

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD, SAN DIEGO REGION  
ADMINISTRATIVE RECORD FOR ORDER NO. R9-2017-0077  
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2	7/16/1990	Order No. 90-42 (San Diego Co. MS4 Permit)	RB9 000042
3	7/16/1990	Order No. 90-46 (Riverside Co. MS4 Permit)	RB9 000085
4	8/18/1996	Order No. 96-03 (Orange Co. MS4 Permit)	RB9 000153
5	5/13/1998	Order No. 98-02 (Riverside Co. MS4 Permit)	RB9 000182
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7	2/13/2002	Order No. R9-2002-0001 (Orange Co. MS4 Permit)	RB9 000290
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California Regional Water Quality Control Board  
San Diego Region

ORDER NO. 90-38  
NPDES No. CA 0108740  
Waste Discharge Requirements  
for  
Stormwater and Urban Runoff  
from the  
County of Orange  
the  
Orange County Flood Control District  
and the

Incorporated Cities of Orange County Within the San Diego Region

The California Regional Water Quality Control Board, San Diego Region (hereinafter Regional Board), finds that:

1. On March 15, 1990, the County of Orange and the Orange County Flood Control District, anticipating cooperation from the incorporated cities of Dana Point, Laguna Beach, Laguna Niguel, Mission Viejo, San Clemente, and San Juan Capistrano, submitted a letter in application for a National Pollutant Discharge Elimination System (NPDES) permit for stormwater and urban runoff discharges to waters within the jurisdiction of the San Diego Regional Board. Shortly thereafter, the aforementioned cities submitted letters notifying the Regional Board of the cities' intent to become co-applicants and subsequently co-permittees subject to the terms and conditions of this Order.
2. Section 405 of the Water Quality Act (WQA) of 1987 added Section 402(p) to the Clean Water Act (CWA). Pursuant to Section 402(p)(4) of the CWA, the EPA is required to promulgate regulations for NPDES permit applications for stormwater discharges associated municipal separate stormwater conveyance 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 stormwater conveyance systems serving a population of 250,000 or more to file stormwater permit applications by February 4, 1990.
3. On December 7, 1988, the 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. In the absence of final stormwater regulations, this Order 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 this Regional Board's discretionary authority.

4. Water quality studies in many urban areas have shown that urban runoff typically contains significant quantities of pollutants. Water quality may be adversely impacted by stormwater discharges and urban runoff. A comprehensive stormwater and urban runoff management and regulation program is essential for the protection of water resources. The County of Orange/Orange County Flood Control District and the incorporated cities in Orange County are developing a comprehensive stormwater/urban runoff management program. This Order requires the County of Orange/Orange County Flood Control District and the incorporated cities to submit documentation on existing runoff pollution control programs and specifies additional requirements towards achieving the water quality objectives for surface waters in Orange County. The intent of this permit is to improve water quality of receiving waters under the jurisdiction of the Regional Board.
5. The discharges consist of surface runoff generated from various land uses and activities in all the hydrologic drainage areas which discharge into receiving waters in Orange County within the area of jurisdiction of the Regional Board. The quality of these discharges varies considerably and is affected by land use, basin hydrology and geology, season, the frequency and duration of storm events, the presence of illicit connections and discharges, and waste management and disposal practices. The parameters and pollutants of potential concern and significance in these discharges may include, but are not limited to, pH, fecal coliform, fecal streptococcus, enterococcus, volatile organic carbon (VOC), surfactants (MBAS), oil and grease, petroleum hydrocarbons, total suspended and settleable solids, total organic carbon, biochemical oxygen demand (BOD), chemical oxygen demand (COD), lead, copper, chromium, cadmium, silver, nickel, zinc, cyanides, phenols, nutrients (e.g., nitrogen, nitrate, phosphate, etc.), and biocides. Since stormwater and urban runoff contains "waste", as defined in California Water Code (CWC) Section 13050, stormwater and urban runoff discharges constitute discharges of waste. Consequently such discharges are subject to CWC Section 13260 et seq., as well as Section 402 of the Clean Water Act, as amended.
6. The County of Orange has jurisdiction over a large portion of the flood control facilities 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 of Orange in controlling and improving the quality of

urban runoff from their respective areas. This Order names the County of Orange the "principal permittee" and the Orange County Flood Control District and incorporated cities as the "co-permittees". Collectively the principal permittee and co-permittees are referred to as "permittees." Attachment A lists the permittees and their 1990 estimated populations.

7. The County of Orange obtains its authority to control pollutants in stormwater discharges, prohibit illegal discharges and control spills, and require compliance and carry out inspections of the drainage facilities in Orange County from the Orange County Flood Control Act (Act 5682) and various county ordinances which address industrial wastes and waste discharges within the unincorporated areas of Orange County and contract cities. "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.
8. The County of Orange, as the "principal permittee", will obtain the cooperation of all entities in implementing the provisions of this Order. The permittees have tentatively agreed upon the responsibilities as outlined in a draft Implementation Agreement submitted to the Regional Board. In general, 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 "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 demonstrate and exercise enforcement authority for achieving compliance with the terms and conditions of this Order.
9. This Order requires the permittees to develop and implement programs to ensure that entities discharging stormwater/urban runoff into stormwater conveyance systems take steps to control/reduce discharges of pollutants to waters of the United States. The Regional Board has the discretion and authority to require non-cooperating entities to participate in this area-wide permit or obtain individual waste discharge requirements if it is determined that discharges from such entities cause or contribute to a violation of a water quality standard or are significant contributors of pollutants to waters of the United States.

10. The total area of Orange County is approximately 786 square miles. Water quality in 252 square miles of Orange County is under the jurisdiction of this Regional Board. The Santa Ana Regional Water Quality Control Board has jurisdiction over the remaining area. Stormwater and urban runoff discharges in areas under the jurisdiction of the Santa Ana Regional Water Quality Control Board are regulated under Santa Ana Regional Board Order No. 90-71 (NPDES No. CA 8000180), Waste Discharge Requirements for the County of Orange and the Orange County Flood Control District and the Incorporated Cities of Orange County Within the Santa Ana Region, Area-wide Urban Stormwater Runoff, Orange County. The requirements contained in this Order are patterned after Order No. 90-71 to ensure consistent regulation, pollution control practices, and monitoring and reporting requirements throughout Orange County.

11. Stormwater discharges in the Orange County portion of the San Diego region are tributary to various receiving waters. Receiving waters identified in the permittees' application are as follows:

Inland Surface Streams

- a. San Juan Creek
- b. Aliso Creek
- c. Sulphur Creek
- d. Trabuco Creek
- e. Oso Creek
- f. Segundo Descheca Creek

Bays

- a. Dana Point Harbor

Ocean Waters

- a. The Pacific Ocean between the boundary of the San Diego and Santa Ana Regional Water Quality Control Boards to the north, and the San Diego/Orange County boundary to the south.

12. The County of Orange has an active surface water quality monitoring program. Runoff samples obtained during dry weather are analyzed for nutrients and selected trace metals (chromium, copper, lead, and zinc). When water quality sampling stations exhibit higher than average watershed pollution concentrations, sediment samples are also collected and analyzed for constituents of concern

(those which were higher than average in the water column).

The monitoring program is composed of 7 water quality monitoring stations, 5 flow monitoring stations, and 8 precipitation stations. Most of the water quality monitoring stations are located in drainage areas in which land uses and activities have been identified which may significantly impact beneficial uses of receiving waters. These areas have been characterized as agricultural, commercial, residential, and areas of discharge from publicly owned treatment works.

13. The State Water Resources Control Board (hereinafter State Board) adopted a Water Quality Control Policy for Enclosed Bays and Estuaries of California (Bays and Estuaries Policy) on May 16, 1974. The policy established water quality principles, guidelines, effluent quality requirements and prohibitions to govern the disposal of wastes in the enclosed bays and estuaries of California. Dana Point Harbor is, by the definition contained in the Bays and Estuaries Policy, an enclosed bay. The Bays and Estuaries Policy contains the following prohibition specific to land runoff to Dana Point Harbor:

"The direct or indirect discharge of silt, sand, soil, clay, or other earthen materials from onshore operations including mining, construction, agriculture, and lumbering, in quantities which unreasonably affect or threaten to affect beneficial uses shall be prohibited."

14. The State Water Resources Control Board adopted a revised Water Quality Control Plan for Ocean Waters of California (Ocean Plan) on March 22, 1990. The Ocean Plan identifies the following beneficial uses of state ocean waters to be protected:
  - a. Industrial water supply;
  - b. Navigation;
  - c. Aesthetic enjoyment;
  - d. Water contact recreation;
  - e. Non-contact water recreation;
  - f. Ocean commercial and sport fishing;
  - g. Mariculture;
  - h. Preservation and enhancement of areas of special biological significance;
  - i. Preservation and enhancement of rare and endangered species;
  - j. Marine habitat;

- k. Fish migration;
- l. Fish spawning; and
- m. Shellfish harvesting.

In order to protect the above beneficial uses, the Ocean Plan established water quality objectives (for bacteriological, physical, chemical, and biological characteristics, and for radioactivity), general requirements for management of waste discharged to the ocean, quality requirements for waste discharges, discharge prohibitions, and general provisions.

15. The Comprehensive Water Quality Control Plan Report, San Diego Basin (9), (Basin Plan) was adopted by this Regional Board on March 17, 1975 and subsequently approved by the State Water Resources Control Board (State Board). Subsequent revisions to the Basin Plan have also been adopted by the Regional Board and approved by the State Board.
16. The Basin Plan identifies the following beneficial uses of inland surface waters in Orange County:
  - a. Industrial service supply;
  - b. Agriculture supply;
  - c. Water contact recreation;
  - d. Non-contact water recreation;
  - e. Warm fresh-water habitat;
  - f. Preservation of rare and endangered species; and
  - g. Wildlife habitat.
17. The Basin Plan contains the following prohibitions, applicable to discharges, for inland surface waters:

"Discharge of treated or untreated sewage or industrial wastes to a natural watercourse upstream of surface storage or diversion facilities used for municipal supply is prohibited."

"Discharge of treated or untreated sewage or industrial wastewater, exclusive of cooling water or other waters which are chemically unchanged, to a watercourse, is prohibited except in cases where the quality of said discharge complies with the receiving body's water quality objectives."

"The dumping or deposition of oil, garbage, trash, or other solid municipal, industrial, or agricultural waste directly into inland waters or watercourses or adjacent to the water courses in

any manner which may permit its being washed into the watercourse is prohibited."

"Land grading and similar operations causing soil disturbance which do not contain provisions to minimize soil erosion and limit suspended matter in area runoff are prohibited."

18. The Basin Plan identifies the following beneficial uses of state ocean waters to be protected:
- a. Industrial service supply;
  - b. Navigation;
  - c. Water contact recreation;
  - d. Noncontact water recreation;
  - e. Ocean commercial and sport fishing;
  - f. Preservation of Areas of Special Biological Significance;
  - g. Preservation of rare and endangered species;
  - h. Marine habitat;
  - i. Fish migration; and
  - j. Shellfish harvesting.

The Basin Plan relies primarily on requirements of the Ocean Plan for protection of those beneficial uses. However, the Basin Plan establishes additional water quality objectives for dissolved oxygen and pH.

19. Although the Basin Plan relies primarily on the Ocean Plan for the protection of marine waters, the Basin Plan contains the following prohibitions, applicable to discharges, for waters subject to tidal action:

" The dumping or deposition from shore or from vessels of oil, garbage, trash or other solid municipal, industrial or agricultural waste directly into waters subject to tidal action or adjacent to waters subject to tidal action in any manner which may permit it to be washed into the waters subject to tidal action is prohibited."

" Discharge of industrial wastewaters exclusive of cooling water, clear brine or other waters which are essentially chemically unchanged, into waters subject to tidal action is prohibited."

" The dumping or deposition of chemical wastes, chemical agents or explosives

into waters subject to tidal action is prohibited."

20. The requirements contained in this Order are necessary to implement the objectives of the Ocean Plan, Bays and Estuaries Policy, and the Basin Plan for receiving waters within the region.
21. Numerical and narrative water quality standards exist for the receiving waters in the region. Due to the enormous variability in stormwater quality and quantity and the complexity of urban runoff, this Order does not contain numerical limitations for any constituents. The impact of stormwater and urban runoff discharges on water quality of 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 permittees to continue to monitor the discharges and to analyze the data. This Order also requires the development and implementation of best management practices (BMPs). "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." For purposes of this Order, BMPs for the control of pollutants in stormwater and urban runoff may include the use of non-structural (e.g. public education, regulatory powers, urban planning, etc.) and structural (e.g. detention basins, grass swales, runoff infiltration devices, etc.) controls which may be applied to a particular site or throughout a region (e.g., a city or throughout an area served by a stormwater conveyance system).
22. Pursuant to 40 CFR 131.12 and State Board Resolution No. 68-16, Statement of Policy with Respect to Maintaining High Quality of Waters in California (collectively "antidegradation policies"), the Regional Board shall ensure that any increase in pollutant loading to a receiving water meets the requirements stated in the foregoing policies. At a minimum, permitting actions shall be consistent with the following:
  - a. Existing instream water uses and the level of water quality necessary to protect existing beneficial uses shall be maintained and protected;

- b. Where the quality of the waters exceed levels necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water, the quality shall be maintained and protected unless the State finds, after full satisfaction of the intergovernmental coordination and public participation provisions of the State's continuing planning process, that allowing lower water quality is necessary to accommodate important economic or social development in the area in which the waters are located;
  - c. Where high quality waters constitute an outstanding national resource, such as waters of National and State parks and wildlife refuges and waters of exceptional recreational or ecological significance, that water quality shall be maintained and protected; and
  - d. In those cases where potential water quality impairment associated with a thermal discharge is involved, the antidegradation policy and implementing method shall be consistent with Section 316 of the Clean Water Act.
23. The Regional Board, in establishing the requirements contained herein, has taken into consideration the requirements of the State and Federal "antidegradation" policies and has determined that:
- a. The conditions and requirements established in this order for discharges of stormwater/urban runoff to waters of the United States ensure that the existing beneficial uses and quality of receiving waters will be protected and improved through the implementation of best management practices for the control of pollutants in stormwater and urban runoff;
  - b. Discharges of urban runoff to waters of the United States will continue regardless of the issuance of this Order. The issuance of this Order is necessary to ensure achievement and maintenance of the goals and objectives of the water quality control plans adopted by the State and will result in improvement in water quality through implementation of stormwater management programs for the control of pollutants in urban runoff;
  - c. No receiving waters covered under the terms and conditions of this Order have been designated an

outstanding national resource water. However, Heisler Park Ecological Reserve, located in coastal waters near the City of Laguna Beach, has been designated an Area of Special Biological Significance (ASBS) by the State Water Resources Control Board. The City of Laguna Beach and the surrounding areas are subject to the terms and conditions of this Order. Implementation of BMPs for the control of pollutants in stormwater and urban runoff from the Laguna Beach area will further protect and improve water quality in this ASBS; and

- d. Thermal discharges potentially impairing water quality are not authorized under the terms and conditions of this Order, thus, Section 316 of the Clean Water Act is not applicable.
24. Pursuant to Section 402 of the CWA, and amendments thereto, and pursuant to Section 13260, et seq. of the California Water Code, this Order shall serve as an NPDES permit and waste discharge requirements for the discharge of stormwater and urban runoff to surface waters of Orange County in the area under the jurisdiction of the Regional Board.
  25. The Regional Board, in establishing the requirements contained herein, considered factors including, but not limited to, the following:
    - a. Beneficial uses to be protected and the water quality objectives reasonably required for that purpose;
    - b. Other waste discharges;
    - c. The need to prevent nuisance;
    - d. Past, present, and probable future beneficial uses of the waters under consideration;
    - e. Environmental characteristics of the waters under consideration;
    - f. Water quality conditions that could reasonably be achieved through the coordinated control of all factors which affect water quality in the area;
    - g. Economic considerations; and
    - h. The need for developing housing within the region.

26. The issuance of this permit for the discharge of stormwater runoff and urban runoff is exempt from the requirement for preparation of environmental documents under the California Environmental Quality Act (Public Resources Code, Division 13, Chapter 3, Section 21000 et seq.) in accordance with the California Water Code, Section 13389.
27. The Regional Board has considered all water resource related environmental factors associated with the discharge of stormwater and urban runoff.
28. The Regional Board has notified all known interested parties of its intent to issue an NPDES permit for the discharge of stormwater and urban runoff.
29. The Regional Board has, at a public meeting, heard and considered all comments pertaining to the discharge of stormwater and urban runoff.

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 (the County of Orange) 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 stormwater conveyance systems as agreed upon by the Executive Officer.
  3. Develop uniform criteria for stormwater conveyance system inspections.
  4. Conduct inspections of the stormwater conveyance systems within its jurisdiction.
  5. Prepare and submit to the Regional Board all the reports, plans, and programs as required in this Order.
  6. Monitor the implementation of the plans and programs and determine their effectiveness in attaining water quality objectives.
  7. Coordinate all the activities with the Regional Board.
  8. Enact legislation and ordinances as necessary to establish legal authority.

9. Solicit, and respond to, public input<sup>1</sup> for proposed monitoring, reconnaissance, management, and implementation plans.
10. Pursue enforcement actions as necessary to ensure compliance with stormwater management programs and implementation plans.
11. Ensure adequate response to emergency situations such as accidental spills, leaks, illicit discharges, etc.
12. Abide by the terms of the Implementation Agreement.

## II. RESPONSIBILITIES OF THE CO-PERMITTEES

- A. The co-permittees (the Orange County Flood Control District and the incorporated cities within Orange County) shall be responsible for the management of stormwater conveyance systems within their jurisdictions, including the following:
  1. Conduct stormwater conveyance 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.
  4. Implement management programs, monitoring programs, and implementation plans as required by this Order.
  5. Submit stormwater conveyance 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 ensure compliance with the stormwater management programs and the implementation plans.
  8. Pursue enforcement actions as necessary to ensure compliance with the stormwater management programs and the implementation plans.
  9. Ensure adequate response to emergency situations such as accidental spills, leaks, illicit discharges, etc.
  10. Abide by the terms of the Implementation Agreement.

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<sup>1</sup> Solicitation, and response to, public input may be 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.

### III. GENERAL REQUIREMENTS

- A. The permittees shall prohibit illicit/illegal discharges from entering into stormwater conveyance systems. Discharges conditionally allowed to enter stormwater conveyance systems are specified in Item V. C.
- B. The permittees shall develop and implement best management practices (BMPs), including management practices, control techniques, and system design and engineering methods, and such other provisions as the Executive Officer determines appropriate for the control of pollutants, to control/reduce the discharge of pollutants to waters of the United States to the maximum extent practicable. The BMPs so developed, along with a time schedule for implementation, shall be submitted for the approval and/or modification by the Executive Officer of the Regional Board. In developing the best management practices, the permittees shall consider the water quality objectives of all the receiving water bodies.
- C. The permittees shall ensure that BMPs are implemented for entities discharging stormwater and urban runoff to stormwater conveyance systems within their area of jurisdiction.

### IV. COMPILATION AND SUBMITTAL OF EXISTING DATA

- A. Runoff Quality/Quantity
  1. The permittees shall collectively submit all quantitative information, generated since 1980, on stormwater discharges to the stormwater conveyance systems. Historical averages and extremes of the collected data shall also be submitted. 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. Analytical and flow data for stormwater samples collected from the stormwater conveyance system outfalls, and within any waters of the United States;
    - b. Precipitation data from the precipitation stations and the duration of the storm events (if available);

- c. Discharge data from the stormwater conveyance systems as determined from the gauging stations;
- d. Analysis of the data and the major pollutants identified in the stormwater discharges from each drainage area to each receiving water and a determination whether the identified pollutants came from non-point source or point-source discharges.

B. System/Drainage Area Characterization

1. The permittees shall submit information to the Regional Board for identification and characterization of the sources of pollutants in the stormwater discharges. Descriptive information, such as land use in Orange County, and an overall map of the drainage system showing major features shall be submitted. In addition, the following information shall be provided:
  - a. Identification of the drainage areas more than 50 acres in size, that discharge stormwater and urban runoff to the stormwater conveyance systems and of those drainage areas that discharge to stormwater conveyance systems with pipe diameters greater than 36 inches;
  - b. The sizes of these drainage areas (acreage) and the sizes (pipe diameters or approximate dimensions of the stormwater conveyance systems) and physical characteristics of the stormwater conveyance systems. These physical characteristics shall include, but not be limited to, whether the stormwater conveyance system is lined or unlined and whether it has intermittent or continuous flow;
  - c. The names, locations, and Standard Industrial Codes (SIC) of specific industrial sources and principal land use activities in each drainage area, identified in IV B.1.a. above, discharging to the stormwater conveyance systems. An estimate of the runoff coefficient for these drainage areas shall also be provided;
  - d. The locations of present stormwater conveyance systems discharging to waters of the United States. The name of each receiving water shall be reported and the location of each

outfall shall be indicated on a map; and

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

C. Illegal Connections

1. The permittees shall provide a list of dischargers (permitted and unpermitted) known to exist currently who discharge process or non-process wastewater to the stormwater conveyance systems and any existing information pertaining to illegal dumping of pollutants in stormwater conveyance systems. The permittees shall also provide any existing procedures used for detecting illegal connections to the stormwater conveyance systems, the rationale for the procedures, and the drainage areas (or cities) in which these programs are practiced; and
2. A description of the present and historical use of ordinances or other controls to prohibit and/or limit the non-stormwater discharges to stormwater conveyance systems.

D. Stormwater Management Program

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

E. Stormwater/Urban Runoff Monitoring Program

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

F. Pollutant Information

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

G. Other Pertinent Existing Information

1. The permittees shall provide to the Regional Board any other existing information that is pertinent to this permit.

V. RECONNAISSANCE SURVEY

A. The permittees shall submit information from a reconnaissance survey to be conducted at the stormwater conveyance systems. The purpose of the survey is to identify illegal/illicit non-stormwater discharges to the stormwater conveyance system, illicit disposal practices, or other practices which impair water quality as a result of stormwater/urban runoff discharges to receiving waters. The reconnaissance survey field manual and implementation plan developed for prosecuting violators and eliminating illegal discharges, along with time schedules for implementation, shall be submitted for the approval of the Executive Officer of the Regional Board. The information shall include, but need not be limited to, the following:

1. By January 31, 1991, a proposed reconnaissance survey field manual;
2. By July 31, 1991, the permittees shall submit a progress report towards compliance with the implementation of a reconnaissance survey in accordance with the field manual;
3. By January 31, 1992, 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 connections and discharges to the stormwater conveyance 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 non-stormwater dischargers including the names, locations, and types of the facilities and the names of the stormwater conveyance systems and receiving waters the illegal non-stormwater 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 proposed implementation plan, including a tentative time schedule, to prosecute violators and eliminate such discharges to the stormwater conveyance systems; and
  - f. Legal authorities cited to prosecute violators and eliminate or control illicit disposal practices and illegal discharges to the stormwater conveyance system.
- B. By January 31 of every year, the permittees shall submit a progress report showing evidence of plan implementation to detect and eliminate illegal discharges to the stormwater conveyance systems and the resulting reduction in loadings of pollutants to waters of the United States. The first progress report is due January 31, 1993.
- C. The permittees shall effectively eliminate all identified illegal/illicit discharges in the shortest time practicable, and in no case later July 16, 1995. Those identified after July 16, 1995 shall be eliminated in the shortest time practicable. The following discharges shall not be considered illegal/illicit 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 an NPDES permit, discharges to storm water conveyance systems from 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 discharges shall be prohibited from entering stormwater conveyance systems.

#### VI. DRAINAGE AREA MANAGEMENT PROGRAM

A. The permittees shall develop and implement best management practices (BMPs) to control the discharge of pollutants to waters of the United States. The permittees shall submit information pertaining to the proposed management programs for control of pollutants in stormwater and urban runoff discharges. The information shall include, but not be limited to, the following:

1. A brief description of the existing BMPs and stormwater management programs;
2. Proposed modifications to the existing BMPs and stormwater/urban runoff management programs to reduce pollutants in stormwater and urban runoff discharges from industrial, commercial, and residential properties to the maximum extent practicable. At a minimum, the following should be considered in developing the BMPs:

##### Structural Controls

- a. Structural controls such as first flush diversion, detention/retention basins, infiltration trenches/basins, porous pavement, oil/grease separators, grass swales, etc. Engineering and design modification of the existing structures should also be considered.

##### Non-structural Controls

- a. 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.;

- b. Management practices such as street sweeping, proper maintenance of streambanks, erosion control structures, etc.;
  - c. Regulatory approaches such as county and local ordinances, permitting of construction sites, etc.;
  - d. An enforcement program, established by the county and cities, responses to both emergency incidents and field inspections; and
  - e. The ongoing program required in Item No. V. above for the detection and elimination of i l l i c i t c o n n e c t i o n s and controlling/eliminating illegal dumping of pollutants into storm drain systems.
3. Implementation plans for site-specific BMPs which are required to reduce pollutants in the stormwater discharges from residential, commercial and industrial areas, and construction sites;

a. New Construction Sites

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 to control erosion/siltation and contaminated runoff from the construction site.

b. Residential and Commercial/Industrial Sites

To prevent the increase of pollutants in the stormwater discharge, all new developments and existing facilities with significant redevelopment, after the construction is completed, are required to develop individual long-term comprehensive stormwater management plans.

- 4. A description of the legal authorities for implementing the programs, and a proposed time schedule for obtaining such legal authorities, if necessary;
- 5. A description of staff, equipment, and funds available to implement the programs;
- B. By July 31, 1991, the BMPs 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;
- C. By July 31 of every year, the permittees 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 stormwater and urban runoff discharges. The permittees shall also include recommended BMPs modifications, with a time schedule for implementation, to achieve compliance with any water quality objective not attained. The first progress report is due July 31, 1992.

VII. STORMWATER RUNOFF MONITORING PROGRAM

The permittees shall develop and implement (after approval of the plan by the Executive Officer) a stormwater/urban runoff monitoring program. Proposed monitoring programs and time schedules for their implementation shall be subject to the approval of the Executive Officer. Proposed monitoring programs, time schedules, and implementation reports shall be submitted to the principal permittee in sufficient time to submit a collated report to the Regional Board as follows:

<u>TASK</u>	<u>STORMWATER/RUNOFF MONITORING</u>	<u>REPORT DATE</u>
Submittal of Proposed Stormwater Monitoring Programs and Implementation Time Schedules		11/30/90
Progress Report on the Implementation of the Stormwater Monitoring Programs		11/30/91*

\* and annually thereafter

VIII. RECEIVING WATER MONITORING PROGRAM

The permittees shall develop and implement (after approval of the plan by the Executive Officer) a receiving water monitoring program. Proposed monitoring programs and time

schedules for their implementation shall be subject to the approval of the Executive Officer. Proposed monitoring programs, time schedules, and implementation reports shall be submitted to the principal permittee in sufficient time to submit a collated report to the Regional Board as follows:

<u>TASK</u>	<u>RECEIVING WATER MONITORING</u>	<u>REPORT DATE</u>
Submittal of Proposed Receiving Water Monitoring Programs and Implementation Time Schedules		7/31/92
Progress Report on the Implementation of the Receiving Water Monitoring Programs		7/31/93*

\* and annually thereafter

IX. FISCAL ANALYSIS

A. 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 and submitted to the Executive Officer of the Regional Board.

X. DATA ANALYSIS

The results of the chemical analysis and quantitative data (such as flow, precipitation, and water level data) shall be compiled for each sampling of any drainage area, storm event, and for different times during the same storm event. The mass loading rates for the pollutants of concern shall be calculated and any impact of the stormwater/urban runoff discharge on the receiving waters shall be discussed, starting with the most significantly impacted receiving waters.

XI. PROGRAM ANALYSIS

Every year, starting from January 1991, 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.

XII. IMPLEMENTATION AGREEMENT

A signed copy of the Implementation Agreement between the County of Orange 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 permittees.

XIII. REPORTING AND SCHEDULE

- A. A summary of tasks to be completed and reports submitted is as follows:

(continued on the next page)

<u>TASK</u>		<u>COMPLIANCE REPORT DUE</u>
VII.	Stormwater Monitoring Program Plan	11/30/90
XII.	Implementation Agreement	01/31/91
IV.	Existing reports and programs	01/31/91
V.A.1	Proposed Reconnaissance Survey Field Manual	01/31/91
V.A.2	Reconnaissance Progress Report	07/31/91
VI.A&B	Management Programs (BMPs) and Implementation Plan	07/31/91
V.A.3	Results of the Reconnaissance Survey	01/31/92
VIII.	Receiving Water Monitoring Program Plan	07/31/92
	----- Progress Reports after Plan Implementation -----	
V.B	Reconnaissance Survey Progress Report	01/31 of every year <sup>2</sup>
VI.C	Management Programs Progress Report	07/31 of every year <sup>3</sup>
VII.	Stormwater Monitoring Progress Report	11/30 of every year <sup>4</sup>
VIII.	Receiving Water Monitoring Program Progress Report	07/31 of every year <sup>5</sup>
IX.	Fiscal Analysis	07/31 of every year <sup>6</sup>
X. & XI.	Data/Program Analysis	01/31 of every year <sup>7</sup>

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<sup>2</sup> The first progress report is due by January 31, 1993.

<sup>3</sup> The first progress report is due by July 31, 1992.

<sup>4</sup> The first progress report is due by November 30, 1991.

<sup>5</sup> The first progress report is due by July 31, 1993.

<sup>6</sup> The first annual fiscal analysis is due by July 31, 1991.

<sup>7</sup> The first data/program analysis is due by January 31, 1991.

- B. All reports and information required herein shall be submitted to the Executive Officer of the Regional Board and the Regional Director of the Environmental Protection Agency, Region IX, at the following addresses:

Executive Officer  
California Regional Water Quality Control Board  
San Diego Region  
9771 Clairemont Mesa Blvd., Ste. B  
San Diego, California 92124-1331

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Environmental Protection Agency  
Region IX  
Permits and Compliance Branch  
1235 Mission Street (Mail Code W-5)  
San Francisco, California 94103

XIV. ANALYTICAL METHODS/RECORD KEEPING

- A. Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge. Once established, monitoring points shall not be changed without notification to and the approval of the Executive Officer.
- B. Monitoring must be conducted according to United States Environmental Protection Agency test procedures approved under Title 40, Code of Federal Regulations (CFR), Part 136, "Guidelines Establishing Test Procedures for Analysis of Pollutants Under the Clean Water Act" as amended, unless other test procedures have been specified by this Order or the Executive Officer.
- C. All analyses shall be performed in a laboratory certified to perform such analyses by the California Department of Health Services or a laboratory approved by the Executive Officer.
- D. Monitoring results must be reported on discharge monitoring report forms or in a format approved by the Executive Officer.
- E. If a permittee monitors any pollutant more frequently than required by this Order, using test procedures approved under 40 CFR, Part 136, or as specified in this Order, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the permittee's monitoring report. The increased frequency of monitoring shall also be reported.

- F. Permittees shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this Order, and records of all data used to complete the application for this Order. Records shall be maintained for a minimum of five years from the date of the sample, measurement, report, or application. This period may be extended during the course of any unresolved litigation regarding this discharge or when requested by the Regional Board Executive Officer.
- G. Records of monitoring information shall include:
1. The date, exact place, and time of sampling or measurements;
  2. The individual(s) who performed the sampling or measurements;
  3. The date(s) analyses were performed;
  4. The individual(s) who performed analyses;
  5. The analytical techniques or method used; and
  6. The results of such analyses.
- H. Calculations for all limitations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified by the Executive Officer or in this Order.
- I. All monitoring instruments and devices used by a permittee to fulfill the prescribed monitoring program shall be properly maintained and calibrated as necessary to ensure their continued accuracy.
- J. Permittees shall report all instances of noncompliance not reported under Standard Reporting Requirement XVI. E. of this Order at the time monitoring reports are submitted. The reports shall contain the information listed in Standard Reporting Requirement XVI. E.
- K. The monitoring reports shall be signed by an authorized person as required by Standard Reporting Requirement L.
- L. A composite sample is defined as a combination of at least 8 sample aliquots of at least 100 milliliters each, collected at periodic intervals during the operating hours of a facility over a 24-hour period. For volatile pollutants, aliquots must be combined in the laboratory immediately before analysis. The composite must be flow proportional; either the time interval between each aliquot or the volume of each

aliquot must be proportional to either the stream flow at the time of sampling or the total stream flow since the collection of the previous aliquot. Aliquots may be collected manually or automatically.

- M. A grab sample is an individual sample of at least 100 milliliters collected at a randomly selected time over a period not exceeding 15 minutes.

XV. PROVISIONS

- A. Neither the treatment nor the discharge of pollutants shall create a pollution, contamination, or nuisance as defined by Section 13050 of the California Water Code.
- B. The permittees must comply with all conditions of this Order. Any permit noncompliance constitutes a violation of the Clean Water Act and the California Water Code and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; the issuance of an individual permit; or for denial of a renewal application.
- C. The permittees shall take all reasonable steps to minimize or correct any adverse impact on the environment resulting from noncompliance with this Order, including such accelerated or additional monitoring as may be necessary to determine the nature and impact of the noncomplying discharge.
- D. This Order may be modified, revoked and reissued, or terminated for cause including, but not limited to, the following:
1. Violation of any terms or conditions of this Order;
  2. Obtaining this Order by misrepresentation or failure to disclose fully all relevant facts; or
  3. A change in any condition that requires either a temporary or permanent reduction or elimination of the discharge.

The filing of a request by a permittee for modification, revocation and reissuance, or termination of this Order or a notification of planned change in or anticipated noncompliance with this Order does not stay any condition of this Order.

- E. In addition to any other grounds specified herein, this Order shall be modified or revoked at any time if, on

the basis of any new data, the Executive Officer determines that continued discharges may cause unreasonable degradation of the aquatic environment.

- F. This Order is not transferable to any person except after notice to the Executive Officer of this Regional Board. The Regional Board may require a new report of waste discharge to change the name of a permittee and incorporate such other requirements as may be necessary under the California Water Code and the Clean Water Act. A permittee shall submit notice of any transfer of this Order's responsibility and coverage to a new permittee as described under Standard Reporting Requirement XVI.C.
- G. This Order does not convey any property rights of any sort or any exclusive privileges. The requirements prescribed herein do not authorize the commission of any act causing injury to persons or property of another, including property damage caused as a result of the discharge, nor protect the permittee from liability under federal, state, or local laws, nor create a vested right for the permittee to continue the discharge.
- H. Permittees shall allow the Regional Board, or an authorized representative or any representative of the United States Environmental Protection Agency upon the presentation of credentials and other documents as may be required by law, to:
1. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this Order;
  2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Order;
  3. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices or operation regulated or required under this Order; and
  4. Sample or monitor at reasonable times, for the purposes of assuring compliance with this Order or as otherwise authorized by the Clean Water Act or California Water Code, any substances or parameters at any location.
- I. Permittees shall, at all times, properly operate and maintain all facilities and systems of treatment and

control (and related appurtenances) which are installed or used by a permittee to achieve compliance with the conditions of this Order. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls including appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of this Order.

J. In an enforcement action, it shall not be a defense for a permittee that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with this Order. Upon reduction, loss, or failure of the treatment facility, the permittee shall, to the extent necessary to maintain compliance with this Order, control production or all discharges, or both, until the facility is restored or an alternative method of treatment is provided. This provision applies, for example, when the primary source of power of the treatment facility fails, is reduced or is lost.

K. The provisions of this Order are severable, and if any provision of this Order, or the application of any provision of this Order to any circumstances, is held invalid, the application of such provision to other circumstances, and the remainder of this Order, shall not be affected thereby.

L. Bypass of Treatment Facilities

1. Definitions

(a) "Bypass" means the intentional diversion of waste streams from any portion of the treatment facility.

(b) "Severe property damage" means substantial physical damage to property, damage to the treatment facilities which cause them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

2. Bypass Not Exceeding Effluent Limitations

A permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to

assure efficient operations. These bypasses are not subject to the provisions of paragraphs (3) and (4) of this section.

3. Notice of Anticipated Bypass and Unanticipated Bypass

(a) Anticipated bypass. If a permittee knows in advance of the need for a bypass, they shall submit prior notice, if possible, at least ten days before the date of the bypass.

(b) Unanticipated bypass. A permittee shall submit notice of an unanticipated bypass as described under Standard Reporting Requirement XVI. E.

4. Prohibition of Bypass

(a) Bypass is prohibited and the Regional Board may take enforcement action against a permittee for bypass, unless:

(1) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;

(2) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated waste, or maintenance during normal periods of equipment downtime. This condition is not satisfied if the permittee could have installed adequate backup equipment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and

(3) The permittee submitted notices as required under paragraph (3) of this section.

(b) The Executive Officer may approve an anticipated bypass, after considering its adverse effect, if the Executive Officer determines that it will meet the three conditions listed above in paragraph (1) of this section.

M. Upset Conditions1. Definitions

"Upset" means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based effluent limitations because of factors beyond the reasonable control of a permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

2. Effect of an Upset

An upset constitutes an affirmative defense to an action brought for noncompliance with such technology-based permit effluent limitations if the requirements of paragraph (3) of this section are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.

3. Conditions Necessary for a Demonstration of Upset

A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:

- (a) An upset occurred and that the permittee can identify the specific cause(s) of the upset;
- (b) The permitted facility was at the time being properly operated; and
- (c) The permittee submitted notice of the upset as required in Standard Reporting Requirement XVI. E.

4. Burden of Proof

In any enforcement proceeding, a permittee seeking to establish the occurrence of an upset has the

burden of proof.

XVI. STANDARD REPORTING REQUIREMENTS

- A. A new Report of Waste Discharge shall be filed with the Regional Board not less than 180 days prior to the following:
1. Significant change in disposal method (e.g., change in the method of treatment which would significantly alter the nature of the waste).
  2. Significant change in disposal area (e.g., moving the discharge to a disposal area significantly removed from the original area, potentially causing different water quality or nuisance problems).
  3. Other circumstances which result in a material change in character, amount, or location of the waste discharge.
- B. A permittee shall give advance notice to the Executive Officer of any planned changes in a permitted facility or activity which may result in noncompliance with the requirements of this Order.
- C. A permittee must notify the Executive Officer, in writing, at least 30 days in advance of any proposed transfer of this Order's responsibility and coverage to a new permittee. The notice must include a written agreement between the existing and new permittee containing a specific date for the transfer of this Order's responsibility and coverage between the current permittee and the new permittee. This agreement shall include an acknowledgement that the existing permittee is liable for violations up to the transfer date and that the new permittee is liable from the transfer date on.
- D. The permittees shall comply with any monitoring and reporting requirements contained in this Order and any additional monitoring requirements specified by the Executive Officer.
- E. A permittee shall report any noncompliance which may endanger health or the environment. Any information shall be provided orally to the Executive Officer within 24 hours from the time the permittee becomes aware of the circumstances. A written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and

times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance. The Executive Officer, or an authorized representative may waive the written report on a case-by-case basis if the oral report has been received within 24 hours.

- F. A permittee shall notify the Executive Officer as soon as it is known or there is reason to believe:
1. That any activity has occurred or which will occur which would result in the discharge of any toxic pollutant which is not limited in this Order, if that discharge will exceed the highest of the following "notification levels":
    - a. One hundred micrograms per liter (100 ug/L);
    - b. Two hundred micrograms per liter (200 ug/L) for acrolein and acrylonitrile; five hundred micrograms per liter (500 ug/L) for 2,4-dinitrophenol and for 2-methyl-4, 6-dinitrophenol; and one milligram per liter (1 mg/L) for antimony.
- G. A permittee shall furnish to the Executive Officer, within a reasonable time, any information which the Executive Officer may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Order or to determine compliance with this Order or other requirements established by the Executive Officer. A permittee shall also furnish to the Executive Officer, upon request, copies of records required to be kept by this Order.
- H. A permittee shall provide adequate notice to the Executive Officer of the following:
1. Any new introduction of pollutants to the discharge.
  2. Any substantial change in the volume or character of pollutants being introduced into the discharge.
  3. For the purpose of this provision, adequate notice shall include information on (a) the quality and quantity of waste introduced into the discharge, and (2) any anticipated impact of the change on the quantity or quality of runoff to be discharged to surface waters.

- I. Where a permittee becomes aware that he failed to submit any relevant facts in a Report of Waste Discharge, or submitted incorrect information in a Report of Waste Discharge, or in any report to the Regional Board, he shall promptly submit such facts or information.
- J. If a need for a discharge bypass is known in advance, the permittee shall submit prior notice and, if at all possible, such notice shall be submitted at least ten days prior to the date of the bypass.
- K. This Order expires on July 16, 1995. The permittees must jointly 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 as a minimum, the following:
  1. Summary of the results of the monitoring program.
  2. Summary of BMPs implemented and evaluations of their effectiveness.
  3. Summary of procedures implemented to detect illegal discharges and illicit disposal practices and an evaluation of their effectiveness.
  4. Summary of measures implemented to control pollutants in surface runoff from construction sites and an evaluation of their effectiveness.
  5. Evaluation of the need for additional BMPs, source control, and/or structural control measures.
  6. Proposed plan of stormwater/urban runoff quality management activities that will be undertaken during the term of the next permit.
- L. All applications, reports, or information submitted to the Executive Officer of this Regional Board shall be signed and certified.
  1. The Report of Waste Discharge shall be signed as follows:
    - a. For a corporation - by a principal executive officer of at least the level of vice-president.

- b. For a partnership or sole proprietorship - by a general partner or the proprietor, respectively.
  - c. For a municipality, state, federal or other public agency - by either a principal executive officer or ranking elected official.
2. All other reports required by this Order and other information requested by the Executive Officer shall be signed by a person designated in paragraph (1) of this provision, or by a duly authorized representative of that person. An individual is a duly authorized representative only if:
- a. The authorization is made in writing by a person described in paragraph (1) of this provision;
  - b. 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 well field, superintendent, or position of equivalent responsibility (a duly authorized representative may thus be either a named individual or any individual occupying a named position); and
  - c. The written authorization is submitted to the Executive Officer.
3. Any person signing a document under this Section shall make the following certification:

"I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that 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."

- M. Except for data determined to be confidential under Title 40, Code of Federal Regulations Part (40 CFR Part

2), all reports prepared in accordance with the terms of this Order shall be available for public inspection at the offices of the California Regional Water Quality Control Board, San Diego Region and the United States Environmental Protection Agency, Region 9. As required by the Clean Water Act, Reports of Waste Discharge, this Order, and effluent data shall not be considered confidential.

#### XVII. NOTIFICATIONS

- A. California Water Code Section 13263(g) states:

"No discharge of waste into the waters of the state, whether or not such discharge is made pursuant to waste discharge requirements, shall create a vested right to continue such discharge. All discharges of waste into waters of the state are privileges, not rights."

- B. The Clean Water Act provides that any person who violates a condition of this Order implementing Sections 301, 302, 306, 307, 308, 318 or 405 of the Clean Water Act is subject to a civil penalty not to exceed \$10,000 per day of such violations. Any person who willfully or negligently violates conditions of this Order implementing Section 301, 302, 306, 307 or 308 of the Clean Water Act is subject to a fine of not less than \$2,500 nor more than \$25,000 per day of violation, or by imprisonment for not more than one year, or both.
- C. 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 Order, including monitoring reports or reports of compliance or noncompliance 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.
- D. Nothing in this Order shall be construed to relieve a permittee from civil or criminal penalties for noncompliance.
- E. Nothing in this Order shall be construed to preclude the institution of any legal action or relieve a permittee from any responsibilities, liabilities, or penalties to which a permittee is or may be subject to under Section 311 of the Clean Water Act.

- F. Nothing in this Order shall be construed to preclude institution of any legal action or relieve a permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable State law or regulation under authority preserved by Section 510 of the Clean Water Act.
- G. This Order shall become effective ten days after the date of its adoption, provided the Regional Administrator or Director, United States Environmental Protection Agency, has no objection. If the Regional Administrator objects to its issuance, this Order shall not become effective until such objection is withdrawn.

I, Arthur L. Coe, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Diego Region, on July 16, 1990.



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ARTHUR L. COE  
Executive Officer

Order No. 90-38

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ATTACHMENT A TO ORDER NO. 90-38

PERMITTEES IN THE ORANGE COUNTY AREA OF THE SAN DIEGO REGION AND  
THEIR 1990 POPULATION ESTIMATES

Dana Point	29,691
Laguna Beach	24,406
Laguna Niguel	36,787
Mission Viejo	80,791
San Clemente	38,635
San Juan Capistrano	26,429
Unincorporated Area (County of Orange)	<u>100,145</u>
	total 336,884

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
SAN DIEGO REGION

ADDENDUM NO. 2 TO ORDER NO. 90-38  
NPDES PERMIT NO. CA0108740

AN ADDENDUM MODIFYING RESPONSIBILITY FOR  
ORDER NO. 90-38 TO INCLUDE THE CITY OF LAGUNA HILLS  
AS AN INCORPORATED CITY OF ORANGE COUNTY  
WITHIN THE SAN DIEGO REGION

The California Regional Water Quality Control Board, San Diego Region (hereinafter Regional Board), finds that:

1. On July 16, 1990, this Regional Board adopted Order No. 90-38 (NPDES Permit No. CA0108740), Waste Discharge Requirements for Stormwater and Urban Runoff from the County of Orange, the Orange County Flood Control District, and the Incorporated Cities of Orange County within the San Diego Region. Order No. 90-38 prescribes requirements for the control of pollutants in stormwater/urban runoff from all incorporated cities and the unincorporated urban areas in Orange County within the jurisdiction of the Regional Board.
2. By letter dated July 23, 1992, (received May 5, 1993) Robert F. Wingard, Director of Regulation, Environmental Management Agency, County of Orange, notified the Regional Board that the City of Laguna Hills is now one of the incorporated cities of Orange County within the San Diego Region.
3. The Regional Board has notified all known interested parties of its intent to modify Order No. 90-38 to reflect the addition of the City of Laguna Hills as one of the parties responsible for complying with Order No. 90-38.
4. The Regional Board in a public hearing heard and considered all comments pertaining to the modification of Order No. 90-38.

Order No. 90-38

Page 2

IT IS HEREBY ORDERED THAT Order No. 90-38 is modified to reflect that the City of Laguna Hills is one of the incorporated cities of Orange County within the San Diego Region. As such, the City of Laguna Hills is one of the parties responsible for compliance with Order No. 90-38.

I, Arthur L. Coe, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Addendum adopted by the California Regional Water Quality Control Board, San Diego Region, on May 17, 1993.



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Arthur L. Coe  
Executive Officer

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
SAN DIEGO REGION

ADDENDUM NO. 1 TO ORDER NO. 90-38  
NPDES PERMIT NO. CA0108740

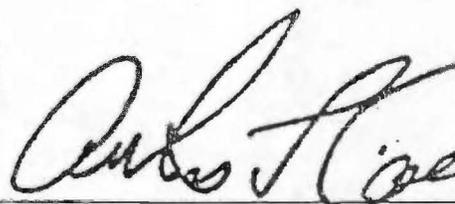
AN ADDENDUM MODIFYING RESPONSIBILITY FOR  
ORDER NO. 90-38 TO INCLUDE THE CITY OF LAKE FOREST  
AS AN INCORPORATED CITY OF ORANGE COUNTY  
WITHIN THE SAN DIEGO REGION

The California Regional Water Quality Control Board, San Diego Region (hereinafter Regional Board), finds that:

1. On July 16, 1990, this Regional Board adopted Order No. 90-38 (NPDES Permit No. CA0108740), Waste Discharge Requirements for Stormwater and Urban Runoff from the County of Orange, the Orange County Flood Control District, and the Incorporated Cities of Orange County within the San Diego Region. Order No. 90-38 prescribes requirements for the control of pollutants resulting from stormwater/urban runoff from all incorporated cities and the unincorporated urban areas in Orange County within the jurisdiction of the Regional Board.
2. By letter dated May 7, 1992, Robert F. Wingard, Director of Regulation, Environmental Management Agency, County of Orange, notified the Regional Board that the City of Lake Forest is now one of the incorporated cities of Orange County within the San Diego Region.
3. The Regional Board has notified all known interested parties of its intent to modify Order No. 90-38 to reflect the addition of the City of Lake Forest as one of the parties responsible for complying with Order No. 90-38.
4. The Regional Board in a public hearing heard and considered all comments pertaining to the modification of Order No. 90-38.

IT IS HEREBY ORDERED THAT Order No. 90-38 is modified to reflect that the City of Lake Forest is one of the incorporated cities of Orange County within the San Diego Region. As such, the City of Lake Forest is one of the parties responsible for compliance with Order No. 90-38.

I, Arthur L. Coe, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Addendum adopted by the California Regional Water Quality Control Board, San Diego Region, on September 21, 1992.



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Arthur L. Coe  
Executive Officer

California Regional Water Quality Control Board  
San Diego Region

ORDER NO. 90-42  
NPDES No. CA 0108758  
Waste Discharge Requirements  
for  
Stormwater and Urban Runoff  
from the  
County of San Diego  
the  
Incorporated Cities of San Diego County  
and the  
San Diego Unified Port District

The California Regional Water Quality Control Board, San Diego Region (hereinafter Regional Board), finds that:

1. Section 405 of the Water Quality Act (WQA) of 1987 added Section 402(p) to the Clean Water Act (CWA). Pursuant to Section 402(p)(4) of the CWA, the EPA is required to promulgate regulations for NPDES permit applications for stormwater discharges.
2. On December 7, 1988, the 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.
3. CWA Sections 402(p)(2)(C) and 402(p)(2)(D) provide for issuance of NPDES permits for discharges from municipal separate storm sewer (stormwater conveyance) systems serving a population of 100,000 or more. Section 402(p)(2)(E) of the CWA provides for issuance of NPDES permits for stormwater discharges determined to contribute to a violation of a water quality standard or determined to be a significant contributor of pollutants to waters of the United States.
4. It is in the interest of the people of the State for a permit regulating stormwater and urban runoff discharges from San Diego County to be adopted before the federal regulations take effect in order to: 1) provide additional flexibility in regulating stormwater and urban runoff discharges, 2) regulate stormwater and urban runoff discharges in a cost effective manner, and 3) initiate efforts to reduce stormwater and urban runoff pollutant discharges at an early date. In the absence of final federal regulations, this Order meets both the statutory requirements of Section 402 (p)(3)(B) and all requirements applicable to an NPDES permit issued under this Regional Board's discretionary authority.

5. On the dates listed below, the following entities submitted a letter in application ("letter of intent") for an area-wide National Pollutant Discharge Elimination System (NPDES) permit for stormwater and urban runoff discharges to receiving waters within San Diego County:

List of Entities Applying for an NPDES Permit

<u>Entity</u>	<u>Date Received</u>
City of Carlsbad	7/16/90
City of Chula Vista	6/14/90
City of Coronado	7/5/90
City of Escondido	5/31/90
City of Imperial Beach	6/5/90
City of La Mesa	7/9/90
City of San Diego	6/26/90
City of San Marcos	6/18/90
County of San Diego	6/20/90

6. Table 1 (attached) identifies California Department of Finance population figures for San Diego County. The cities of San Diego, Chula Vista and Oceanside had 1989 populations in excess of 100,000. Since the City of Escondido's 1989 population was 99,007, its population is or will soon be greater than 100,000. The 1989 population of the unincorporated area of San Diego County was 391,688.
7. Stormwater and urban runoff from the County of San Diego, and all cities in San Diego County, and the area under the jurisdiction of the San Diego Unified Port District (SDUPD) contribute to a violation of a water quality standard and/or are significant contributors of pollutants to waters of the United States. Table 2 summarizes water quality standard violations to which stormwater and urban runoff discharges from various entities in San Diego County contribute. Consequently, the County of San Diego, all the incorporated cities in San Diego County, and SDUPD are named as permittees in this permit.
8. Water quality studies in many urban areas have shown that urban runoff typically contains significant quantities of pollutants. Water quality in receiving waters is adversely impacted by stormwater and urban runoff discharges. A comprehensive stormwater and urban runoff management and regulation program is essential for the protection of the water resources of the region. In order to establish an effective county-wide stormwater and urban runoff pollution control management program, it is necessary to name all incorporated cities in San Diego County, the SDUPD, and the County of San Diego as

permittees in this Order. This Order requires the permittees to submit documentation on existing stormwater and urban runoff pollution control programs and specifies additional requirements directed toward achieving the water quality objectives for surface waters in San Diego County. The intent of this permit is to improve water quality in the region.

9. The discharges consist of surface runoff generated from various land uses and activities in hydrologic drainage areas which discharge into receiving waters in San Diego County. The quality and quantity of these discharges may vary considerably and is affected by land use, basin hydrology and geology, season, the frequency and duration of storm events, the presence of illicit connections and discharges, and waste management and disposal practices. The parameters and pollutants of potential concern and significance in these discharges may include, but are not limited to pH, fecal coliform, fecal streptococcus, enterococcus, volatile organic carbon (VOC), surfactants (MBAS), oil and grease, petroleum hydrocarbons, total suspended and settleable solids, total organic carbon, biochemical oxygen demand (BOD), chemical oxygen demand (COD), lead, copper, chromium, cadmium, silver, nickel, zinc, cyanides, phenols, nutrients (e.g., nitrogen, nitrate, phosphate, etc.), and biocides. Since stormwater and urban runoff contains "waste", as defined in California Water Code (CWC) Section 13050, stormwater and urban runoff discharges constitute discharges of waste. Consequently such discharges are subject to CWC Section 13260 et seq., as well as Section 402 of the Clean Water Act, as amended.
10. The permittees may obtain their authority to control pollutants in stormwater discharges, prohibit illegal discharges and control spills, and require compliance with stormwater management programs and carry out inspections of the drainage facilities in their areas of jurisdiction from various forms of legal authority, such as charters, State Code provisions for General Law cities, city ordinances and applicable portions of Municipal Codes and the State Water Code. Where an individual permittee does not already have the legal authority to do so, this Order requires the permittee to establish the legal authority to control pollutants in stormwater discharges to receiving waters of the United States.
11. The permittees have not reached an agreement regarding their roles and responsibilities in implementing the provisions of this Order. This Order requires that the permittees reach an agreement regarding the roles and

responsibilities of each party. This Order also requires that a "principal permittee(s)" and "co-permittees" be named. For purposes of this Order, a "principal permittee" is also a "co-permittee".

12. The "principal permittee(s)" will coordinate the efforts of all entities in implementing the provisions of this Order. In general, the "principal permittee" will be responsible for coordinating and collating data and submitting reports to the Regional Board in addition to their site-specific responsibilities. "Co-permittees" will develop site-specific responsibilities, perform compliance monitoring and inspections, submit stormwater conveyance system maps and compliance reports to the principal permittee(s), and demonstrate and exercise enforcement authority for achieving compliance with the terms and conditions of this Order in their area of jurisdiction.
13. This Order requires the permittees to develop and implement programs to ensure that entities discharging stormwater/urban runoff into stormwater conveyance systems take steps to prevent/control/reduce discharges of pollutants to waters of the United States. The Regional Board has the discretion and authority to require non-cooperating entities to participate in this county-wide permit or obtain individual waste discharge requirements if it is determined that discharges from such entities cause or contribute to violations of water quality standards or are significant contributors of pollutants to waters of the United States.
14. Stormwater and urban runoff discharges in San Diego County are tributary to various receiving waters, including creeks, rivers, reservoirs, lakes, lagoons, estuaries, harbors, bays, and the Pacific Ocean. The receiving waters under the jurisdiction of this Regional Board are identified in the Comprehensive Water Quality Control Plan Report, San Diego Basin (9), (Basin Plan).
15. Due to time constraints, the permittees submitting letter applications for this Order have not yet submitted information on existing stormwater/urban runoff monitoring and pollution control programs. This Order requires information on existing programs to be submitted to the Executive Officer. This Order also requires the permittees to submit proposed monitoring programs to evaluate stormwater and urban runoff discharges and detect illicit connections and discharges to stormwater conveyance systems within their area of jurisdiction, and establish best management practices to control pollution as a result of stormwater and urban runoff discharges.

In the case of the County of San Diego, areas subject to the terms and conditions of this Order are those unincorporated areas within the County of San Diego's Urban Limit Line. The remaining areas subject to the terms and conditions of this Order are within the boundary lines of the incorporated cities, and the lands under the jurisdiction of the SDUPD.

16. The State Water Resources Control Board (hereinafter State Board) adopted a Water Quality Control Policy for Enclosed Bays and Estuaries of California (Bays and Estuaries Policy) on May 16, 1974. The policy established water quality principles, guidelines, effluent quality requirements and prohibitions to govern the disposal of wastes in the enclosed bays and estuaries of California. The Bays and Estuaries Policy applies to the following receiving waters:

- a. Tiajuana River Estuary
- b. San Diego Bay
- c. Mission Bay
- d. Los Penasquitos Lagoon
- e. San Dieguito Lagoon
- f. San Elijo Lagoon
- g. Batiquitos Lagoon
- h. Agua Hedionda Lagoon
- i. Buena Vista Lagoon
- j. Oceanside Harbor/Del Mar Boat Basin
- k. Santa Margarita Lagoon

17. The Bays and Estuaries Policy contains the following prohibition specific to land runoff:

"The direct or indirect discharge of silt, sand, soil, clay, or other earthen materials from onshore operations including mining, construction, agriculture, and lumbering, in quantities which unreasonably affect or threaten to affect beneficial uses shall be prohibited."

18. The State Water Resources Control Board adopted a revised Water Quality Control Plan for Ocean Waters of California (Ocean Plan) on March 22, 1990. The Ocean Plan identifies the following beneficial uses of state ocean waters to be protected:

- a. Industrial water supply;
- b. Navigation;
- c. Aesthetic enjoyment;
- d. Water contact recreation;
- e. Non-contact water recreation;

- f. Ocean commercial and sport fishing;
- g. Mariculture;
- h. Preservation and enhancement of areas of special biological significance;
- i. Preservation and enhancement of rare and endangered species;
- j. Marine habitat;
- k. Fish migration;
- l. Fish spawning; and
- m. Shellfish harvesting.

In order to protect the above beneficial uses, the Ocean Plan established water quality objectives (for bacteriological, physical, chemical, and biological characteristics, and for radioactivity), general requirements for management of waste discharged to the ocean, quality requirements for waste discharges, discharge prohibitions, and general provisions.

- 19. The Comprehensive Water Quality Control Plan Report, San Diego Basin (9), (Basin Plan) was adopted by this Regional Board on March 17, 1975 and subsequently approved by the State Water Resources Control Board (State Board). Subsequent revisions to the Basin Plan have also been adopted by the Regional Board and approved by the State Board.
- 20. The Basin Plan identifies the following beneficial uses of state ocean waters to be protected:
  - a. Industrial service supply;
  - b. Navigation;
  - c. Water contact recreation;
  - d. Noncontact water recreation;
  - e. Ocean commercial and sport fishing;
  - f. Preservation of Areas of Special Biological Significance;
  - g. Preservation of rare and endangered species;
  - h. Marine habitat;
  - i. Fish migration; and
  - j. Shellfish harvesting.

The Basin Plan relies primarily on requirements of the Ocean Plan for protection of those beneficial uses. However, the Basin Plan establishes additional water quality objectives for dissolved oxygen and pH.

- 21. Although the Basin Plan relies primarily on the Ocean Plan for the protection of marine waters, the Basin Plan contains the following prohibitions, applicable to discharges, for waters subject to tidal action:

" The dumping or deposition from shore or from vessels of oil, garbage, trash or other solid municipal, industrial or agricultural waste directly into waters subject to tidal action or adjacent to waters subject to tidal action in any manner which may permit it to be washed into the waters subject to tidal action is prohibited."

" Discharge of industrial wastewaters exclusive of cooling water, clear brine or other waters which are essentially chemically unchanged, into waters subject to tidal action is prohibited."

" The dumping or deposition of chemical wastes, chemical agents or explosives into waters subject to tidal action is prohibited."

22. The Basin Plan identifies the following beneficial uses of inland surface waters in San Diego County:
- a. Municipal and domestic supply;
  - b. Agricultural supply;
  - c. Industrial service supply;
  - d. Industrial process supply;
  - e. Hydropower generation;
  - f. Water contact recreation;
  - g. Non-contact water recreation;
  - h. Warm fresh-water habitat;
  - i. Cold fresh-water habitat;
  - j. Preservation of rare and endangered species; and
  - k. Wildlife habitat.

The Basin Plan also identifies groundwater recharge as a potential beneficial use for several surface waters within the region. Site-specific listings of beneficial uses are listed in the Basin Plan.

23. The Basin Plan contains the following prohibitions, applicable to discharges, for inland surface waters:

"Discharge of treated or untreated sewage or industrial wastes to a natural watercourse upstream of surface storage or diversion facilities used for municipal supply is prohibited."

"Discharge of treated or untreated sewage or industrial wastewater, exclusive of cooling water or other waters which are chemically unchanged, to

a watercourse, is prohibited except in cases where the quality of said discharge complies with the receiving body's water quality objectives."

"The dumping or deposition of oil, garbage, trash, or other solid municipal, industrial, or agricultural waste directly into inland waters or watercourses or adjacent to the water courses in any manner which may permit its being washed into the watercourse is prohibited."

"Land grading and similar operations causing soil disturbance which do not contain provisions to minimize soil erosion and limit suspended matter in area runoff are prohibited."

24. The requirements contained in this Order are necessary to implement the objectives of the Ocean Plan, Bays and Estuaries Policy, and the Basin Plan for receiving waters within the region.
25. Numerical and narrative water quality standards exist for the receiving waters in the region. Due to the enormous variability in stormwater quality and quantity and the complexity of urban runoff, this Order does not contain numerical limitations for any constituents. The impact of stormwater and urban runoff discharges on water quality of 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 permittees to monitor the discharges and to analyze the data. This Order also requires the development and implementation of best management practices (BMPs). "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." For purposes of this Order, BMPs for the control of pollutants in stormwater and urban runoff may include the use of non-structural (e.g. public education, regulatory powers, urban planning, etc.) and structural (e.g. detention basins, grass swales, runoff infiltration devices, etc.) controls which may be applied to a particular site or throughout a region (e.g., a city or throughout an area served by a stormwater conveyance system).

26. Pursuant to 40 CFR 131.12 and State Board Resolution No. 68-16, Statement of Policy with Respect to Maintaining High Quality of Waters in California (collectively "antidegradation policies"), the Regional Board shall ensure that any increase in pollutant loading to a receiving water meets the requirements stated in the foregoing policies. At a minimum, permitting actions shall be consistent with the following:
- a. Existing instream water uses and the level of water quality necessary to protect existing beneficial uses shall be maintained and protected;
  - b. Where the quality of the waters exceed levels necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water, the quality shall be maintained and protected unless the State finds, after full satisfaction of the intergovernmental coordination and public participation provisions of the State's continuing planning process, that allowing lower water quality is necessary to accommodate important economic or social development in the area in which the waters are located;
  - c. Where high quality waters constitute an outstanding national resource, such as waters of National and State parks and wildlife refuges and waters of exceptional recreational or ecological significance, that water quality shall be maintained and protected; and
  - d. In those cases where potential water quality impairment associated with a thermal discharge is involved, the antidegradation policy and implementing method shall be consistent with Section 316 of the Clean Water Act.
27. The Regional Board, in establishing the requirements contained herein, has taken into consideration the requirements of the State and Federal "antidegradation" policies and has determined that:
- a. The conditions and requirements established in this order for discharges of stormwater/urban runoff to waters of the United States ensure that the existing beneficial uses and quality of receiving Bay waters will be protected and improved through the implementation of best management practices for the control of pollutants in stormwater and urban runoff;

- b. Discharges of urban runoff to waters of the United States will continue regardless of the issuance of this Order. The issuance of this Order is necessary to ensure achievement and maintenance of the goals and objectives of the water quality control plans adopted by the State;
  - c. No receiving waters covered under the terms and conditions of this Order have been designated an outstanding national resource water. However, the San Diego-La Jolla Ecological Reserve and the San Diego Marine Life Refuge, located in coastal waters near La Jolla, a community of the City of San Diego, have been designated Areas of Special Biological Significance (ASBS) by the State Water Resources Control Board. The City of San Diego is subject to the terms and conditions of this Order. Implementation of BMPs for the control of pollutants in stormwater from the La Jolla area will further protect and improve water quality in these ASBS; and
  - d. Thermal discharges potentially impairing water quality are not authorized under the terms and conditions of this Order, thus, Section 316 of the Clean Water Act is not applicable.
28. Pursuant to Section 402 of the CWA, and amendments thereto, and pursuant to Section 13260, et seq. of the California Water Code, this Order shall serve as an NPDES permit and waste discharge requirements for the discharge of stormwater and urban runoff to surface waters of San Diego County.
29. The Regional Board, in establishing the requirements contained herein, considered factors including, but not limited to, the following:
- a. Beneficial uses to be protected and the water quality objectives reasonably required for that purpose;
  - b. Other waste discharges;
  - c. The need to prevent nuisance;
  - d. Past, present, and probable future beneficial uses of the waters under consideration;
  - e. Environmental characteristics of the waters under consideration;

- f. Water quality conditions that could reasonably be achieved through the coordinated control of all factors which affect water quality in the area;
  - g. Economic considerations; and
  - h. The need for developing housing within the region.
30. The issuance of this permit for the discharge of stormwater and urban runoff is exempt from the requirement for preparation of environmental documents under the California Environmental Quality Act (Public Resources Code, Division 13, Chapter 3, Section 21000 et seq.) in accordance with the California Water Code, Section 13389.
  31. The Regional Board has considered all water resource related environmental factors associated with the discharge of stormwater runoff and urban runoff.
  32. The Regional Board has notified all known interested parties of its intent to issue an NPDES permit for the discharge of stormwater and urban runoff
  33. The Regional Board has, at a public meeting, heard and considered all comments pertaining to the discharge of stormwater and urban runoff.

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. GENERAL REQUIREMENTS

- A. The following entities (permittees) are subject to the terms and conditions of this Order and shall cooperate in the development and implementation of a comprehensive county-wide stormwater/urban runoff management program:

<u>Cities</u>	<u>County</u>	<u>Other</u>
Carlsbad	San Diego	San Diego Unified
Chula Vista		Port District
Coronado		
Del Mar		
El Cajon		
Encinitas		
Escondido		
Imperial Beach		
La Mesa		

Lemon Grove  
National City  
Oceanside  
Poway  
San Diego  
San Marcos  
Santee  
Solana Beach  
Vista

- B. The permittees shall prohibit illicit/illegal discharges from entering into stormwater conveyance systems. Discharges conditionally allowed to enter stormwater conveyance systems are specified in Item No. VIII. below.
- C. As specified in Item VI., the permittees shall develop, approve, sign, and submit a legally binding "Implementation Agreement" to the Regional Board. Any revisions to the Implementation Agreement shall be forwarded to the Executive Officer within 30 days of approval by all the permittees. The Implementation Agreement shall:
1. Designate "principal permittee(s)" and "co-permittees" where the principal permittee(s) will assume, at a minimum, the overall role of coordinating the stormwater management program for the agreed upon hydrographic areas. The principal permittee(s) will also coordinate and collate data and reports for submittal to the Regional Board.
  2. Designate the roles and responsibilities of the permittees regarding the requirements herein.
  3. Designate the fiscal responsibilities of the permittees.
- D. As specified in Item No. IX., the permittees shall develop and implement best management practices (BMPs), including management practices, control techniques, and system design and engineering methods, and such other provisions as the Executive Officer determines appropriate for the control of pollutants, to control/reduce the discharge of pollutants to waters of the United States to the maximum extent practicable. The BMPs so developed, along with a time schedule for implementation, shall be submitted for the approval and/or modification by the Executive Officer of the Regional Board. In developing the best management

practices, the permittees shall consider the water quality objectives of all the receiving waters.

- E. As specified in Item No. VII., the permittees shall develop and implement stormwater, urban runoff, and receiving water monitoring programs to evaluate discharges of pollutants from stormwater conveyance systems to waters of the United States. The monitoring programs developed shall be collated by the principal permittee(s) and submitted for the approval of the Executive Officer of the Regional Board.
- F. The permittees shall ensure that BMPs are implemented by entities discharging stormwater and urban runoff to stormwater conveyance systems within the area of jurisdiction of the permittees.

## II. RESPONSIBILITIES OF PRINCIPAL PERMITTEE(S)

- A. The principal permittee(s), as a minimum, shall be responsible for the overall program management or coordination, including the following:
1. Coordinate all the activities of all permittees with the Regional Board.
  2. Solicit and respond to public input<sup>1</sup> for proposed monitoring, reconnaissance, management, and implementation plans.
  3. Prepare (or collate) and submit<sup>2</sup> to the Regional Board all reports, plans, and programs as required by this Order.
  4. Abide by the terms of the Implementation Agreement.

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<sup>1</sup> Solicitation of, and response to, 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.

<sup>2</sup> Co-permittees may individually submit reports due January 31, 1991 if a principal permittee(s) has not been designated as of that date. After January 31, 1991, all co-permittees reports covering the same task(s) shall be collated and submitted to the Regional Board at the same time.

III. RESPONSIBILITIES OF CO-PERMITTEES

- A. The co-permittees shall be responsible for management of stormwater and urban runoff management programs within their jurisdictions, including but not limited to the following<sup>3</sup>:
1. Conduct stormwater conveyance system inspections.
  2. Plan and conduct surveys and characterizations needed to identify the pollutant sources and drainage areas.
  3. Prepare management programs, monitoring programs, and implementation plans.
  4. Implement management programs, monitoring programs, and other plans as required by this Order.
  5. Submit stormwater conveyance system maps with periodic revisions as necessary.
  6. Prepare and submit all reports to the principal permittee(s) in a timely manner.
  7. Enact legislation and ordinances as necessary to ensure compliance with the stormwater management programs and the implementation plans.
  8. Pursue enforcement actions as necessary to ensure compliance with the stormwater management programs and the implementation plans.
  9. Ensure adequate response to emergency situations such as accidental spills, leaks, illicit discharges, etc.
  10. Abide by the terms of the Implementation Agreement.

IV. FISCAL ANALYSIS

- A. By January 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 by each permittee and the results submitted to the principal permittee(s) in sufficient time to submit a collated report to the Regional Board.

V. INVENTORY AND DESCRIPTION OF STORMWATER PROGRAMS/DATA

- A. The permittees shall inventory existing stormwater and urban runoff pollution control programs, illicit discharge detection programs, monitoring programs and data, stormwater conveyance system maps, land use maps,

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<sup>3</sup> A permittee may enter into agreements to have other parties perform any of these requirements/tasks. However, responsibility for compliance with the terms and conditions of this Order lies with the permittee.

and existing laws, ordinances, and codes giving the permittees the authority to implement and enforce stormwater pollution control programs in their areas of jurisdiction. The information shall include a list of major sources of pollutants such as industrial and military or other federal facilities, airports, highways, shopping centers, and large parking areas. The permittees shall submit reports on the existing programs and data/maps to the principal permittee(s) in sufficient time to submit a collated report(s) to the Regional Board as follows:

<u>TASK</u>	<u>REPORT DATE</u>
Inventory and Program/Data Description Progress Report:	1/31/91
Inventory and Program/Data Description Final Report:	7/31/91

- B. After inventorying and compiling data regarding existing programs and data, the permittees shall submit reports on the adequacy of the existing data after taking into consideration any requirements of NPDES stormwater regulations promulgated by the Environmental Protection Agency or as specified by the Executive Officer of the Regional Board. Where existing information is insufficient to comply with NPDES requirements, or requirements specified by the Executive Officer, the permittees shall take actions to correct any deficiencies by compiling additional information as necessary. Reports regarding the information shall be submitted to the principal permittee(s) in sufficient time to submit a collated report(s) to the Regional Board as follows:

<u>TASK</u>	<u>REPORT DATE</u>
Inventory and Program/Data Corrective Action Progress Report:	1/31/92
Inventory and Program/Data Corrective Action Final Report:	7/31/92

VI. IMPLEMENTATION AGREEMENT

As specified in General Requirement I. C., the permittees shall collectively develop and submit an implementation agreement(s) between all entities subject to the terms and conditions of this Order. The Implementation Agreement shall specify the roles and responsibilities of all permittees. Reports shall be submitted by the principal permittee(s) as follows:

<u>TASK</u>	<u>REPORT DATE</u>
Implementation Agreement Progress Report	1/31/91
Submittal of Implementation Agreement	7/31/91

VII. STORMWATER/RECEIVING WATER MONITORING PROGRAM

The permittees shall develop and implement (after approval of the plan by the Executive Officer) a stormwater, urban runoff, and receiving water monitoring program. Proposed monitoring programs and time schedules for their implementation shall be subject to the approval of the Executive Officer. Proposed monitoring programs, time schedules, and implementation reports shall be submitted to the principal permittee(s) in sufficient time to submit a collated report(s) to the Regional Board as follows:

<u>TASK</u>	<u>REPORT DATE</u>
Progress Report on the Development of Proposed Monitoring Programs	1/31/91
Submittal of Proposed Monitoring Programs and Implementation Time Schedules	7/31/91
Progress Report on the Implementation of the Monitoring Programs	1/31/92
Compliance Report on the Implementation of the Monitoring Programs	7/31/92

Permittees shall continue to submit monitoring program reports on a semi-annual basis to the principal permittee(s) in sufficient time to submit a collated report(s) to the Regional Board each January 31 and July 31, unless specified otherwise by the Executive Officer.

VIII. ILLICIT CONNECTION/ILLEGAL DUMPING DETECTION PROGRAM

- A. The permittees shall develop and implement (after approval by the Executive Officer) an illicit connection/illegal discharge detection program to identify and eliminate non-stormwater discharges to stormwater conveyance systems. Where necessary, codes, ordinances, or other laws shall be enacted to ensure implementation of the program. Proposed illicit connection/illegal discharge detection and elimination programs and other reports shall be subject to the approval of the Executive Officer. Reports shall be

submitted to the principal permittee(s) in sufficient time to submit a collated report(s) to the Regional Board as follows:

<u>TASK</u>	<u>REPORT DATE</u>
Progress Report on the Development of a Proposed Illegal/Illicit Discharge Detection/Elimination Program	7/31/91
Submittal of the Proposed Illegal/Illicit Discharge Detection/Elimination Program and Implementation Time Schedule	1/31/92
Progress Report on the Implementation of the Illegal/Illicit Discharge Detection/Elimination Program	7/31/92
Compliance Report on the Implementation of the Illegal/Illicit Discharge Detection/Elimination Program	1/31/93

- B. The permittees shall effectively eliminate all identified illegal/illicit discharges in the shortest time practicable, and in no case later July 16, 1995. Those identified after July 16, 1995 shall be eliminated in the shortest time practicable. The following discharges shall not be considered illegal/illicit 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 an NPDES permit, discharges to storm water conveyance systems from 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 discharges shall be

prohibited from entering stormwater conveyance systems.

Permittees shall continue to submit illegal/illicit discharge detection and elimination program reports on a semi-annual basis to the principal permittee(s) in sufficient time to submit a collated report(s) to the Regional Board each January 31 and July 31, unless specified otherwise by the Executive Officer.

IX. BEST MANAGEMENT PRACTICES (BMPs) PROGRAM FOR STORMWATER POLLUTION CONTROL

The permittees shall develop and implement BMPs to reduce/control/eliminate pollutants in discharges to and from stormwater conveyance systems in their areas of jurisdiction to the maximum extent practicable. The BMPs shall address non-structural and structural techniques for the control of pollutants in urban runoff and stormwater discharges from industrial, commercial, and residential areas. Where necessary, codes, ordinances, or other laws shall be enacted to ensure implementation of the program. Proposed programs and time schedules for their implementation shall be subject to the approval of the Executive Officer. Reports shall be submitted to the principal permittee(s) in sufficient time to submit a collated report(s) to the Regional Board as follows:

<u>TASK</u>	<u>REPORT DATE</u>
Progress Report on the Development of a Proposed Best Management Practices Program	7/31/91
Submittal of a Proposed Best Management Practices Program	1/31/92
Progress Report on the Implementation of the Best Management Practices Program	7/31/92
Compliance Report on the Implementation of the Best Management Practices Program	1/31/93

Permittees shall continue to submit BMP implementation program reports on a semi-annual basis to the principal permittee(s) in sufficient time to submit a collated report(s) to the Regional Board each January 31 and July 31, unless specified otherwise by the Executive Officer.

X. PROGRAM ANALYSIS

The permittees shall conduct an analysis of the effectiveness of the overall stormwater pollution control management program in their areas of jurisdiction. If the water quality objectives of the receiving waters are violated as a result of stormwater/urban runoff discharges, the permittees shall identify proposed programs which will result in the attainment of the water quality objectives, and a time schedule to implement the new programs. Such analyses shall include a discussion of compliance with any NPDES stormwater regulations promulgated by the Environmental Protection Agency, or as specified by the Executive Officer, and actions necessary to come into compliance with such regulations and other regulations/policies applicable to the discharge. Reports shall be submitted to the principal permittee(s) in sufficient time to submit a collated report(s) to the Regional Board by January 31, 1993 and each January 31 thereafter.

XI. REPORTING AND SCHEDULE

- A. A summary of tasks to be completed and reports submitted is as follows:

(continued on the following page)

<u>TASK NUMBER</u>	<u>REPORT(S) DUE</u>
IV. FISCAL ANALYSIS	1/31 of each year
V. A. INVENTORY AND DESCRIPTION OF EXISTING STORMWATER SYSTEMS/PROGRAMS	1/31/91, 7/31/91
V. B. INVENTORY AND DATA COMPLIANCE WITH NPDES REGULATIONS OR EXECUTIVE OFFICER SPECIFICATIONS	1/31/92, 7/31/92
VI. IMPLEMENTATION AGREEMENT	1/31/91, 7/31/91
VII. STORMWATER/RECEIVING WATER MONITORING PROGRAM	
Progress Report on Development of Program	1/31/91
Submit Proposed Program	7/31/91
Progress Report on Implementation	1/31/92
Compliance Report on Implementation	7/31/92*
*and semi-annual reports thereafter	
VIII. ILLICIT CONNECTION/ILLEGAL DISCHARGE DETECTION PROGRAM	
Progress Report on Development of Program	7/31/91
Submit Proposed Program	1/31/92
Progress Report on Implementation	7/31/92
Compliance Report on Implementation	1/31/93*
*and semi-annual reports thereafter	
IX. BEST MANAGEMENT PRACTICES PROGRAM FOR STORMWATER POLLUTION CONTROL	
Progress Report on Development of Program	7/31/91
Submit Proposed Program	1/31/92
Progress Report on Implementation	7/31/92
Compliance Report on Implementation	1/31/93*
*and semi-annual reports thereafter	
X. PROGRAM ANALYSIS	1/31/93 and annually thereafter

=ee=

B. All reports and information required herein shall be submitted to the Executive Officer of the Regional Board and the Regional Director of the Environmental Protection Agency, Region IX, at the following addresses:

Executive Officer  
California Regional Water Quality Control Board  
San Diego Region  
9771 Clairemont Mesa Blvd., Ste. B  
San Diego, California 92124-1331

-----  
Environmental Protection Agency  
Region IX  
Permits and Compliance Branch  
1235 Mission Street (Mail Code W-5)  
San Francisco, California 94103

XIII. ANALYTICAL METHODS/RECORD KEEPING

- A. Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge. Once established, monitoring points shall not be changed without notification to and the approval of the Executive Officer.
- B. Monitoring must be conducted according to United States Environmental Protection Agency test procedures approved under Title 40, Code of Federal Regulations (CFR), Part 136, "Guidelines Establishing Test Procedures for Analysis of Pollutants Under the Clean Water Act" as amended, unless other test procedures have been specified by this Order or the Executive Officer.
- C. All analyses shall be performed in a laboratory certified to perform such analyses by the California Department of Health Services or a laboratory approved by the Executive Officer.
- D. Monitoring results must be reported on discharge monitoring report forms or in a format approved by the Executive Officer.
- E. If a permittee monitors any pollutant more frequently than required by this Order, using test procedures approved under 40 CFR, Part 136, or as specified in this Order, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the permittee's monitoring report. The increased frequency of monitoring shall also be reported.
- F. Permittees shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this Order, and records of all data used to complete the application for this Order. Records

shall be maintained for a minimum of five years from the date of the sample, measurement, report, or application. This period may be extended during the course of any unresolved litigation regarding this discharge or when requested by the Regional Board Executive Officer.

- G. Records of monitoring information shall include:
1. The date, exact place, and time of sampling or measurements;
  2. The individual(s) who performed the sampling or measurements;
  3. The date(s) analyses were performed;
  4. The individual(s) who performed analyses;
  5. The analytical techniques or method used; and
  6. The results of such analyses.
- H. Calculations for all limitations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified by the Executive Officer or in this Order.
- I. All monitoring instruments and devices used by a permittee to fulfill the prescribed monitoring program shall be properly maintained and calibrated as necessary to ensure their continued accuracy.
- J. Permittees shall report all instances of noncompliance not reported under Standard Reporting Requirement XIV. E. of this Order at the time monitoring reports are submitted. The reports shall contain the information listed in Standard Reporting Requirement XIV. E.
- K. The monitoring reports shall be signed by an authorized person as required by Standard Reporting Requirement XIV. L.
- L. A composite sample is defined as a combination of at least 8 sample aliquots of at least 100 milliliters each, collected at periodic intervals during the operating hours of a facility over a 24-hour period. For volatile pollutants, aliquots must be combined in the laboratory immediately before analysis. The composite must be flow proportional; either the time interval between each aliquot or the volume of each aliquot must be proportional to either the stream flow at the time of sampling or the total stream flow since the collection of the previous aliquot. Aliquots may be collected manually or automatically.
- M. A grab sample is an individual sample of at least 100 milliliters collected at a randomly selected time over

a period not exceeding 15 minutes.

XIII. PROVISIONS

- A. Neither the treatment nor the discharge of pollutants shall create a pollution, contamination, or nuisance as defined by Section 13050 of the California Water Code.
- B. The permittees must comply with all conditions of this Order. Any permit noncompliance constitutes a violation of the Clean Water Act and the California Water Code and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; the issuance of an individual permit; or for denial of a renewal application.
- C. The permittees shall take all reasonable steps to minimize or correct any adverse impact on the environment resulting from noncompliance with this Order, including such accelerated or additional monitoring as may be necessary to determine the nature and impact of the noncomplying discharge.
- D. This Order may be modified, revoked and reissued, or terminated for cause including, but not limited to, the following:
  - 1. Violation of any terms or conditions of this Order;
  - 2. Obtaining this Order by misrepresentation or failure to disclose fully all relevant facts; or
  - 3. A change in any condition that requires either a temporary or permanent reduction or elimination of the discharge.

The filing of a request by a permittee for modification, revocation and reissuance, or termination of this Order or a notification of planned change in or anticipated noncompliance with this Order does not stay any condition of this Order.

- E. In addition to any other grounds specified herein, this Order shall be modified or revoked at any time if, on the basis of any new data, the Executive Officer determines that continued discharges may cause unreasonable degradation of the aquatic environment.
- F. This Order is not transferable to any person except after notice to the Executive Officer of this Regional Board. The Regional Board may require a new report of waste discharge to change the name of a permittee and

incorporate such other requirements as may be necessary under the California Water Code and the Clean Water Act. A permittee shall submit notice of any transfer of this Order's responsibility and coverage to a new permittee as described under Standard Reporting Requirement XIV.C.

- G. This Order does not convey any property rights of any sort or any exclusive privileges. The requirements prescribed herein do not authorize the commission of any act causing injury to persons or property of another, including property damage caused as a result of the discharge, nor protect the permittee from his liabilities under federal, state, or local laws, nor create a vested right for the permittee to continue his discharge.
- H. Permittees shall allow the Regional Board, or an authorized representative or any representative of the United States Environmental Protection Agency upon the presentation of credentials and other documents as may be required by law, to:
1. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this Order;
  2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Order;
  3. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices or operation regulated or required under this Order; and
  4. Sample or monitor at reasonable times, for the purposes of assuring compliance with this Order or as otherwise authorized by the Clean Water Act or California Water Code, any substances or parameters at any location.
- I. Permittees shall, at all times, properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by a permittee to achieve compliance with the conditions of this Order. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls including appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems only when necessary to achieve

compliance with the conditions of this Order.

- J. In an enforcement action, it shall not be a defense for a permittee that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with this Order. Upon reduction, loss, or failure of the treatment facility, the permittee shall, to the extent necessary to maintain compliance with this Order, control production or all discharges, or both, until the facility is restored or an alternative method of treatment is provided. This provision applies, for example, when the primary source of power of the treatment facility fails, is reduced or is lost.
- K. The provisions of this Order are severable, and if any provision of this Order, or the application of any provision of this Order to any circumstances, is held invalid, the application of such provision to other circumstances, and the remainder of this Order, shall not be affected thereby.
- L. Bypass of Treatment Facilities

1. Definitions

- (a) "Bypass" means the intentional diversion of waste streams from any portion of the treatment facility.
- (b) "Severe property damage" means substantial physical damage to property, damage to the treatment facilities which cause them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

2. Bypass Not Exceeding Effluent Limitations

A permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operations. These bypasses are not subject to the provisions of paragraphs (3) and (4) of this section.

3. Notice of Anticipated Bypass and Unanticipated Bypass

- (a) Anticipated bypass. If a permittee knows in advance of the need for a bypass, they shall submit prior notice, if possible, at least ten

days before the date of the bypass.

- (b) Unanticipated bypass. A permittee shall submit notice of an unanticipated bypass as described under Standard Reporting Requirement XIV. E.

4. Prohibition of Bypass

- (a) Bypass is prohibited and the Regional Board may take enforcement action against a permittee for bypass, unless:

(1) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;

(2) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated waste, or maintenance during normal periods of equipment downtime. This condition is not satisfied if the permittee could have installed adequate backup equipment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and

(3) The permittee submitted notices as required under paragraph (3) of this section.

- (b) The Executive Officer may approve an anticipated bypass, after considering its adverse effect, if the Executive Officer determines that it will meet the three conditions listed above in paragraph (1) of this section.

M. Upset Conditions

1. Definitions

"Upset" means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based effluent limitations because of factors beyond the reasonable control of a permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive

maintenance, or careless or improper operation.

2. Effect of an Upset

An upset constitutes an affirmative defense to an action brought for noncompliance with such technology-based permit effluent limitations if the requirements of paragraph (3) of this section are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.

3. Conditions Necessary for a Demonstration of Upset

A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:

- (a) An upset occurred and that the permittee can identify the specific cause(s) of the upset;
- (b) The permitted facility was at the time being properly operated; and
- (c) The permittee submitted notice of the upset as required in Standard Reporting Requirement XIV. E.

4. Burden of Proof

In any enforcement proceeding, a permittee seeking to establish the occurrence of an upset has the burden of proof.

XIV. STANDARD REPORTING REQUIREMENTS

- A. A new Report of Waste Discharge shall be filed with the Regional Board not less than 180 days prior to the following:
  - 1. Significant change in disposal method (e.g., change in the method of treatment which would significantly alter the nature of the waste).
  - 2. Significant change in disposal area (e.g., moving the discharge to a disposal area significantly

removed from the original area, potentially causing different water quality or nuisance problems).

3. Other circumstances which result in a material change in character, amount, or location of the waste discharge.
- B. A permittee shall give advance notice to the Executive Officer of any planned changes in a permitted facility or activity which may result in noncompliance with the requirements of this Order.
  - C. A permittee must notify the Executive Officer, in writing, at least 30 days in advance of any proposed transfer of this Order's responsibility and coverage to a new permittee. The notice must include a written agreement between the existing and new permittee containing a specific date for the transfer of this Order's responsibility and coverage between the current permittee and the new permittee. This agreement shall include an acknowledgement that the existing permittee is liable for violations up to the transfer date and that the new permittee is liable from the transfer date on.
  - D. The permittees shall comply with any monitoring and reporting requirements contained in this Order and any additional monitoring requirements specified by the Executive Officer.
  - E. A permittee shall report any noncompliance which may endanger health or the environment. Any information shall be provided orally to the Executive Officer within 24 hours from the time the permittee becomes aware of the circumstances. A written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance. The Executive Officer, or an authorized representative may waive the written report on a case-by-case basis if the oral report has been received within 24 hours.
  - F. A permittee shall notify the Executive Officer as soon as it is known or there is reason to believe:
    1. That any activity has occurred or which will occur which would result in the discharge of any toxic pollutant which is not limited in this Order, if that discharge will exceed the highest of the following "notification levels":

- a. One hundred micrograms per liter (100 ug/L);
  - b. Two hundred micrograms per liter (200 ug/L) for acrolein and acrylonitrile; five hundred micrograms per liter (500 ug/L) for 2,4-dinitrophenol and for 2-methyl-4, 6-dinitrophenol; and one milligram per liter (1 mg/L) for antimony.
- G. A permittee shall furnish to the Executive Officer, within a reasonable time, any information which the Executive Officer may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Order or to determine compliance with this Order or other requirements established by the Executive Officer. A permittee shall also furnish to the Executive Officer, upon request, copies of records required to be kept by this Order.
- H. A permittee shall provide adequate notice to the Executive Officer of the following:
1. Any new introduction of pollutants to the discharge.
  2. Any substantial change in the volume or character of pollutants being introduced into the discharge.
  3. For the purpose of this provision, adequate notice shall include information on (a) the quality and quantity of waste introduced into the discharge, and (2) any anticipated impact of the change on the quantity or quality of runoff to be discharged to surface waters.
- I. Where a permittee becomes aware that he failed to submit any relevant facts in a Report of Waste Discharge, or submitted incorrect information in a Report of Waste Discharge, or in any report to the Regional Board, he shall promptly submit such facts or information.
- J. If a need for a discharge bypass is known in advance, the permittee shall submit prior notice and, if at all possible, such notice shall be submitted at least ten days prior to the date of the bypass.
- K. This Order expires on July 16, 1995. The permittees must jointly 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 as a minimum, the following:

1. Summary of the results of the monitoring program.
  2. Summary of BMPs implemented and evaluations of their effectiveness.
  3. Summary of procedures implemented to detect illegal discharges and illicit disposal practices and an evaluation of their effectiveness.
  4. Summary of measures implemented to control pollutants in surface runoff from construction sites and an evaluation of their effectiveness.
  5. Evaluation of the need for additional BMPs, source control, and/or structural control measures.
  6. Proposed plan of stormwater/urban runoff quality management activities that will be undertaken during the term of the next permit.
- L. All applications, reports, or information submitted to the Executive Officer of this Regional Board shall be signed and certified.
1. The Report of Waste Discharge shall be signed as follows:
    - a. For a corporation - by a principal executive officer of at least the level of vice-president.
    - b. For a partnership or sole proprietorship - by a general partner or the proprietor, respectively.
    - c. For a municipality, state, federal or other public agency - by either a principal executive officer or ranking elected official.
  2. All other reports required by this Order and other information requested by the Executive Officer shall be signed by a person designated in paragraph (1) of this provision, or by a duly authorized representative of that person. An individual is a duly authorized representative only if:
    - a. The authorization is made in writing by a person described in paragraph (1) of this provision;

- b. 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 well field, superintendent, or position of equivalent responsibility (a duly authorized representative may thus be either a named individual or any individual occupying a named position); and
  - c. The written authorization is submitted to the Executive Officer.
3. Any person signing a document under this Section shall make the following certification:

"I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that 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."

- M. Except for data determined to be confidential under Title 40, Code of Federal Regulations Part (40 CFR Part 2), all reports prepared in accordance with the terms of this Order shall be available for public inspection at the offices of the California Regional Water Quality Control Board, San Diego Region and the United States Environmental Protection Agency, Region 9. As required by the Clean Water Act, Reports of Waste Discharge, this Order, and effluent data shall not be considered confidential.

#### XV. NOTIFICATIONS

- A. California Water Code Section 13263(g) states:

"No discharge of waste into the waters of the state, whether or not such discharge is made pursuant to waste discharge requirements, shall create a vested right to continue such discharge. All discharges of waste into waters of the state are privileges, not rights."

- B. The Clean Water Act provides that any person who violates a condition of this Order implementing Sections 301, 302, 306, 307, 308, 318 or 405 of the Clean Water Act is subject to a civil penalty not to exceed \$10,000 per day of such violations. Any person who willfully or negligently violates conditions of this Order implementing Section 301, 302, 306, 307 or 308 of the Clean Water Act is subject to a fine of not less than \$2,500 nor more than \$25,000 per day of violation, or by imprisonment for not more than one year, or both.
- C. 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 Order, including monitoring reports or reports of compliance or noncompliance 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.
- D. Nothing in this Order shall be construed to relieve a permittee from civil or criminal penalties for noncompliance.
- E. Nothing in this Order shall be construed to preclude the institution of any legal action or relieve a permittee from any responsibilities, liabilities, or penalties to which a permittee is or may be subject to under Section 311 of the Clean Water Act.
- F. Nothing in this Order shall be construed to preclude institution of any legal action or relieve a permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable State law or regulation under authority preserved by Section 510 of the Clean Water Act.
- G. This Order shall become effective ten days after the date of its adoption, provided the Regional Administrator or Director, United States Environmental Protection Agency, has no objection. If the Regional Administrator objects to its issuance, this Order shall not become effective until such objection is withdrawn.

Order No. 90-42

-Page 33 of 33-

I, Arthur L. Coe, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Diego Region, on July 16, 1990.

A handwritten signature in cursive script, appearing to read 'Arthur L. Coe', is written above a horizontal line.

ARTHUR L. COE  
Executive Officer

Table 1. for Order No. 90-42. 1989 populations for the incorporated cities and unincorporated areas of San Diego County (data obtained from the California Department of Finance).

<u>Cities</u>	<u>Population</u>
Carlsbad.....	62,030
Chula Vista.....	126,026
Coronado.....	24,595
Del Mar.....	5,131
El Cajon.....	86,403
Encinitas.....	53,120
Escondido.....	99,007
Imperial Beach.....	25,970
La Mesa.....	53,005
Lemon Grove.....	22,749
National City.....	56,247
Oceanside.....	117,587
Poway.....	43,121
San Diego.....	1,086,592
San Marcos.....	33,837
Santee.....	52,402
Solana Beach.....	14,694
Vista.....	61,742
County of San Diego *	
(unincorporated areas).....	391,688
	total 2,415,946

\* A small portion of the population in the unincorporated area of San Diego County is located outside the jurisdiction of the San Diego Regional Board. Some of the population in the unincorporated area of San Diego County is located outside the Urban Limit Line.

California Regional Water Quality Control Board  
San Diego Region  
9771 Clairemont Mesa Boulevard, Suite B  
San Diego, California 92124-1331

FACT SHEET  
for  
ORDER NO. 90-42  
NPDES No. CA 0108758  
Waste Discharge Requirements  
for  
Stormwater and Urban Runoff  
from the  
County of San Diego  
the  
Incorporated Cities of San Diego County  
and the  
The San Diego Unified Port District

PROJECT

Order No. 90-42, NPDES No. CA0108758, prescribes requirements for the control of pollutants resulting from stormwater/urban runoff from all incorporated cities and the unincorporated urban areas in San Diego County, and lands under the jurisdiction of the San Diego Unified Port District.

"Letters of Intent" to apply for and become a permittee to a county-wide stormwater permit have been received from several of the cities within San Diego County. Because not all municipalities and other land-use jurisdictional agencies have submitted letters of intent to participate in the county-wide permit, the Regional Board finds it necessary to name all such entities using their discretionary authority.

PROJECT AREA

The permitted area is delineated by the boundaries of San Diego County to the north and south, the Pacific Ocean to the west, and the boundary between the San Diego and the Colorado River Basin Regional Boards to the east.

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.

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 municipal

Fact Sheet

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Order No. 90-42

NPDES No. CA 0008758

separate storm sewer systems serving a population of 100,000 or more. Section 402 (p)(4) of the CWA also requires dischargers of stormwater associated with municipal separate storm sewer 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. 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 an 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/urban runoff discharges from urban areas to runoff conveyance systems and receiving waters, an areawide approach is essential. The management and control of the runoff conveyance system cannot be effectively carried out without the cooperation and efforts of all entities within San Diego County. The Regional Board has concluded that the best management option for the area is to issue an areawide stormwater permit incorporating all land-use regulatory agencies using the discretionary authority granted to the Regional Board. Thus, the following entities have been named in the stormwater permit:

<u>Cities</u>	<u>Counties</u>	<u>Other</u>
Carlsbad	San Diego	San Diego Unified
Chula Vista		Port District
Coronado		
Del Mar		
El Cajon		
Encinitas		
Escondido		
Imperial Beach		
La Mesa		
Lemon Grove		
National City		
Oceanside		
Poway		
San Diego		
San Marcos		
Santee		
Solana Beach		
Vista		

Fact Sheet  
Order No. 90-42  
NPDES No. CA 0008758

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REQUIREMENTS CONTAINED IN THE PERMIT

Order No. 90-42 requires the entities named above to:

1. Enter into an agreement regarding the roles and responsibilities of all co-permittees with regard to all requirements contained in the permit.
2. Perform and submit annual fiscal analyses demonstrating availability of funds to carry out the stormwater management programs.
3. Inventory existing stormwater pollution control programs, illicit discharge detection programs, monitoring programs and data, stormwater conveyance system maps, land use maps, and existing laws, ordinances, and codes giving the dischargers the authority to implement and enforce stormwater pollution control programs in their areas of jurisdiction and where necessary, promulgate the authority to carry out all functions of the stormwater management programs.
4. Submit reports on the adequacy of the existing data after taking into consideration any requirements of NPDES stormwater regulations promulgated by the Environmental Protection Agency or as specified by the Executive Officer of the Regional Board.
5. Develop and implement stormwater and receiving water monitoring programs to evaluate discharges of pollutants from stormwater conveyance systems to waters of the United States.
6. Develop and implement an illicit connection/illegal discharge detection program to identify and eliminate non-stormwater discharges to stormwater conveyance systems.
7. Prohibit illicit/illegal discharges from entering into stormwater conveyance systems unless the discharge is permitted by the Regional Board.
8. Develop and implement best management practices (BMPs) to control discharges of pollutants to the maximum extent practicable to waters of the United States.
9. Effectively eliminate all identified illegal/illicit discharges by July 16, 1995 and eliminate those identified thereafter in the shortest time possible.
10. Conduct an annual analysis of the effectiveness of the overall stormwater pollution control management program in their areas of jurisdiction. If the water quality objectives of the

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receiving waters are violated as a result of stormwater/urban runoff discharges, the dischargers shall identify proposed programs which will result in the attainment of the water quality objectives, and a time schedule to implement the new programs. Such analyses shall include a discussion of compliance with any NPDES stormwater regulations promulgated by the Environmental Protection Agency, or as specified by the Executive Officer, and actions necessary to come into compliance with such regulations and other regulations/policies applicable to the discharge.

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

#### WORKSHOP

The San Diego Regional Water Quality Control Board held a workshop regarding Order No. 90-42 on June 4, 1990. The purpose of the workshop was to solicit comments and distribute information. Controversial input from the public was not encountered.

#### PUBLIC HEARING

The San Diego Regional Water Quality Control Board will consider the adoption of tentative Order No. 90-42 at its July 16, 1990 Regional Board meeting which will be held at the Encinitas City Council Chamber, 535 Encinitas Boulevard, Suite 100, Encinitas, California at 9:00 a.m. The meeting is open to the public.

Further information regarding the conduct and nature of the public hearing and these waste discharge requirements may be obtained by calling Mr. Chris Sandall at (619) 265-5114 between 8:00 a.m. and 4:00 p.m. or writing the San Diego Regional Water Quality Control Board office, located at the address listed below.

#### WRITTEN COMMENTS

Interested persons are invited to submit written comments on the proposed waste discharge requirements. To ensure an adequate review period, written comments should be submitted by July 3,

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1990, either in person or by mail to:

Mr. Arthur L. Coe, Executive Officer  
California Regional Water Quality Control Board  
San Diego Region  
9771 Clairemont Mesa Blvd., Ste. B  
San Diego, California 92124-1331

TABLE 2 FOR ORDER NO. 90-42. RECEIVING WATERS IMPACTED BY POLLUTION FROM STORMWATER AND URBAN RUNOFF\*.

<u>IMPACTED RECEIVING WATER REFERENCES</u>	<u>PARAMETERS</u>	<u>MUNICIPALITIES/JURISDICTION</u>
<b>BAYS:</b>		
San Diego Bay	WQLS, NPSI PET, TRA, SYN, COL, DEB, MET	City of San Diego, Coronado, National City, Chula Vista, Imperial Beach, La Mesa, Lemon Grove, County of San Diego, San Diego Unified Port District
Mission Bay	WQLS, NPSI MET, COL	City of San Diego
<b>LAGOONS:</b>		
Santa Margarita Lagoon	WQLS, NPSI NUT	Camp Pendleton, County of San Diego, County of Riverside, Ternecula
Oceanside Harbor	NPSI TRA, SYN	Camp Pendleton, Oceanside
Buena Vista Lagoon	NPSI NUT, SED	Oceanside, Vista, Carlsbad, County of San Diego
Agua Hedionda Lagoon	SOCHSR COL	Carlsbad, San Marcos
Batiquillos Lagoon	WQLS, NPSI NUT, SED	Carlsbad, Encinitas, San Marcos, County of San Diego
San Elijo Lagoon	WQLS, NPSI NUT, SED	Encinitas, Escondido, Solana Beach, County of San Diego
San Dieguito Lagoon	NPSI, TSMP SED, TRA	City of San Diego, Del Mar, Solana Beach, County of San Diego, Escondido
Los Penasquitos Lagoon	WQLS, NPSI NUT, SED	City of San Diego, Del Mar, Poway, County of San Diego
Tijuana River Estuary	WQLS, NPSI TRA, SYN, DOX, NUT, SYN	Tijuana, Mexico, City of San Diego, Imperial Beach

\* SEE ABBREVIATION  
DEFINITIONS ON THE NEXT  
PAGE

Table 2 for Order No. 90-42 Cont'd.

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**RIVERS:**

San Diego River	NPSI	SYN, PES, SED	City of San Diego, La Mesa, El Cajon, Santee, County of San Diego
Forester Creek	NPSI	TRA	El Cajon, Santee
Tijuana River	WQLS, NPSI	NUT, DEB, COL, DOX, SYN, PES, TRA	Tijuana, City of San Diego

**RESERVOIRS/LAKES:**

Lake Hodges	NPSI	NUT, DIS	City of San Diego, Escondido, Poway
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**\* ABBREVIATIONS FOR TABLE 2:****REFERENCES** (Available for review at the Regional Board office)

WQLS - Water Quality Limited Segment List

NPSI - Nonpoint Source Inventory Report

SDOHSR - State Department of Health Services Report on Shellfish Contamination in Agua Hedionda Lagoon

TSMP - Toxic Substances Monitoring Program elevated values

**PARAMETERS**

COL - Coliform Bacteria or other microbes

DEB - Debris

DIS - Dissolved Solids

DOX - Low Dissolved Oxygen, except when associated with algal blooms caused by nutrients

MET - Metals, except trace elements

NUT - Nutrients, macro- and micro-nutrients, including algal bloom-low dissolved oxygen syndrome

PES - Pesticides, except trace elements, including insecticides, nematocides, herbicides, and fungicides

PET - Petroleum Distillates

SED - Sedimentation/Turbidity, including habitat alteration due to sedimentation

SYN - Synthetic Organics, except herbicides and pesticides

TRA - Trace Elements: aluminum, beryllium, cadmium, chromium, copper, lead, mercury, manganese, molybdenum, nickel, selenium, silver, titanium, and zinc

TABLE 2 FOR ORDER NO. 90-42. RECEIVING WATERS IMPACTED BY POLLUTION FROM STORMWATER AND URBAN RUNOFF\*.

<u>IMPACTED RECEIVING WATER REFERENCES</u>	<u>PARAMETERS</u>	<u>MUNICIPALITIES/JURISDICTION</u>
<b>BAYS:</b>		
San Diego Bay	WQLS, NPSI PET, TRA, SYN, COL, DEB, MET	City of San Diego, Coronado, National City, Chula Vista, Imperial Beach, La Mesa, Lemon Grove, County of San Diego, San Diego Unified Port District
Mission Bay	WQLS, NPSI MET, COL	City of San Diego
<b>LAGOONS:</b>		
Santa Margarita Lagoon	WQLS, NPSI NUT	Camp Pendleton, County of San Diego, County of Riverside, Temecula
Oceanside Harbor	NPSI TRA, SYN	Camp Pendleton, Oceanside
Buena Vista Lagoon	NPSI NUT, SED	Oceanside, Vista, Carlsbad, County of San Diego
Agua Hedionda Lagoon	SDOHSR COL	Carlsbad, San Marcos
Batiquitos Lagoon	WQLS, NPSI NUT, SED	Carlsbad, Encinitas, San Marcos, County of San Diego
San Elijo Lagoon	WQLS, NPSI NUT, SED	Encinitas, Escondido, Solana Beach, County of San Diego
San Dieguito Lagoon	NPSI, TSMP SED, TRA	City of San Diego, Del Mar, Solana Beach, County of San Diego, Escondido
Los Penasquitos Lagoon	WQLS, NPSI NUT, SED	City of San Diego, Del Mar, Poway, County of San Diego
Tijuana River Estuary	WQLS, NPSI TRA, SYN, DOX, NUT, SYN	Tijuana, Mexico, City of San Diego, Imperial Beach

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DEFINITIONS ON THE NEXT  
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Table 2 for Order No. 90-42 Cont'd.

-2-

**RIVERS:**

San Diego River	NPSI	SYN, PES, SED	City of San Diego, La Mesa, El Cajon, Santee, County of San Diego
Forester Creek	NPSI	TRA	El Cajon, Santee
Tijuana River	WQLS, NPSI	NUT, DEB, COL, DOX, SYN, PES, TRA	Tijuana, City of San Diego

**RESERVOIRS/LAKES:**

Lake Hodges	NPSI	NUT, DIS	City of San Diego, Escondido, Poway
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TRA = Trace Elements: aluminum, beryllium, cadmium, chromium, copper, lead, mercury, manganese, molybdenum, nickel, selenium, silver, titanium, and zinc

California Regional Water Quality Control Board  
San Diego Region

ORDER NO. 90-46  
NPDES No. CA 0108766

Waste Discharge Requirements  
for  
Stormwater and Urban Runoff  
from the  
Riverside County Flood Control & Water Conservation District  
the  
County of Riverside  
and the  
Incorporated Cities<sup>1</sup> of Riverside County Within the San Diego Region

The California Regional Water Quality Control Board, San Diego Region (hereinafter Regional Board), finds that:

1. On June 8, 1990, the Riverside County Flood Control and Water Conservation District (RCFC&WCD), anticipating cooperation from the incorporated city of Temecula and the County of Riverside (hereinafter collectively referred to as "permittees"), submitted a letter in application for a National Pollutant Discharge Elimination System (NPDES) permit for stormwater discharges to waters within the jurisdiction of the San Diego Regional Board. This Order names the RCFC&WCD the "principal permittee" and the County of Riverside and the City of Temecula "co-permittees."
2. Section 405 of the Water Quality Act (WQA) of 1987 added Section 402(p) to the Clean Water Act (CWA). Pursuant to Section 402(p)(4) of the CWA, the EPA is required to promulgate regulations for NPDES permit applications for stormwater discharges associated municipal separate stormwater conveyance 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 stormwater conveyance systems serving a population of 250,000 or more to file stormwater permit applications by February 4, 1990.
3. On December 7, 1988, the 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. In the absence of final stormwater regulations, this Order governing municipal stormwater discharges meets both the statutory requirements of Section 402 (p)(3)(B) and all

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<sup>1</sup> Currently includes only the City of Temecula.

requirements applicable to an NPDES permit issued under this Regional Board's discretionary authority.

4. Water quality studies in many urban areas have shown that urban runoff typically contains significant quantities of pollutants. Water quality may be adversely impacted by stormwater discharges and urban runoff. A comprehensive stormwater and urban runoff management and regulation program is essential for the protection of water resources. The RCFC&WCD and the co-permittees will develop a comprehensive stormwater/urban runoff management program. This order requires the RCFC&WCD and the incorporated cities to submit documentation on existing runoff pollution control programs and specifies additional requirements towards achieving the water quality objectives for surface waters in the San Diego Region. The intent of this permit is to improve water quality of receiving waters under the jurisdiction of the Regional Board.
5. The discharges consist of surface runoff generated from various land uses and activities in all the hydrologic drainage areas which discharge into receiving waters within the area of jurisdiction of the Regional Board. The quality of these discharges varies considerably and is affected by land use, basin hydrology and geology, season, the frequency and duration of storm events, the presence of illicit connections and discharges, and waste management and disposal practices. The parameters and pollutants of potential concern and significance in these discharges may include, but are not limited to, pH, fecal coliform, fecal streptococcus, enterococcus, volatile organic carbon (VOC), surfactants (MBAS), oil and grease, petroleum hydrocarbons, total suspended and settleable solids, total organic carbon, biochemical oxygen demand (BOD), chemical oxygen demand (COD), lead, copper, chromium, cadmium, silver, nickel, zinc, cyanides, phenols, nutrients (e.g., nitrogen, nitrate, phosphate, etc.), and biocides. Since stormwater and urban runoff contains "waste", as defined in California Water Code (CWC) Section 13050, stormwater and urban runoff discharges constitute discharges of waste. Consequently such discharges are subject to CWC Section 13260 et seq., as well as Section 402 of the Clean Water Act, as amended.
6. The RCFC&WCD has jurisdiction over a large portion of the flood control facilities and has agreed to be the major responsible party in implementing the provisions of this Order. This Order names the RCFC&WCD the "principal permittee" and the County of Riverside and City of Temecula as the "co-permittees". Collectively the

principal permittee and co-permittees are referred to as "permittees."

7. The RCFC&WCD, as the "principal permittee", will obtain the cooperation of all entities in implementing the provisions of this Order. In general, the RCFC&WCD, 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 "co-permittees" will develop site-specific compliance responsibilities, perform compliance monitoring and inspections, submit stormwater conveyance system maps and compliance reports to the RCFC&WCD, and demonstrate and exercise enforcement authority for achieving compliance with the terms and conditions of this Order.
8. This Order requires the permittees to develop and implement programs to ensure that entities discharging stormwater/urban runoff into stormwater conveyance systems take steps to control/reduce discharges of pollutants to waters of the United States. The Regional Board has the discretion and authority to require non-cooperating entities to participate in this area-wide permit or obtain individual waste discharge requirements if it is determined that discharges from such entities cause or contribute to a violation of a water quality standard or are significant contributors of pollutants to waters of the United States.
9. Approximately one-eighth (1/8) of the entire Riverside County area drains into receiving waters within this Regional Board's jurisdiction. A minor portion of these drainage areas is urbanized but experiencing rapid development and growth. Approximately 5/8 of the Riverside County drainage area is within the jurisdiction of the Colorado River Basin Regional Board and the remaining one-quarter (1/4) of the Riverside County drainage area is within the jurisdiction of the Santa Ana Regional Water Quality Control Board. The area under the jurisdiction of the Santa Ana Regional Water Quality Control board is currently regulated by Santa Ana Regional Board Order No. 90-104, NPDES No. 8000192, Waste Discharge Requirements for the Riverside County Flood Control and Water Conservation District and the County of Riverside and Incorporated Cities within the Santa Ana Region, Areawide Urban Stormwater Runoff, Riverside County. The requirements contained in this Order are patterned after Order No. 90-104 to ensure consistent regulation, pollution control practices, and monitoring and reporting requirements throughout Riverside County.

10. Stormwater discharges in the Riverside County portion of the San Diego region are tributary to various receiving waters. These receiving waters include:

Inland Surface Streams

- a. Santa Margarita River
- b. Murrieta Creek
- c. Temecula Creek
- d. Pechanga Creek
- e. Cahuilla Creek
- f. San Mateo Creek
- g. San Juan Creek
- h. Tocalota Creek

Lakes/Reservoirs

- a. Skinner Lake
- b. Vail Lake

Lagoons

- a. Mouth of the Santa Margarita River

11. The Comprehensive Water Quality Control Plan Report, San Diego Basin (9), (Basin Plan) was adopted by this Regional Board on March 17, 1975 and subsequently approved by the State Water Resources Control Board (State Board). Subsequent revisions to the Basin Plan have also been adopted by the Regional Board and approved by the State Board.
12. The Basin Plan identifies the following beneficial uses of inland surface waters in Riverside County and the mouth of the Santa Margarita River:
- a. Municipal and domestic supply;
  - b. Industrial service supply;
  - c. Industrial process supply;
  - d. Agriculture supply;
  - e. Water contact recreation;
  - f. Non-contact water recreation;
  - g. Warm fresh-water habitat;
  - h. Cold fresh-water habitat;
  - i. Preservation of rare and endangered species;
  - j. Wildlife habitat;and
  - k. Marine habitat.
13. The Basin Plan contains the following prohibitions, applicable to discharges, for inland surface waters:

"Discharge of treated or untreated sewage or industrial wastes to a natural watercourse upstream of surface storage or diversion facilities used for municipal supply is prohibited."

"Discharge of treated or untreated sewage or industrial wastewater, exclusive of cooling water or other waters which are chemically unchanged, to a watercourse, is prohibited except in cases where the quality of said discharge complies with the receiving body's water quality objectives."

"The dumping or deposition of oil, garbage, trash, or other solid municipal, industrial, or agricultural waste directly into inland waters or watercourses or adjacent to the water courses in any manner which may permit its being washed into the watercourse is prohibited."

"Land grading and similar operations causing soil disturbance which do not contain provisions to minimize soil erosion and limit suspended matter in area runoff are prohibited."

14. The requirements contained in this Order are necessary to implement the objectives of the Basin Plan for receiving waters within the region.
15. Numerical and narrative water quality standards exist for the receiving waters in the region. Due to the enormous variability in stormwater quality and quantity and the complexity of urban runoff, this Order does not contain numerical limitations for any constituents. The impact of stormwater and urban runoff discharges on water quality of 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 permittees to continue to monitor the discharges and to analyze the data. This Order also requires the development and implementation of best management practices (BMPs). "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." For purposes of this Order, BMPs for the control of pollutants in stormwater and urban runoff may include the use of non-structural (e.g. public education, regulatory powers, urban planning,

etc.) and structural (e.g. detention basins, grass swales, runoff infiltration devices, etc.) controls which may be applied to a particular site or throughout a region (e.g., a city or throughout an area served by a stormwater conveyance system).

16. Pursuant to 40 CFR 131.12 and State Board Resolution No. 68-16, Statement of Policy with Respect to Maintaining High Quality of Waters in California (collectively "antidegradation policies"), the Regional Board shall ensure that any increase in pollutant loading to a receiving water meets the requirements stated in the foregoing policies. At a minimum, permitting actions shall be consistent with the following:
  - a. Existing instream water uses and the level of water quality necessary to protect existing beneficial uses shall be maintained and protected;
  - b. Where the quality of the waters exceed levels necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water, the quality shall be maintained and protected unless the State finds, after full satisfaction of the intergovernmental coordination and public participation provisions of the State's continuing planning process, that allowing lower water quality is necessary to accommodate important economic or social development in the area in which the waters are located;
  - c. Where high quality waters constitute an outstanding national resource, such as waters of National and State parks and wildlife refuges and waters of exceptional recreational or ecological significance, that water quality shall be maintained and protected; and
  - d. In those cases where potential water quality impairment associated with a thermal discharge is involved, the antidegradation policy and implementing method shall be consistent with Section 316 of the Clean Water Act.
17. The Regional Board, in establishing the requirements contained herein, has taken into consideration the requirements of the State and Federal "antidegradation" policies and has determined that:
  - a. The conditions and requirements established in this order for discharges of stormwater/urban runoff to waters of the United States ensure that the existing

- beneficial uses and quality of receiving waters will be protected and improved through the implementation of best management practices for the control of pollutants in stormwater and urban runoff;
- b. Discharges of urban runoff to waters of the United States will continue regardless of the issuance of this Order. The issuance of this Order is necessary to ensure achievement and maintenance of the goals and objectives of the water quality control plans adopted by the State and will result in improvement in water quality through implementation of stormwater management programs for the control of pollutants in urban runoff;
  - c. No receiving waters covered under the terms and conditions of this Order have been designated an outstanding national resource water or an Area of Special Biological Significance (ASBS) by the State Water Resources Control Board; and
  - d. Thermal discharges potentially impairing water quality are not authorized under the terms and conditions of this Order, thus, Section 316 of the Clean Water Act is not applicable.
18. Pursuant to Section 402 of the CWA, and amendments thereto, and pursuant to Section 13260, et seq., of the California Water Code, this Order shall serve as an NPDES permit and waste discharge requirements for the discharge of stormwater and urban runoff to surface waters of Riverside County in the area under the jurisdiction of the Regional Board.
  19. The Regional Board, in establishing the requirements contained herein, considered factors including, but not limited to, the following:
    - a. Beneficial uses to be protected and the water quality objectives reasonably required for that purpose;
    - b. Other waste discharges;
    - c. The need to prevent nuisance;
    - d. Past, present, and probable future beneficial uses of the waters under consideration;
    - e. Environmental characteristics of the waters under consideration;

- f. Water quality conditions that could reasonably be achieved through the coordinated control of all factors which affect water quality in the area;
  - g. Economic considerations; and
  - h. The need for developing housing within the region;
20. The issuance of this permit for the discharge of stormwater runoff and urban runoff is exempt from the requirement for preparation of environmental documents under the California Environmental Quality Act (Public Resources Code, Division 13, Chapter 3, Section 21000 et seq.) in accordance with the California Water Code, Section 13389.
  21. The Regional Board has considered all water resource related environmental factors associated with the discharge of stormwater and urban runoff.
  22. The Regional Board has notified all known interested parties of its intent to issue an NPDES permit for the discharge of stormwater and urban runoff.
  23. The Regional Board has, at a public meeting, heard and considered all comments pertaining to the discharge of stormwater and urban runoff.

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 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 stormwater conveyance system outfalls as agreed upon by the Executive Officer.
3. Develop uniform criteria for stormwater conveyance system inspections.
4. Conduct inspections of the stormwater conveyance systems within its jurisdiction.
5. Prepare and submit to the Regional Board all the reports, plans, and programs as required in this Order.
6. Monitor the implementation of the plans and programs and determine their effectiveness in attaining water quality

- objectives.
7. Coordinate all the activities with the Regional Board.
  8. Enact legislation and ordinances as necessary to establish legal authority.
  9. Pursue enforcement actions as necessary to ensure compliance with stormwater management programs and implementation plans.
  10. Solicit, and respond to, public input<sup>2</sup> for proposed monitoring, reconnaissance, management, and implementation plans.
  11. Ensure adequate response to emergency situations such as accidental spills, leaks, illicit discharges, etc.
  12. Abide by the terms of the Implementation Agreement.

## II. RESPONSIBILITIES OF THE CO-PERMITTEES

The co-permittees shall be responsible to manage the program within its jurisdiction, including:

1. Conduct stormwater conveyance 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.
4. Implement management programs, monitoring programs, and implementation plans as required by this Order.
5. Submit stormwater conveyance system maps with periodic revisions as necessary.
6. Prepare and submit all reports to the principal permittee in a timely manner.
7. Enact, and administer, 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. Ensure adequate response to emergency situations such as accidental spills, leaks, illicit discharges, etc.
10. Abide by the terms of the Implementation Agreement.

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<sup>2</sup> Solicitation, and response to, public input may be 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.

III. GENERAL REQUIREMENTS

1. The permittees shall prohibit illicit/illegal discharges from entering into stormwater conveyance systems. Discharges conditionally allowed to enter stormwater conveyance systems are specified in Item V. 4.
2. The permittees shall develop and implement best management practices (BMPs), including management practices, control techniques, and system design and engineering methods, and such other provisions as the Executive Officer determines appropriate for the control of pollutants, to control/reduce the discharge of pollutants to waters of the United States to the maximum extent practicable. The BMPs so developed, along with a time schedule for implementation, shall be submitted for the approval and/or modification by the Executive Officer of the Regional Board. In developing the best management practices, the permittees shall consider the water quality objectives of all the receiving water bodies.
3. The permittees shall ensure that BMPs are implemented for entities discharging stormwater and urban runoff to stormwater conveyance systems within their area of jurisdiction.

IV. COMPILATION AND SUBMITTAL OF EXISTING DATA1. Runoff Quality/Quantity

The permittees shall collectively submit all quantitative information, generated since 1980, on stormwater discharges to stormwater conveyance systems. Historical averages and extremes of the collected data shall also be submitted. 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. Analytical and flow data for stormwater samples collected from the stormwater conveyance system outfalls, and within any tributary waters of the United States;
- b. Precipitation data from the precipitation stations and the duration of the storm events (if available); and
- c. Analysis of the data and the major pollutants identified in the stormwater discharges from each drainage area to each receiving water and a

determination whether the identified pollutants came from non-point source or point-source discharges.

## 2. System/Drainage Area Characterization

The permittees shall submit information to the Regional Board for identification and characterization of the sources of pollutants in the stormwater discharges. Descriptive information, such as land use in Riverside County, and an overall map of the drainage system showing major feature shall be submitted. The following information shall be provided:

- a. An identification of the drainage areas (more than 50 acres in size) that discharge stormwater to the stormwater conveyance systems and of those drainage areas that discharge to stormwater conveyance systems with pipe diameters greater than 36 inches;
- b. The sizes of these drainage areas (acreage) and the sizes (pipe diameters or approximate dimensions of the stormwater conveyance systems) and physical characteristics of the stormwater conveyance systems. These physical characteristics shall include, but not be limited to, whether the stormwater conveyance system is lined or unlined and whether it has intermittent or continuous flow;
- c. The names, locations, and Standard Industrial Codes (SIC) of specific industrial sources and principal land use activities in each drainage area, identified in IV B.2. a., above, discharging to the stormwater conveyance systems. An estimation of the runoff coefficients for these drainage areas shall also be provided;
- d. The locations of present stormwater conveyance system outfalls discharging to waters of the United States. The name of each receiving water shall be reported and the location of each outfall shall be indicated on a map; and
- e. The locations of major structural controls for stormwater and urban runoff discharges (e.g. retention basins, detention basins, etc).

## 3. Illegal Connections

- a. The permittees shall provide a list of dischargers (permitted and unpermitted) known to exist currently who discharge process or non-process wastewater to the stormwater conveyance systems and any existing

information pertaining to illegal dumping of pollutants in stormwater conveyance systems. The permittees shall also provide any existing procedures used for detecting illegal connections to the stormwater conveyance 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 and/or limit the non-stormwater discharges to stormwater conveyance systems.

4. Stormwater Management Program

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

5. Stormwater/Urban Runoff Monitoring Program

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

6. Pollutant Information

The permittees 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 permittees shall provide to the Regional Board any other existing information that is pertinent to this permit.

8. The permittees shall submit the above information, IV.1. - IV.7., for the receiving waters within the San Diego region no later than March 31, 1992.

## V. RECONNAISSANCE SURVEY

1. The permittees shall submit information from a reconnaissance survey to be conducted at the stormwater conveyance systems. The purpose of the survey is to identify illegal/illicit non-stormwater discharges to the stormwater conveyance systems, illicit disposal practices, or other practices which impair water quality. 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

the Executive Officer of the Regional Board. The information shall include, but need not be limited to, the following:

- a. By September 30, 1992, a proposed reconnaissance survey field manual, including a time schedule shall be submitted.
  - b. By September 30, 1993, and every year thereafter until the completion of the survey, a progress report containing the following information shall be submitted:
    - i. Results of the reconnaissance survey, including an evaluation of the results;
    - ii. Additional information that would lead to isolating and identifying sources of illegal connections to the stormwater conveyance 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.;
    - iii. A listing of any identified or suspected illegal non-stormwater dischargers, including the names, locations, and types of the facilities, and the names of the stormwater conveyance systems and receiving waters to which the illegal/illicit non-stormwater discharges occur;
    - iv. 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; and
    - v. A discussion on all activities, related to the survey, conducted for the past 12 months.
2. By March 31, 1992, the permittees shall submit a proposed implementation plan, including a tentative time schedule, to prosecute violators and eliminate illegal/illicit discharges to the stormwater conveyance systems. 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 stormwater conveyance systems, and a proposed time schedule for obtaining such legal authorities, if necessary.

3. By September 30, 1994, and every year thereafter, the permittees shall submit a progress report evaluating the effectiveness of the plan in detecting and eliminating illegal/illicit discharges to the stormwater conveyance systems.
4. The permittees shall effectively eliminate all identified illegal/illicit discharges in the shortest time practicable, and in no case later than July 16, 1995. Those identified after July 16, 1995 shall be eliminated in the shortest time practicable. The following discharges shall not be considered illegal/illicit 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 an NPDES permit, discharges to storm water conveyance systems from 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 discharges shall be prohibited from entering stormwater conveyance systems.

#### VI. DRAINAGE AREA MANAGEMENT PROGRAM

1. The permittees shall develop and implement best management practices (BMPs) to control the discharge of pollutants to waters of the United States. The permittees shall submit information pertaining to the proposed management programs for control of the pollutants in the stormwater discharges. 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 stormwater discharges from industrial, commercial, and residential properties to the maximum extent practicable. At a minimum, the following should be considered in developing the BMPs:

Structural Controls

- i. Structural controls such as first flush diversion, detention/retention basins, infiltration trenches/basins, porous pavement, oil/grease separators, grass swales, wire concentrators, etc. Engineering and design modification of the existing structures should also be considered.

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 field inspections and response to emergency incidents.
- vi. The ongoing program required in Item No. V. above for the detection and elimination of illicit connections and controlling/eliminating illegal dumping of pollutants into 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 as follows:

## i. 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 to control erosion/siltation and contaminated runoff from the construction site.

## ii. Residential and Commercial/Industrial Sites

To prevent the increase of pollutants in stormwater discharges, all new developments and existing facilities with significant redevelopment must develop individual post construction long-term comprehensive stormwater management plans.

- d. A description of the legal authorities for implementing the programs, and a proposed time schedule for obtaining such legal authorities, if necessary; and
  - e. A description of staff, equipment, and funds available to implement the programs.
2. The permittees shall submit the BMPs so developed, along with a time schedule for implementation, for the approval by the Executive Officer of the Regional Board no later than March 31, 1993.
3. By March 31, 1994 and every year thereafter, the permittees 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 and urban runoff discharges. The permittees 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/URBAN RUNOFF MONITORING PROGRAM

The permittees shall develop and implement (after approval of the plan by the Executive Officer) a stormwater/urban runoff monitoring program. Proposed monitoring programs and time schedules for their implementation shall be subject to the approval of the Executive Officer. Proposed monitoring

programs, time schedules, and implementation reports shall be submitted to the principal permittee in sufficient time to submit a collated report to the Regional Board as follows:

<u>TASK</u>	<u>STORMWATER MONITORING</u>	<u>REPORT DATE</u>
Submittal of Proposed Stormwater Monitoring Programs and Implementation Time Schedules		03/31/93
Progress Report on the Implementation of the Stormwater Monitoring Programs		03/31/94*

\* and annually thereafter

#### VIII. RECEIVING WATER MONITORING PROGRAM

The permittees shall develop and implement (after approval of the plan by the Executive Officer) a receiving water monitoring program. Proposed monitoring programs and time schedules for their implementation shall be subject to the approval of the Executive Officer. Proposed monitoring programs, time schedules, and implementation reports shall be submitted to the principal permittee in sufficient time to submit a collated report to the Regional Board as follows:

<u>TASK</u>	<u>RECEIVING WATER MONITORING</u>	<u>REPORT DATE</u>
Submittal of Proposed Receiving Water Monitoring Programs and Implementation Time Schedules		03/31/93
Progress Report on the Implementation of the Receiving Water Monitoring Programs		03/31/94*

\* and annually thereafter

#### 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. 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 and any impact of stormwater and urban runoff discharges on the receiving waters shall be discussed, starting with the most significantly impacted receiving waters.

2. With the implementation of the receiving water monitoring program, an evaluation shall be performed for the calculated pollutant loading rates from the stormwater and urban runoff monitoring program and the receiving water monitoring program. 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

No later than January 31, 1994, and annually thereafter, 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.

#### XII. IMPLEMENTATION AGREEMENT

A signed copy of the Implementation Agreement between the RCFC&WCD, the County of Riverside, and the City of Temecula 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 permittees.

#### XIII. REPORTING

1. A summary of tasks to be completed and reports submitted is as follows:

(continued on the following page)

<u>TASK</u>		<u>COMPLIANCE REPORT DUE</u>
XII	Implementation Agreement	01/31/91
IV.	Existing reports and programs	03/31/92
V.1.a	Proposed Reconnaissance Survey Field Manual	09/30/92
V.2	Proposed Implementation Plan for Prosecuting Illegal Dischargers	03/31/93
VI.1&2	Management Programs (BMPs) and Implementation Plan	03/31/93
VII.1&2	Stormwater Monitoring Program Plan	03/31/93
VIII.1&2	Receiving Water Monitoring Program Plan	03/31/93
----- Progress Reports after Plan Implementation -----		
V.1.b.	Reconnaissance Survey Progress Report	09/30 of every year <sup>3</sup>
V.	Illegal Discharge Elimination Progress Report	09/30 of every year <sup>4</sup>
VI.3	Management Programs Progress Report	03/31 of every year <sup>5</sup>
VII.3	Stormwater Monitoring Program Progress Report	03/31 of every year <sup>6</sup>
VIII.3	Receiving Water Monitoring Program Progress Report	03/31 of every year <sup>7</sup>
IX.	Fiscal Analysis	08/31 of every year <sup>8</sup>
X & XI	Data/Program Analysis	01/31 of every year <sup>9</sup>

<sup>3</sup> The first progress report is due by September 30, 1993.

<sup>4</sup> The first progress report is due by September 30, 1994.

<sup>5</sup> The first progress report is due by March 31, 1994.

<sup>6</sup> The first progress report is due by March 31, 1994.

<sup>7</sup> The first progress report is due by March 31, 1994.

<sup>8</sup> The first annual fiscal analysis is due by August 31, 1991.

<sup>9</sup> The first data/program analysis is due by January 31, 1994.

- B. All reports and information required herein shall be submitted to the Executive Officer of the Regional Board and the Regional Director of the Environmental Protection Agency, Region IX, at the following addresses:

Executive Officer  
California Regional Water Quality Control Board  
San Diego Region  
9771 Clairemont Mesa Blvd., Ste. B  
San Diego, California 92124-1331

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Environmental Protection Agency  
Region IX  
Permits and Compliance Branch  
1235 Mission Street (Mail Code W-5)  
San Francisco, California 94103

XIV. ANALYTICAL METHODS/RECORD KEEPING

- A. Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge. Once established, monitoring points shall not be changed without notification to and the approval of the Executive Officer.
- B. Monitoring must be conducted according to United States Environmental Protection Agency test procedures approved under Title 40, Code of Federal Regulations (CFR), Part 136, "Guidelines Establishing Test Procedures for Analysis of Pollutants Under the Clean Water Act" as amended, unless other test procedures have been specified by this Order or the Executive Officer.
- C. All analyses shall be performed in a laboratory certified to perform such analyses by the California Department of Health Services or a laboratory approved by the Executive Officer.
- D. Monitoring results must be reported on discharge monitoring report forms or in a format approved by the Executive Officer.
- E. If a permittee monitors any pollutant more frequently than required by this Order, using test procedures approved under 40 CFR, Part 136, or as specified in this Order, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the permittee's monitoring report. The increased frequency of monitoring shall also be reported.
- F. Permittees shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all

reports required by this Order, and records of all data used to complete the application for this Order. Records shall be maintained for a minimum of five years from the date of the sample, measurement, report, or application. This period may be extended during the course of any unresolved litigation regarding this discharge or when requested by the Regional Board Executive Officer.

- G. Records of monitoring information shall include:
1. The date, exact place, and time of sampling or measurements;
  2. The individual(s) who performed the sampling or measurements;
  3. The date(s) analyses were performed;
  4. The individual(s) who performed analyses;
  5. The analytical techniques or method used; and
  6. The results of such analyses.
- H. Calculations for all limitations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified by the Executive Officer or in this Order.
- I. All monitoring instruments and devices used by a permittee to fulfill the prescribed monitoring program shall be properly maintained and calibrated as necessary to ensure their continued accuracy.
- J. Permittees shall report all instances of noncompliance not reported under Standard Reporting Requirement XVI. E. of this Order at the time monitoring reports are submitted. The reports shall contain the information listed in Standard Reporting Requirement XVI. E.
- K. The monitoring reports shall be signed by an authorized person as required by Standard Reporting Requirement L.
- L. A composite sample is defined as a combination of at least 8 sample aliquots of at least 100 milliliters each, collected at periodic intervals during the operating hours of a facility over a 24-hour period. For volatile pollutants, aliquots must be combined in the laboratory immediately before analysis. The composite must be flow proportional; either the time interval between each aliquot or the volume of each aliquot must be proportional to either the stream flow at the time of sampling or the total stream flow since the collection of the previous aliquot. Aliquots may be collected manually or automatically.
- M. A grab sample is an individual sample of at least 100 milliliters collected at a randomly selected time over a period not exceeding 15 minutes.

XV. PROVISIONS

- A. Neither the treatment nor the discharge of pollutants shall create a pollution, contamination, or nuisance as defined by Section 13050 of the California Water Code.
- B. The permittees must comply with all conditions of this Order. Any permit noncompliance constitutes a violation of the Clean Water Act and the California Water Code and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; the issuance of an individual permit; or for denial of a renewal application.
- C. The permittees shall take all reasonable steps to minimize or correct any adverse impact on the environment resulting from noncompliance with this Order, including such accelerated or additional monitoring as may be necessary to determine the nature and impact of the noncomplying discharge.
- D. This Order may be modified, revoked and reissued, or terminated for cause including, but not limited to, the following:
  - 1. Violation of any terms or conditions of this Order;
  - 2. Obtaining this Order by misrepresentation or failure to disclose fully all relevant facts; or
  - 3. A change in any condition that requires either a temporary or permanent reduction or elimination of the discharge.

The filing of a request by a permittee for modification, revocation and reissuance, or termination of this Order or a notification of planned change in or anticipated noncompliance with this Order does not stay any condition of this Order.

- E. In addition to any other grounds specified herein, this Order shall be modified or revoked at any time if, on the basis of any new data, the Executive Officer determines that continued discharges may cause unreasonable degradation of the aquatic environment.
- F. This Order is not transferable to any person except after notice to the Executive Officer of this Regional Board. The Regional Board may require a new report of waste discharge to change the name of a permittee and incorporate such other requirements as may be necessary under the California Water Code and the Clean Water Act. A permittee shall submit notice of any transfer of this

Order's responsibility and coverage to a new permittee as described under Standard Reporting Requirement XVI.C.

- G. This Order does not convey any property rights of any sort or any exclusive privileges. The requirements prescribed herein do not authorize the commission of any act causing injury to persons or property of another, including property damage caused as a result of the discharge, nor protect the permittee from liability under federal, state, or local laws, nor create a vested right for the permittee to continue the discharge.
- H. Permittees shall allow the Regional Board, or an authorized representative or any representative of the United States Environmental Protection Agency upon the presentation of credentials and other documents as may be required by law, to:
1. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this Order;
  2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Order;
  3. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices or operation regulated or required under this Order; and
  4. Sample or monitor at reasonable times, for the purposes of assuring compliance with this Order or as otherwise authorized by the Clean Water Act or California Water Code, any substances or parameters at any location.
- I. Permittees shall, at all times, properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by a permittee to achieve compliance with the conditions of this Order. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls including appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of this Order.
- J. In an enforcement action, it shall not be a defense for a permittee that it would have been necessary to halt or reduce the permitted activity in order to maintain

compliance with this Order. Upon reduction, loss, or failure of the treatment facility, the permittee shall, to the extent necessary to maintain compliance with this Order, control production or all discharges, or both, until the facility is restored or an alternative method of treatment is provided. This provision applies, for example, when the primary source of power of the treatment facility fails, is reduced or is lost.

K. The provisions of this Order are severable, and if any provision of this Order, or the application of any provision of this Order to any circumstances, is held invalid, the application of such provision to other circumstances, and the remainder of this Order, shall not be affected thereby.

L. Bypass of Treatment Facilities

1. Definitions

- (a) "Bypass" means the intentional diversion of waste streams from any portion of the treatment facility.
- (b) "Severe property damage" means substantial physical damage to property, damage to the treatment facilities which cause them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

2. Bypass Not Exceeding Effluent Limitations

A permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operations. These bypasses are not subject to the provisions of paragraphs (3) and (4) of this section.

3. Notice of Anticipated Bypass and Unanticipated Bypass

- (a) Anticipated bypass. If a permittee knows in advance of the need for a bypass, they shall submit prior notice, if possible, at least ten days before the date of the bypass.
- (b) Unanticipated bypass. A permittee shall submit notice of an unanticipated bypass as described under Standard Reporting Requirement XVI. E.

#### 4. Prohibition of Bypass

(a) Bypass is prohibited and the Regional Board may take enforcement action against a permittee for bypass, unless:

- (1) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
- (2) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated waste, or maintenance during normal periods of equipment downtime. This condition is not satisfied if the permittee could have installed adequate backup equipment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and
- (3) The permittee submitted notices as required under paragraph (3) of this section.

(b) The Executive Officer may approve an anticipated bypass, after considering its adverse effect, if the Executive Officer determines that it will meet the three conditions listed above in paragraph (1) of this section.

#### M. Upset Conditions

##### 1. Definitions

"Upset" means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based effluent limitations because of factors beyond the reasonable control of a permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

##### 2. Effect of an Upset

An upset constitutes an affirmative defense to an action brought for noncompliance with such technology-based permit effluent limitations if the requirements of paragraph (3) of this

section are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.

3. Conditions Necessary for a Demonstration of Upset

A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:

- (a) An upset occurred and that the permittee can identify the specific cause(s) of the upset;
- (b) The permitted facility was at the time being properly operated; and
- (c) The permittee submitted notice of the upset as required in Standard Reporting Requirement XVI. E.

4. Burden of Proof

In any enforcement proceeding, a permittee seeking to establish the occurrence of an upset has the burden of proof.

XVI. STANDARD REPORTING REQUIREMENTS

- A. A new Report of Waste Discharge shall be filed with the Regional Board not less than 180 days prior to the following:
  1. Significant change in disposal method (e.g., change in the method of treatment which would significantly alter the nature of the waste).
  2. Significant change in disposal area (e.g., moving the discharge to a disposal area significantly removed from the original area, potentially causing different water quality or nuisance problems).
  3. Other circumstances which result in a material change in character, amount, or location of the waste discharge.
- B. A permittee shall give advance notice to the Executive Officer of any planned changes in a permitted facility or activity which may result in noncompliance with the requirements of this Order.

- C. A permittee must notify the Executive Officer, in writing, at least 30 days in advance of any proposed transfer of this Order's responsibility and coverage to a new permittee. The notice must include a written agreement between the existing and new permittee containing a specific date for the transfer of this Order's responsibility and coverage between the current permittee and the new permittee. This agreement shall include an acknowledgement that the existing permittee is liable for violations up to the transfer date and that the new permittee is liable from the transfer date on.
- D. The permittees shall comply with any monitoring and reporting requirements contained in this Order and any additional monitoring requirements specified by the Executive Officer.
- E. A permittee shall report any noncompliance which may endanger health or the environment. Any information shall be provided orally to the Executive Officer within 24 hours from the time the permittee becomes aware of the circumstances. A written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance. The Executive Officer, or an authorized representative may waive the written report on a case-by-case basis if the oral report has been received within 24 hours.
- F. A permittee shall notify the Executive Officer as soon as it is known or there is reason to believe:
1. That any activity has occurred or which will occur which would result in the discharge of any toxic pollutant which is not limited in this Order, if that discharge will exceed the highest of the following "notification levels":
    - a. One hundred micrograms per liter (100 ug/L);
    - b. Two hundred micrograms per liter (200 ug/L) for acrolein and acrylonitrile; five hundred micrograms per liter (500 ug/L) for 2,4-dinitrophenol and for 2-methyl-4, 6-dinitrophenol; and one milligram per liter (1 mg/L) for antimony.
- G. A permittee shall furnish to the Executive Officer, within a reasonable time, any information which the Executive Officer may request to determine whether cause

exists for modifying, revoking and reissuing, or terminating this Order or to determine compliance with this Order or other requirements established by the Executive Officer. A permittee shall also furnish to the Executive Officer, upon request, copies of records required to be kept by this Order.

- H. A permittee shall provide adequate notice to the Executive Officer of the following:
1. Any new introduction of pollutants to the discharge.
  2. Any substantial change in the volume or character of pollutants being introduced into the discharge.
  3. For the purpose of this provision, adequate notice shall include information on (a) the quality and quantity of waste introduced into the discharge, and (2) any anticipated impact of the change on the quantity or quality of runoff to be discharged to surface waters.
- I. Where a permittee becomes aware that he failed to submit any relevant facts in a Report of Waste Discharge, or submitted incorrect information in a Report of Waste Discharge, or in any report to the Regional Board, he shall promptly submit such facts or information.
- J. If a need for a discharge bypass is known in advance, the permittee shall submit prior notice and, if at all possible, such notice shall be submitted at least ten days prior to the date of the bypass.
- K. This Order expires on July 16, 1995. The permittees must jointly 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 as a minimum, the following:
1. Summary of the results of the monitoring program.
  2. Summary of BMPs implemented and evaluations of their effectiveness.
  3. Summary of procedures implemented to detect illegal discharges and illicit disposal practices and an evaluation of their effectiveness.
  4. Summary of measures implemented to control pollutants in surface runoff from construction sites and an evaluation of their effectiveness.

5. Evaluation of the need for additional BMPs, source control, and/or structural control measures.
  6. Proposed plan of stormwater/urban runoff quality management activities that will be undertaken during the term of the next permit.
- L. All applications, reports, or information submitted to the Executive Officer of this Regional Board shall be signed and certified.
1. The Report of Waste Discharge shall be signed as follows:
    - a. For a corporation - by a principal executive officer of at least the level of vice-president.
    - b. For a partnership or sole proprietorship - by a general partner or the proprietor, respectively.
    - c. For a municipality, state, federal or other public agency - by either a principal executive officer or ranking elected official.
  2. All other reports required by this Order and other information requested by the Executive Officer shall be signed by a person designated in paragraph (1) of this provision, or by a duly authorized representative of that person. An individual is a duly authorized representative only if:
    - a. The authorization is made in writing by a person described in paragraph (1) of this provision;
    - b. 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 well field, superintendent, or position of equivalent responsibility (a duly authorized representative may thus be either a named individual or any individual occupying a named position); and
    - c. The written authorization is submitted to the Executive Officer.
  3. Any person signing a document under this Section shall make the following certification:

"I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that 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."

- M. Except for data determined to be confidential under Title 40, Code of Federal Regulations Part (40 CFR Part 2), all reports prepared in accordance with the terms of this Order shall be available for public inspection at the offices of the California Regional Water Quality Control Board, San Diego Region and the United States Environmental Protection Agency, Region 9. As required by the Clean Water Act, Reports of Waste Discharge, this Order, and effluent data shall not be considered confidential.

#### XVII. NOTIFICATIONS

- A. California Water Code Section 13263(g) states:

"No discharge of waste into the waters of the state, whether or not such discharge is made pursuant to waste discharge requirements, shall create a vested right to continue such discharge. All discharges of waste into waters of the state are privileges, not rights."

- B. The Clean Water Act provides that any person who violates a condition of this Order implementing Sections 301, 302, 306, 307, 308, 318 or 405 of the Clean Water Act is subject to a civil penalty not to exceed \$10,000 per day of such violations. Any person who willfully or negligently violates conditions of this Order implementing Section 301, 302, 306, 307 or 308 of the Clean Water Act is subject to a fine of not less than \$2,500 nor more than \$25,000 per day of violation, or by imprisonment for not more than one year, or both.
- C. 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 Order, including monitoring reports or reports of compliance or noncompliance 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.

- D. Nothing in this Order shall be construed to relieve a permittee from civil or criminal penalties for noncompliance.
- E. Nothing in this Order shall be construed to preclude the institution of any legal action or relieve a permittee from any responsibilities, liabilities, or penalties to which a permittee is or may be subject to under Section 311 of the Clean Water Act.
- F. Nothing in this Order shall be construed to preclude institution of any legal action or relieve a permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable State law or regulation under authority preserved by Section 510 of the Clean Water Act.
- G. This Order shall become effective ten days after the date of its adoption, provided the Regional Administrator or Director, United States Environmental Protection Agency, has no objection. If the Regional Administrator objects to its issuance, this Order shall not become effective until such objection is withdrawn.

I, Arthur L. Coe, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Diego Region, on July 16, 1990.



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ARTHUR L. COE  
Executive Officer

California Regional Water Quality Control Board  
San Diego Region  
9771 Clairemont Mesa Boulevard, Suite B  
San Diego, California 92124-1331

FACT SHEET

for

ORDER NO. 90-46

NPDES No. CA 0108766

Waste Discharge Requirements

for

Stormwater and Urban Runoff

from the

Riverside County Flood Control and Water Conservation District

the

County of Riverside

and the

Incorporated Cities of Riverside County Within the San Diego Region

PROJECT

Order No. 90-46, NPDES No. CA0108766, prescribes requirements for the control of pollutants resulting from stormwater/urban runoff from all incorporated cities and the unincorporated urban areas in Riverside County within the jurisdiction of the Regional Board.

A "Letter of Intent" to apply for and become a permittee to an area-wide stormwater permit has been received from the Riverside County Flood Control and Water Conservation District (RCFC&WCD). The RCFC&WCD anticipates cooperation from the County of Riverside and the City of Temecula in becoming active co-permittees subject to the terms and conditions of the permit.

PROJECT AREA

The permitted area is within the County of Riverside within the area under the jurisdiction of the San Diego Regional Water Quality Control Board.

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.

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 municipal separate storm sewer systems serving a population of 100,000 or

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more. Section 402 (p)(4) of the CWA also requires dischargers of stormwater associated with municipal separate storm sewer 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. 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 an NPDES general 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/urban runoff discharges from urban areas to runoff conveyance systems and receiving waters, an areawide approach is essential. The management and control of the runoff conveyance system cannot be effectively carried out without the cooperation and efforts of all entities within Riverside County within the area under the jurisdiction of the San Diego Regional Board. The Regional Board has concluded that the best management option for the area is to issue an areawide stormwater permit incorporating all land-use regulatory agencies using the discretionary authority granted to the Regional Board. Thus, the following entities have been named in the stormwater permit: RCFC&WCD, as the principal permittee, and the County of Riverside and City of Temecula as co-permittees.

#### REQUIREMENTS CONTAINED IN THE PERMIT

Order No. 90-46 requires the entities named above to:

1. Enter into an agreement regarding the roles and responsibilities of all co-permittees with regard to all requirements contained in the permit.
2. Perform and submit annual fiscal analyses demonstrating availability of funds to carry out the stormwater management programs.
3. Inventory existing stormwater pollution control programs, illicit discharge detection programs, monitoring programs and data, stormwater conveyance system maps, land use maps, and existing laws, ordinances, and codes giving the dischargers the authority to implement and enforce stormwater pollution control programs in their areas of jurisdiction and where necessary, promulgate the authority to carry out all functions

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of the stormwater management programs.

4. Submit reports on the adequacy of the existing data after taking into consideration any requirements of NPDES stormwater regulations promulgated by the Environmental Protection Agency or as specified by the Executive Officer of the Regional Board.
5. Develop and implement stormwater and receiving water monitoring programs to evaluate discharges of pollutants from stormwater conveyance systems to waters of the United States.
6. Develop and implement an illicit connection/illegal discharge detection program to identify and eliminate non-stormwater discharges to stormwater conveyance systems.
7. Prohibit illicit/illegal discharges from entering into stormwater conveyance systems unless the discharge is permitted by the Regional Board.
8. Develop and implement best management practices (BMPs) to control discharges of pollutants to the maximum extent practicable to waters of the United States.
9. Effectively eliminate all identified illegal/illicit discharges as soon as is practicable and not later than by July 16, 1995. Illicit/illegal discharges identified thereafter will be eliminated in the shortest time practicable.
10. Conduct an annual analysis of the effectiveness of the overall stormwater pollution control management program in their areas of jurisdiction. If the water quality objectives of the receiving waters are violated as a result of stormwater/urban runoff discharges, the dischargers shall identify proposed programs which will result in the attainment of the water quality objectives, and a time schedule to implement the new programs.

#### 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 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 the stormwater discharges and receiving waters will be improved, thereby protecting the beneficial uses of waters of the United States. The stormwater discharges are consistent with the federal and state antidegradation requirements

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and a complete antidegradation analysis is not necessary.

#### WORKSHOP

The San Diego Regional Water Quality Control Board held a workshop regarding Order No. 90-46 on June 4, 1990. The purpose of the workshop was to solicit comments and distribute information. Controversial input from the public was not encountered.

#### PUBLIC HEARING

The San Diego Regional Water Quality Control Board will consider the adoption of tentative Order No. 90-46 at its July 16, 1990 Regional Board meeting which will be held at the Encinitas City Council Chamber, 535 Encinitas Boulevard, Suite 100, Encinitas, California at 9:00 a.m. The meeting is open to the public.

Further information regarding the conduct and nature of the public hearing and these waste discharge requirements may be obtained by calling Mr. Chris Sandall at (619) 265-5114 between 8:00 a.m. and 4:00 p.m. or writing the San Diego Regional Water Quality Control Board office, located at the address listed below.

#### WRITTEN COMMENTS

Interested persons are invited to submit written comments on the proposed waste discharge requirements. To ensure an adequate review period, written comments should be submitted by July 6, 1990, either in person or by mail to:

Mr. Arthur L. Coe, Executive Officer  
California Regional Water Quality Control Board  
San Diego Region  
9771 Clairemont Mesa Blvd., Ste. B  
San Diego, California 92124-1331

California Regional Water Quality Control Board  
San Diego Region

ORDER NO. 90-46  
NPDES No. CA 0108766

Waste Discharge Requirements  
for  
Stormwater and Urban Runoff  
from the  
Riverside County Flood Control & Water Conservation District  
the  
County of Riverside  
and the  
Incorporated Cities<sup>1</sup> of Riverside County Within the San Diego Region

The California Regional Water Quality Control Board, San Diego Region (hereinafter Regional Board), finds that:

1. On June 8, 1990, the Riverside County Flood Control and Water Conservation District (RCFC&WCD), anticipating cooperation from the incorporated city of Temecula and the County of Riverside (hereinafter collectively referred to as "permittees"), submitted a letter in application for a National Pollutant Discharge Elimination System (NPDES) permit for stormwater discharges to waters within the jurisdiction of the San Diego Regional Board. This Order names the RCFC&WCD the "principal permittee" and the County of Riverside and the City of Temecula "co-permittees."
2. Section 405 of the Water Quality Act (WQA) of 1987 added Section 402(p) to the Clean Water Act (CWA). Pursuant to Section 402(p)(4) of the CWA, the EPA is required to promulgate regulations for NPDES permit applications for stormwater discharges associated municipal separate stormwater conveyance 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 stormwater conveyance systems serving a population of 250,000 or more to file stormwater permit applications by February 4, 1990.
3. On December 7, 1988, the 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. In the absence of final stormwater regulations, this Order governing municipal stormwater discharges meets both the statutory requirements of Section 402 (p)(3)(B) and all

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<sup>1</sup> Currently includes only the City of Temecula.

requirements applicable to an NPDES permit issued under this Regional Board's discretionary authority.

4. Water quality studies in many urban areas have shown that urban runoff typically contains significant quantities of pollutants. Water quality may be adversely impacted by stormwater discharges and urban runoff. A comprehensive stormwater and urban runoff management and regulation program is essential for the protection of water resources. The RCFC&WCD and the co-permittees will develop a comprehensive stormwater/urban runoff management program. This order requires the RCFC&WCD and the incorporated cities to submit documentation on existing runoff pollution control programs and specifies additional requirements towards achieving the water quality objectives for surface waters in the San Diego Region. The intent of this permit is to improve water quality of receiving waters under the jurisdiction of the Regional Board.
5. The discharges consist of surface runoff generated from various land uses and activities in all the hydrologic drainage areas which discharge into receiving waters within the area of jurisdiction of the Regional Board. The quality of these discharges varies considerably and is affected by land use, basin hydrology and geology, season, the frequency and duration of storm events, the presence of illicit connections and discharges, and waste management and disposal practices. The parameters and pollutants of potential concern and significance in these discharges may include, but are not limited to, pH, fecal coliform, fecal streptococcus, enterococcus, volatile organic carbon (VOC), surfactants (MBAS), oil and grease, petroleum hydrocarbons, total suspended and settleable solids, total organic carbon, biochemical oxygen demand (BOD), chemical oxygen demand (COD), lead, copper, chromium, cadmium, silver, nickel, zinc, cyanides, phenols, nutrients (e.g., nitrogen, nitrate, phosphate, etc.), and biocides. Since stormwater and urban runoff contains "waste", as defined in California Water Code (CWC) Section 13050, stormwater and urban runoff discharges constitute discharges of waste. Consequently such discharges are subject to CWC Section 13260 et seq., as well as Section 402 of the Clean Water Act, as amended.
6. The RCFC&WCD has jurisdiction over a large portion of the flood control facilities and has agreed to be the major responsible party in implementing the provisions of this Order. This Order names the RCFC&WCD the "principal permittee" and the County of Riverside and City of Temecula as the "co-permittees". Collectively the

principal permittee and co-permittees are referred to as "permittees."

7. The RCFC&WCD, as the "principal permittee", will obtain the cooperation of all entities in implementing the provisions of this Order. In general, the RCFC&WCD, 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 "co-permittees" will develop site-specific compliance responsibilities, perform compliance monitoring and inspections, submit stormwater conveyance system maps and compliance reports to the RCFC&WCD, and demonstrate and exercise-enforcement authority for achieving compliance with the terms and conditions of this Order.
8. This Order requires the permittees to develop and implement programs to ensure that entities discharging stormwater/urban runoff into stormwater conveyance systems take steps to control/reduce discharges of pollutants to waters of the United States. The Regional Board has the discretion and authority to require non-cooperating entities to participate in this area-wide permit or obtain individual waste discharge requirements if it is determined that discharges from such entities cause or contribute to a violation of a water quality standard or are significant contributors of pollutants to waters of the United States.
9. Approximately one-eighth (1/8) of the entire Riverside County area drains into receiving waters within this Regional Board's jurisdiction. A minor portion of these drainage areas is urbanized but experiencing rapid development and growth. Approximately 5/8 of the Riverside County drainage area is within the jurisdiction of the Colorado River Basin Regional Board and the remaining one-quarter (1/4) of the Riverside County drainage area is within the jurisdiction of the Santa Ana Regional Water Quality Control Board. The area under the jurisdiction of the Santa Ana Regional Water Quality Control board is currently regulated by Santa Ana Regional Board Order No. 90-104, NPDES No. 8000192, Waste Discharge Requirements for the Riverside County Flood Control and Water Conservation District and the County of Riverside and Incorporated Cities within the Santa Ana Region, Areawide Urban Stormwater Runoff, Riverside County. The requirements contained in this Order are patterned after Order No. 90-104 to ensure consistent regulation, pollution control practices, and monitoring and reporting requirements throughout Riverside County.

10. Stormwater discharges in the Riverside County portion of the San Diego region are tributary to various receiving waters. These receiving waters include:

Inland Surface Streams

- a. Santa Margarita River
- b. Murrieta Creek
- c. Temecula Creek
- d. Pechanga Creek
- e. Cahuilla Creek
- f. San Mateo Creek
- g. San Juan Creek
- h. Tocalota Creek

Lakes/Reservoirs

- a. Skinner Lake
- b. Vail Lake

Lagoons

- a. Mouth of the Santa Margarita River

11. The Comprehensive Water Quality Control Plan Report, San Diego Basin (9), (Basin Plan) was adopted by this Regional Board on March 17, 1975 and subsequently approved by the State Water Resources Control Board (State Board). Subsequent revisions to the Basin Plan have also been adopted by the Regional Board and approved by the State Board.
12. The Basin Plan identifies the following beneficial uses of inland surface waters in Riverside County and the mouth of the Santa Margarita River:
- a. Municipal and domestic supply;
  - b. Industrial service supply;
  - c. Industrial process supply;
  - d. Agriculture supply;
  - e. Water contact recreation;
  - f. Non-contact water recreation;
  - g. Warm fresh-water habitat;
  - h. Cold fresh-water habitat;
  - i. Preservation of rare and endangered species;
  - j. Wildlife habitat; and
  - k. Marine habitat.
13. The Basin Plan contains the following prohibitions, applicable to discharges, for inland surface waters:

"Discharge of treated or untreated sewage or industrial wastes to a natural watercourse upstream of surface storage or diversion facilities used for municipal supply is prohibited."

"Discharge of treated or untreated sewage or industrial wastewater, exclusive of cooling water or other waters which are chemically unchanged, to a watercourse, is prohibited except in cases where the quality of said discharge complies with the receiving body's water quality objectives."

"The dumping or deposition of oil, garbage, trash, or other solid municipal, industrial, or agricultural waste directly into inland waters or watercourses or adjacent to the water courses in any manner which may permit its being washed into the watercourse is prohibited."

"Land grading and similar operations causing soil disturbance which do not contain provisions to minimize soil erosion and limit suspended matter in area runoff are prohibited."

14. The requirements contained in this Order are necessary to implement the objectives of the Basin Plan for receiving waters within the region.
15. Numerical and narrative water quality standards exist for the receiving waters in the region. Due to the enormous variability in stormwater quality and quantity and the complexity of urban runoff, this Order does not contain numerical limitations for any constituents. The impact of stormwater and urban runoff discharges on water quality of 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 permittees to continue to monitor the discharges and to analyze the data. This Order also requires the development and implementation of best management practices (BMPs). "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." For purposes of this Order, BMPs for the control of pollutants in stormwater and urban runoff may include the use of non-structural (e.g. public education, regulatory powers, urban planning,

etc.) and structural (e.g. detention basins, grass swales, runoff infiltration devices, etc.) controls which may be applied to a particular site or throughout a region (e.g., a city or throughout an area served by a stormwater conveyance system).

16. Pursuant to 40 CFR 131.12 and State Board Resolution No. 68-16, Statement of Policy with Respect to Maintaining High Quality of Waters in California (collectively "antidegradation policies"), the Regional Board shall ensure that any increase in pollutant loading to a receiving water meets the requirements stated in the foregoing policies. At a minimum, permitting actions shall be consistent with the following:
  - a. Existing instream water uses and the level of water quality necessary to protect existing beneficial uses shall be maintained and protected;
  - b. Where the quality of the waters exceed levels necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water, the quality shall be maintained and protected unless the State finds, after full satisfaction of the intergovernmental coordination and public participation provisions of the State's continuing planning process, that allowing lower water quality is necessary to accommodate important economic or social development in the area in which the waters are located;
  - c. Where high quality waters constitute an outstanding national resource, such as waters of National and State parks and wildlife refuges and waters of exceptional recreational or ecological significance, that water quality shall be maintained and protected; and
  - d. In those cases where potential water quality impairment associated with a thermal discharge is involved, the antidegradation policy and implementing method shall be consistent with Section 316 of the Clean Water Act.
17. The Regional Board, in establishing the requirements contained herein, has taken into consideration the requirements of the State and Federal "antidegradation" policies and has determined that:
  - a. The conditions and requirements established in this order for discharges of stormwater/urban runoff to waters of the United States ensure that the existing

beneficial uses and quality of receiving waters will be protected and improved through the implementation of best management practices for the control of pollutants in stormwater and urban runoff;

- b. Discharges of urban runoff to waters of the United States will continue regardless of the issuance of this Order. The issuance of this Order is necessary to ensure achievement and maintenance of the goals and objectives of the water quality control plans adopted by the State and will result in improvement in water quality through implementation of stormwater management programs for the control of pollutants in urban runoff;
  - c. No receiving waters covered under the terms and conditions of this Order have been designated an outstanding national resource water or an Area of Special Biological Significance (ASBS) by the State Water Resources Control Board; and
  - d. Thermal discharges potentially impairing water quality are not authorized under the terms and conditions of this Order, thus, Section 316 of the Clean Water Act is not applicable.
18. Pursuant to Section 402 of the CWA, and amendments thereto, and pursuant to Section 13260, et seq., of the California Water Code, this Order shall serve as an NPDES permit and waste discharge requirements for the discharge of stormwater and urban runoff to surface waters of Riverside County in the area under the jurisdiction of the Regional Board.
19. The Regional Board, in establishing the requirements contained herein, considered factors including, but not limited to, the following:
- a. Beneficial uses to be protected and the water quality objectives reasonably required for that purpose;
  - b. Other waste discharges;
  - c. The need to prevent nuisance;
  - d. Past, present, and probable future beneficial uses of the waters under consideration;
  - e. Environmental characteristics of the waters under consideration;

- f. Water quality conditions that could reasonably be achieved through the coordinated control of all factors which affect water quality in the area;
  - g. Economic considerations; and
  - h. The need for developing housing within the region;
20. The issuance of this permit for the discharge of stormwater runoff and urban runoff is exempt from the requirement for preparation of environmental documents under the California Environmental Quality Act (Public Resources Code, Division 13, Chapter 3, Section 21000 et seq.) in accordance with the California Water Code, Section 13389.
  21. The Regional Board has considered all water resource related environmental factors associated with the discharge of stormwater and urban runoff.
  22. The Regional Board has notified all known interested parties of its intent to issue an NPDES permit for the discharge of stormwater and urban runoff.
  23. The Regional Board has, at a public meeting, heard and considered all comments pertaining to the discharge of stormwater and urban runoff.

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 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 stormwater conveyance system outfalls as agreed upon by the Executive Officer.
3. Develop uniform criteria for stormwater conveyance system inspections.
4. Conduct inspections of the stormwater conveyance systems within its jurisdiction.
5. Prepare and submit to the Regional Board all the reports, plans, and programs as required in this Order.
6. Monitor the implementation of the plans and programs and determine their effectiveness in attaining water quality

objectives.

7. Coordinate all the activities with the Regional Board.
8. Enact legislation and ordinances as necessary to establish legal authority.
9. Pursue enforcement actions as necessary to ensure compliance with stormwater management programs and implementation plans.
10. Solicit, and respond to, public input<sup>2</sup> for proposed monitoring, reconnaissance, management, and implementation plans.
11. Ensure adequate response to emergency situations such as accidental spills, leaks, illicit discharges, etc.
12. Abide by the terms of the Implementation Agreement.

## II. RESPONSIBILITIES OF THE CO-PERMITTEES

The co-permittees shall be responsible to manage the program within its jurisdiction, including:

1. Conduct stormwater conveyance 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.
4. Implement management programs, monitoring programs, and implementation plans as required by this Order.
5. Submit stormwater conveyance system maps with periodic revisions as necessary.
6. Prepare and submit all reports to the principal permittee in a timely manner.
7. Enact, and administer, 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. Ensure adequate response to emergency situations such as accidental spills, leaks, illicit discharges, etc.
10. Abide by the terms of the Implementation Agreement.

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<sup>2</sup> Solicitation, and response to, public input may be 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.

III. GENERAL REQUIREMENTS

1. The permittees shall prohibit illicit/illegal discharges from entering into stormwater conveyance systems. Discharges conditionally allowed to enter stormwater conveyance systems are specified in Item V. 4.
2. The permittees shall develop and implement best management practices (BMPs), including management practices, control techniques, and system design and engineering methods, and such other provisions as the Executive Officer determines appropriate for the control of pollutants, to control/reduce the discharge of pollutants to waters of the United States to the maximum extent practicable. The BMPs so developed, along with a time schedule for implementation, shall be submitted for the approval and/or modification by the Executive Officer of the Regional Board. In developing the best management practices, the permittees shall consider the water quality objectives of all the receiving water bodies.
3. The permittees shall ensure that BMPs are implemented for entities discharging stormwater and urban runoff to stormwater conveyance systems within their area of jurisdiction.

IV. COMPILATION AND SUBMITTAL OF EXISTING DATA

## 1. Runoff Quality/Quantity

The permittees shall collectively submit all quantitative information, generated since 1980, on stormwater discharges to stormwater conveyance systems. Historical averages and extremes of the collected data shall also be submitted. 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. Analytical and flow data for stormwater samples collected from the stormwater conveyance system outfalls, and within any tributary waters of the United States;
- b. Precipitation data from the precipitation stations and the duration of the storm events (if available); and
- c. Analysis of the data and the major pollutants identified in the stormwater discharges from each drainage area to each receiving water and a

determination whether the identified pollutants came from non-point source or point-source discharges.

## 2. System/Drainage Area Characterization

The permittees shall submit information to the Regional Board for identification and characterization of the sources of pollutants in the stormwater discharges. Descriptive information, such as land use in Riverside County, and an overall map of the drainage system showing major feature shall be submitted. The following information shall be provided:

- a. An identification of the drainage areas (more than 50 acres in size) that discharge stormwater to the stormwater conveyance systems and of those drainage areas that discharge to stormwater conveyance systems with pipe diameters greater than 36 inches;
- b. The sizes of these drainage areas (acreage) and the sizes (pipe diameters or approximate dimensions of the stormwater conveyance systems) and physical characteristics of the stormwater conveyance systems. These physical characteristics shall include, but not be limited to, whether the stormwater conveyance system is lined or unlined and whether it has intermittent or continuous flow;
- c. The names, locations, and Standard Industrial Codes (SIC) of specific industrial sources and principal land use activities in each drainage area, identified in IV B.2. a., above, discharging to the stormwater conveyance systems. An estimation of the runoff coefficients for these drainage areas shall also be provided;
- d. The locations of present stormwater conveyance system outfalls discharging to waters of the United States. The name of each receiving water shall be reported and the location of each outfall shall be indicated on a map; and
- e. The locations of major structural controls for stormwater and urban runoff discharges (e.g. retention basins, detention basins, etc).

## 3. Illegal Connections

- a. The permittees shall provide a list of dischargers (permitted and unpermitted) known to exist currently who discharge process or non-process wastewater to the stormwater conveyance systems and any existing

information pertaining to illegal dumping of pollutants in stormwater conveyance systems. The permittees shall also provide any existing procedures used for detecting illegal connections to the stormwater conveyance 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 and/or limit the non-stormwater discharges to stormwater conveyance systems.

4. Stormwater Management Program

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

5. Stormwater/Urban Runoff Monitoring Program

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

6. Pollutant Information

The permittees 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 permittees shall provide to the Regional Board any other existing information that is pertinent to this permit.

8. The permittees shall submit the above information, IV.1. - IV.7., for the receiving waters within the San Diego region no later than March 31, 1992.

- V. RECONNAISSANCE SURVEY

1. The permittees shall submit information from a reconnaissance survey to be conducted at the stormwater conveyance systems. The purpose of the survey is to identify illegal/illicit non-stormwater discharges to the stormwater conveyance systems, illicit disposal practices, or other practices which impair water quality. 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

the Executive Officer of the Regional Board. The information shall include, but need not be limited to, the following:

- a. By September 30, 1992, a proposed reconnaissance survey field manual, including a time schedule shall be submitted.
- b. By September 30, 1993, and every year thereafter until the completion of the survey, a progress report containing the following information shall be submitted:
  - i. Results of the reconnaissance survey, including an evaluation of the results;
  - ii. Additional information that would lead to isolating and identifying sources of illegal connections to the stormwater conveyance 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.;
  - iii. A listing of any identified or suspected illegal non-stormwater dischargers, including the names, locations, and types of the facilities, and the names of the stormwater conveyance systems and receiving waters to which the illegal/illicit non-stormwater discharges occur;
  - iv. 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; and
  - v. A discussion on all activities, related to the survey, conducted for the past 12 months.
2. By March 31, 1992, the permittees shall submit a proposed implementation plan, including a tentative time schedule, to prosecute violators and eliminate illegal/illicit discharges to the stormwater conveyance systems. 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 stormwater conveyance systems, and a proposed time schedule for obtaining such legal authorities, if necessary.

3. By September 30, 1994, and every year thereafter, the permittees shall submit a progress report evaluating the effectiveness of the plan in detecting and eliminating illegal/illicit discharges to the stormwater conveyance systems.
4. The permittees shall effectively eliminate all identified illegal/illicit discharges in the shortest time practicable, and in no case later than July 16, 1995. Those identified after July 16, 1995 shall be eliminated in the shortest time practicable. The following discharges shall not be considered illegal/illicit 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 an NPDES permit, discharges to storm water conveyance systems from 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 discharges shall be prohibited from entering stormwater conveyance systems.

#### VI. DRAINAGE AREA MANAGEMENT PROGRAM

1. The permittees shall develop and implement best management practices (BMPs) to control the discharge of pollutants to waters of the United States. The permittees shall submit information pertaining to the proposed management programs for control of the pollutants in the stormwater discharges. 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 stormwater discharges from industrial, commercial, and residential properties to the maximum extent practicable. At a minimum, the following should be considered in developing the BMPs:

Structural Controls

- i. Structural controls such as first flush diversion, detention/retention basins, infiltration trenches/basins, porous pavement, oil/grease separators, grass swales, wire concentrators, etc. Engineering and design modification of the existing structures should also be considered.

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 field inspections and response to emergency incidents.
- vi. The ongoing program required in Item No. V. above for the detection and elimination of illicit connections and controlling/eliminating illegal dumping of pollutants into 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 as follows:

## i. 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 to control erosion/siltation and contaminated runoff from the construction site.

## ii. Residential and Commercial/Industrial Sites

To prevent the increase of pollutants in stormwater discharges, all new developments and existing facilities with significant redevelopment must develop individual post construction long-term comprehensive stormwater management plans.

- d. A description of the legal authorities for implementing the programs, and a proposed time schedule for obtaining such legal authorities, if necessary; and
  - e. A description of staff, equipment, and funds available to implement the programs.
2. The permittees shall submit the BMPs so developed, along with a time schedule for implementation, for the approval by the Executive Officer of the Regional Board no later than March 31, 1993.
  3. By March 31, 1994 and every year thereafter, the permittees 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 and urban runoff discharges. The permittees 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/URBAN RUNOFF MONITORING PROGRAM

The permittees shall develop and implement (after approval of the plan by the Executive Officer) a stormwater/urban runoff monitoring program. Proposed monitoring programs and time schedules for their implementation shall be subject to the approval of the Executive Officer. Proposed monitoring

programs, time schedules, and implementation reports shall be submitted to the principal permittee in sufficient time to submit a collated report to the Regional Board as follows:

<u>TASK</u>	<u>STORMWATER MONITORING</u>	<u>REPORT DATE</u>
Submittal of Proposed Stormwater Monitoring Programs and Implementation Time Schedules		03/31/93
Progress Report on the Implementation of the Stormwater Monitoring Programs		03/31/94*

\* and annually thereafter

#### VIII. RECEIVING WATER MONITORING PROGRAM

The permittees shall develop and implement (after approval of the plan by the Executive Officer) a receiving water monitoring program. Proposed monitoring programs and time schedules for their implementation shall be subject to the approval of the Executive Officer. Proposed monitoring programs, time schedules, and implementation reports shall be submitted to the principal permittee in sufficient time to submit a collated report to the Regional Board as follows:

<u>TASK</u>	<u>RECEIVING WATER MONITORING</u>	<u>REPORT DATE</u>
Submittal of Proposed Receiving Water Monitoring Programs and Implementation Time Schedules		03/31/93
Progress Report on the Implementation of the Receiving Water Monitoring Programs		03/31/94*

\* and annually thereafter

#### 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. 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 and any impact of stormwater and urban runoff discharges on the receiving waters shall be discussed, starting with the most significantly impacted receiving waters.

2. With the implementation of the receiving water monitoring program, an evaluation shall be performed for the calculated pollutant loading rates from the stormwater and urban runoff monitoring program and the receiving water monitoring program. 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

No later than January 31, 1994, and annually thereafter, 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.

#### XII. IMPLEMENTATION AGREEMENT

A signed copy of the Implementation Agreement between the RCFC&WCD, the County of Riverside, and the City of Temecula 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 permittees.

#### XIII. REPORTING

1. A summary of tasks to be completed and reports submitted is as follows:

(continued on the following page)

<u>TASK</u>		<u>COMPLIANCE REPORT DUE</u>
XII	Implementation Agreement	01/31/91
IV.	Existing reports and programs	03/31/92
V.1.a	Proposed Reconnaissance Survey Field Manual	09/30/92
V.2	Proposed Implementation Plan for Prosecuting Illegal Dischargers	03/31/93
VI.1&2	Management Programs (BMPs) and Implementation Plan	03/31/93
VII.1&2	Stormwater Monitoring Program Plan	03/31/93
VIII.1&2	Receiving Water Monitoring Program Plan	03/31/93
----- Progress Reports after Plan Implementation -----		
V.1.b.	Reconnaissance Survey Progress Report	09/30 of every year <sup>3</sup>
V.	Illegal Discharge Elimination Progress Report	09/30 of every year <sup>4</sup>
VI.3	Management Programs Progress Report	03/31 of every year <sup>5</sup>
VII.3	Stormwater Monitoring Program Progress Report	03/31 of every year <sup>6</sup>
VIII.3	Receiving Water Monitoring Program Progress Report	03/31 of every year <sup>7</sup>
IX.	Fiscal Analysis	08/31 of every year <sup>8</sup>
X & XI	Data/Program Analysis	01/31 of every year <sup>9</sup>

<sup>3</sup> The first progress report is due by September 30, 1993.

<sup>4</sup> The first progress report is due by September 30, 1994.

<sup>5</sup> The first progress report is due by March 31, 1994.

<sup>6</sup> The first progress report is due by March 31, 1994.

<sup>7</sup> The first progress report is due by March 31, 1994.

<sup>8</sup> The first annual fiscal analysis is due by August 31, 1991.

<sup>9</sup> The first data/program analysis is due by January 31, 1994.

- B. All reports and information required herein shall be submitted to the Executive Officer of the Regional Board and the Regional Director of the Environmental Protection Agency, Region IX, at the following addresses:

Executive Officer  
California Regional Water Quality Control Board  
San Diego Region  
9771 Clairemont Mesa Blvd., Ste. B  
San Diego, California 92124-1331

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Environmental Protection Agency  
Region IX  
Permits and Compliance Branch  
1235 Mission Street (Mail Code W-5)  
San Francisco, California 94103

XIV. ANALYTICAL METHODS/RECORD KEEPING

- A. Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge. Once established, monitoring points shall not be changed without notification to and the approval of the Executive Officer.
- B. Monitoring must be conducted according to United States Environmental Protection Agency test procedures approved under Title 40, Code of Federal Regulations (CFR), Part 136, "Guidelines Establishing Test Procedures for Analysis of Pollutants Under the Clean Water Act" as amended, unless other test procedures have been specified by this Order or the Executive Officer.
- C. All analyses shall be performed in a laboratory certified to perform such analyses by the California Department of Health Services or a laboratory approved by the Executive Officer.
- D. Monitoring results must be reported on discharge monitoring report forms or in a format approved by the Executive Officer.
- E. If a permittee monitors any pollutant more frequently than required by this Order, using test procedures approved under 40 CFR, Part 136, or as specified in this Order, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the permittee's monitoring report. The increased frequency of monitoring shall also be reported.
- F. Permittees shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all

reports required by this Order, and records of all data used to complete the application for this Order. Records shall be maintained for a minimum of five years from the date of the sample, measurement, report, or application. This period may be extended during the course of any unresolved litigation regarding this discharge or when requested by the Regional Board Executive Officer.

- G. Records of monitoring information shall include:
1. The date, exact place, and time of sampling or measurements;
  2. The individual(s) who performed the sampling or measurements;
  3. The date(s) analyses were performed;
  4. The individual(s) who performed analyses;
  5. The analytical techniques or method used; and
  6. The results of such analyses.
- H. Calculations for all limitations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified by the Executive Officer or in this Order.
- I. All monitoring instruments and devices used by a permittee to fulfill the prescribed monitoring program shall be properly maintained and calibrated as necessary to ensure their continued accuracy.
- J. Permittees shall report all instances of noncompliance not reported under Standard Reporting Requirement XVI. E. of this Order at the time monitoring reports are submitted. The reports shall contain the information listed in Standard Reporting Requirement XVI. E.
- K. The monitoring reports shall be signed by an authorized person as required by Standard Reporting Requirement L.
- L. A composite sample is defined as a combination of at least 8 sample aliquots of at least 100 milliliters each, collected at periodic intervals during the operating hours of a facility over a 24-hour period. For volatile pollutants, aliquots must be combined in the laboratory immediately before analysis. The composite must be flow proportional; either the time interval between each aliquot or the volume of each aliquot must be proportional to either the stream flow at the time of sampling or the total stream flow since the collection of the previous aliquot. Aliquots may be collected manually or automatically.
- M. A grab sample is an individual sample of at least 100 milliliters collected at a randomly selected time over a period not exceeding 15 minutes.

XV. PROVISIONS

- A. Neither the treatment nor the discharge of pollutants shall create a pollution, contamination, or nuisance as defined by Section 13050 of the California Water Code.
- B. The permittees must comply with all conditions of this Order. Any permit noncompliance constitutes a violation of the Clean Water Act and the California Water Code and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; the issuance of an individual permit; or for denial of a renewal application.
- C. The permittees shall take all reasonable steps to minimize or correct any adverse impact on the environment resulting from noncompliance with this Order, including such accelerated or additional monitoring as may be necessary to determine the nature and impact of the noncomplying discharge.
- D. This Order may be modified, revoked and reissued, or terminated for cause including, but not limited to, the following:
1. Violation of any terms or conditions of this Order;
  2. Obtaining this Order by misrepresentation or failure to disclose fully all relevant facts; or
  3. A change in any condition that requires either a temporary or permanent reduction or elimination of the discharge.

The filing of a request by a permittee for modification, revocation and reissuance, or termination of this Order or a notification of planned change in or anticipated noncompliance with this Order does not stay any condition of this Order.

- E. In addition to any other grounds specified herein, this Order shall be modified or revoked at any time if, on the basis of any new data, the Executive Officer determines that continued discharges may cause unreasonable degradation of the aquatic environment.
- F. This Order is not transferable to any person except after notice to the Executive Officer of this Regional Board. The Regional Board may require a new report of waste discharge to change the name of a permittee and incorporate such other requirements as may be necessary under the California Water Code and the Clean Water Act. A permittee shall submit notice of any transfer of this

Order's responsibility and coverage to a new permittee as described under Standard Reporting Requirement XVI.C.

- G. This Order does not convey any property rights of any sort or any exclusive privileges. The requirements prescribed herein do not authorize the commission of any act causing injury to persons or property of another, including property damage caused as a result of the discharge, nor protect the permittee from liability under federal, state, or local laws, nor create a vested right for the permittee to continue the discharge.
- H. Permittees shall allow the Regional Board, or an authorized representative or any representative of the United States Environmental Protection Agency upon the presentation of credentials and other documents as may be required by law, to:
1. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this Order;
  2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Order;
  3. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices or operation regulated or required under this Order; and
  4. Sample or monitor at reasonable times, for the purposes of assuring compliance with this Order or as otherwise authorized by the Clean Water Act or California Water Code, any substances or parameters at any location.
- I. Permittees shall, at all times, properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by a permittee to achieve compliance with the conditions of this Order. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls including appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of this Order.
- J. In an enforcement action, it shall not be a defense for a permittee that it would have been necessary to halt or reduce the permitted activity in order to maintain

compliance with this Order. Upon reduction, loss, or failure of the treatment facility, the permittee shall, to the extent necessary to maintain compliance with this Order, control production or all discharges, or both, until the facility is restored or an alternative method of treatment is provided. This provision applies, for example, when the primary source of power of the treatment facility fails, is reduced or is lost.

K. The provisions of this Order are severable, and if any provision of this Order, or the application of any provision of this Order to any circumstances, is held invalid, the application of such provision to other circumstances, and the remainder of this Order, shall not be affected thereby.

L. Bypass of Treatment Facilities

1. Definitions

- (a) "Bypass" means the intentional diversion of waste streams from any portion of the treatment facility.
- (b) "Severe property damage" means substantial physical damage to property, damage to the treatment facilities which cause them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

2. Bypass Not Exceeding Effluent Limitations

A permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operations. These bypasses are not subject to the provisions of paragraphs (3) and (4) of this section.

3. Notice of Anticipated Bypass and Unanticipated Bypass

- (a) Anticipated bypass. If a permittee knows in advance of the need for a bypass, they shall submit prior notice, if possible, at least ten days before the date of the bypass.
- (b) Unanticipated bypass. A permittee shall submit notice of an unanticipated bypass as described under Standard Reporting Requirement XVI. E.

4. Prohibition of Bypass

(a) Bypass is prohibited and the Regional Board may take enforcement action against a permittee for bypass, unless:

- (1) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
- (2) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated waste, or maintenance during normal periods of equipment downtime. This condition is not satisfied if the permittee could have installed adequate backup equipment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and
- (3) The permittee submitted notices as required under paragraph (3) of this section.

(b) The Executive Officer may approve an anticipated bypass, after considering its adverse effect, if the Executive Officer determines that it will meet the three conditions listed above in paragraph (1) of this section.

M. Upset Conditions1. Definitions

"Upset" means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based effluent limitations because of factors beyond the reasonable control of a permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

2. Effect of an Upset

An upset constitutes an affirmative defense to an action brought for noncompliance with such technology-based permit effluent limitations if the requirements of paragraph (3) of this

section are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.

3. Conditions Necessary for a Demonstration of Upset

A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:

- (a) An upset occurred and that the permittee can identify the specific cause(s) of the upset;
- (b) The permitted facility was at the time being properly operated; and
- (c) The permittee submitted notice of the upset as required in Standard Reporting Requirement XVI. E.

4. Burden of Proof

In any enforcement proceeding, a permittee seeking to establish the occurrence of an upset has the burden of proof.

XVI. STANDARD REPORTING REQUIREMENTS

- A. A new Report of Waste Discharge shall be filed with the Regional Board not less than 180 days prior to the following:
  1. Significant change in disposal method (e.g., change in the method of treatment which would significantly alter the nature of the waste).
  2. Significant change in disposal area (e.g., moving the discharge to a disposal area significantly removed from the original area, potentially causing different water quality or nuisance problems).
  3. Other circumstances which result in a material change in character, amount, or location of the waste discharge.
- B. A permittee shall give advance notice to the Executive Officer of any planned changes in a permitted facility or activity which may result in noncompliance with the requirements of this Order.

- C. A permittee must notify the Executive Officer, in writing, at least 30 days in advance of any proposed transfer of this Order's responsibility and coverage to a new permittee. The notice must include a written agreement between the existing and new permittee containing a specific date for the transfer of this Order's responsibility and coverage between the current permittee and the new permittee. This agreement shall include an acknowledgement that the existing permittee is liable for violations up to the transfer date and that the new permittee is liable from the transfer date on.
- D. The permittees shall comply with any monitoring and reporting requirements contained in this Order and any additional monitoring requirements specified by the Executive Officer.
- E. A permittee shall report any noncompliance which may endanger health or the environment. Any information shall be provided orally to the Executive Officer within 24 hours from the time the permittee becomes aware of the circumstances. A written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance. The Executive Officer, or an authorized representative may waive the written report on a case-by-case basis if the oral report has been received within 24 hours.
- F. A permittee shall notify the Executive Officer as soon as it is known or there is reason to believe:
1. That any activity has occurred or which will occur which would result in the discharge of any toxic pollutant which is not limited in this Order, if that discharge will exceed the highest of the following "notification levels":
    - a. One hundred micrograms per liter (100 ug/L);
    - b. Two hundred micrograms per liter (200 ug/L) for acrolein and acrylonitrile; five hundred micrograms per liter (500 ug/L) for 2,4-dinitrophenol and for 2-methyl-4, 6-dinitrophenol; and one milligram per liter (1 mg/L) for antimony.
- G. A permittee shall furnish to the Executive Officer, within a reasonable time, any information which the Executive Officer may request to determine whether cause

exists for modifying, revoking and reissuing, or terminating this Order or to determine compliance with this Order or other requirements established by the Executive Officer. A permittee shall also furnish to the Executive Officer, upon request, copies of records required to be kept by this Order.

- H. A permittee shall provide adequate notice to the Executive Officer of the following:
1. Any new introduction of pollutants to the discharge.
  2. Any substantial change in the volume or character of pollutants being introduced into the discharge.
  3. For the purpose of this provision, adequate notice shall include information on (a) the quality and quantity of waste introduced into the discharge, and (2) any anticipated impact of the change on the quantity or quality of runoff to be discharged to surface waters.
- I. Where a permittee becomes aware that he failed to submit any relevant facts in a Report of Waste Discharge, or submitted incorrect information in a Report of Waste Discharge, or in any report to the Regional Board, he shall promptly submit such facts or information.
- J. If a need for a discharge bypass is known in advance, the permittee shall submit prior notice and, if at all possible, such notice shall be submitted at least ten days prior to the date of the bypass.
- K. This Order expires on July 16, 1995. The permittees must jointly 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 as a minimum, the following:
1. Summary of the results of the monitoring program.
  2. Summary of BMPs implemented and evaluations of their effectiveness.
  3. Summary of procedures implemented to detect illegal discharges and illicit disposal practices and an evaluation of their effectiveness.
  4. Summary of measures implemented to control pollutants in surface runoff from construction sites and an evaluation of their effectiveness.

5. Evaluation of the need for additional BMPs, source control, and/or structural control measures.
  6. Proposed plan of stormwater/urban runoff quality management activities that will be undertaken during the term of the next permit.
- L. All applications, reports, or information submitted to the Executive Officer of this Regional Board shall be signed and certified.
1. The Report of Waste Discharge shall be signed as follows:
    - a. For a corporation - by a principal executive officer of at least the level of vice-president.
    - b. For a partnership or sole proprietorship - by a general partner or the proprietor, respectively.
    - c. For a municipality, state, federal or other public agency - by either a principal executive officer or ranking elected official.
  2. All other reports required by this Order and other information requested by the Executive Officer shall be signed by a person designated in paragraph (1) of this provision, or by a duly authorized representative of that person. An individual is a duly authorized representative only if:
    - a. The authorization is made in writing by a person described in paragraph (1) of this provision;
    - b. 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 well field, superintendent, or position of equivalent responsibility (a duly authorized representative may thus be either a named individual or any individual occupying a named position); and
    - c. The written authorization is submitted to the Executive Officer.
  3. Any person signing a document under this Section shall make the following certification:

"I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that 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."

- M. Except for data determined to be confidential under Title 40, Code of Federal Regulations Part (40 CFR Part 2), all reports prepared in accordance with the terms of this Order shall be available for public inspection at the offices of the California Regional Water Quality Control Board, San Diego Region and the United States Environmental Protection Agency, Region 9. As required by the Clean Water Act, Reports of Waste Discharge, this Order, and effluent data shall not be considered confidential.

#### XVII. NOTIFICATIONS

- A. California Water Code Section 13263(g) states:

"No discharge of waste into the waters of the state, whether or not such discharge is made pursuant to waste discharge requirements, shall create a vested right to continue such discharge. All discharges of waste into waters of the state are privileges, not rights."

- B. The Clean Water Act provides that any person who violates a condition of this Order implementing Sections 301, 302, 306, 307, 308, 318 or 405 of the Clean Water Act is subject to a civil penalty not to exceed \$10,000 per day of such violations. Any person who willfully or negligently violates conditions of this Order implementing Section 301, 302, 306, 307 or 308 of the Clean Water Act is subject to a fine of not less than \$2,500 nor more than \$25,000 per day of violation, or by imprisonment for not more than one year, or both.
- C. 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 Order, including monitoring reports or reports of compliance or noncompliance 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.

- D. Nothing in this Order shall be construed to relieve a permittee from civil or criminal penalties for noncompliance.
- E. Nothing in this Order shall be construed to preclude the institution of any legal action or relieve a permittee from any responsibilities, liabilities, or penalties to which a permittee is or may be subject to under Section 311 of the Clean Water Act.
- F. Nothing in this Order shall be construed to preclude institution of any legal action or relieve a permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable State law or regulation under authority preserved by Section 510 of the Clean Water Act.
- G. This Order shall become effective ten days after the date of its adoption, provided the Regional Administrator or Director, United States Environmental Protection Agency, has no objection. If the Regional Administrator objects to its issuance, this Order shall not become effective until such objection is withdrawn.

I, Arthur L. Coe, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Diego Region, on July 16, 1990.



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ARTHUR L. COE  
Executive Officer

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
SAN DIEGO REGION

ADDENDUM NO. 1 TO ORDER NO. 90-46  
NPDES PERMIT NO. CA0108766

AN ADDENDUM MODIFYING RESPONSIBILITY FOR  
ORDER NO. 90-46 TO INCLUDE THE CITY OF MURRIETA  
AS AN INCORPORATED CITY OF RIVERSIDE COUNTY  
WITHIN THE SAN DIEGO REGION

The California Regional Water Quality Control Board, San Diego Region (hereinafter Regional Board), finds that:

1. On July 16, 1990, this Regional Board adopted Order No. 90-46 (NPDES Permit No. CA0108766), Waste Discharge Requirements for Stormwater and Urban Runoff from the Riverside County Flood Control and Water Conservation District, the County of Riverside and the Incorporated Cities<sup>1</sup> of Riverside County within the San Diego Region. Order No. 90-46 prescribes requirements for the control of pollutants resulting from stormwater/urban runoff from all incorporated cities and the unincorporated urban areas in Riverside County within the jurisdiction of the Regional Board.
2. By letter dated January 23, 1992, Kenneth L. Edwards, Chief Engineer, Riverside County Flood Control and Water Conservation District, notified the Regional Board that the City of Murrieta is now included in the incorporated cities of Riverside County within the San Diego Region.
3. The Regional Board has notified all known interested parties of its intent to modify Order No. 90-46 to reflect the addition of the City of Murrieta as one of the parties responsible for complying with Order No. 90-46.
4. The Regional Board in a public hearing heard and considered all comments pertaining to the modification of Order No. 90-46.
5. This facility is an existing facility and as such is exempt from the provisions of the California Environmental Quality Act, in accordance with Title 14, California Code of Regulations, Article 19, Section 15301.

<sup>1</sup> Currently includes only the City of Temecula.

IT IS HEREBY ORDERED THAT Order No. 90-46 is modified as follows:

1. Order No. 90-46 shall henceforth be referred to as Waste Discharge Requirements for Stormwater and Urban Runoff from the Riverside County Flood Control and Water Conservation District, the County of Riverside and the Incorporated Cities<sup>2</sup> of Riverside County within the San Diego Region.
2. The waste discharge requirements contained in Order No. 90-46 shall be applicable to the Riverside County Flood Control and Water Conservation District, the County of Riverside and the Incorporated Cities of Riverside County within the San Diego Region and shall remain in full force and effect.
3. The word discharger as it appears in Order No. 90-46 shall hereafter be construed to refer to the Riverside County Flood Control and Water Conservation District, the County of Riverside and the Incorporated Cities of Riverside County within the San Diego Region.

I, Arthur L. Coe, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Addendum adopted by the California Regional Water Quality Control Board, San Diego Region, on May 18, 1992.



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Arthur L. Coe  
Executive Officer

<sup>2</sup> Currently includes the City of Temecula and the City of Murrieta.

**California Regional Water Quality Control Board  
San Diego Region**

**ORDER NO. 96-03  
NPDES No. CAS0108740**

**Waste Discharge Requirements for Storm Water and Urban Runoff  
from the County of Orange, the Orange County Flood Control District,  
and the Incorporated Cities of Orange County Within the San Diego Region**

The California Regional Water Quality Control Board, San Diego 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 Dana Point, Laguna Beach, Laguna Hills, Laguna Niguel, Lake Forest, Mission Viejo, San Clemente and San Juan Capistrano, (hereinafter collectively referred to as permittees or co-permittees), submitted National Pollutant Discharge Elimination System (NPDES) Application No. CAS0108740 and a Report of Waste Discharge for reissuance of their areawide municipal 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 USEPA) 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 USEPA's promulgation of the final storm water regulations, the County of Orange and the incorporated cities within the jurisdiction of the San Diego Region requested an areawide NPDES permit for urban storm water run-off.
3. On July 16, 1990, the Regional Board adopted Order No. 90-38 for urban storm water run-off from urban areas in Orange County within the San Diego 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 No. 96-03 (NPDES No. CAS0108740) - cont'd**  
**The County of Orange, OCFCD, and Incorporated Cities**  
**Areawide Urban Storm Water Run-off**

2 of 29

4. Order No. 90-38 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)<sup>1</sup>.
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<sup>2</sup> 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 481,000, occupying an area of approximately 243 square miles (including both unincorporated areas and the limits of 8 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 portion of the urbanized areas of Orange County drains into water bodies within this Regional Board's jurisdiction. The permitted 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 major portion of the Orange County drainage area is within the jurisdiction of the Santa Ana Regional Board and is currently regulated under an order issued by that Board.
8. The permittees may lack legal jurisdiction over storm water discharges into their systems

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<sup>1</sup> 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.

<sup>2</sup> 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.

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 1992, 1994, and 1996 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 surface water bodies in Orange County include:

Inland Surface Streams

- a. Aliso Creek
- b. Salt Creek
- c. Oso Creek
- d. Sulphur Creek
- e. San Juan Creek
- f. Trabuco Creek
- g. Segunda Descheca Creek

h. Laguna Canyon

Bays, Estuaries, and Tidal Prisms

i. Dana Point Harbor

Ocean Waters

k. Pacific Ocean

The beneficial uses of these water bodies include: agricultural supply, industrial service supply, navigation, 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, and spawning, reproduction and development of aquatic habitats. The ultimate goal of this storm water management program is to protect the beneficial uses of the receiving waters.

12. Studies conducted by the USEPA, 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)<sup>3</sup> 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.
13. 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).

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<sup>3</sup> 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.

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**Areawide Urban Storm Water Run-off**

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14. One of the major components of these statewide permits is the development and implementation of a storm water pollution prevention plan (SWPPP).
15. 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.
16. 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.
17. 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.
18. 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.
19. 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.
20. 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).

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 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 April 9, 1996.
22. 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.
23. 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.
24. 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.
25. 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.

26. 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 stakeholders, including the permittees in other counties and Regional Boards.
27. Any illegal dumping and illicit/illegal connections and discharges<sup>4</sup> 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.
28. 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.

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.

29. 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

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<sup>4</sup> Illegal discharge means any discharge (or seepage) to the municipal separate storm water conveyance system 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.

- general permit for construction activity.
30. 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.
  31. 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.
  32. 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 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 of water quality objectives 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 previously 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.
  33. 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, this Order 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. A permittee will be in compliance with the Receiving Water Limitations so long as it complies with that procedure.
  34. A revised Water Quality Control Plan (Basin Plan) was adopted by the Regional Board on September 4, 1994. The Basin Plan contains water quality objectives and beneficial uses for water bodies in the San Diego 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).

35. The requirements contained in this Order are necessary to implement the plans and policies described in Finding 34, 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.
36. 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.
37. 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. 90-38.
38. 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.
39. 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.
40. The Regional Board has considered antidegradation requirements, pursuant to 40 CFR 131.12 and State Board Resolution 68-16, for this discharge. The Regional Board finds that this Order is consistent with the federal and state anti-degradation requirements and a complete antidegradation analysis is not necessary.
41. 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.
42. 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 United States.
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 previously 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 this Order.
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, and 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 United States.
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. discharges covered by NPDES permits or written clearances issued by the Regional or State Board,
  - c. discharges 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 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 water conveyance system for which the permittees are responsible under the terms of this Order 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 water conveyance system, the following steps shall be taken:

- i. The Executive Officer will evaluate the adequacy of the permittees' implementation of the previously approved DAMP based on the permittees' submitted reports and other relevant information. The Executive Officer will determine if implementation of the previously 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 previously 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 previously 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 previously 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 previously 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.
2. The Executive Officer shall review the reports required under Receiving Water Limitation 1. The reports required under Receiving Water Limitation 1. 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 previously 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 modifications, revisions, or amendments developed pursuant to this Order. The previously approved DAMP, as included in the Report of Waste Discharge, including any amendments thereto, is hereby made an enforceable component of this Order.
2. The permittees shall implement all elements of the previously approved DAMP. Where the dates are different than those in 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. All revisions to the DAMP shall be implemented in a timely manner.
3. The permittees shall comply with Monitoring and Reporting Program No. 96-03 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. 96-03.
4. All plans, reports and subsequent amendments submitted in compliance with this Order shall be implemented immediately and shall be an enforceable part of this Order. All submittals by the permittees must be adequate to implement the requirements 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 United States.
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 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 October 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. This guide or 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 from industrial facilities to the municipal system that the permittees determine are contributing to substantial pollutant loading to the municipal storm drain system. The program shall identify priorities and procedures for inspections and for 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 increase compliance with 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 United States. 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 United States, 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 90-38.

Each permittee shall certify to the Regional Board by April 15, 1997, 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 August 8, 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;
  - 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. New or revised program elements and compliance schedule(s) necessary to comply with Section IV of this Order.

**Order No. 96-03 (NPDES No. CAS0108740) - cont'd**  
**The County of Orange, OCFCD, and Incorporated Cities**  
**Areawide Urban Storm Water Run-off**

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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 USEPA 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. 90-38 is hereby rescinded.

I, John H. Robertus, 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, San Diego Region, on August 8, 1996.

---

John H. Robertus  
Executive Officer

**Order No. 96-03**  
**Attachment "A" -- Permitted Area**

## **Order No. 96-03 Attachment "B"**

### **Major Drainage Areas**

- 1. Laguna Canyon**
- 2. Aliso Creek**
- 3. San Juan Creek**
- 4. Prima Deshecha/Prima Segunda**

**Order No. 96-03**  
**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  
National Forest Service  
San Diego Gas and Electric  
Southern California Edison  
Southern California Gas Company  
Rancho Mission Viejo C/O Santa Margarita Company

Universities and Colleges

Saddleback College

School Districts

Capistrano Valley Unified School District  
Laguna Beach Unified School District  
Newport-Mesa Unified School District  
Saddleback Valley Unified School District

Hospitals

Laguna Hills Hospital  
South Coast Medical Center  
Mission Hospital - Regional Medical Center  
Saddleback Memorial Medical Center  
Capistrano By The Sea Hospital  
Capistrano Surgicenter  
Charter Hospital of Mission Viejo  
Childrens Hospital at Mission  
Samaritan Medical Center  
Mission Ambulatory Surgicenter  
Mission Regional Pain Center  
Mission Viejo Surgicenter  
Saddleback Valley Outpatient Surgery  
California Department of Transportation (Caltrans), District 12  
Southern Pacific Railroad  
Atchison, Topeka & Santa Fe Railway Company  
National Forest Service

Water/Wastewater Agencies

Irvine Ranch Water District  
Los Alisos Water District  
El Toro Water District  
County Sanitation Districts of Orange County  
Orange County Water District  
Metropolitan Water District  
Capistrano Valley Water District  
Coastal Municipal Water District  
Laguna Beach County Water District  
Moulten Niguel Water District  
Santa Margarita Water District  
South Coast Water District  
Trabuco Canyon Water District  
Capistrano Beach Water District  
Southeast Regional Reclamation Authority (SERRA)  
Aliso Water Management Agency

**California Regional Water Quality Control Board  
San Diego Region**

**Monitoring and Reporting Program No. 96-03  
NPDES No. CAS0108740**

**for  
the County of Orange, Orange County Flood Control District,  
and  
Incorporated Cities of Orange County Within the San Diego Region**

**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 south Orange County watersheds within the San Diego Region.
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.
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 other counties. The proposed monitoring program shall be submitted by July 31, 1997. The permittees may participate in existing watershed programs or programs developed under the Regional Board's "Watershed Management Approach" (March 4, 1996). 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 Orange County watersheds within the San Diego Region. 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 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, 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 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., Provisions, No. 28., 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.

Order No. 96-03 (NPDES No. CAS0108740) - cont'd  
 The County of Orange, OCFCD, and Incorporated Cities  
 Areawide Urban Storm Water Run-off

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

Ordered by \_\_\_\_\_

**John H. Robertus**  
**Executive Officer**  
**August 8, 1996**

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
SAN DIEGO REGION**

**ORDER NO. 98-02  
NPDES NO. CAS0108766**

**WASTE DISCHARGE REQUIREMENTS  
FOR URBAN RUNOFF  
FROM THE RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION  
DISTRICT, THE COUNTY OF RIVERSIDE,  
AND THE INCORPORATED CITIES OF RIVERSIDE COUNTY WITHIN THE SAN DIEGO  
REGION**

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Order No. 98-02 (NPDES No. CAS0108766)  
The RCFC&WCD, County of Riverside, and Incorporated Cities  
Areawide Municipal Storm Water NPDES Permit

## I. FACT SHEET

### 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. 98-02, NPDES No. CAS0108766, which prescribes waste discharge requirements for urban storm water runoff from the cities and the unincorporated areas in Riverside County within the jurisdiction of the SDRWQCB. On January 17, 1995 the Riverside County Flood Control and Water Conservation District (RCFC&WCD), the County of Riverside, the Cities of Temecula and Murrieta (Cities), hereinafter collectively referred to as Permittees, submitted NPDES Application No. CAS0108766 for an area-wide storm water discharge permit under the NPDES program. The permit application was submitted in accordance with the previous NPDES permit (Order No. 90-46) 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 (RWQCBs).

### PROJECT AREA

The permitted area is delineated by the Santa Ana RWQCB-SDRWQCB boundary line on the north, the SDRWQCB - Colorado River Basin RWQCB boundary line on the east, and the County of Riverside (County) boundary line on the south and west. The permitted area is shown on Attachment 1 (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 California Water Code (CWC) 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 storm water permit applications for storm water discharges associated with industrial activities and municipal separate storm sewer systems (MS4s) serving a population of 100,000 or more. As shown in Appendix I to 40 CFR 122 (the final Phase I storm water regulations), the County of Riverside has an unincorporated, urbanized-area population of greater than 100,000 and less than 250,000 (based on the 1980 decennial census) and is therefore required to obtain coverage under a municipal NPDES storm water permit. USEPA intended that Phase I municipal NPDES storm water permits focus on the areas within a county which are either already highly urbanized or are rapidly developing. The portion of Riverside County within the jurisdiction of the SDRWQCB is one of the fastest growing areas in the State. Riverside County was California's fastest growing county from 1980 to 1990. Riverside County grew three times faster than Orange County and more than two times faster than San Diego County during that same time period. Temecula is currently the fastest growing city in Riverside County. From 1990 to 1997 Temecula was the 11th fastest growing city in the State. This permit governing municipal and industrial storm water discharges meets both the statutory requirements of Section 402(p)(3) of the CWA 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 STORM WATER PERMIT

To regulate and control storm water discharges from the Riverside County area to the MS4s, an area-wide approach is essential. The entire MS4 is not controlled by a single entity; the RCFC&WCD, the County, several Cities, and the State Department of Transportation (Caltrans), 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 contributors of urban storm water runoff to these storm drain systems. While there are other contributors to their MS4s, the Permittees are responsible for all discharges from their MS4s. Together with the SDRWQCB and USEPA, the Permittees share a responsibility to enforce the laws, regulations, and ordinances that apply to discharges of storm water runoff.

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 practical at this time to issue a separate storm water permit to each of the entities within the permitted area whose land/facilities drain into the storm drain systems operated by the Permittees. The SDRWQCB has concluded that the best management option for this portion of Riverside County is to issue an area-wide storm water permit to the RCFC&WCD, Riverside County, and the cities in Riverside County. Storm water 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 if required.

### COORDINATION WITH OTHER REGIONAL AGENCIES

In developing best management practices (BMPs) and monitoring programs, consultation/coordination with other drainage management entities and other Regional Boards is highly desirable. SDRWQCB staff will coordinate the program with other Regional Boards, other dischargers, and other entities on an "as needed" basis. The municipal storm water permit/program process is at the same stage of development in both the Santa Ana RWQCB and SDRWQCB areas of Riverside County.

### EXISTING FACILITIES AND PROGRAMS

Within the San Diego Region, the MS4 owned and operated by the RCFC&WCD currently serves a population of approximately 100,000, occupying an area of approximately 630 square miles. The RCFC&WCD's MS4 includes an estimated 30 miles of open and closed storm drains. The MS4s owned and operated by the remaining Permittees include an estimated 2 miles of open and closed storm drains. Storm water discharges from urbanized areas consist mainly of surface runoff from residential, commercial, and industrial developments. In addition, the MS4 receives storm water discharges from agricultural land uses. Although the CWA specifically excludes agricultural discharges from regulation under an NPDES permit, SDRWQCB encourages the Permittees to seek cooperative ways to control these discharges to and from their MS4s. The constituents of concern and significance in storm water discharges are: human pathogens, total suspended solids, biochemical oxygen demand (BOD), chemical oxygen demand (COD), oil and grease (O&G), heavy metals, nutrients and organic chemicals such as pesticides and petroleum hydrocarbon components.

This permit places an emphasis on the Permittees' programs to control the discharge of sediment from construction sites through their MS4s. During the past 5 years, SDRWQCB staff has observed a significant occurrence of sediment discharges from construction activities which threaten to impair the beneficial uses of the Santa Margarita River and its tributaries. During this period, SDRWQCB staff estimates to have expended over 50% of its storm water resources to address this specific problem. These resources have been spent in efforts to ensure that dischargers comply with applicable NPDES permits. SDRWQCB staff anticipate that this level of effort will be necessary for the next few years as the Permitted area continues to grow. The rapid development occurring in the area subject to this Permit presents both a special problem and a special opportunity for the Permittees. Due to the number of construction activities ongoing at any time and the erosive nature of the soil in the area, the Permittees need to increase their oversight of construction activities, conduct increased site inspections (for compliance with their ordinances), and diligently enforce their ordinances as appropriate. The fact that the Permitted area is currently developing (as opposed to fully "built-out"), provides the Permittees with a

unique opportunity and responsibility to incorporate BMPs into their general and specific plans. Careful consideration of water quality issues during the planning and zoning decision-making process is an effective means for reducing sediment and other pollutants in urban runoff. Structural BMPs are also very effective in reducing pollutants and can be cost-effective in developing areas since installation of new structural BMPs is less costly than retrofitting.

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 urban runoff discharges contain pollutants, the Permittees and the SDRWQCB have agreed that an area-wide municipal storm water permit is the most effective way to develop and implement a comprehensive municipal storm water management program in a timely and cost-effective manner. This area-wide municipal storm water permit contains requirements with time schedules that will allow the Permittees to continue to address water quality problems caused by urban runoff through their existing storm water management programs.

#### PERMIT REQUIREMENTS

In accordance with Section 402(p)(3), as part of a program to reduce the pollutants in urban runoff discharges, the Permittees have been required to submit existing management plans and programs being implemented or developed in the previous municipal storm water NPDES permit to reduce pollutants in urban runoff discharges. In addition, the Permittees will be required to report, review and/or revise these management programs and control measures in accordance with a time schedule approved by the Executive Officer of the SDRWQCB for this municipal storm water permit.

If existing municipal storm water management programs are not effective in controlling pollutant loading from urban runoff discharges 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 further development and implementation of management programs and/or BMPs during the life of the permit such that the quality of urban runoff discharges 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.

#### PERFORMANCE STANDARDS FOR STORM WATER AND NON-STORM WATER DISCHARGES

The Permittees are required to reduce all discharges of pollutants in storm water and non-storm water from their MS4s to the maximum extent practicable (MEP). In addition, this permit regulates the Permittees' industrial discharges (including construction discharges), which are subject to the Best Available Technology Economically Achievable (BAT) / Best Conventional Pollutant Control Technology (BCT) performance standards.

#### BENEFICIAL USES / RECEIVING WATERS

Storm water flows, which are discharged to and from MS4s in Riverside County, are tributary to various water bodies of the state, including inland surface streams, the Santa Margarita River, the Santa Margarita Lagoon, and the Pacific Ocean. The beneficial uses of the inland water bodies in this watershed include municipal and domestic supply, agricultural supply (AGR), industrial service supply (IND), industrial process supply (PROC), groundwater recharge (GWR), contact water recreation (REC1), non-contact water recreation (REC2), warm freshwater habitat (WARM), cold freshwater habitat (COLD), wildlife habitat (WILD), and preservation of rare and endangered species (RARE). The beneficial uses of the Pacific Ocean are industrial service supply (IND), navigation (NAV), contact water recreation (REC1), non-contact water recreation (REC2), commercial and sport fishing (COMM), wildlife habitat (WILD), rare, threatened, or endangered species (RARE), marine habitat (MAR), aquaculture (AQUA), migration of aquatic organisms (MIGR), spawning, reproduction, and/or early development (SPWN), and shellfish harvesting (SHELL). The ultimate goal of this municipal storm water management program is to protect the beneficial uses of the receiving waters.

Order No. 98-02 (NPDES No. CAS0108766)  
The RCFC&WCD, County of Riverside, and Incorporated Cities  
Areawide Municipal Storm Water NPDES Permit

#### ANTIDEGRADATION ANALYSIS

The SDRWQCB has considered whether a complete antidegradation analysis, pursuant to Title 40 Code of Federal Regulations (40 CFR), Part 131.12 and State Board Resolution No. 68-16, is required for these municipal storm water discharges. The SDRWQCB finds that the pollutant loading rates from urban runoff discharges to the receiving waters should not degrade water quality 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 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 SDRWQCB 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 objectives of the municipal storm water management program. The details of these workshops 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 SDRWQCB office at the address given below.

#### PUBLIC HEARING

On April 8, 1998, the SDRWQCB held a public hearing in Temecula regarding the proposed waste discharge requirements.

#### INFORMATION AND COPYING

Persons wishing additional information may write to the above address or call Greg Gearheart at (619) 627-3941. 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 SDRWQCB 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.

## II. WASTE DISCHARGE REQUIREMENTS

### A. FINDINGS

The SDRWQCB finds that:

1. **PERMITTEES:** These entities are hereinafter referred to in this Order as *Permittees* or *dischargers*. The terms and conditions of this Order apply to discharges to and from municipal separate storm sewer systems (MS4s) owned or operated by the following:
  - a. the Riverside County Flood Control and Water Conservation District (RCFC&WCD);
  - b. the County of Riverside (County);
  - c. the City of Temecula; and
  - d. the City of Murrieta (collectively referred to as Cities).
2. **LEGAL AUTHORITY:** This Order implements all of the portions of the CWA, the CWC, the CFR and the California Code of Regulations (CCR) applicable to the discharge of urban runoff in the San Diego Region.
3. **BASIS AND SCOPE OF REISSUED PERMIT:** In July of 1990, the Permittees (except for Murrieta, which had not yet been incorporated) voluntarily sought and obtained an NPDES storm water permit (Order No. 90-46) that preceded USEPA's November 1990 final NPDES storm water regulations for discharges from MS4s. This type of permit was called an "Early Permit." As shown in Appendix I to 40 CFR 122 (the final Phase I storm water regulations), the County of Riverside has an unincorporated, urbanized-area population of greater than 100,000 and less than 250,000 (based on the 1980 decennial census) and is therefore required to obtain coverage under a municipal NPDES storm water permit. USEPA intended that Phase I municipal NPDES storm water permits focus on the areas within a county which are either already highly urbanized or are rapidly developing. The portion of Riverside County within the jurisdiction of the SDRWQCB is one of the fastest growing areas in the State. Each Permittee owns and operates an MS4 which discharges into one or more surface water bodies in the San Diego Region including numerous creeks, the Santa Margarita River, the Santa Margarita Lagoon, the Pacific Ocean and tributaries thereto. Permittees' discharges contain pollutants which may adversely affect the water quality of waters of the United States. These surface waters are waters of the United States as defined in 40 CFR 122.2. The Permittees may lack legal jurisdiction over storm water discharges into their systems from Native American tribal lands. The SDRWQCB encourages the Permittees to seek cooperative ways to control these discharges to and from their MS4s.
4. **POLLUTANT SOURCES:** Pollutants occur in urban runoff. The sources of these pollutants occur primarily in commercial, industrial, and residential urban land use areas. The most important pollutant sources include motor vehicles; construction site runoff; industrial site runoff; sewage spills; illegal dumping; illicit connections or improper plumbing of sewage; commercial site runoff ; paved surfaces; animal waste; and residential site runoff (e.g., home and garden care). The most important pollutant categories include metals (e.g., copper, lead, zinc and cadmium), human pathogens (e.g., bacteria, parasites and viruses), synthetic organics (e.g., petroleum products, pesticides, and PAHs), sediment; nutrients (e.g., nitrogen and phosphorus fertilizers), and oxygen demanding substances (decaying vegetation, animal waste, and other organic matter).
5. **DRAINAGE AREA MANAGEMENT PLAN (DAMP):** Order No. 90-46 required the Permittees to develop and implement a 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. On April 26, 1996 the Executive Officer of the SDRWQCB approved the DAMP for the Santa Margarita Watershed,

6. **REPORT OF WASTE DISCHARGE / NPDES PERMIT RENEWAL APPLICATION:** On January 17, 1995 the RCFC&WCD submitted a Report of Waste Discharge (NPDES permit renewal application), which 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 Agreements
  - g. The Drainage Area Management Plan (DAMP)
  - h. A copy of Proposed Riverside County Grading and Erosion Control Ordinance

On April 26, 1996 the Executive Officer of the SDRWQCB approved the Report of Waste Discharge submitted as an application for renewal of the NPDES permit.

7. **SIGNIFICANT CONTRIBUTORS OF POLLUTANTS CONSIDERATIONS:** Each of the Permittees are significant contributors of pollutants to waters of the United States in the Santa Margarita Watershed based on the following considerations:
- a. Monitoring data collected by municipal dischargers within the San Diego Region (including the Permittees) and others indicate that urban runoff discharges contain metals, pathogens, sediment, and nutrients in concentrations that could adversely affect receiving waters.
  - b. Pollutant loads during the first several storms of the wet season may be significantly higher than pollutant loads from storms later in the season because the semiarid San Diego Region has an extended dry season.
  - c. In the semiarid San Diego Region, most receiving water streams are essentially ephemeral in nature. Non-storm water flows containing pollutants discharge into these streams during dry weather conditions. During the dry weather season these streams have no reliable dilution waters available to aid in protection of the public health and wildlife and to provide sufficient assimilative capacity to ensure that discharges do not contribute to violations of receiving water quality objectives. Accordingly, non-storm water flows to these streams during dry weather periods could adversely affect receiving waters.
  - d. All watercourses in the Santa Margarita Watershed terminate into the Santa Margarita Lagoon, which has poor flushing characteristics and little assimilative capacity.
  - e. Discharges of storm water containing suspended sediment from construction activity sites in the areas of the Santa Margarita Watershed subject to this Permit, have threatened to cause and/or contribute to the impairment of beneficial uses in portions of the Santa Margarita River and its tributaries. These types of discharges violate Basin Plan Prohibition No. 14. The area covered by this Permit is rapidly growing, so there is a significant potential for these types of discharges to continue through the life of this Permit.

8. **CWA SECTION 303(D) WATER BODIES:** The discharge of urban runoff pollutants by the Permittees into CWA Section 303(d) water bodies is significant because they may contribute to violations of applicable water quality standards. The Santa Margarita Lagoon, which is impaired by eutrophication, is the only CWA Section 303(d) Water Body that receives discharges subject to this permit.
9. **PERFORMANCE STANDARD:** As specified in CWA Section 402 (p)(3) and 40 CFR 122.26, the performance standards applicable to the Permittees' discharges of storm water and non-storm water which are covered by this Permit are summarized below:

<b>STORM WATER AND NON STORM WATER RUNOFF FROM</b>	<b>MAXIMUM EXTENT PRACTICABLE (MEP)</b>  [for Municipal Discharges as defined in CWA Section 402 (p)(3)(B)]	<b>BEST AVAILABLE TECHNOLOGY (BAT) / BEST CONVENTIONAL TECHNOLOGY (BCT)</b>  [for Industrial Discharges as defined in CWA Section 402 (p)(3)(A)]
All Permittee-Owned MS4s unless specified below	X	
Permittee-Owned Industrial Facilities	X  [If the activity at the facility is <b>not</b> one of the 11 categories listed in 40 CFR 122.26 (b)(14)(i-xi)]	X  [If the activity at the facility is one of the 11 categories listed in 40 CFR 122.26 (b)(14)(i-xi)]
Permittee-Owned Construction Sites	X  [Sites that disturb less than 5 acres]	X  [Sites that disturb 5 acres or more, or less than 5 acres but are part of a larger common plan of development or sale]

10. **POLLUTION PREVENTION:** The SDRWQCB and the Permittees fully support pollution prevention as a fundamental principle of the SDRWQCB's mission to protect the quality of the Region's ground and surface waters.
11. **CONSTRUCTION ACTIVITY SITES:** The rapid development occurring in the area subject to this Permit presents both a special problem and a special opportunity for the Permittees. Due to the sheer number of construction activities ongoing at any time and the erosive nature of the soil in the area, the Permittees need to increase their oversight of construction activities, conduct increased site inspections (for compliance with their ordinances), and diligently enforce their ordinances as appropriate.

12. **IMPORTANCE OF PLANNING:** The fact that the Permitted area is currently developing (as opposed to fully “built-out”), provides the Permittees with a unique opportunity and responsibility to incorporate BMPs into their general and specific plans. Careful consideration of water quality issues during the planning and zoning decision-making process is an effective means for reducing sediment and other pollutants in urban runoff. Structural BMPs are also very effective in reducing pollutants and can be cost-effective in developing areas since installation of new structural BMPs is less costly than retrofitting.
13. **RECEIVING WATER LIMITATIONS:** The Basin Plan designates beneficial uses to be protected in the receiving water bodies, and contains both numeric and narrative receiving water quality objectives (including all incorporated plans, policies, and resolutions). Attainment of these water quality objectives ensures water quality necessary to sustain the beneficial uses. Receiving water limitations, based on the numeric and narrative receiving water quality objectives, are required in this Order to ensure that water quality needed to sustain the beneficial uses is attained in spite of the discharges of storm water and non-storm water flows regulated by this Order.
14. **RECEIVING WATER LIMITATIONS:** Numeric effluent limitations do not provide an appropriate mechanism for regulating discharges from MS4s at this time because such discharges are generally not susceptible to conventional wastewater treatment approaches (i.e., removal of pollutants in a conventional wastewater treatment plant). Such full scale treatment of all flows from MS4s may be technologically and economically infeasible. For discharges from MS4s, best management practices (BMPs), rather than numeric effluent limitations, are used to promote attainment of receiving water quality objectives.
15. **RECEIVING WATER LIMITATIONS:** Development and implementation of storm water management programs that include both nonstructural as well as structural BMPs designed to reduce discharges of pollutants into and from storm water conveyance systems can protect the beneficial uses of the receiving waters by promoting attainment of receiving water quality objectives.
16. **RECEIVING WATER LIMITATIONS:** Implementation of BMPs is not equivalent to attainment of receiving water quality objectives. If there are violations of receiving water quality objectives as determined by the SDRWQCB and the USEPA, an iterative process of BMP development, education, implementation, enforcement, assessment, and adjustment by the Discharger is necessary to assure that its storm water management program is sufficiently comprehensive and effective to promote consistent compliance with receiving water quality objectives.
17. **BENEFICIAL USES OF INLAND SURFACE WATERS:** The beneficial uses of inland surface waters in the Santa Margarita Watershed designated in the Basin Plan are: Municipal and Domestic supply (MUN); Agricultural supply (AGR); Industrial process supply (PROC); Industrial service supply (IND); Ground Water Recharge (GWR); Contact water recreation (REC1); Non-contact water recreation (REC2); Warm freshwater habitat (WARM); Cold freshwater habitat (COLD); Wildlife habitat (WILD); and Rare, threatened, or endangered species (RARE). Beneficial uses of inland surface waters vary. The beneficial uses for specific inland surface waters are described in the Basin Plan. Inland surface waters consist of all waters exclusive of the waters of the Pacific Ocean, enclosed bays and estuaries, coastal lagoons, and ground waters.
18. **BENEFICIAL USES OF COASTAL WATERS:** The beneficial uses of coastal waters in the Santa Margarita Watershed and the Pacific Ocean designated in the Basin Plan are: Industrial service supply (IND); Navigation (NAV); Contact water recreation (REC1); Non-contact water recreation (REC2); Commercial and sport fishing (COMM); Estuarine habitat (EST); Wildlife habitat (WILD); Preservation of biological habitats of special significance (BIOL); Rare, threatened, or endangered species (RARE); Marine habitat (MAR); Aquaculture (AQUA); Migration of aquatic organisms (MIGR); Spawning,

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reproduction, and/or early development(SPWN); Warm freshwater habitat (WARM); and Shellfish harvesting (SHELL). Beneficial uses of coastal waters vary. The beneficial uses for specific coastal waters are described in the Basin Plan. Coastal waters are defined as waters subject to tidal action and include ocean waters and enclosed bays and estuaries.

19. **ANTIDegradation:** The Basin Plan contains the following general antidegradation water quality objective which applies to all waters of the State within the San Diego Region:

"Wherever the existing quality of water is better than the quality of water established herein as objectives, such existing quality shall be maintained unless otherwise provided by the provisions of the State Water Resources Control Board Resolution No. 68-16, 'Statement of Policy with Respect to Maintaining of Waters in California', including any revisions thereto, or the federal antidegradation policy, 40 CFR 131.12 (for surface waters only)."

Discharges from Permittee storm water conveyance systems in compliance with the terms and conditions of this Order should not degrade surface water quality. Furthermore, the purpose of this Order is to reduce pollutants in storm water discharges to the MEP in conformance with CWA section 402(p)(3)(B)(ii). Therefore, the SDRWQCB finds that this Order is in conformance with SWRCB Resolution No. 68-16 and the federal antidegradation policy described in 40 CFR 131.12.

20. **NPDES PERMIT:** This Order shall serve as an NPDES permit pursuant to CWA section 402, and waste discharge requirements pursuant to CWC section 13260 for the discharge of urban runoff to surface waters of the project area of the Santa Margarita Watershed.
21. **CEQA:** The issuance of this Order for the discharge of urban runoff is exempt from the requirement for preparation of environmental documents under the California Environmental Quality Act (Public Resources Code, Division. 13, Chapter 3, section 21000 et seq.) in accordance with the CWC section 13389 and as provided in categorical exemption classes of the CEQA Guidelines (Title 14, CCRs sections 15301-15329).
22. **PRINCIPAL PERMITTEE:** The RCFC&WCD will serve as the principal Permittee for this permit.
23. **PUBLIC NOTICE:** The SDRWQCB has notified the Permittees and all known interested parties of its intent to renew an NPDES permit for the existing discharge of storm water and non-storm water.
24. **PUBLIC HEARING:** The SDRWQCB has, at a public meeting on April 8, 1998, held, or provided an opportunity for, a public hearing, and heard and considered all comments pertaining to the terms and conditions of this Order.

**IT IS HEREBY ORDERED** that the Riverside County Flood Control and Water Conservation District, the County of Riverside, the City of Temecula, and the City of Murrieta (hereinafter referred to as the Dischargers, or 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 each comply with the following:

**B. RESPONSIBILITIES OF THE PRINCIPAL PERMITTEE**

The principal Permittee (RCFC&WCD) shall be responsible for managing the overall storm water program and shall:

1. Conduct water quality monitoring of the MS4 outfalls within the Santa Margarita River drainage area.
2. Develop criteria for inspections of the MS4s.
3. Conduct inspections of the MS4s 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, 40 CFR, 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 MS4s 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 shall 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 Permittees of the progress of other pertinent municipal programs, pilot projects, research studies, etc.
10. Coordinate the implementation of storm water quality management activities within the Santa Margarita River drainage area 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 applicable performance standard, as described in Finding No. 9.

13. Coordinate activities pertaining to implementation of this order with the SDRWQCB.
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 Permittees, implement the BMPs listed in the approved DAMP.

**C. RESPONSIBILITIES OF THE PERMITTEES**

Each Permittee shall be responsible for managing the storm water program within its jurisdiction and shall:

1. Conduct storm drain system inspections in accordance with the criteria developed by the principal Permittee.
2. Enact and revise policies and ordinances necessary to establish and maintain adequate legal authority as required by the Federal Storm Water Regulations, 40 CFR, Part 122.26(d)(2)(i)(A-F) within 120 days of adoption of this order.
3. Implement management programs, monitoring programs, and related plans as required by this order.
4. 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.

The Permittees' activities shall include, but not be limited to, the following:

5. Administer and enforce the storm water and erosion control ordinances adopted pursuant to Items 1. and 3., 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. Participate 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 SDRWQCB.
11. Prepare and submit any specific reports/information related to the Permittees' storm water program as deemed necessary by the Executive Officer of the SDRWQCB.

**D. DISCHARGE LIMITATIONS**

1. The Permittees shall prohibit illicit discharges from entering into the MS4s and require controls to reduce the discharge of pollutants to the applicable performance standard, as described in Finding No. 9.
2. This order regulates storm water discharges to waters of the United States from the Permittees' existing MS4s. Accordingly, the Permittees shall implement the BMPs (structural and/or non-structural control measures) necessary to reduce the pollutants in the discharge to the applicable performance standard, as described in Finding No. 9. All other discharges are prohibited except those listed under Item 3., below, those for which the SDRWQCB has issued individual permits or waived waste discharge requirements, 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 or the SDRWQCB as sources of pollutants to the waters of the United States.
  - a. Discharges authorized by an NPDES permit, or for which an approval has been issued by the SDRWQCB 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 CWC Section 13050 (d); and
- q. Other types of discharges identified and recommended by the Permittees and approved by the SDRWQCB.

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 their MS4s 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 Municipal Facilities Strategy, required under Section II. F., Provision 14., of this order, a proposed plan to address the non-storm water discharges.
- 6. The discharge of storm water and non-storm water shall not cause or contribute to degradation of groundwaters.
- 7. Pollutants in storm water discharges from the Permittees' MS4s shall be reduced to the applicable performance standard, as described in Finding No. 9.

#### ***E. RECEIVING WATER LIMITATIONS***

- 1. Storm water discharges and authorized non-storm water discharges to any surface or ground water shall not adversely impact human health or the environment.
- 2. The DAMP shall be designed and implemented, or shall be in the process of being revised in accordance with the procedures set forth below to ensure that discharges authorized by this permit shall not cause or substantially (in more than a de minimus amount) contribute to a continuing or recurring exceedance of any applicable water quality standards contained in a Statewide Water Quality Control Plan or the SDRWQCB's Basin Plan.
- 3. If the discharges cause or contribute to an exceedance of the applicable water quality standards, Permittee shall take the following steps:
  - a. Upon a determination by either the Permittee or the SDRWQCB that discharges are causing or contributing to an exceedance of an applicable water quality standard, the Permittee shall promptly notify and thereafter submit a report to the SDRWQCB 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 SDRWQCB directs an earlier submittal. The SDRWQCB may require modifications to the report;

- b. Submit any modifications to the report required by the SDRWQCB within 30 days of notification;
  - c. Within 30 days following approval of the report described above by the SDRWQCB, the Permittee shall revise its 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;
  - d. Implement the revised DAMP and monitoring program in accordance with the approved schedule; and
  - e. Reduce pollutants in storm water discharges and authorized non-storm water discharges, following implementation of the DAMP revised in accordance with paragraph 3 above, to levels which shall not cause or contribute to an exceedance of any applicable water quality standards.
4. So long as Permittees have complied with the procedures set forth in paragraph 3 above and are implementing the revised DAMP, they do not have to repeat the same procedure for continuing or recurring exceedances of the same receiving water limitations unless directed by the SDRWQCB to develop additional BMPs.

## **F. PROVISIONS**

### **GENERAL**

1. The Permittees shall demonstrate compliance with all the requirements in this order and specifically with Section D., Discharge Limitations, and Section E., Receiving Water Limitations, through timely implementation of their approved DAMP and any modifications, revisions, or amendments thereto, which are developed pursuant to this order. The DAMP and any amendments thereto are hereby made an enforceable part of this order.
2. Permittees shall implement all elements of the DAMP. Each Permittee shall develop and, at the SDRWQCB Executive Officer's request, submit a plan describing how they will implement the applicable portions of the DAMP. Any proposed revisions to the DAMP shall be submitted to the SDRWQCB Executive Officer.
3. The Permittees shall comply with the Consolidated Program for Water Quality Monitoring required by the Monitoring and Reporting Requirements contained in this order. The SDRWQCB Executive Officer may revise the MRP to allow the Permittees to participate in regional, statewide, national, or other monitoring programs in lieu of the Consolidated Program for Water Quality Monitoring.
4. All plans, reports and subsequent amendments submitted in compliance with this order shall be implemented immediately and shall be an enforceable part of this Order upon submission to the SDRWQCB Executive Officer. All submittals by the Permittees must be adequate to implement the requirements of this order.
5. The Permittees shall report to the SDRWQCB Executive Officer:
  - a. Any enforcement actions and known discharges of storm or wastewaters to MS4s owned or

operated by the Permittees which may impair domestic water supply sources (e.g., discharges due to a levee break, sewer overflows, illegal discharges to the street, etc.) or which may have an impact on human health or the environment.

- b. Any industrial facilities and/or construction sites found not to be in compliance with the Permittees' ordinances 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, or any other use entitlements, 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 NPDES 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. Within 120 days of issuance of this Order, the Permittees shall submit to the SDRWQCB Executive Officer 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 SDRWQCB Executive Officer 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. 90-46.

#### **LEGAL AUTHORITY**

9. The Permittees shall adopt a Storm Water/Urban Run-off Management and Discharge Control Ordinance. Within 180 days of issuance of this Order, each Permittee's Chief Legal Counsel shall certify to the SDRWQCB Executive Officer 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 following regulatory requirements [contained in 40 CFR Section 122.26(d)(2)(i)(A-F)]:
- a. control through ordinance, permit, contract order or similar means, the contribution of pollutants to the MS4 by storm water discharges associated with industrial activity (including construction activity) and the quality of storm water discharge from sites of industrial activity (including construction activity);
  - b. prohibit through ordinance, order or similar means, illicit discharges to the MS4;
  - c. control through ordinance, order or similar means, the discharge to a MS4 of spills, dumping, or

disposal of materials other than storm water;

- d. control through interagency agreements among Permittees the contribution of pollutants from one portion of the MS4 to another;
- e. require compliance with conditions in ordinances, permits, contracts and orders; and
- f. carry out all inspection, surveillance and monitoring procedures necessary to determine compliance and noncompliance with permit conditions including prohibition on illicit discharges to the MS4.

### **ENFORCEMENT/COMPLIANCE STRATEGY**

- 10. Within 360 days of issuance of this Order, the Permittees shall develop, submit to the SDRWQCB Executive Officer, and implement an enforcement/compliance strategy which describes each Permittees' programs for enforcing their storm water and erosion control ordinances. This enforcement/compliance strategy should include a mechanism to determine compliance of industrial facilities and construction sites with the Permittees' ordinances, and notification to the SDRWQCB Executive Officer any finding of non-compliance and any proposed local enforcement action.

### **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. This Order regulates the discharge of storm water and non-storm water from Permittee-owned facilities associated with industrial activity. The Permittees shall reduce pollutants (to the applicable performance standards, as defined in Finding No. 9) in such discharges through implementation of BMPs.

The Permittees shall develop a pollution prevention strategy to address their public agency facilities and associated activities which are determined by the Permittees to be sources of concern regarding storm water pollution. The pollution prevention strategy shall be developed to ensure that public agency facilities and associated 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 SDRWQCB Executive Officer within 180 days of issuance of this Order. In developing the pollution prevention strategy, the Permittees shall consider the following:

- a. Identification of public agency facilities and associated 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 associated 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.

### **PERMITTEE-OWNED CONSTRUCTION PROJECTS/ACTIVITIES**

- 15. This Order regulates the discharge of storm water run-off from construction projects, regardless of size, that are under ownership and/or direct responsibility of any of the Permittees. The Permittees shall prevent and control (to the applicable performance standards, as defined in Finding No. 9) discharges of contaminated runoff from all construction sites under ownership and/or direct responsibility of any of the Permittees through implementation of BMPs.
- 16. Prior to commencement of Permittee-owned construction activities, the Permittees shall notify the SDRWQCB Executive Officer of proposed construction projects that disturb more than one (1) acre of land. Upon completion of the project, the SDRWQCB Executive Officer shall be notified of the completion of the project.
- 17. For Permittee-owned projects that will disturb more than five (5) acres (or less than five acres, but part of a larger common plan of sale or development), 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 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 SDRWQCB staff upon request.
- 18. The SWPPP and the monitoring program for the Permittee-owned construction projects shall be consistent with the requirements of the State's General Permit for Storm Water Discharges Associated with Construction Activities (State Board Order No. 92-08 DWQ).
- 19. The Permittees shall give advance notice to the SDRWQCB Executive Officer of any planned changes in the Permittee-owned construction activities which may result in non-compliance with this Order. In the event of conditions at a Permittee-owned project site which constitute non-compliance with this Order, the Permittees shall: 1) notify the SDRWQCB Executive Officer within 3 days of the of the non-compliance; 2) take all reasonable steps to minimize or correct any adverse impact on the environment resulting from non-compliance with this Order; and 3) shall, within 30 days of notification, report the following to the SDRWQCB Executive Officer:
  - a. a description of the events which lead to the non-compliance;
  - b. a description of the actions taken by the responsible Permittee to minimize or correct any adverse impacts on the environment resulting from the non-compliance;

c. an assessment of the adverse impacts on the environment resulting from the non-compliance.

20. All other terms and conditions of State Board Order No. 92-08 DWQ shall be applicable.

#### **NEW DEVELOPMENT (INCLUDING RE-DEVELOPMENT)**

21. The Permittees shall immediately require all construction operations not under ownership and/or direct responsibility of any of the Permittees, regardless of size, to prevent and control (to the MEP, as defined in Finding No. 9) discharges of contaminated runoff from construction sites.

Within 270 days of issuance of this Order, the Permittees shall implement and submit to the SDRWQCB Executive Officer Supplement B to the DAMP for Erosion Control which describes the following: 1) the Permittees' recommended BMPs which prevent and control discharges of contaminated runoff from construction sites; and 2) the Permittees' programs (i.e., Permittees' ordinances, inspection program, enforcement program, etc.) to require construction operations to implement BMPs.

22. Within 180 days of issuance of this Order, the Permittees shall implement the new development BMPs (DAMP Supplement A) that were developed pursuant to SDRWQCB Order No. 90-46.

23. For new development projects where the Permittees act as lead agency for the California Environmental Quality Act (CEQA), the Permittees shall ensure that their processes for approving General Plan CEQA checklist documents, and any other CEQA documents approved by the Permittees for new developments, comply with the requirements of this Order. If necessary, these processes shall be revised to include requirements for evaluation of storm water-related impacts and identification of appropriate mitigation measures.

24. 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**

25. 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 SDRWQCB. The fiscal analysis report shall be submitted as part of the Annual Report no later than **October 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;

#### **MONITORING AND REPORTING REQUIREMENTS**

26. 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.

27. All reports and other submittals required by this order shall be signed by the principal Permittee and copies shall be submitted to the Executive Officer of the SDRWQCB under penalty of perjury.

28. The Permittees shall submit three copies of an ANNUAL REPORT to the Executive Officer of the SDRWQCB and one copy of an ANNUAL REPORT to the Regional Administrator of USEPA, Region 9 no later than **October 15** of each year. This report may be submitted in a mutually agreed upon electronic format. 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 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 (IC/IDs) and in reducing pollutant loads in storm water discharges.
  - c. An assessment of any storm water management program modifications made to comply with CWA requirements to reduce the discharge of pollutants to the applicable performance standard.
  - d. The results and information described in the Consolidated Program for Water Quality Monitoring for the previous year.
  - e. Fiscal Resources Report, as required by Section II.F.25.
29. 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 Permittee under penalty of perjury.

All information/materials required by this order shall be submitted to the SDRWQCB Executive Officer in accordance with the following schedule:

<b>ITEM</b>	<b>DUE DATE</b>
<b>Revised Implementation Agreement</b>	September 10, 1998
<b>Legal Authority Certification</b>	November 9, 1998
<b>Municipal Activities Pollution Prevention Strategy</b>	November 9, 1998
<b>Supplement B to the DAMP for Erosion Control</b>	February 9, 1999
<b>Enforcement Compliance Strategy</b>	May 13, 1999
<b>Report of Waste Discharge (NPDES Renewal Application)</b>	November 9, 2002
<b>Annual Report, including:</b> 1. Program Status 2. Effectiveness Assessment of Illegal Discharge Elimination Program 3. Program Modifications 4. Monitoring Program Results 5. Fiscal Resources Report	October 15 of each year (next report due in 1998)

**PERMIT EXPIRATION AND RENEWAL**

30. This Order expires five years from the date of issuance of this Order and the Permittees must file a Report of Waste Discharge (NPDES 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:

Order No. 98-02 (NPDES No. CAS0108766)  
The RCFC&WCD, County of Riverside, and Incorporated Cities  
Areawide Municipal Storm Water NPDES Permit

- a. 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.;
  - 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.
31. The SDRWQCB may modify, revoke or reissue this Order 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 Board or any amendments to the Basin Plan approved by the SDRWQCB, 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 II.E. of this Order.
32. This order shall serve as a NPDES permit pursuant to Section 402 (p) of the CWA, 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.
33. Order No. 90-46 is hereby rescinded.

I, John H. Robertus, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of an Order adopted by the SDRWQCB, on May 13, 1998.

  
John H. Robertus  
Executive Officer

### III. GLOSSARY

#### **Best Available Technology Economically Achievable (BAT) / Best Conventional Pollutant Control Technology (BCT)**

BAT and BCT are treatment-based performance standards which measure the effectiveness of pollutant reduction in discharges, as defined in CWA 402(p) and 40 CFR 122, for specific categories of industrial facilities subject to storm water effluent limitations, new source performance standards, or toxic pollutant effluent standards. Effluent limitations have been defined in 40 CFR for the reduction of toxic pollutants using BAT, and the reduction of conventional pollutants using BCT.

#### **Best Management Practices (BMPs)**

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.

#### **Controls**

Controls are defined in Section 402 (p)(3)(B)(iii) of the Clean Water Act (CWA) as a means to reduce the discharge of pollutants to the maximum extent practicable (MEP), including maintenance practices, control techniques and system design and engineering methods, and such other provisions as the Administrator or State determines appropriate for the control of such pollutants.

#### **CWA Section 303(d) Water Bodies**

Certain water bodies receiving storm water discharges are designated by the SWRCB and USEPA as CWA section 303(d) water bodies. A "section 303(d) 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 storm water and non-storm water pollutants by the Permittees are significant because these discharges contribute to violations of applicable water quality standards.

#### **Maximum Extent Practicable (MEP)**

Under Section 402(p) of the CWA, municipalities are required to reduce the discharge of pollutants from their storm water conveyance systems to the MEP. MEP is the critical performance standard which municipalities must attain in order to comply with their municipal storm water permits.

To achieve the MEP standard, municipalities must employ whatever 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 which 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 which would address a pollutant source, or to pick a BMP based 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. [Source: February 11, 1993 memo entitled "Definition of Maximum Extent Practicable" by Elizabeth Jennings, Senior Staff Counsel, SWRCB].

#### **Municipal Separate Storm Sewer System (MS4)**

A conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains): (i) owned or operated by a State, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State law) 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 tribal organization, or a 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 or conveying storm water; (iii) which is not a combined sewer; and (iv) which is not part of a Publicly Owned Treatment Works (POTW) as defined at 40 CFR 122.2.

#### **Non-Storm Water**

Non-storm water consists of all discharges to and from a storm water conveyance system which 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.

#### **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].

#### **Pollution Prevention**

Pollution prevention is defined as practices and processes which reduce or eliminate the generation of pollutants, in contrast to source control, pollution control, treatment or disposal.

#### **Public Agency Facilities**

Facilities owned and operated by public agencies, including corporate yards, fire stations, vehicle maintenance facilities, etc.

### **Storm Water**

Storm water is defined as runoff from precipitation and snow melt consisting only of those discharges which originate from precipitation events. Storm water is that portion of precipitation which flows across a surface to the storm drain system or receiving waters. Examples of this phenomenon include: water that flows off a building's roof when it rains (runoff from an impervious surface); water that flows into streams when snow on the ground begins to melt (runoff from a semi-pervious surface); and 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, storm water picks up and transports pollutants into and through storm water conveyance systems, and ultimately to waters of the United States.

### **Municipal Separate Storm Sewer System (MS4)**

A conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains): (i) owned or operated by a State, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State law) 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 tribal organization, or a 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 or conveying storm water; (iii) which is not a combined sewer; and (iv) which is not part of a Publicly Owned Treatment Works (POTW) as defined at 40 CFR 122.2.

### **Urban Runoff**

Urban runoff is defined as all flows in a MS4 and consists of the following components: (1) storm water (wet weather flows) and (2) non-storm water illicit discharges (dry weather flows).

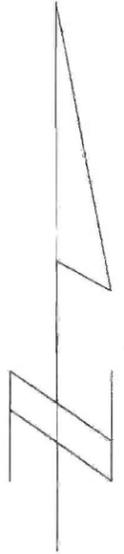
### **Waste**

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."

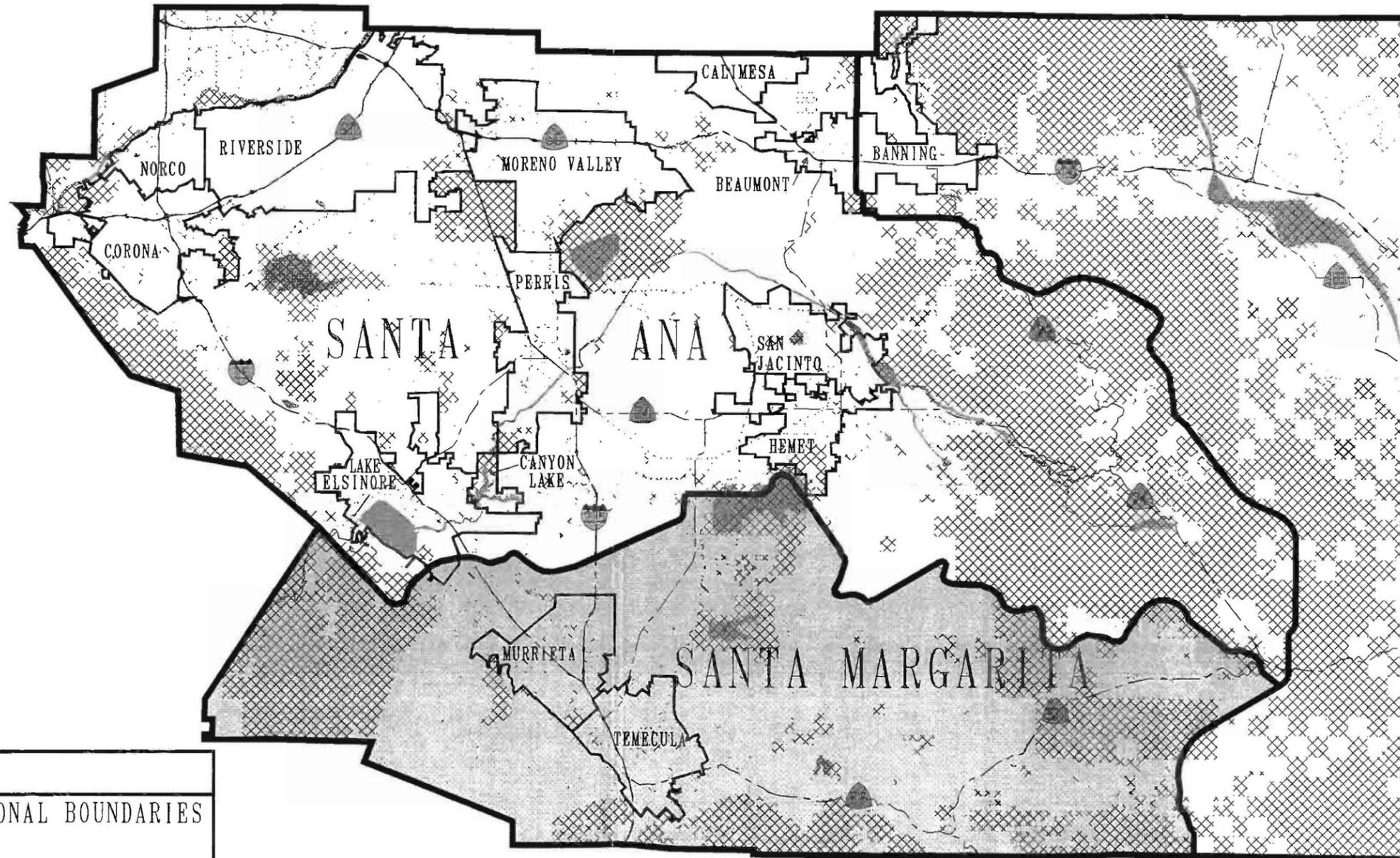
• Order No. 98-02 (NPDES No. CAS0108766)  
The RCFC&WCD, County of Riverside, and Incorporated Cities  
Areawide Municipal Storm Water NPDES Permit

## **Attachment 1: Map of Project Area Subject to Permit**

# WESTERN RIVERSIDE COUNTY NPDES PERMIT AREA



N.T.S.



**LEGEND**

-  NPDES PERMIT REGIONAL BOUNDARIES
-  SANTA ANA PERMIT
-  SANTA MARGARITA PERMIT
-  STATE & FEDERAL LANDS EXEMPTED FROM NPDES PERMIT AREAS

\* PARCEL DATA 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 responsibility for the information contained on this map. Data and information represented on this map is subject to update and modification. The Geographic Information System and other sources should be queried for the most current information.



**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
SAN DIEGO REGION**

**ADDENDUM NO. 1 TO ORDER NO. 98-02  
NPDES PERMIT NO. CAS0108766**

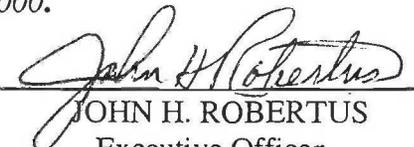
**AN ADDENDUM MODIFYING ORDER NO. 98-02 TO INCORPORATE  
LANGUAGE DEVELOPED BY THE UNITED STATES ENVIRONMENTAL  
PROTECTION AGENCY**

The California Regional Water Quality Control Board, San Diego Region (hereinafter Regional Board) finds that:

1. Order No. 98-02 (NPDES Permit No. CAS0108766) specifies Waste Discharge Requirements for **Discharges of Storm Water and Urban Runoff from the Riverside County Flood Control District, the County of Riverside, and the Incorporated Cities of Riverside County within the San Diego Region** (Co-Permittees).
2. NPDES No. CAS0108766 issued by the USEPA on May 30, 1999 established waste discharge requirements for the Co-Permittees.
3. The requirements of Order No. 98-02 must be modified to assure consistency with the NPDES No. CAS0108766, issued by the USEPA.
4. This Regional Board has notified all known interested parties of its intent to modify Order No. 98-02 to reflect the addition of the language developed by the United States Environmental Protection Agency.
5. This Regional Board in public hearing heard and considered all comments pertaining to the final draft of the addendum.

**IT IS HEREBY ORDERED THAT** Order No. 98-02 is modified to incorporate by reference the terms and conditions contained in National Pollutant Discharge Elimination System Permit No. CAS0108766. All references to USEPA Region IX in the terms and conditions of Permit No. CAS0109766 shall be considered as meaning USEPA Region IX and the Regional Water Quality Control Board, San Diego Region.

*I, John H. Robertus, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Addendum adopted by the California Regional Water Quality Control Board, San Diego Region, on November 8, 2000.*

  
JOHN H. ROBERTUS  
Executive Officer

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
SAN DIEGO REGION  
ORDER NO. 2001-01  
NPDES NO. CAS0108758**

**WASTE DISCHARGE REQUIREMENTS  
FOR DISCHARGES OF URBAN RUNOFF FROM  
THE MUNICIPAL SEPARATE STORM SEWER SYSTEMS (MS4s)  
DRAINING THE WATERSHEDS OF THE  
COUNTY OF SAN DIEGO,  
THE INCORPORATED CITIES OF SAN DIEGO COUNTY,  
AND THE  
SAN DIEGO UNIFIED PORT DISTRICT**

The California Regional Water Quality Control Board, San Diego Region (hereinafter SDRWQCB), finds that:

1. **COPERMITTEES ARE DISCHARGERS OF URBAN RUNOFF:** Each of the persons in Table 1 below, hereinafter called Copermitees or dischargers, owns or operates a municipal separate storm sewer system (MS4), through which it discharges urban runoff into waters of the United States within the San Diego Region. These MS4s fall 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) a small MS4 that is "interrelated" to a medium or large MS4; or (3) an MS4 which contributes to a violation of a water quality standard; or (4) an MS4 which is a significant contributor of pollutants to waters of the United States.

Table 1. Municipal Copermitees

1.	City of Carlsbad	11.	City of National City
2.	City of Chula Vista	12.	City of Oceanside
3.	City of Coronado	13.	City of Poway
4.	City of Del Mar	14.	City of San Diego
5.	City of El Cajon	15.	City of San Marcos
6.	City of Encinitas	16.	City of Santee
7.	City of Escondido	17.	City of Solana Beach
8.	City of Imperial Beach	18.	City of Vista
9.	City of La Mesa	19.	County of San Diego
10.	City of Lemon Grove	20.	San Diego Unified Port District

2. **URBAN RUNOFF CONTAINS "WASTE" AND "POLLUTANTS":** Urban runoff contains waste, as defined in the California Water Code, and pollutants, as defined in the federal Clean Water Act, and adversely affects the quality of the waters of the State.
3. **URBAN DEVELOPMENT AND RUNOFF CAUSES RECEIVING WATER DEGRADATION:** Urban runoff discharges from MS4s are a leading cause of receiving water quality impairment in the San Diego Region and throughout the United States. As runoff flows over urban areas, it picks up harmful pollutants such as pathogens, sediment (resulting from human activities), fertilizers, pesticides, heavy metals, and petroleum products. These pollutants often become dissolved or suspended in urban runoff and are conveyed and discharged to receiving waters, such as streams, lakes, lagoons, bays, and the ocean without treatment. Once in receiving waters, these pollutants harm aquatic life primarily through toxicity and habitat degradation. Furthermore, the pollutants can enter the food chain and may eventually enter the tissues of fish and humans.

There is a strong direct correlation between "urbanization" and "impacts to receiving water quality". In general, the more heavily developed the area, the greater the impacts to receiving waters from urban runoff.

These impacts especially threaten environmentally sensitive areas (such as Clean Water Act section 303(d) impaired water bodies, areas designated as Areas of Special Biological Significance, water bodies designated with the RARE beneficial use, and preserves containing receiving waters designated under the Multi Species Conservation Program within the Cities and County of San Diego). Such environmentally sensitive areas have a much lower capacity to withstand pollutant shocks than might be acceptable in the general circumstance. In essence, urban development that is ordinarily insignificant in its impact on the environment may, in a particularly sensitive environment, be significant.

4. **URBAN DEVELOPMENT INCREASES POLLUTANT LOAD, VOLUME, AND VELOCITY OF RUNOFF:** During urban development two important changes occur. First, 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 a very effective natural purification process. Because pavement and concrete can neither absorb water nor remove pollutants, the natural purification characteristics of the land are lost.

Secondly, urban development creates new pollution sources as human population density increases and brings with it proportionately higher levels of car emissions, car maintenance wastes, municipal sewage, pesticides, household hazardous wastes, pet wastes, trash, etc. which can either be washed or directly dumped into the MS4.

As a result of these two changes, the runoff leaving the developed urban area is significantly greater in volume, velocity and pollutant load than the pre-development runoff from the same area.

The significance of the impacts of urban development on receiving waters is determined by the scope of the project, such as the size of the project, the project land-use type, etc. Large projects (such as commercial developments greater than 100,000 square feet, home subdivisions greater than 10 units, and streets, roads, highways, and freeways) generally have large amounts of impervious surface, and therefore have greater potential to significantly impact receiving waters by increasing erosion (through increased peak flow rates, flow velocities, flow volumes, and flow durations) than smaller projects. Projects of particular land use types also have greater potential to significantly impact receiving waters due to the presence of typically large amounts of pollutants on site or an increased potential for pollutants to move off site (such as automotive repair shops, restaurants, parking lots, streets, roads, highways, and freeways, hillside development, and retail gasoline outlets).

5. **WATER QUALITY DEGRADATION INCREASES WITH PERCENT IMPERVIOUSNESS:** The increased volume and velocity of runoff from developed urban areas greatly accelerates the erosion of downstream natural channels. Numerous studies have demonstrated a direct correlation between the degree of imperviousness of an area and the degradation of its receiving water quality. Significant declines in the biological integrity and physical habitat of streams and other receiving waters have been found to occur with as little as a 10% conversion from natural to impervious surfaces. (Developments of medium density single family homes range between 25 to 60% impervious). Today "% impervious coverage" is believed to be a reliable indicator and predictor of the water quality degradation expected from planned new development.
6. **URBAN RUNOFF IS A HUMAN HEALTH THREAT:** Urban runoff contains pollutants, which threaten human health. Human illnesses have been clearly linked to recreating (i.e.,

swimming, surfing, etc.) near storm drains flowing to coastal beach waters. Such flows from urban areas often result in the posting or closure of local beaches.

Pollutants transported to receiving waters by urban runoff can also enter the food chain. Once in the food chain they can "bioaccumulate" in the tissues of invertebrates (e.g., mussels, oysters, and lobsters) and fish which may be eventually consumed by humans. Furthermore, some pollutants are also known to "biomagnify". This phenomenon can result in pollutant concentrations in the body fat of top predators that are millions of times greater than the concentrations in the tissues of their lower trophic (food chain) counterparts or in ambient waters.

7. **POLLUTANT TYPES:** The most common categories of pollutants in urban runoff include total suspended solids, sediment (due to anthropogenic activities); 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 trash.
8. **URBAN STREAMS AS AN MS4 COMPONENT:** 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.
9. **URBAN RUNOFF CAUSES BENEFICIAL USE IMPAIRMENT:** Individually and in combination, the discharge of pollutants and increased flows from MS4s can cause or threaten to cause a condition of pollution (i.e., unreasonable impairment of water quality for designated beneficial uses), contamination, or nuisance. The discharge of pollutants from MS4s can cause the concentration of pollutants to exceed applicable receiving water quality objectives and impair or threaten to impair designated beneficial uses.
10. **COPERMITTEES IMPLEMENT URBAN RUNOFF MANAGEMENT PROGRAMS (URMPs):** Copermittee implementation of Urban Runoff Management Programs (URMPs) designed to reduce discharges of pollutants and flow into and from MS4s to the maximum extent practicable (MEP) can protect receiving water quality by promoting attainment of water quality objectives necessary to support designated beneficial uses. To be most effective, URMPs must contain both structural and non-structural best management practices (BMPs).
11. **BEST MANAGEMENT PRACTICES (BMPs):** Pollutants can be effectively reduced in urban runoff by the application of a combination of pollution prevention, source control, and treatment control BMPs. Source control BMPs (both structural and non-structural) minimize the contact between pollutants and flows (e.g., rerouting run-on around pollutant sources or keeping pollutants on-site and out of receiving waters). Treatment control (or structural) BMPs remove pollutants from urban runoff. Where feasible, use of BMPs which utilize natural processes should be assessed. These types of BMPs, such as grassy swales and constructed wetlands, can frequently be as effective as less natural BMPs, while providing additional benefits such as aesthetics and habitat.
12. **POLLUTION PREVENTION:** Pollution prevention, the initial reduction/elimination of pollutant generation at its source, is the best "first line of defense" for Copermittees and should be used in conjunction with source control and treatment control BMPs. Pollutants that are never generated do not have to be controlled or treated. Encouragement during planning processes of the use of pollution prevention BMPs can be an effective means for pollution prevention BMPs to be implemented, through such methods as education, landscaping, etc.

13. **RECEIVING WATER LIMITATIONS:** Compliance with receiving water limits based on applicable water quality objectives is necessary to ensure that MS4 discharges will not cause or contribute to violations of water quality objectives and the creation of conditions of pollution.
14. **RECEIVING WATER LIMITATION COMPLIANCE STRATEGY:** Implementation of BMPs cannot ensure attainment of receiving water quality objectives under all circumstances; some BMPs may not prove to be as effective as anticipated. An iterative process of BMP development, implementation, monitoring, and assessment is necessary to assure that an Urban Runoff Management Program is sufficiently comprehensive and effective to achieve compliance with receiving water quality objectives.
15. **COPERMITTEES' RESPONSIBILITY FOR ILLICIT DISCHARGES FROM THIRD PARTIES:** As operators of MS4s, the Copermittees cannot passively receive and discharge pollutants from third parties. By providing free and open access to an MS4 that conveys discharges to the waters of the United States, the operator of an MS4 that does not prohibit and/or control discharges into its system essentially accepts responsibility for those discharges.
16. **COPERMITTEES' RESPONSIBILITY BASED ON LAND USE AUTHORITY:** Utilizing their land use authority, Copermittees authorize and realize benefits from the urban development which generates the pollutants and runoff that impair receiving waters. Since the Copermittees utilize their legal authority to authorize urbanization, they must also exercise their legal authority to ensure that the resulting increased pollutant loads and flows do not further degrade receiving waters.
17. **THREE PHASES OF URBAN DEVELOPMENT:** Urban development has three major phases: (1) land use planning for new development; (2) construction; and (3) the "use" or existing development phase. Because the Copermittees authorize, permit, and profit from each of these phases, and because each phase has a profound impact on water quality, the Copermittees have commensurate responsibilities to protect water quality during each phase.  
  
In other words, Copermittees are held responsible for the short and long-term water quality consequences of their land use planning, construction, and existing development decisions.
18. **PLANNING PHASE FOR NEW DEVELOPMENT:** Because land use planning and zoning is where urban development is conceived, it is the phase in which the greatest and most cost-effective opportunities to protect water quality exists. When a Copermittee incorporates policies and principles designed to safeguard water resources into its General Plan and development project approval processes, it has taken a far-reaching step towards the preservation of local water resources for future generations.
19. **CONSTRUCTION PHASE:** Construction activities are a significant cause of receiving water impairment. Siltation is currently the largest cause of river impairment in the United States. Sediment runoff rates from construction sites greatly exceed natural erosion rates of undisturbed lands causing siltation and impairment of receiving waters. In addition to requiring implementation of the full range of BMPs, an effective construction runoff program must include local plan review, permit conditions, field inspections, and enforcement.
20. **EXISTING DEVELOPMENT:** The Copermittees' wet weather monitoring results collected during the past decade, as well as volumes of other references in the literature today, confirm substantial pollutant loads to receiving waters in runoff from existing urban development. Implementation of jurisdictional and watershed URMPs, which include extensive controls on existing development, can reduce pollutant loadings over the long term.
21. **CHANGES NEEDED:** Because the urbanization process is a direct and leading cause of water quality degradation in this Region, fundamental changes to existing policies and

practices about urban development are needed if the beneficial uses of San Diego's natural water resources are to be protected.

- 22. DUAL REGULATION OF INDUSTRIAL AND CONSTRUCTION SITES:** Discharges of runoff from industrial and construction sites in this Region are subject to dual (state and local) regulation. (1) All industries and construction sites are subject to the local permits, plans, and ordinances of the municipal jurisdiction in which it is located. Pursuant to this Order, local (storm water, grading, construction, and use) permits, plans, and ordinances must (a) prohibit the discharge of pollutants and non-storm water into the MS4; and (b) require the routine use of BMPs to reduce pollutants in site runoff. (2) Many industries and construction sites are also subject to regulation under the statewide General Industrial Storm Water Permit or statewide General Construction Storm Water Permit<sup>1</sup>. These statewide general permits are adopted by the State Water Resources Control Board and enforced by the nine Regional Water Quality Control Boards throughout California. Like the Copermittees' local permits and ordinances, the statewide General Industrial and Construction Permits also (a) prohibit the discharge of pollutants and non-storm water; and (b) require the routine use of BMPs to reduce pollutants in site runoff.

Recognizing that both authorities share a common goal, the federal storm water regulations at 40 CFR 122.26 (and its preamble) call for the dual system to ensure the most effective oversight of industrial and construction site discharges. Under this dual system, each municipal Copermittee is responsible for enforcing its local permits, plans, and ordinances within its jurisdiction. Similarly, the SDRWQCB is responsible for enforcing both statewide general permits and this Order within the San Diego Region.

- 23. EDUCATION:** Education is the foundation of every effective URMP and the basis for changes in behavior at a societal level. Education of municipal planning, inspection, and maintenance department staffs is especially critical to ensure that in-house staffs 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 impact receiving water quality and how these impacts can be minimized.
- 24. ENFORCING LOCAL LEGAL AUTHORITY:** Enforcement of local urban runoff related ordinances, permits, and plans is an essential component of every URMP and is specifically required in the federal storm water regulations and this Order. Routine inspections provide an effective means by which Copermittees can evaluate compliance with their permits and ordinances. Inspections are especially important at high-risk areas for pollutant discharges such as industrial and construction sites.

When industrial or construction site discharges occur in violation of local permits and ordinances, the SDRWQCB looks to the municipality that has authorized the discharge for appropriate actions (typically education followed by enforcement where education has been unsuccessful). Each Copermittee must also provide enforcement against illegal discharges from other land uses it has authorized, such as commercial and residential developments.

<sup>1</sup> The "statewide General Industrial Storm Water Permit" refers to State Water Resources Control Board Water Quality Order No. 97-03-DWQ National Pollutant Discharge Elimination System General Permit No. CAS000001, Waste Discharge Requirements for Discharges of Storm Water Associated with Industrial Activities Excluding Construction Activities. The "statewide General Construction Storm Water Permit" refers to State Water Resources Control Board Order No. 99-08-DWQ National Pollutant Discharge Elimination System General Permit No. CAS000002, Waste Discharge Requirements for Discharges of Storm Water Runoff Associated with Construction Activity.

25. **PUBLIC PARTICIPATION:** Public participation during the URMP development process is necessary to ensure that all stakeholder interests and a variety of creative solutions are considered.
26. **TOXICITY:** Urban runoff discharges from MS4s often contain pollutants that cause toxicity, (i.e., adverse responses of organisms to chemicals or physical agents ranging from mortality to physiological responses such as impaired reproduction or growth anomalies). The water quality objectives for toxicity provided in the Water Quality Control Plan, San Diego Basin, Region 9, (Basin Plan), state in part "All waters shall be free of toxic substances in concentrations that are toxic to, or that produce detrimental physiological responses in human, plant, animal, or aquatic life.... The survival of aquatic life in surface waters subjected to a waste discharge or other controllable water quality factors, shall not be less than that for the same water body in areas unaffected by the waste discharge..." Urban runoff discharges from MS4s are considered toxic when (1) the toxic effect observed in an acute toxicity test exceeds zero Toxic Units Acute (TU<sub>a</sub>=0); or (2) the toxic effect observed in a chronic toxicity test exceeds one Toxic Unit Chronic (TU<sub>c</sub>=1).
27. **FOCUS ON MAN-MADE POLLUTANTS AND FLOWS:** The focus of this Order is on the control of urban runoff pollutants and flows which are either generated or accelerated by human activities. This Order is not meant to control background or naturally occurring pollutants and flows.
28. **COMMON WATERSHEDS AND CWA SECTION 303(d) IMPAIRED WATERS:** The Copermittees discharge urban runoff into lakes, drinking water reservoirs, rivers, streams, creeks, bays, estuaries, coastal lagoons, the Pacific Ocean, and tributaries thereto within ten of the eleven hydrologic units (watersheds) comprising the San Diego Region as shown in Table 2 below. During its downstream course, urban runoff is conveyed through lined and unlined (natural, manmade, and partially modified) channels, all of which are defined as components of the Copermittees' MS4.

Some of the receiving water bodies, which receive or convey urban runoff discharges, have been designated as impaired by the SDRWQCB and USEPA in 1998 pursuant to Clean Water Act section 303(d). Also shown below are the watershed management areas (WMAs) as defined in the SDRWQCB report, Watershed Management Approach, January 2000.

Table 2. Watershed Management Areas (WMAs)

SDRWQCB WATERSHED MANAGEMENT AREA (WMA)	HYDROLOGIC UNIT(S)	MAJOR SURFACE WATER BODIES	303(d) POLLUTANT(S) OF CONCERN OR WATER QUALITY EFFECT	COPERMITTEES
Santa Margarita River	Santa Margarita (902.00)	Santa Margarita River and Estuary, Pacific Ocean	1. Coliform Bacteria 2. Nutrients	1. County of San Diego
San Luis Rey River	San Luis Rey (903.00)	San Luis Rey River and Estuary, Pacific Ocean	1. Coliform Bacteria 2. Nutrients	1. City of Escondido 2. City of Oceanside 3. City of Vista 4. County of San Diego
Carlsbad	Carlsbad (904.00)	Batiquitos Lagoon San Elijo Lagoon Agua Hedionda Lagoon Buena Vista Lagoon And Tributary Streams Pacific Ocean	1. Coliform Bacteria 2. Nutrients 3. Sediment	1. City of Carlsbad 2. City of Encinitas 3. City of Escondido 4. City of Oceanside 5. City of San Marcos 6. City of Solana Beach 7. City of Vista 8. County of San Diego
San Dieguito River	San Dieguito (905.00)	San Dieguito River and Estuary, Pacific Ocean	1. Coliform Bacteria	1. City of Del Mar 2. City of Escondido 3. City of Poway 4. City of San Diego 5. City of Solana Beach

SDRWQCB WATERSHED MANAGEMENT AREA (WMA)	HYDROLOGIC UNIT(S)	MAJOR SURFACE WATER BODIES	303(d) POLLUTANT(S) OF CONCERN OR WATER QUALITY EFFECT	COPERMITTEES
				6. County of San Diego
Mission Bay	Peñasquitos (906.00)	Los Peñasquitos Lagoon Mission Bay, Pacific Ocean	1. Coliform Bacteria 2. Metals 3. Nutrients 4. Sediment	1. City of Del Mar 2. City of Poway 3. City of San Diego 4. County of San Diego
San Diego River	San Diego (907.00)	San Diego River, Pacific Ocean	1. Coliform Bacteria	1. City of El Cajon 2. City of La Mesa 3. City of Poway 4. City of San Diego 5. City of Santee 6. County of San Diego
San Diego Bay	Pueblo San Diego (908.00) Sweetwater (909.00) Otay (910.00)	San Diego Bay Sweetwater River Otay River Pacific Ocean	1. Coliform Bacteria 2. Metals 3. Toxicity 4. Benthic Community Degradation	1. City of Chula Vista 2. City of Coronado 3. City of Imperial Beach 4. City of La Mesa 5. City of Lemon Grove 6. City of National City 7. City of San Diego 8. County of San Diego 9. San Diego Unified Port District
Tijuana River	Tijuana (911.00)	Tijuana River and Estuary Pacific Ocean	1. Coliform Bacteria 2. Low Dissolved Oxygen 3. Metals 4. Nutrients 5. Pesticides 6. Synthetic Organics 7. Total Dissolved Solids 8. Trash	1. City of Imperial Beach 2. City of San Diego 3. County of San Diego

29. **CUMULATIVE POLLUTANT LOAD CONTRIBUTIONS:** Because they are interconnected, each MS4 within a watershed contributes to the cumulative pollutant loading, volume, and velocity of urban runoff and the ensuing degradation of downstream receiving water bodies. Accordingly, inland MS4s contribute to coastal impairments.

30. **LAND USE PLANNING ON A WATERSHED SCALE:** Because urban runoff does not recognize political boundaries, "watershed-based" land use planning (pursued collaboratively by neighboring local governments) can greatly enhance the protection of shared natural water resources. Such planning enables multiple jurisdictions to work together to plan for both development and resource conservation that can be environmentally as well as economically sustainable.

31. **INTERGOVERNMENTAL COORDINATION:** Within their common watersheds it is essential for the Copermittees to coordinate their water quality protection and land use planning activities to achieve the greatest protection of receiving water bodies. Copermittee coordination with other watershed stakeholders, especially Caltrans, the Department of Defense, and Native American Tribes, is also critical.

Establishment of a management structure, within which the Copermittees subject to this Order, will fund and coordinate those aspects of their joint obligations will promote implementation of Urban Runoff Management Programs on a watershed and regional basis in the most cost effective manner.

32. **WASTE REMOVAL:** Waste and pollutants which are deposited and accumulate in MS4 drainage structures will be discharged from these structures to waters of the United States unless they are removed. These discharges may cause or contribute to, or threaten to cause or contribute to, a condition of pollution in receiving waters. Once removed, such accumulated wastes must be characterized and lawfully disposed.

33. **TOXIC HOT SPOTS:** Urban runoff is a significant contributor to the creation and persistence of Toxic Hot Spots in San Diego Bay. California Water Code section 13395 requires regional boards to reevaluate waste discharge requirements (WDRs) associated with toxic hot spots. The State Water Resources Control Board (SWRCB) adopted the Consolidated Toxic Hot Spot Cleanup Plan in June 1999. The Plan states: "The reevaluation [of WDRs associated with toxic hot spots] shall consist of (1) an assessment of the WDRs that may influence the creation or further pollution of the known toxic hot spot, (2) an assessment of which WDRs need to be modified to improve environmental conditions at the known toxic hot spot, and (3) a schedule for completion of any WDR modifications deemed appropriate."
34. **CHANGING THE STORM WATER MANAGEMENT APPROACH:** In contrast to the conventional "conveyance" approach, a more natural approach to storm water management seeks to filter and infiltrate runoff by allowing it to flow slowly over permeable vegetated surfaces. By "preserving and restoring the natural hydrologic cycle", filtration and infiltration can greatly reduce the volume/peak rate, velocity, and pollutant loads of urban runoff. The greatest opportunities for changing from a "conveyance" to a more natural management approach occur during the land use planning and zoning processes and when new development projects are under early design.
35. **INFILTRATION AND POTENTIAL GROUNDWATER CONTAMINATION:** Any drainage feature that infiltrates runoff poses some risk of potential groundwater contamination. Although dependent on several factors, the risks typically associated with properly managed infiltration of runoff (especially from residential land use areas) are not significant. The risks associated with infiltration can be managed by many techniques, including (1) designing landscape drainage features that promote infiltration of runoff, but do not "inject" runoff (injection bypasses the natural processes of filtering and transformation that occur in the soil); (2) taking reasonable steps to prevent the illegal disposal of wastes; and (3) ensuring that each drainage feature is adequately maintained in perpetuity. Minimum conditions needed to protect groundwater are specified in section F.1.b. of this Order.
36. **VECTOR CONTROL:** Certain BMPs implemented or required by municipalities for urban runoff management may create a habitat for vectors (e.g. mosquitoes and rodents) if not properly designed or maintained. Close collaboration and cooperative effort between municipalities and local vector control agencies and the State Department of Health Services during the development and implementation of the Urban Runoff Management Programs is necessary to minimize nuisances and public health impacts resulting from vector breeding.
37. **LEGAL AUTHORITY:** This Order is based on the federal Clean Water Act, 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, the Regional Water Quality Control Plan (Basin Plan) adopted by the Regional Board, the California Toxics Rule, and the California Toxics Rule Implementation Plan.
38. **TOTAL MAXIMUM DAILY LOADS (TMDLs):** 40 CFR 122.44 (d)(vii)(B) requires that NPDES permits contain effluent limitations that are consistent with waste load allocations developed under a TMDL. Several TMDLs are being developed in the San Diego Region for impaired waterbodies that receive Copermittees' discharge. Once these TMDLs are approved by the SDRWQCB and USEPA, Copermittees' discharge of urban runoff into an impaired waterbody will be subject to load allocations established by the TMDLs.
39. **ANTIDegradation:** Conscientious implementation of URMPs that satisfy the requirements contained in this Order will reduce the likelihood that discharges from MS4s will cause or contribute to unreasonable degradation of the quality of receiving waters. Therefore, this Order is in conformance with SWRCB Resolution No. 68-16 and the federal antidegradation policy described in 40 CFR 131.12.

40. **CEQA:** The issuance of waste discharge requirements for the discharge of urban runoff from MS4s to waters of the United States is exempt from the requirement for preparation of environmental documents under the California Environmental Quality Act (CEQA) (Public Resources Code, Division 13, Chapter 3, § 21000 et seq.) in accordance with the CWC § 13389.
41. **PUBLIC NOTICE:** The SDRWQCB has notified the Copermitees, all known interested parties, and the public of its intent to consider adoption of an order prescribing waste discharge requirements that would serve to renew an NPDES permit for the existing discharge of urban runoff.
42. **PUBLIC HEARING:** The SDRWQCB has, at a public meeting on December 13, 2000, held a public hearing and heard and considered all comments pertaining to the terms and conditions of this Order.

**IT IS HEREBY ORDERED** that the Copermitees, 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 and regulations adopted thereunder, shall each comply with the following:

**A. PROHIBITIONS -- DISCHARGES**

1. Discharges into and from MS4s in a manner causing, or threatening to cause, a condition of pollution, contamination, or nuisance (as defined in CWC § 13050), in waters of the state are prohibited.
2. Discharges from MS4s which cause or contribute to exceedances of receiving water quality objectives for surface water or groundwater are prohibited.
3. Discharges from MS4s containing pollutants which have not been reduced to the maximum extent practicable (MEP) are prohibited.
4. Applicable to New Development and Redevelopment:  
Post-development runoff containing pollutants loads which cause or contribute to an exceedance of receiving water quality objectives or which have not been reduced to the maximum extent practicable is prohibited.
5. In addition to the above prohibitions, discharges from MS4s are subject to all Basin Plan prohibitions cited in **Attachment A** to this Order.

**B. PROHIBITIONS -- NON-STORM WATER DISCHARGES**

1. Each Copermitee shall effectively prohibit all types of non-storm water discharges into its Municipal Separate Storm Sewer System (MS4) unless such discharges are either authorized by a separate NPDES permit; or not prohibited in accordance with B.2. and B.3. below.
2. Pursuant to 40 CFR 122.26(d)(2)(iv)(B)(1), the following categories of non-storm water discharges need only be prohibited from entering an MS4 if such categories of discharges are identified by the Copermitee as a significant source of pollutants to waters of the United States:
  - a. Diverted stream flows;
  - b. Rising ground waters;
  - c. Uncontaminated ground water infiltration [as defined at 40 CFR 35.2005(20)] to MS4s;
  - d. Uncontaminated pumped ground water;
  - e. Foundation drains;
  - f. Springs;
  - g. Water from crawl space pumps;
  - h. Footing drains;
  - i. Air conditioning condensation;
  - j. Flows from riparian habitats and wetlands;

- k. Water line flushing;
  - l. Landscape irrigation;
  - m. Discharges from potable water sources other than water main breaks;
  - n. Irrigation water;
  - o. Lawn watering;
  - p. Individual residential car washing; and
  - q. Dechlorinated swimming pool discharges.
3. When a discharge category above is identified as a significant source of pollutants to waters of the United States, the Copermittee shall either:
- a. Prohibit the discharge category from entering its MS4; **OR**
  - b. Not prohibit the discharge category and implement, or require the responsible party(ies) to implement, BMPs which will reduce pollutants to the MEP; **AND**
  - c. For each discharge category not prohibited, the Copermittee shall submit the following information to the SDRWQCB within 365 days of adoption of this Order:
    - (1) The non-storm water discharge category listed above which the Copermittee elects not to prohibit; and
    - (2) The BMP(s) for each discharge category listed above which the Copermittee will implement, or require the responsible party(ies) to implement, to prevent or reduce pollutants to the MEP.
4. **Fire Fighting Flows:** Emergency fire fighting flows (i.e., flows necessary for the protection of life or property) do not require BMPs and need not be prohibited. As part of the Jurisdictional URMP, each Copermittee shall develop and implement a program within 365 days of adoption of this Order to reduce pollutants from non-emergency fire fighting flows (i.e., flows from controlled or practice blazes and maintenance activities) identified by the Copermittee to be significant sources of pollutants to waters of the United States.
5. **Dry Weather Analytical Monitoring and Non-Storm Water Discharges:** Each Copermittee shall examine all dry weather analytical monitoring results collected in accordance with section F.5. and Attachment E of this Order to identify water quality problems which may be the result of any non-prohibited discharge category(ies) identified above in Non-Storm Water Discharges to MS4s Prohibition B.2. Follow-up investigations shall be conducted as necessary to identify and control any non-prohibited discharge category(ies) listed above.

### C. RECEIVING WATER LIMITATIONS

- 1. Discharges from MS4s that cause or contribute to the violation of water quality standards (designated beneficial uses and water quality objectives developed to protect beneficial uses) are prohibited.
- 2. Each Copermittee shall comply with Part C.1, Part A.2, and Part A.5 as it applies to Prohibition 5 in Attachment A of this Order through timely implementation of control measures and other actions to reduce pollutants in urban runoff discharges in accordance with the Jurisdictional Urban Runoff Management Program (Jurisdictional URMP) and other requirements of this Order including any modifications. The Jurisdictional URMP shall be designed to achieve compliance with Part C.1, Part A.2, and Part A.5 as it applies to Prohibition 5 in Attachment A of this Order. If exceedance(s) of water quality standards persist notwithstanding implementation of the URMP and other requirements of this Order, the Copermittee shall assure compliance with Part C.1, Part A.2, and Part A.5 as it applies to Prohibition 5 in Attachment A of this Order by complying with the following procedure:

- a. Upon a determination by either the Copermittee or the SDRWQCB that MS4 discharges are causing or contributing to an exceedance of an applicable water quality standard, the Copermittee shall promptly notify and thereafter submit a report to the SDRWQCB 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 Jurisdictional URMP unless the SDRWQCB directs an earlier submittal. The report shall include an implementation schedule. The SDRWQCB may require modifications to the report;
- b. Submit any modifications to the report required by the SDRWQCB within 30 days of notification;
- c. Within 30 days following approval of the report described above by the SDRWQCB, the Copermittee shall revise its Jurisdictional URMP 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 Jurisdictional URMP and monitoring program in accordance with the approved schedule.

So long as the Copermittee has complied with the procedures set forth above and are implementing the revised Jurisdictional URMP, the Copermittee does not have to repeat the same procedure for continuing or recurring exceedances of the same receiving water limitations unless directed by the SDRWQCB to do so.

3. Nothing in this section shall prevent the SDRWQCB from enforcing any provision of this Order while the Copermittee prepares and implements the above report.

#### D. LEGAL AUTHORITY

1. Each Copermittee shall establish, maintain, and enforce adequate legal authority to control pollutant discharges into and from its MS4 through ordinance, statute, permit, contract or similar means. This legal authority must, at a minimum, authorize the Copermittee to:
  - a. Control the contribution of pollutants in discharges of runoff associated with industrial and construction activity to its MS4 and control the quality of runoff from industrial and construction sites. This requirement applies both to industrial and construction sites which have coverage under the statewide general industrial or construction storm water permits, as well as to those sites which do not. Grading ordinances shall be upgraded and enforced as necessary to comply with this Order.
  - b. Prohibit all identified illicit discharges not otherwise allowed pursuant to section B.2 including but not limited to:
    - (1) Sewage;
    - (2) Discharges of wash water resulting from the hosing or cleaning of gas stations, auto repair garages, or other types of automotive services facilities;
    - (3) Discharges resulting from the cleaning, repair, or maintenance of any type of equipment, machinery, or facility including motor vehicles, cement-related equipment, and port-a-potty servicing, etc.;
    - (4) Discharges of wash water from mobile operations such as mobile automobile washing, steam cleaning, power washing, and carpet cleaning, etc.;

- (5) Discharges of wash water from the cleaning or hosing of impervious surfaces in municipal, industrial, commercial, and residential areas including parking lots, streets, sidewalks, driveways, patios, plazas, work yards and outdoor eating or drinking areas, etc.;
  - (6) Discharges of runoff from material storage areas containing chemicals, fuels, grease, oil, or other hazardous materials;
  - (7) Discharges of pool or fountain water containing chlorine, biocides, or other chemicals; discharges of pool or fountain filter backwash water;
  - (8) Discharges of sediment, pet waste, vegetation clippings, or other landscape or construction-related wastes; and
  - (9) Discharges of food-related wastes (e.g., grease, fish processing, and restaurant kitchen mat and trash bin wash water, etc.).
- c. Prohibit and eliminate illicit connections to the MS4;
  - d. Control the discharge of spills, dumping, or disposal of materials other than storm water to its MS4;
  - e. Require compliance with conditions in Copermittee ordinances, permits, contracts or orders (i.e., hold dischargers to its MS4 accountable for their contributions of pollutants and flows);
  - f. Utilize enforcement mechanisms to require compliance with Copermittee storm water ordinances, permits, contracts, or orders;
  - g. Control the contribution of pollutants from one portion of the shared MS4 to another portion of the MS4 through interagency agreements among Copermittees. Control of the contribution of pollutants from one portion of the shared MS4 to another portion of the MS4 through interagency agreements with other owners of the MS4 such as Caltrans, the Department of Defense, or Native American Tribes is encouraged.;
  - h. Carry out all inspections, surveillance, and monitoring necessary to determine compliance and noncompliance with local ordinances and permits and with this Order, including the prohibition on illicit discharges to the MS4. This means the Copermittee must have authority to enter, sample, inspect, review and copy records, and require regular reports from industrial facilities discharging into its MS4, including construction sites; and
  - i. Require the use of best management practices (BMPs) to prevent or reduce the discharge of pollutants to MS4s.
2. Within 180 days of adoption of this Order, each Copermittee shall provide to the SDRWQCB a statement certified by its chief legal counsel that the Copermittee has adequate legal authority to implement and enforce each of the requirements contained in 40 CFR 122.26(d)(2)(i)(A-F) and this Order. This statement shall include:
    - a. Identification of all departments within the jurisdiction that conduct urban runoff related activities, and their roles and responsibilities under this Order. Include an up to date organizational chart specifying these departments and key personnel.
    - b. Citation of urban runoff related ordinances and the reasons they are enforceable;
    - c. Identification of the local administrative and legal procedures available to mandate compliance with urban runoff related ordinances and therefore with the conditions of this

Order;

- d. Description of how these ordinances are implemented and appealed; and
- e. Description of whether the municipality can issue administrative orders and injunctions or if it must go through the court system for enforcement actions.

#### E. TECHNOLOGY BASED STANDARDS

Each Copermitttee shall implement, or require implementation of, best management practices to ensure that the following pollutant discharges into and from its MS4 are reduced to the applicable technology based standard as specified below:

Table 3. Technology Based Standards<sup>2</sup>

POLLUTANT DISCHARGE FROM	DESCRIPTION	APPLICABLE PERFORMANCE STANDARD
Industrial Activity <u>owned by the Copermitttee</u>	Categorical Industry in 40 CFR 122.26	BAT/BCT (pursuant to Statewide General Industrial Permit)
Industrial Activity	All other industry	MEP
Construction Activity <u>owned by the Copermitttee</u>	Greater than or Equal to 5 Acres (or less than 5 acres and Part of a Larger Common Plan of Sale or Development)	BAT/BCT (pursuant to Statewide General Construction Permit)
Construction Activity	All Other construction	MEP
Other Sources	All Other Land Use Activities	MEP
MS4s	All discharges from MS4s	MEP

#### F. JURISDICTIONAL URBAN RUNOFF MANAGEMENT PROGRAM<sup>2</sup>

Each Copermitttee shall take appropriate actions to reduce discharges of pollutants and runoff flow during each of the three major phases of urban development, i.e., the planning, construction, and existing development (or use) phases.

Each Copermitttee shall implement a Jurisdictional Urban Runoff Management Program (Jurisdictional URMP) that contains the components shown below as described in Sections F.1. through F.8:

- F.1. Land-Use Planning for New Development and Redevelopment Component
- F.2. Construction Component
- F.3. Existing Development Component
  - a. Municipal
  - b. Industrial
  - c. Commercial
  - d. Residential
- F.4. Education Component
- F.5. Illicit Discharge Detection and Elimination Component
- F.6. Public Participation Component
- F.7. Assessment of Jurisdictional URMP Effectiveness Component
- F.8. Fiscal Analysis Component

<sup>2</sup> Pursuant to this Order, each Copermitttee shall ensure that pollutants in runoff from industrial and construction sites within its jurisdiction have been reduced to the MEP standard before entering its MS4. The industrial and construction site dischargers themselves however must ensure that pollutants in runoff leaving their sites have been reduced to the BAT/BCT standard pursuant to either the statewide General Industrial or Construction Storm Water Permit. Runoff from industrial and construction sites owned by municipalities and subject to either the General Industrial or Construction Storm Water Permits, must meet the BAT/BCT standard.

**F.1. Land-Use Planning for New Development and Redevelopment Component**

Each Copermittee shall minimize the short and long-term impacts on receiving water quality from new development and redevelopment. In order to reduce pollutants and runoff flows from new development and redevelopment to the maximum extent practicable, each Copermittee shall at a minimum:

- F.1.a Assess General Plan
- F.1.b Modify Development Project Approval Processes
- F.1.c Revise Environmental Review Processes
- F.1.d Conduct Education Efforts Focused on New Development and Redevelopment

**F.1.a. Assess General Plan**

Each Copermittee's General Plan or equivalent plan (e.g., Comprehensive, Master, or Community Plan) shall include water quality and watershed protection principles and policies to direct land-use decisions and require implementation of consistent water quality protection measures for development projects. As part of its Jurisdictional Urban Runoff Management Program document, each Copermittee shall provide a workplan with time schedule detailing any changes to its General Plan regarding water quality and watershed protection. Examples of water quality and watershed protection principles and policies to be considered include the following:

- (1) Minimize the amount of impervious surfaces and directly connected impervious surfaces in areas of new development and redevelopment and where feasible slow runoff and maximize on-site infiltration of runoff.
- (2) Implement pollution prevention methods supplemented by pollutant source controls and treatment. Use small collection strategies located at, or as close as possible to, the source (i.e., the point where water initially meets the ground) to minimize the transport of urban runoff and pollutants offsite and into an MS4.
- (3) Preserve, and where possible, create or restore areas that provide important water quality benefits, such as riparian corridors, wetlands, and buffer zones. Encourage land acquisition of such areas.
- (4) Limit disturbances of natural water bodies and natural drainage systems caused by development including roads, highways, and bridges.
- (5) Prior to making land use decisions, utilize methods available to estimate increases in pollutant loads and flows resulting from projected future development. Require incorporation of structural and non-structural BMPs to mitigate the projected increases in pollutant loads and flows.
- (6) Avoid development of areas that are particularly susceptible to erosion and sediment loss; or establish development guidance that identifies these areas and protects them from erosion and sediment loss.
- (7) Reduce pollutants associated with vehicles and increasing traffic resulting from development. Coordinate local traffic management reduction efforts with the San Diego County Congestion Management Plan.
- (8) Implement the San Diego Association of Government's (SANDAG's) recommendations as found in the Water Quality Element of its Regional Growth Management Strategy.

- (9) Post-development runoff from a site shall not contain pollutant loads which cause or contribute to an exceedance of receiving water quality objectives or which have not been reduced to the maximum extent practicable.

F.1.b. Modify Development Project Approval Processes

Prior to project approval and issuance of local permits, Copermittees shall require each proposed project to implement measures to ensure that pollutants and runoff from the development will be reduced to the maximum extent practicable and will not cause or contribute to an exceedance of receiving water quality objectives. Each Copermittee shall further ensure that all development will be in compliance with Copermittee storm water ordinances, local permits, all other applicable ordinances and requirements, and this Order.

(1) *Development Project Requirements*

Each Copermittee shall include development project requirements in local permits to ensure that pollutant discharges and runoff flows from development are reduced to the maximum extent practicable and that receiving water quality objectives are not violated throughout the life of the project. Such requirements shall, at a minimum:

- (a) Require project proponent to implement source control BMPs for all applicable development projects.
- (b) Require project proponent to implement site design/landscape characteristics where feasible which maximize infiltration, provide retention, slow runoff, and minimize impervious land coverage for all development projects.
- (c) Require project proponent to implement buffer zones for natural water bodies, where feasible. Where buffer zone implementation is infeasible, require project proponent to implement other buffers such as trees, lighting restrictions, access restrictions, etc.
- (d) Require industrial applicants subject to California's statewide General NPDES Permit for Storm Water Discharges Associated with Industrial Activities (Except Construction), (hereinafter General Industrial Permit), to provide evidence of coverage under the General Industrial Permit.
- (e) Require project proponent to ensure its grading or other construction activities meet the provisions specified in Section F.2. of this Order.
- (f) Require project proponent to provide proof of a mechanism which will ensure ongoing long-term maintenance of all structural post-construction BMPs.

(2) *Standard Urban Storm Water Mitigation Plans (SUSMPs)*

Within 365 days of adoption of this Order, the Copermittees shall collectively develop a model Standard Urban Storm Water Mitigation Plan (SUSMP) to reduce pollutants and runoff flows from all new development and significant redevelopment projects falling under the priority project categories or locations listed in section F.1.b.(2)(a) below. Within 180 days of approval of the model SUSMP in the public process by the SDRWQCB, each Copermittee shall adopt its own local SUSMP, and amended ordinances consistent with the approved model SUSMP, and shall submit both (local SUSMP and amended ordinances) to the SDRWQCB.

Immediately following adoption of its local SUSMP, each Copermittee shall ensure that all new development and significant redevelopment projects falling under the priority project categories or locations listed in F.1.b.(2)(a) below meet SUSMP requirements. The SUSMP requirements shall apply to all priority projects or phases of priority projects which have not yet begun grading or construction activities. If a Copermittee determines that lawful prior approval of a project exists, whereby application of SUSMP requirements to the project is infeasible, SUSMP requirements need not apply to the project. Where feasible, the Copermittees shall utilize the 18 month SUSMP implementation period to ensure that

projects undergoing approval processes include application of SUSMP requirements in their plans.

- (a) *Priority Development Project Categories - SUSMP requirements shall apply to all new development and significant redevelopment projects falling under the priority project categories or locations listed below. Significant redevelopment is defined as the creation or addition of at least 5,000 square feet of impervious surfaces on an already developed site. Significant redevelopment includes, but is not limited to: the expansion of a building footprint or addition or replacement of a structure; structural development including an increase in gross floor area and/or exterior construction or remodeling; replacement of impervious surface that is not part of a routine maintenance activity; and land disturbing activities related with structural or impervious surfaces. Where significant 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 SUSMP requirements, the numeric sizing criteria discussed in section F.1.b.(2)(c) applies only to the addition, and not to the entire development.*
- i. *Home subdivisions of 100 housing units or more. This category includes single-family homes, multi-family homes, condominiums, and apartments.*
  - ii. *Home subdivisions of 10-99 housing units. This category includes single-family homes, multi-family homes, condominiums, and apartments.*
  - iii. *Commercial developments greater than 100,000 square feet. This category is defined as any development on private land that is not for heavy industrial or residential uses where the land area for development is greater than 100,000 square feet. The category includes, but is not limited to: hospitals; laboratories and other medical facilities; educational institutions; recreational facilities; commercial nurseries; multi-apartment buildings; car wash facilities; mini-malls and other business complexes; shopping malls; hotels; office buildings; public warehouses; automotive dealerships; commercial airfields; and other light industrial facilities.*
  - iv. *Automotive repair shops. This category is defined as a facility that is categorized in any one of the following Standard Industrial Classification (SIC) codes: 5013, 5014, 5541, 7532-7534, or 7536-7539.*
  - v. *Restaurants. This category is defined as a facility that sells prepared foods and drinks for consumption, including stationary lunch counters and refreshment stands selling prepared foods and drinks for immediate consumption (SIC code 5812), where the land area for development is greater than 5,000 square feet.*
  - vi. *All hillside development greater than 5,000 square feet. This category is defined as any development which creates 5,000 square feet of impervious surface which is located in an area with known erosive soil conditions, where the development will grade on any natural slope that is twenty-five percent or greater.*
  - vii. *Environmentally Sensitive Areas: All development and redevelopment located within or directly adjacent to or discharging directly to an environmentally sensitive area (where discharges from the development or redevelopment will enter receiving waters within the environmentally sensitive area), which either creates 2,500 square feet of impervious surface on a proposed project site or increases the area of imperviousness of a proposed project site to 10% or more of its naturally occurring condition. Environmentally sensitive areas 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 San Diego 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 San Diego Basin (1994) and amendments); areas designated as preserves or their equivalent under the Multi Species Conservation Program within the Cities and County of San Diego; and any other equivalent environmentally sensitive areas which have been identified by the Copermittees. "Directly adjacent" means situated within 200 feet of the environmentally sensitive area. "Discharging directly to" means outflow from a drainage conveyance system that is composed entirely of flows from the subject development or redevelopment site, and not commingled with flows from adjacent lands.

viii. *Parking lots 5,000 square feet or more or with 15 or more parking spaces and potentially exposed to urban runoff.* Parking lot is defined as a land area or facility for the temporary parking or storage of motor vehicles used personally, for business, or for commerce.

ix. *Street, roads, highways, and freeways.* This category includes any paved surface which is 5,000 square feet or greater used for the transportation of automobiles, trucks, motorcycles, and other vehicles.

(b) **BMP Requirements** – The SUSMP shall include a list of recommended source control and structural treatment BMPs. The SUSMP shall require all new development and significant redevelopment projects falling under the above priority project categories or locations to implement a combination of BMPs selected from the recommended BMP list, including at a minimum (1) source control BMPs and (2) structural treatment BMPs. The BMPs shall, at a minimum:

- i. Control the post-development peak storm water runoff discharge rates and velocities to maintain or reduce pre-development downstream erosion, and to protect stream habitat;
- ii. Conserve natural areas where feasible;
- iii. Minimize storm water pollutants of concern in urban runoff from the new development or significant redevelopment (through implementation of source control BMPs). Identification of pollutants of concern should include at a minimum consideration of any pollutants for which water bodies receiving the development's runoff are listed as impaired under Clean Water Act section 303(d), any pollutant associated with the land use type of the development, and any pollutant commonly associated with urban runoff;
- iv. Remove pollutants of concern from urban runoff (through implementation of structural treatment BMPs);
- v. Minimize directly connected impervious areas where feasible;
- vi. Protect slopes and channels from eroding;
- vii. Include storm drain stenciling and signage;
- viii. Include properly designed outdoor material storage areas;
- ix. Include properly designed trash storage areas;
- x. Include proof of a mechanism, to be provided by the project proponent or Copermittee, which will ensure ongoing long-term structural BMP maintenance;
- xi. Include additional water quality provisions applicable to individual priority project categories;
- xii. Be correctly designed so as to remove pollutants to the maximum extent practicable;
- xiii. Be implemented close to pollutant sources, when feasible, and prior to discharging into receiving waters supporting beneficial uses; and

- xiv. Ensure that post-development runoff does not contain pollutant loads which cause or contribute to an exceedance of water quality objectives or which have not been reduced to the maximum extent practicable.
- (c) Numeric Sizing Criteria – The SUSMP shall require structural treatment BMPs to be implemented for all priority development projects. All structural treatment BMPs shall be located so as to infiltrate, filter, or treat the required runoff volume or flow prior to its discharge to any receiving waterbody supporting beneficial uses. Structural treatment BMPs may be shared by multiple new development projects as long as construction of any shared structural treatment BMPs is completed prior to the use of any new development project from which the structural treatment BMP will receive runoff.

In addition to meeting the BMP requirements listed in item F.1.b.(2)(b) above, all structural treatment BMPs for a single priority development project shall collectively be sized to comply with the following numeric sizing criteria:

Volume

Volume-based BMPs shall be designed to mitigate (infiltrate, filter, or treat) either:

- i. The volume of runoff produced from a 24-hour 85<sup>th</sup> percentile storm event, as determined from the local historical rainfall record (0.6 inch approximate average for the San Diego County area);<sup>3</sup> or
- ii. The volume of runoff produced by the 85<sup>th</sup> 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 90% 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 85<sup>th</sup> percentile 24-hour runoff event;<sup>4</sup>

OR

Flow

Flow-based BMPs shall be designed to mitigate (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

<sup>3</sup>This volume is not a single volume to be applied to all of San Diego County. The size of the 85<sup>th</sup> percentile storm event is different for various parts of the County. The Copermitees are encouraged to calculate the 85<sup>th</sup> percentile storm event for each of their jurisdictions using local rain data pertinent to their particular jurisdiction (the 0.6 inch standard is a rough average for the County and should only be used where appropriate rain data is not available). In addition, isopluvial maps contained in the County of San Diego Hydrology Manual may be used to extrapolate rainfall data to areas where insufficient data exists in order to determine the volume of the local 85<sup>th</sup> percentile storm event in such areas. Where the Copermitees will use isopluvial maps to determine the 85<sup>th</sup> percentile storm event in areas lacking rain data, the Copermitees shall describe their method for using isopluvial maps in the model and local SUSMPs.

<sup>4</sup> Under this volume criteria, hourly rainfall data may be used to calculate the 85<sup>th</sup> percentile storm event, where each storm event is identified by its separation from other storm events by at least six hours of no rain. Where the Copermitees may use hourly rainfall data to calculate the 85<sup>th</sup> percentile storm event, the Copermitees shall describe their method for using hourly rainfall data to calculate the 85<sup>th</sup> percentile storm event in the model and local SUSMPs.

- ii. The maximum flow rate of runoff produced by the 85<sup>th</sup> 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 85<sup>th</sup> percentile hourly rainfall intensity multiplied by a factor of two.
- (d) Equivalent Numeric Sizing Criteria - The Copermittees may develop, as part of the model SUSMP, any equivalent method for calculating the volume or flow which must be mitigated (i.e., any equivalent method for calculating numeric sizing criteria) by post-construction structural treatment BMPs. Such equivalent sizing criteria may be authorized by the SDRWQCB for use in place of the above criteria. In the absence of development and subsequent authorization of such equivalent numeric sizing criteria, the above numeric sizing criteria requirement shall be implemented.
- (e) Pollutants or Conditions of Concern – As part of the model SUSMP, the Copermittees shall develop a procedure for pollutants or conditions of concern to be identified for each new development or significant redevelopment project. The procedure shall include, at a minimum, consideration of (1) receiving water quality (including pollutants for which receiving waters are listed as impaired under Clean Water Act section 303(d)); (2) land use type of the development project and pollutants associated with that land use type; (3) pollutants expected to be present on site; (4) changes in storm water discharge flow rates, velocities, durations, and volumes resulting from the development project; and (5) sensitivity of receiving waters to changes in storm water discharge flow rates, velocities, durations, and volumes.
- (f) Implementation Process – As part of the model SUSMP, the Copermittees shall develop a process by which SUSMP requirements will be implemented. The process shall identify at what point in the planning process development projects will be required to meet SUSMP requirements. The process shall also include identification of the roles and responsibilities of various municipal departments in implementing the SUSMP requirements, as well as any other measures necessary for the implementation of SUSMP requirements.
- (g) Restaurants Less than 5,000 Square Feet - New development and significant redevelopment restaurant projects where the land area development is less than 5,000 square feet shall meet all SUSMP requirements except for structural treatment BMP and numeric sizing criteria requirement F.1.b.(2)(c) and peak flow rate requirement F.1.b(2)(b)(i). A restaurant is defined as a facility that sells prepared foods and drinks for consumption, including stationary lunch counters and refreshment stands selling prepared foods and drinks for immediate consumption (SIC Code 5812).
- (h) Waiver Provision – A Copermittee may provide for a project to be waived from the requirement of implementing structural treatment BMPs (F.1.b.(2)(c)) if infeasibility can be established. A waiver of infeasibility shall only be granted by a Copermittee when all available structural treatment BMPs have been considered and rejected as infeasible. Copermittees shall notify the SDRWQCB within 5 days of each waiver issued and shall include the name of the person granting each waiver.

As part of the model SUSMP, the Copermittees may develop a program to require project proponents who have received waivers to transfer the savings in cost, as determined by the Copermittee(s), to a storm water mitigation fund. This program may be implemented by all Copermittees which choose to provide waivers. Funds may be used on projects to improve urban runoff quality within the watershed of the waived

project. The waiver program may identify:

- i. The entity or entities that will manage the storm water mitigation fund (i.e., assume full responsibility for)
- ii. The range and types of acceptable projects for which mitigation funds may be expended;
- iii. The entity or entities that will assume full responsibility for each mitigation project including its successful completion
- iv. How the dollar amount of fund contributions will be determined.

(f) Infiltration and Groundwater Protection – To protect groundwater quality, each Copermittee shall apply restrictions to the use of structural treatment BMPs which are designed to primarily function as infiltration devices (such as infiltration trenches and infiltration basins). Such restrictions shall ensure that the use of such infiltration structural treatment BMPs shall not cause or contribute to an exceedance of groundwater quality objectives. At a minimum, use of structural treatment BMPs which are designed to primarily function as infiltration devices shall meet the following conditions:<sup>5</sup>

- i. Urban runoff shall undergo pretreatment such as sedimentation or filtration prior to infiltration.
- ii. All dry weather flows shall be diverted from infiltration devices.
- iii. Pollution prevention and source control BMPs shall be implemented at a level appropriate to protect groundwater quality at sites where infiltration structural treatment BMPs are to be used.
- iv. Infiltration structural treatment BMPs shall be adequately maintained so that they remove pollutants to the maximum extent practicable.
- v. The vertical distance from the base of any infiltration structural treatment BMP to the seasonal high groundwater mark shall be at least 10 feet. Where groundwater basins do not support beneficial uses, this vertical distance criteria may be reduced, provided groundwater quality is maintained.
- vi. The soil through which infiltration is to occur shall have physical and chemical characteristics (such as appropriate cation exchange capacity, organic content, clay content, and infiltration rate) which are adequate for proper infiltration durations and treatment of urban runoff for the protection of groundwater beneficial uses.
- vii. Infiltration structural treatment BMPs shall not be used for areas of industrial or light industrial activity; areas subject to high vehicular traffic (25,000 or greater average daily traffic on main roadway or 15,000 or more average daily traffic on any intersecting roadway); automotive repair shops; car washes; fleet storage areas (bus, truck, etc.); nurseries; and other high threat to water quality land uses and activities as designated by each Copermittee.
- viii. Infiltration structural BMPs shall be located a minimum of 100 feet horizontally from any water supply wells.

As part of the model and local SUSMPs, the Copermittees may develop alternative restrictions on the use of structural treatment BMPs which are designed to primarily function as infiltration devices.

(g) Downstream Erosion – As part of the model SUSMP and the local SUSMPs, the Copermittees shall develop criteria to ensure that discharges from new development and significant redevelopment maintain or reduce pre-development downstream erosion and protect stream habitat. At a minimum, criteria shall be developed to control peak

<sup>5</sup> These conditions do not apply to structural treatment BMPs which allow incidental infiltration and are not designed to primarily function as infiltration devices (such as grassy swales, detention basins, vegetated buffer strips, constructed wetlands, etc.)

storm water discharge rates and velocities in order to maintain or reduce pre-development downstream erosion and protect stream habitat. Storm water discharge volumes and durations should also be considered.

F.1.c. Revise Environmental Review Processes

- (1) To the extent feasible, the Copermittees shall revise their current environmental review processes to include requirements for evaluation of water quality effects and identification of appropriate mitigation measures. The following questions are examples to be considered in addressing increased pollutants and flows from proposed projects:
  - (a) Could the proposed project result in an increase in pollutant discharges to receiving waters? Consider water quality parameters such as temperature, dissolved oxygen, turbidity and other typical storm water pollutants (e.g., heavy metals, pathogens, petroleum derivatives, synthetic organics, sediment, nutrients, oxygen-demanding substances, and trash).
  - (b) Could the proposed project result in significant alteration of receiving water quality during or following construction?
  - (c) Could the proposed project result in increased impervious surfaces and associated increased runoff?
  - (d) Could the proposed project create a significant adverse environmental impact to drainage patterns due to changes in runoff flow rates or volumes?
  - (e) Could the proposed project result in increased erosion downstream?
  - (f) Is the project tributary to an already impaired water body, as listed on the Clean Water Act Section 303(d) list. If so, can it result in an increase in any pollutant for which the water body is already impaired?
  - (g) Is project tributary to other environmentally sensitive areas? If so, can it exacerbate already existing sensitive conditions?
  - (h) Could the proposed project have a potentially significant environmental impact on surface water quality, to either marine, fresh, or wetland waters?
  - (i) Could the proposed project have a potentially significant adverse impact on ground water quality?
  - (j) Could the proposed project cause or contribute to an exceedance of applicable surface or groundwater receiving water quality objectives or degradation of beneficial uses?
  - (k) Can the project impact aquatic, wetland, or riparian habitat?

F.1.d. Conduct Education Efforts Focused on New Development and Redevelopment

- (1) Internal: Municipal Staff and Others

Each Copermittee shall implement an education program to ensure that its planning and development review staffs (and Planning Boards and Elected Officials, if applicable) have an understanding of:

- (a) Federal, state, and local water quality laws and regulations applicable to development projects;
  - (b) The connection between land use decisions and short and long-term water quality impacts (i.e., impacts from land development and urbanization); and
  - (c) How impacts to receiving water quality resulting from development can be minimized (i.e., through implementation of various source control and structural BMPs).
- (2) External: Project Applicants, Developers, Contractors, Property Owners, Community Planning Groups

As early in the planning and development process as possible, each Copermittee shall implement a program to educate project applicants, developers, contractors, property owners, and community planning groups on the following topics:

- (a) Federal, state, and local water quality laws and regulations applicable to development projects;
- (b) Required federal, state, and local permits pertaining to water quality;
- (c) Water quality impacts of urbanization; and
- (d) Methods for minimizing the impacts of development on receiving water quality.

### ***F.2. Construction Component***

Each Copermittee shall implement a Construction Component of its Jurisdictional URMP to reduce pollutants in runoff from construction sites during all construction phases. At a minimum the construction component shall address:

- F.2.a. Pollution Prevention
- F.2.b. Grading Ordinance Update
- F.2.c. Modify Construction and Grading Approval Process
- F.2.d. Source Identification
- F.2.e. Threat to Water Quality Prioritization
- F.2.f. BMP Implementation
- F.2.g. Inspection of Construction Sites
- F.2.h. Enforcement of Construction Sites
- F.2.i. Reporting of Non-compliant Sites
- F.2.j. Education Focused on Construction Activities

#### **F.2.a. Pollution Prevention (Construction)**

Each Copermittee shall implement pollution prevention methods in its Construction Component and shall require its use by construction site owners, developers, contractors, and other responsible parties, where appropriate.

#### **F.2.b. Grading Ordinance Update (Construction)**

Each Copermittee shall review and update its grading ordinances as necessary for compliance with its storm water ordinances and this Order. The updated grading ordinance shall require implementation of BMPs and other measures during all construction activities, including the following BMPs and other measures or their equivalent:

- (1) Erosion prevention;
- (2) Seasonal restrictions on grading;
- (3) Slope stabilization requirements;
- (4) Phased grading;
- (5) Revegetation as early as feasible;
- (6) Preservation of natural hydrologic features;
- (7) Preservation of riparian buffers and corridors;
- (8) Maintenance of all source control and structural treatment BMPs; and
- (9) Retention and proper management of sediment and other construction pollutants on site.

#### **F.2.c. Modify Construction and Grading Approval Process (Construction)**

Prior to approval and issuance of local construction and grading permits, each Copermittee shall require all individual proposed construction and grading projects to implement measures to ensure that pollutants from the site will be reduced to the maximum extent practicable and will not cause or contribute to an exceedance of water quality objectives. Each Copermittee shall further ensure that

all grading and construction activities will be in compliance with applicable Copermitttee ordinances (e.g., storm water, grading, construction, etc.) and other applicable requirements, including this Order.

(1) Construction and Grading Project Requirements

Include construction and grading project requirements in local grading and construction permits to ensure that pollutant discharges are reduced to the maximum extent practicable and water quality objectives are not violated during the construction phase. Such requirements shall include the following requirements or their equivalent:

- (a) Require project proponent to develop and implement a plan to manage storm water and non-storm water discharges from the site at all times;
- (b) Require project proponent to minimize grading during the wet season and coincide grading with seasonal dry weather periods to the extent feasible. If grading does occur during the wet season, require project proponent to implement additional BMPs for any rain events which may occur, as necessary for compliance with this Order;
- (c) Require project proponent to emphasize erosion prevention as the most important measure for keeping sediment on site during construction;
- (d) Require project proponent to utilize sediment controls as a supplement to erosion prevention for keeping sediment on-site during construction, and never as the single or primary method;
- (e) Require project proponent to minimize areas that are cleared and graded to only the portion of the site that is necessary for construction;
- (f) Require project proponent to minimize exposure time of disturbed soil areas;
- (g) Require project proponent to temporarily stabilize and reseed disturbed soil areas as rapidly as possible;
- (h) (h) Require project proponent to permanently revegetate or landscape as early as feasible;
- (i) Require project proponent to stabilize all slopes; and
- (j) Require project proponents subject to California's statewide General NPDES Permit for Storm Water Discharges Associated With Construction Activities, (hereinafter General Construction Permit), to provide evidence of existing coverage under the General Construction Permit.

F.2.d. Source Identification (Construction)

Each Copermitttee shall annually develop and update, prior to the rainy season, a watershed based inventory of all construction sites within its jurisdiction regardless of site size or ownership. This requirement is applicable to all construction sites regardless of whether the construction site is subject to the California statewide General NPDES Permit for Storm Water Discharges Associated With Construction Activities (hereinafter General Construction Permit), or other individual NPDES permit. The use of an automated database system, such as Geographical Information System (GIS) is highly recommended, but not required.

F.2.e. Threat to Water Quality Prioritization (Construction)

- (1) To establish priorities for construction oversight activities under this Order, the Copermitttee shall prioritize its watershed-based inventory (developed pursuant to F.2.d. above) by threat to water quality. Each construction site shall be classified as high, medium, or low threat to water quality. In evaluating threat to water quality each Copermitttee shall consider (1) soil erosion potential; (2) site slope; (3) project size and type; (4) sensitivity of receiving water bodies; (5) proximity to receiving water bodies; (6) non-storm water discharges; and (7) any other relevant factors.

- (2) A high priority construction site shall at a minimum be defined as a site meeting either of the following criteria or equivalent criteria:
- (a) The site is 50 acres or more and grading will occur during the wet season; OR
  - (b) The site is (1) 5 acres or more and (2) tributary to a Clean Water Act section 303(d) water body impaired for sediment or is within or directly adjacent to or discharging directly to a coastal lagoon or other receiving water within an environmentally sensitive area (as defined in section F.1.b.(2)(a)vii of this Order).

F.2.f. BMP Implementation (Construction)

- (1) Each Copermitttee shall designate a set of minimum BMPs for high, medium, and low threat to water quality construction sites (as determined under section F.2.e). BMPs are to be implemented year round.
- (2) Each Copermitttee shall implement, or require the implementation of, the designated minimum BMPs (based upon the site's threat to water quality rating) at each construction site within its jurisdiction year round. If particular minimum BMPs are infeasible at any specific site, each Copermitttee shall implement, or require the implementation of, other equivalent BMPs. Each Copermitttee shall also implement or require any additional site specific BMPs as necessary to comply with this Order, including BMPs which are more stringent than those required under the statewide General Construction Permit.
- (3) Each Copermitttee shall implement, or require the implementation of, BMPs year round; however, BMP implementation requirements can vary based on wet and dry seasons.
- (4) Each Copermitttee shall implement, or require implementation of, additional controls for construction sites tributary to Clean Water Act section 303(d) water bodies impaired for sediment as necessary to comply with this Order. Each Copermitttee shall implement, or require implementation of, additional controls for construction sites within or adjacent to or discharging directly to coastal lagoons or other receiving waters within environmentally sensitive areas (as defined in section F.1.b.(2)(a)(vii) of this Order) as necessary to comply with this Order.

F.2.g. Inspection of Construction Sites (Construction)

- (1) Each Copermitttee shall conduct construction site inspections for compliance with its ordinances (grading, storm water, etc.), permits (construction, grading, etc.), and this Order. Inspections shall include review of site erosion control and BMP implementation plans.
- (2) Each Copermitttee shall establish inspection frequencies and priorities as determined by the threat to water quality prioritization described in F.2.e above. During the wet season (i.e., October 1 through April 30 of each year), each Copermitttee shall inspect, at a minimum, each High Priority construction site, either:
  - (a) Weekly  
OR
  - (b) Monthly for any site that the responsible Copermitttee certifies in a written statement to the SDRWQCB all of the following (certified statements may be submitted to the SDRWQCB at any time for one or more sites):
    - i. Copermitttee has record of construction site's Waste Discharge Identification Number (WDID#) documenting construction site's coverage under the statewide General Construction Permit; and
    - ii. Copermitttee has reviewed the construction site's Storm Water Pollution Prevention Plan (SWPPP); and

- iii. Copermittee finds SWPPP to be in compliance with all local ordinances, permits, and plans; and
- iv. Copermittee finds that the SWPPP is being properly implemented on site.

At a minimum, Medium and Low Priority construction sites shall be inspected by Copermittees twice during the wet season. All construction sites shall be inspected by the Copermittees as needed during the dry season (i.e., May 1 through September 30 of each year).

- (3) Based upon site inspection findings, each Copermittee shall implement all follow-up actions necessary to comply with this Order.

#### F.2.h. Enforcement of Construction Sites (Construction)

Each Copermittee shall enforce its ordinances (grading, storm water, etc.) and permits (construction, grading, etc.) at all construction sites as necessary to maintain compliance with this Order. Copermittee ordinances or other regulatory mechanisms shall include sanctions to ensure compliance. Sanctions shall include the following or their equivalent: Non-monetary penalties, fines, bonding requirements, and/or permit denials for non-compliance.

#### F.2.i. Reporting of Non-compliant Sites (Construction)

Each Copermittee shall provide oral notification to the SDRWQCB of non-compliant sites that are determined to pose a threat to human or environmental health within its jurisdiction within 24 hours of the discovery of noncompliance, as required under section R.1 (and B.6 of Attachment C) of this Order.

Each Copermittee shall develop and submit criteria by which to evaluate events of non-compliance to determine whether they pose a threat to human or environmental health. These criteria shall be submitted in the Jurisdictional Urban Runoff Management Program Document and Annual Reports for SDRWQCB review.

Such oral notification shall be followed up by a written report to be submitted to the SDRWQCB within 5 days of the incidence of non-compliance as required under section R.1 (and B.6 of Attachment C) of this Order. Sites are considered non-compliant when one or more violations of local ordinances, permits, plans, or this Order exist on the site.

#### F.2.j. Education Focused on Construction Activities (Construction)

##### (1) Internal: Municipal Staff

Each Copermittee shall implement an education program to ensure that its construction, building, and grading review staffs and inspectors have an understanding of:

- (a) Federal, state, and local water quality laws and regulations applicable to construction and grading activities.
- (b) The connection between construction activities and water quality impacts (i.e., impacts from land development and urbanization).
- (c) How erosion can be prevented.
- (d) How impacts to receiving water quality resulting from construction activities can be minimized (i.e., through implementation of various source control and structural BMPs).
- (e) Applicable topics listed in section F.4. of this Order.

##### (2) External: Project Applicants, Contractors, Developers, Property Owners, and other Responsible Parties

Each Copermittee shall implement an education program to ensure that project applicants, contractors, developers, property owners, and other responsible parties have an understanding of the topics outlined in section F.2.j.1. above of this Order.

### **F.3. Existing Development Component**

Each Copermittee shall minimize the short and long-term impacts on receiving water quality from all types of existing development.

#### **F.3.a. Municipal (Existing Development)**

Each Copermittee shall implement a Municipal (Existing Development) Component to prevent or reduce pollutants in runoff from all municipal land use areas and activities. At a minimum the municipal component shall address:

- |           |   |
|-----------|---|
| F.3.a.(1) | Pollution Prevention                                  |
| F.3.a.(2) | Source Identification                                 |
| F.3.a.(3) | Threat to Water Quality Prioritization                |
| F.3.a.(4) | BMP Implementation                                    |
| F.3.a.(5) | Maintenance of Municipal Separate Storm Sewer System  |
| F.3.a.(6) | Management of Pesticides, Herbicides, and Fertilizers |
| F.3.a.(7) | Inspection of Municipal Areas and Activities          |
| F.3.a.(8) | Enforcement of Municipal Areas and Activities         |

#### **F.3.a.(1) Pollution Prevention (Municipal)**

Each Copermittee shall implement pollution prevention methods in its Municipal (Existing Development) Component and shall require its use by appropriate municipal departments and personnel, where appropriate.

#### **F.3.a.(2) Source Identification (Municipal)**

Each Copermittee shall develop, and update annually, a watershed based inventory of the name, address (if applicable), and description of all municipal land use areas and activities which generate pollutants. The use of an automated database system, such as Geographical Information System (GIS) is highly recommended when applicable, but not required.

#### **F.3.a.(3) Threat to Water Quality Prioritization (Municipal)**

- (a) To establish priorities for oversight of municipal areas and activities required under this Order, each Copermittee shall prioritize each watershed inventory in F.3.a.2. above by threat to water quality and update annually. Each municipal area and activity shall be classified as high, medium, or low threat to water quality. In evaluating threat to water quality, each Copermittee shall consider (1) type of municipal area or activity; (2) materials used; (3) wastes generated; (4) pollutant discharge potential; (5) non-storm water discharges; (6) size of facility or area; (7) proximity to receiving water bodies; (8) sensitivity of receiving water bodies; and (9) any other relevant factors.

- (b) At a minimum, the high priority municipal areas and activities shall include the following:

- i. Roads, Streets, Highways, and Parking Facilities.
- ii. Flood Management Projects and Flood Control Devices.
- iii. Areas and activities tributary to a Clean Water Act section 303(d) impaired water body, where an area or activity generates pollutants for which the water body is impaired. Areas and activities within or adjacent to or discharging

- directly to coastal lagoons or other receiving waters within environmentally sensitive areas (as defined in section F.1.b.(2)(a)vii of this Order).
- iv. Municipal Waste Facilities.
    - Active or closed municipal landfills;
    - Publicly owned treatment works (including water and wastewater treatment plants) and sanitary sewage collection systems;
    - Municipal separate storm sewer systems;
    - Incinerators;
    - Solid waste transfer facilities;
    - Land application sites;
    - Uncontrolled sanitary landfills;
    - Corporate yards including maintenance and storage yards for materials, waste, equipment and vehicles;
    - Sites for disposing and treating sewage sludge; and
    - Hazardous waste treatment, disposal, and recovery facilities.
  - v. Other municipal areas and activities that the Copermittee determines may contribute a significant pollutant load to the MS4.
  - vi. Municipal airfields.

**F.3.a.(4) BMP Implementation (Municipal)**

- (a) Each Copermittee shall designate a set of minimum BMPs for high, medium, and low threat to water quality municipal areas and activities (as determined under section F.3.a.(3)). The designated minimum BMPs for high threat to water quality municipal areas and activities shall be area or activity specific as appropriate.
- (b) Each Copermittee shall implement, or require the implementation of, the designated minimum BMPs (based upon the threat to water quality rating) at each municipal area or activity within its jurisdiction. If particular minimum BMPs are infeasible for any specific area or activity, each Copermittee shall implement, or require implementation of other equivalent BMPs. Each Copermittee shall also implement any additional BMPs as are necessary to comply with this Order.
  - i. Each Copermittee shall evaluate feasibility of retrofitting existing structural flood control devices and retrofit where needed.
- (c) Each Copermittee shall implement, or require implementation of, any additional controls for municipal areas and activities tributary to Clean Water Act section 303(d) impaired water bodies (where an area or activity generates pollutants for which the water body is impaired) as necessary to comply with this Order. Each Copermittee shall implement, or require implementation of, additional controls for municipal areas and activities within or directly adjacent to or discharging directly to coastal lagoons or other receiving waters within environmentally sensitive areas (as defined in section F.1.b.(2)(a)(vii) of this Order) as necessary to comply with this Order.

**F.3.a.(5) Maintenance of Municipal Separate Storm Sewer System (Municipal)**

- (a) Each Copermittee shall implement a schedule of maintenance activities at all structural controls designed to reduce pollutant discharges to or from its MS4s and related drainage structures.
- (b) Each Copermittee shall implement a schedule of maintenance activities for the municipal separate storm sewer system.
- (c) The maintenance activities must, at a minimum, include:

- i. Inspection and removal of accumulated waste (e.g. sediment, trash, debris and other pollutants) between May 1 and September 30 of each year;
- ii. Additional cleaning as necessary between October 1 and April 30 of each year;
- iii. Record keeping of cleaning and the overall quantity of waste removed;
- iv. Proper disposal of waste removed pursuant to applicable laws;
- v. Measures to eliminate waste discharges during MS4 maintenance and cleaning activities.

**F.3.a.(6) Management of Pesticides, Herbicides, and Fertilizers (Municipal)**

The Copermittees shall implement BMPs to reduce the contribution of pollutants associated with the application, storage, and disposal of pesticides, herbicides and fertilizers from municipal areas and activities to MS4s. Important municipal areas and activities include municipal facilities, public rights-of-way, parks, recreational facilities, golf courses, cemeteries, botanical or zoological gardens and exhibits, landscaped areas, etc.

Such BMPs shall include, at a minimum: (1) educational activities, permits, certifications and other measures for municipal applicators and distributors; (2) integrated pest management measures that rely on non-chemical solutions; (3) the use of native vegetation; (4) schedules for irrigation and chemical application; and (5) the collection and proper disposal of unused pesticides, herbicides, and fertilizers.

**F.3.a.(7) Inspection of Municipal Areas and Activities (Municipal)**

At a minimum, each Copermittee shall inspect high priority municipal areas and activities annually. Based upon site inspection findings, each Copermittee shall implement all follow-up actions necessary to comply with this Order.

**F.3.a.(8) Enforcement of Municipal Areas and Activities (Municipal)**

Each Copermittee shall enforce its storm water ordinance for all municipal areas and activities as necessary to maintain compliance with this Order.

**F.3.b. Industrial (Existing Development)**

Each Copermittee shall implement an Industrial (Existing Development) Component to reduce pollutants in runoff from all industrial sites. At a minimum the industrial component shall address:

- |           |   |
|-----------|---|
| F.3.b.(1) | Pollution Prevention                      |
| F.3.b.(2) | Source Identification                     |
| F.3.b.(3) | Threat to Water Quality Prioritization    |
| F.3.b.(4) | BMP Implementation                        |
| F.3.b.(5) | Monitoring of Industrial Sites            |
| F.3.b.(6) | Inspection of Industrial Sites            |
| F.3.b.(7) | Enforcement Measures for Industrial Sites |
| F.3.b.(8) | Reporting of Non-compliant Sites          |

**F.3.b.(1) Pollution Prevention (Industrial)**

Each Copermittee shall implement pollution prevention methods in its Industrial (Existing Development) Component and shall require its use by industry, where appropriate.

F.3.b.(2) Source Identification (Industrial)

Each Copermitee shall develop and update annually a watershed-based inventory of all industrial sites within its jurisdiction regardless of site ownership. This requirement is applicable to all industrial sites regardless of whether the industrial site is subject the California statewide General NPDES Permit for Storm Water Discharges Associated With Industrial Activities, Except Construction (hereinafter General Industrial Permit) or other individual NPDES permit.

The inventory shall include the following minimum information for each industrial site: name; address; and a narrative description including SIC codes which best reflects the principal products or services provided by each facility. The use of an automated database system, such as Geographical Information System (GIS) is highly recommended, but not required.

F.3.b.(3) Threat to Water Quality Prioritization (Industrial)

- (a) To establish priorities for industrial oversight activities under this Order, the Copermitee shall prioritize each watershed-based inventory in F.3.b.(2) above by threat to water quality and update annually. Each industrial site shall be classified as high, medium, or low threat to water quality. In evaluating threat to water quality each Copermitee shall consider (1) type of industrial activity (SIC Code); (2) materials used in industrial processes; (3) wastes generated; (4) pollutant discharge potential; (5) non-storm water discharges; (6) size of facility; (7) proximity to receiving water bodies; (8) sensitivity of receiving water bodies; (9) whether the industrial site is subject to the statewide General Industrial Permit; and (10) any other relevant factors.
- (b) At a minimum the high priority industrial sites shall include industrial facilities that are subject to section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA); industrial facilities tributary to a Clean Water Act section 303(d) Impaired water body, where a facility generates pollutants for which the water body is impaired; industrial facilities within or directly adjacent to or discharging directly to coastal lagoons or other receiving waters within environmentally sensitive areas (as defined in section F.1.b.(2)(a)vii of this Order); facilities subject to the statewide General Industrial Permit; and all other industrial facilities that the Copermitee determines are contributing significant pollutant loading to its MS4, regardless of whether such facilities are covered under the statewide General Industrial Permit or other NPDES permit.

F.3.b.(4) BMP Implementation (Industrial)

- (a) Each Copermitee shall designate a set of minimum BMPs for high, medium, and low threat to water quality industrial sites (as determined under section F.3.b.(3)). The designated minimum BMPs for high threat to water quality Industrial sites shall be industry and site specific as appropriate.
- (b) Each Copermitee shall implement, or require the implementation of, the designated minimum BMPs (based upon the site's threat to water quality rating) at each industrial site within its jurisdiction. If particular minimum BMPs are infeasible at any specific site, each Copermitee shall implement, or require implementation of, other equivalent BMPs. Each Copermitee shall also implement or require any additional site specific BMPs as necessary to comply with this Order including BMPs which are more stringent than those required under the statewide General Industrial Permit.
- (c) Each Copermitee shall implement, or require implementation of, additional controls for industrial sites tributary to Clean Water Act section 303(d) impaired water bodies (where a site generates pollutants for which the water body is impaired) as necessary to comply

with this Order. Each Copermitttee shall implement, or require implementation of, additional controls for industrial sites within or directly adjacent to or discharging directly to coastal lagoons or other receiving waters within environmentally sensitive areas (as defined in section F.1.b.(2)(a)(vii) of this Order) as necessary to comply with this Order.

**F.3.b.(5) Monitoring of Industrial Sites (Industrial)**

- (a) Each Copermitttee shall conduct, or require industry to conduct, a monitoring program for runoff from each high threat to water quality industrial site (identified in F.3.b.(3) above). Group monitoring by multiple industrial sites conducted under group monitoring programs approved by the State Water Resources Control Board is acceptable.
- (b) At a minimum, the monitoring program shall provide quantitative data from two storm events per year on the following constituents:
- i. Any pollutant listed in effluent guidelines subcategories where applicable;
  - ii. Any pollutant for which an effluent limit has been established in an existing NPDES permit for the facility;
  - iii. Oil and grease or Total Organic Carbon (TOC);
  - iv. pH;
  - v. Total suspended solids (TSS);
  - vi. Specific conductance; and
  - vii. Toxic chemicals and other pollutants that are likely to be present in storm water discharges.

**F.3.b.(6) Inspection of Industrial Sites (Industrial)**

- (a) Each Copermitttee shall conduct industrial site inspections for compliance with its ordinances, permits, and this Order. Inspections shall include review of BMP implementation plans.
- (b) Each Copermitttee shall establish inspection frequencies and priorities as determined by the threat to water quality prioritization described in F.3.b.(3) above. Each Copermitttee shall inspect high priority industrial sites, at a minimum:
- i. Annually
  - OR
  - ii. Bi-annually for any site that the responsible Copermitttee certifies in a written statement to the SDRWQCB all of the following (certified statements may be submitted to the SDRWQCB at any time for one or more sites):
    - Copermitttee has record of industrial site's Waste Discharge Identification Number (WDID#) documenting industrial site's coverage under the statewide General Industrial Permit; and
    - Copermitttee has reviewed the industrial site's Storm Water Pollution Prevention Plan (SWPPP); and
    - Copermitttee finds SWPPP to be in compliance with all local ordinances, permits, and plans; and
    - Copermitttee finds that the SWPPP is being properly implemented on site.

Each Copermitttee shall inspect medium and low threat to water quality industrial sites as needed.

- (c) Based upon site inspection findings, each Copermitttee shall implement all follow-up actions necessary to comply with this Order.

- (d) To the extent that the SDRWQCB has conducted an inspection of a high priority industrial site during a particular year, the requirement for the responsible Copermittée to inspect this site during the same year will be satisfied.

**F.3.b.(7) Enforcement of Industrial Sites (Industrial).**

Each Copermittée shall enforce its storm water ordinance at all industrial sites as necessary to maintain compliance with this Order. Copermittée ordinances or other regulatory mechanisms shall include sanctions to ensure compliance. Sanctions shall include the following or their equivalent: Non-monetary penalties, fines, bonding requirements, and/or permit denials for non-compliance.

**F.3.b.(8) Reporting of Non-compliant Sites (Industrial)**

Each Copermittée shall provide oral notification to the SDRWQCB of non-compliant sites that are determined to pose a threat to human or environmental health within its jurisdiction within 24 hours of the discovery of noncompliance, as required under section R.1 (and B.6 of Attachment C) of this Order.

Each Copermittée shall develop and submit criteria by which to evaluate events of non-compliance to determine whether they pose a threat to human or environmental health. These criteria shall be submitted in the Jurisdictional Urban Runoff Management Program Document and Annual Reports for SDRWQCB review.

Such oral notification shall be followed up by a written report to be submitted to the SDRWQCB within 5 days of the incidence of non-compliance as required under section R.1 (and B.6 of Attachment C) of this Order. Sites are considered non-compliant when one or more violations of local ordinances, permits, plans, or this Order exist on the site.

**F.3.c. Commercial (Existing Development)**

Each Copermittée shall implement a Commercial (Existing Development) Component to reduce pollutants in runoff from commercial sites. At a minimum the commercial component shall address:

- F.3.c.(1) Pollution Prevention
- F.3.c.(2) Source Identification
- F.3.c.(3) BMP Implementation
- F.3.c.(4) Inspection of Commercial Sites and Sources
- F.3.c.(5) Enforcement of Commercial Sites and Sources

**F.3.c.(1) Pollution Prevention (Commercial)**

Each Copermittée shall implement pollution prevention methods in its Commercial (Existing Development) Component and shall require its use by commerce, where appropriate.

**F.3.c.(2) Source Identification (Commercial)**

Each Copermittée shall develop and update annually an inventory of the following high priority threat to water quality commercial sites/sources listed below. (If any commercial site/source listed below is inventoried as an industrial site, as required under section F.3.b.(2) of this Order, it is not necessary to also inventory it as a commercial site/source).

- (a) Automobile mechanical repair, maintenance, fuelling, or cleaning;
- (b) Airplane mechanical repair, maintenance, fueling, or cleaning;
- (c) Boat mechanical repair, maintenance, fuelling, or cleaning;

- (d) Equipment repair, maintenance, fueling, or cleaning;
- (e) Automobile and other vehicle body repair or painting;
- (f) Mobile automobile or other vehicle washing;
- (g) Automobile (or other vehicle) parking lots and storage facilities;
- (h) Retail or wholesale fueling;
- (i) Pest control services;
- (j) Eating or drinking establishments;
- (k) Mobile carpet, drape or furniture cleaning;
- (l) Cement mixing or cutting;
- (m) Masonry;
- (n) Painting and coating;
- (o) Botanical or zoological gardens and exhibits;
- (p) Landscaping;
- (q) Nurseries and greenhouses;
- (r) Golf courses, parks and other recreational areas/facilities;
- (s) Cemeteries;
- (t) Pool and fountain cleaning;
- (u) Marinas;
- (v) Port-a-Potty servicing;
- (w) Other commercial sites/sources that the Copermittee determines may contribute a significant pollutant load to the MS4;
- (x) Any commercial site or source tributary to a Clean Water Act section 303(d) impaired water body, where the site or source generates pollutants for which the water body is impaired; and
- (y) Any commercial site or source within or directly adjacent to or discharging directly to a coastal lagoon or other receiving water within an environmentally sensitive area (as defined in F.1.b(2)(a)vii of this Order).

The use of an automated database system, such as Geographical Information System (GIS) is highly recommended, but not required.

**F.3.c.(3) BMP Implementation (Commercial)**

- (a) Each Copermittee shall designate a set of minimum BMPs for the high priority threat to water quality commercial sites/sources (listed above in section F.3.c.(2)). The designated minimum BMPs for the high threat to water quality commercial sites/sources shall be site and source specific as appropriate.
- (b) Each Copermittee shall implement, or require the implementation of, the designated minimum BMPs at each high priority threat to water quality commercial site/source within its jurisdiction. If particular minimum BMPs are infeasible for any specific site/source, each Copermittee shall implement, or require the implementation of, other equivalent BMPs. Each Copermittee shall also implement or require any additional site specific BMPs as necessary to comply with this Order.
- (c) Each Copermittee shall implement, or require implementation of, additional controls for commercial sites or sources tributary to Clean Water Act section 303(d) impaired water bodies (where a site or source generates pollutants for which the water body is impaired) as necessary to comply with this Order. Each Copermittee shall implement, or require implementation of, additional controls for commercial sites or sources within or directly adjacent to or discharging directly to coastal lagoons or other receiving waters within environmentally sensitive areas (as defined in section F.1.b.(2)(a)(vii) of this Order) as necessary to comply with this Order.

**F.3.c.(4) Inspection of Commercial Sites and Sources (Commercial)**

Each Copermittee shall inspect high priority commercial sites and sources as needed. Based upon site inspection findings, each Copermittee shall implement all follow-up actions necessary to comply with this Order.

**F.3.c.(5) Enforcement of Commercial Sites and Sources (Commercial)**

Each Copermittee shall enforce its storm water ordinance for all commercial sites and sources as necessary to maintain compliance with this Order.

**F.3.d. Residential (Existing Development)**

Each Copermittee shall implement a Residential (Existing Development) Component to prevent or reduce pollutants in runoff from all residential land use areas and activities. At a minimum the residential component shall address:

- |           |   |
|-----------|---|
| F.3.d.(1) | Pollution Prevention                            |
| F.3.d.(2) | Threat to Water Quality Prioritization          |
| F.3.d.(3) | BMP Implementation                              |
| F.3.d.(4) | Enforcement of Residential Areas and Activities |

**F.3.d.(1) Pollution Prevention (Residential)**

Each Copermittee shall include pollution prevention methods in its Residential (Existing Development) Component and shall encourage their use by residents, where appropriate.

**F.3.d.(2) Threat to Water Quality Prioritization (Residential)**

Each Copermittee shall identify high priority residential areas and activities. At a minimum, these shall include:

- Automobile repair and maintenance;
- Automobile washing;
- Automobile parking;
- Home and garden care activities and product use (pesticides, herbicides, and fertilizers);
- Disposal of household hazardous waste (e.g., paints, cleaning products);
- Disposal of pet waste;
- Disposal of green waste;
- Any other residential source that the Copermittee determines may contribute a significant pollutant load to the MS4;
- Any residence tributary to a Clean Water Act section 303(d) impaired water body, where the residence generates pollutants for which the water body is impaired; and
- Any residence within or directly adjacent to or discharging directly to a coastal lagoon or other receiving waters within an environmentally sensitive area (as defined in F.1.b.(2)(a)vii of this Order).

**F.3.d.(3) BMP Implementation (Residential)**

- (a) Each Copermittee shall designate a set of minimum BMPs for high threat to water quality residential areas and activities (as required under section F.3.d.(2)). The designated minimum BMPs for high threat to water quality municipal areas and activities shall be area or activity specific.

- (b) Each Copermitttee shall require implementation of the designated minimum BMPs for high threat to water quality residential areas and activities. If particular minimum BMPs are infeasible for any specific site/source, each Copermitttee shall require implementation of other equivalent BMPs. Each Copermitttee shall also implement, or require implementation of, any additional BMPs as are necessary to comply with this Order.
- (c) Each Copermitttee shall implement, or require implementation of, any additional controls for residential areas and activities tributary to Clean Water Act Section 303(d) impaired water bodies (where a residential area or activity generates pollutants for which the water body is impaired) as necessary to comply with this Order. Each Copermitttee shall implement, or require implementation of, additional controls for residential areas within or directly adjacent to or discharging directly to coastal lagoons or other receiving waters within environmentally sensitive areas (as defined in section F.1.b.(2)(a)(vii) of this Order) as necessary to comply with this Order.

**F.3.d.(4) Enforcement of Residential Areas and Activities (Residential)**

Each Copermitttee shall enforce its storm water ordinance for all residential areas and activities as necessary to maintain compliance with this Order.

**F.4. Education Component**

Each Copermitttee shall implement an Education Component using all media as appropriate to (1) measurably increase the knowledge of the target communities regarding MS4s, impacts of urban runoff on receiving waters, and potential BMP solutions for the target audience; and (2) measurably change the behavior of target communities and thereby reduce pollutant releases to MS4s and the environment. At a minimum the education component shall address the following target communities:

- Municipal Departments and Personnel
- Construction Site Owners and Developers
- Industrial Owners and Operators
- Commercial Owners and Operators
- Residential Community, General Public, and School Children
- Quasi-Governmental Agencies/Districts (i.e., educational institutions, water districts, sanitation districts, etc.)

**F.4.a. All Target Communities**

At a minimum the Education Program for each target audience shall contain information on the following topics where applicable:

- State and Federal water quality laws
- Requirements of local municipal permits and ordinances (e.g., storm water and grading ordinances and permits)
- Impacts of urban runoff on receiving waters
- Watershed concepts (i.e., stewardship, connection between inland activities and coastal problems, etc.)
- Distinction between MS4s and sanitary sewers
- Importance of good housekeeping (e.g., sweeping impervious surfaces instead of hosing)
- Pollution prevention and safe alternatives
- Household hazardous waste collection
- Recycling

- BMPs: Site specific, structural and source control
- BMP maintenance
- Non-storm water disposal alternatives (e.g., all wash waters)
- Pet and animal waste disposal
- Proper solid waste disposal (e.g., garbage, tires, appliances, furniture, vehicles)
- Equipment and vehicle maintenance and repair
- Public reporting mechanisms
- Green waste disposal
- Integrated pest management
- Native vegetation
- Proper disposal of boat and recreational vehicle waste
- Traffic reduction, alternative fuel use
- Water conservation

**F.4.b. Municipal, Construction, Industrial, Commercial, and Quasi-Governmental (educational institutions, water districts, sanitation districts, etc.) Communities**

In addition to the topics listed in F.4.a. above, the Municipal, Construction, Industrial, Commercial, and Quasi-Governmental (Educational Institutions, Water Districts, Sanitation Districts) Communities shall also be educated on the following topics where applicable:

- Basic urban runoff training for all personnel
- Additional urban runoff training for appropriate personnel
- Illicit Discharge Detection and Elimination observations and follow-up during daily work activities
- Lawful disposal of catchbasin and other MS4 cleanout wastes
- Water quality awareness for Emergency/First Responders
- California's Statewide General NPDES Permit for Storm Water Discharges Associated with Industrial Activities (Except Construction).
- California's Statewide General NPDES Permit for Storm Water Discharges Associated with Construction Activities
- SDRWQCB's General NPDES Permit for Groundwater Dewatering
- 401 Water Quality Certification by the SDRWQCB
- Statewide General NPDES Utility Vault Permit (NPDES No. CAG990002)
- SDRWQCB Waste Discharge Requirements for Dredging Activities
- Local requirements beyond statewide general permits
- Federal, state and local water quality regulations that affect development projects
- Water quality impacts associated with land development
- Alternative materials & designs to maintain peak runoff values
- How to conduct a storm water inspection
- Potable water discharges to the MS4
- Dechlorination techniques
- Hydrostatic testing
- Spill response, containment, & recovery
- Preventive maintenance
- How to do your job and protect water quality

**F.4.c. Residential, General Public, School Children Communities**

In addition to the topics listed in F.4.a. above, the Residential, General Public, and School Children Communities shall be educated on the following topics where applicable:

- Public reporting information resources
- Residential and charity car-washing

- Community activities (e.g., "Adopt a Storm Drain, Watershed, or Highway" Programs, citizen monitoring, creek/beach cleanups, environmental protection organization activities, etc.)

#### ***F.5. Illicit Discharge Detection and Elimination Component***

Each Copermittee shall implement an Illicit Discharge Detection and Elimination Component containing measures to actively seek and eliminate illicit discharges and connections. At a minimum the Illicit Discharge Detection and Elimination Component shall address:

- F.5.a Illicit Discharges and Connections
- F.5.b Dry Weather Analytical Monitoring
- F.5.c Investigation / Inspection and follow-up
- F.5.d Elimination of Illicit Discharges and Connections
- F.5.e Enforce Ordinance
- F.5.f Prevent and Respond To Sewage Spills (Including from Private Laterals and Failing Septic Systems) and Other Spills
- F.5.g Facilitate Public Reporting of Illicit Discharges and Connections – Public Hotline
- F.5.h Facilitate Disposal of Used Oil and Toxic Materials
- F.5.i Limit Infiltration From Sanitary Sewer to MS4

#### **F.5.a. Illicit Discharges and Connections**

Each Copermittee shall implement a program to actively seek and eliminate illicit discharges and connections into its MS4. The program shall address all types of illicit discharges and connections excluding those non-storm water discharges not prohibited by the Copermittee in accordance with Section B. of this Order.

#### **F.5.b. Dry Weather Analytical Monitoring**

Each Copermittee shall conduct dry weather analytical monitoring of MS4 outfalls within its jurisdiction to detect illicit discharges and connections in accordance with Attachment E of this Order.

#### **F.5.c. Investigation / Inspection and Follow-Up**

Each Copermittee shall investigate and inspect any portion of the MS4 that, based on dry weather analytical monitoring results or other appropriate information, indicates a reasonable potential for illicit discharges, illicit connections, or other sources of non-storm water (including non-prohibited discharge(s) identified in Section B. of this Order). Each Copermittee shall establish criteria to identify portions of the system where such follow-up investigations are appropriate.

#### **F.5.d. Elimination of Illicit Discharges and Connections**

Each Copermittee shall eliminate all detected illicit discharges, discharge sources, and connections immediately.

#### **F.5.e. Enforce Ordinances**

Each Copermittee shall implement and enforce its ordinances, orders, or other legal authority to prevent illicit discharges and connections to its MS4. Each Copermittee shall also implement and enforce its ordinance, orders, or other legal authority to eliminate detected illicit discharges and connections to its MS4.

**F.5.f. Prevent and Respond to Sewage Spills (Including from Private Laterals and Failing Septic Systems) and Other Spills**

Each Copermittee shall prevent, respond to, contain and clean up all sewage and other spills that may discharge into its MS4 from any source (including private laterals and failing septic systems). Spill response teams shall prevent entry of spills into the MS4 and contamination of surface water, ground water and soil to the maximum extent practicable. Each Copermittee shall coordinate spill prevention, containment and response activities throughout all appropriate departments, programs and agencies to ensure maximum water quality protection at all times.

Each Copermittee shall develop and implement a mechanism whereby it is notified of all sewage spills from private laterals and failing septic systems into its MS4. Each Copermittee shall prevent, respond to, contain and clean up sewage from any such notification.

**F.5.g. Facilitate Public Reporting of Illicit Discharges and Connections - - Public Hotline**

Each Copermittee shall promote, publicize and facilitate public reporting of illicit discharges or water quality impacts associated with discharges into or from MS4s. Each Copermittee shall facilitate public reporting through development and operation of a public hotline. Public hotlines can be Copermittee-specific or shared by Copermittees. All storm water hotlines shall be capable of receiving reports in both English and Spanish 24 hours per day / seven days per week. Copermittees shall respond to and resolve each reported incident. All reported incidents, and how each was resolved, shall be summarized in each Copermittee's individual Jurisdictional URMP Annual Report.

**F.5.h. Facilitate Disposal of Used Oil and Toxic Materials**

Each Copermittee shall facilitate the proper management and disposal of used oil, toxic materials, and other household hazardous wastes. Such facilitation shall include educational activities, public information activities, and establishment of collection sites operated by the Copermittee or a private entity. Curbside collection of household hazardous wastes is encouraged.

**F.5.i. Limit Infiltration From Sanitary Sewer to MS4/ Provide Preventive Maintenance of Both**

Each Copermittee shall implement controls and measures to limit infiltration of seepage from municipal sanitary sewers to MS4s through thorough, routine preventive maintenance of the MS4. Each Copermittee that operates both a municipal sanitary sewer system and a MS4 shall implement controls and measures to limit infiltration of seepage from the municipal sanitary sewers to the MS4s that shall include overall sanitary sewer and MS4 surveys and thorough, routine preventive maintenance of both.

***F.6. Public Participation Component***

Each Copermittee shall incorporate a mechanism for public participation in the implementation of the Jurisdictional URMP.

***F.7. Assessment of Jurisdictional URMP Effectiveness Component***

- a. As part of its individual Jurisdictional URMP, each Copermittee shall develop a long-term strategy for assessing the effectiveness of its individual Jurisdictional URMP. The long-term assessment strategy shall identify specific direct and indirect measurements that each Copermittee will use to track the long-term progress of its individual Jurisdictional URMP towards achieving improvements in receiving water quality. Methods used for assessing effectiveness shall include the following or their equivalent: surveys, pollutant loading

estimations, and receiving water quality monitoring. The long-term strategy shall also discuss the role of monitoring data in substantiating or refining the assessment.

- b. As part of its individual Jurisdictional URMP Annual Report, each Copermittee shall include an assessment of the effectiveness of its Jurisdictional URMP using the direct and indirect assessment measurements and methods developed in its long-term assessment strategy.

#### **F.8. Fiscal Analysis Component**

Each Copermittee shall secure the resources necessary to meet the requirements of this Order. As part of its individual Jurisdictional URMP, each Copermittee shall develop a strategy to conduct a fiscal analysis of its urban runoff management program in its entirety. In order to demonstrate sufficient financial resources to implement the conditions of this Order, each Copermittee shall conduct an annual fiscal analysis as part of its individual Jurisdictional URMP Annual Report. This analysis shall, for each fiscal year covered by this Order, evaluate the expenditures (such as capital, operation and maintenance, education, and administrative expenditures) necessary to accomplish the activities of the Copermittee's urban runoff management program. Such analysis shall include a description of the source(s) of funds that are proposed to meet the necessary expenditures, including legal restrictions on the use of such funds.

#### **G. IMPLEMENTATION OF JURISDICTIONAL URMP**

Each Copermittee shall have completed full implementation of all requirements of the Jurisdictional URMP section of this Order no later than **365 days after adoption** of this Order, except as stated as follows: Each Copermittee's local SUSMP must be implemented within 180 days of approval of the model SUSMP in the public process by the SDRWQCB.

#### **H. SUBMITTAL OF JURISDICTIONAL URMP DOCUMENT**

The written account of the overall program to be conducted by each Copermittee within its jurisdiction during the five-year life of this Order is referred to as the "Jurisdictional URMP Document".

1. Individual – Each Copermittee shall submit to the Principal Permittee(s) an individual Jurisdictional URMP document which describes all activities it has undertaken or is undertaking to implement the requirements of each component of the Jurisdictional URMP section F. of this Order.
  - a. At a minimum, the individual Jurisdictional URMP document shall contain the following information for the following components:
    - (1) Construction Component
      - (a) Which pollution prevention methods will be required for implementation, and how and where they will be required
      - (b) Updated grading ordinances
      - (c) A description of the modified construction and grading approval process
      - (d) Updated construction and grading project requirements in local grading and construction permits
      - (e) A completed watershed-based inventory of all construction sites
      - (f) A completed prioritization of all construction sites based on threat to water quality
      - (g) Which BMPs will be implemented, or required to be implemented, for each priority category
      - (h) How BMPs will be implemented, or required to be implemented, for each priority category
      - (i) Planned inspection frequencies for each priority category
      - (j) Methods for inspection
      - (k) A description of enforcement mechanisms and how they will be used

- (l) A description of how non-compliant sites will be identified and the process for notifying the SDRWQCB, including a list of current non-compliant sites
- (m) A description of the construction education program and how it will be implemented

(2) Municipal (Existing Development) Component

- (a) Which pollution prevention methods will be required for implementation, and how and where they will be required
- (b) A completed watershed-based inventory of all municipal land use areas and activities
- (c) A completed prioritization of all municipal areas and activities based on threat to water quality
- (d) Which BMPs will be implemented, or required to be implemented, for each priority category
- (e) How BMPs will be implemented, or required to be implemented, for each priority category
- (f) Municipal maintenance activities and schedules
- (g) Management strategy for pesticides, herbicides, and fertilizer use.
- (h) Planned inspection frequencies for the high priority category
- (i) Methods for inspection
- (j) A description of enforcement mechanisms and how they will be used

(3) Industrial (Existing Development) Component

- (a) Which pollution prevention methods will be required for implementation, and how and where they will be required
- (b) A completed watershed-based inventory of all industrial sites
- (c) A completed prioritization of all industrial sites based on threat to water quality
- (d) Which BMPs will be implemented, or required to be implemented, for each priority category
- (e) How BMPs will be implemented, or required to be implemented, for each priority category
- (f) A description of the monitoring program to be conducted, or required to be conducted
- (g) Planned inspection frequencies for each priority category
- (h) Methods for inspection
- (i) A description of enforcement mechanisms and how they will be used
- (j) A description of how non-compliant sites will be identified and the process for notifying the SDRWQCB, including a list of current non-compliant sites

(4) Commercial (Existing Development) Component

- (a) Which pollution prevention methods will be required for implementation, and how and where they will be required
- (b) A completed watershed-based inventory of high priority commercial sites
- (c) Which BMPs will be implemented, or required to be implemented, for high priority sites
- (d) How BMPs will be implemented, or required to be implemented, for high priority sites
- (e) Planned inspection frequencies for high priority sites
- (f) Methods for inspection
- (g) A description of enforcement mechanisms and how they will be used

(5) Residential (Existing Development) Component

- (a) Which pollution prevention methods will be encouraged for implementation, and how and where they will be encouraged
- (b) A completed inventory of high priority residential areas and activities

- (c) Which BMPs will be implemented, or required to be implemented, for high priority areas and activities
- (d) How BMPs will be implemented, or required to be implemented, for high priority areas and activities
- (e) A description of enforcement mechanisms and how they will be used

(6) Education Component

- (a) A description of the content, form, and frequency of education efforts for each target community

(7) Illicit Discharges Detection and Elimination Component

- (a) A description of the program to actively seek and eliminate illicit discharges and connections
- (b) A description of dry weather analytical monitoring to be conducted to detect illicit discharges and connections (see Attachment E)
- (c) A description of investigation and inspection procedures to follow-up on dry weather analytical monitoring results or other information which indicate potential for illicit discharges and connections
- (d) A description of procedures to eliminate detected illicit discharges and connections
- (e) A description of enforcement mechanisms and how they will be used
- (f) A description of methods to prevent, respond to, contain, and clean up all sewage (including spills from private laterals and failing septic systems) and other spills in order to prevent entrance into the MS4
- (g) A description of the mechanism to receive notification of spills from private laterals
- (h) A description of efforts to facilitate public reporting of illicit discharges and connections, including a public hotline
- (i) A description of efforts to facilitate proper disposal of used oil and other toxic materials
- (j) A description of controls and measures to be implemented to limit infiltration of seepage from sanitary sewers to MS4s
- (k) A description of routine preventive maintenance activities on the sanitary system (where applicable) and the MS4

(8) Public Participation Component

- (a) A description of how public participation will be included in the implementation of the Jurisdictional URMP

(9) Assessment of Jurisdictional URMP Effectiveness Component

- (a) A description of strategies to be used for assessing the long-term effectiveness of the individual Jurisdictional URMP.

(10) Fiscal Analysis Component

- (a) A description of the strategy to be used to conduct a fiscal analysis of the urban runoff management program.

(11) Land-Use Planning for New Development and Redevelopment Component

- (a) Workplan for inclusion in General Plan (or equivalent plan) of water quality and watershed protection principles and policies
- (b) Development project requirements in local development permits
- (c) Participation efforts conducted in the development of the Model SUSMP

- (d) Environmental review processes revisions
- (e) A description of the planning education program and how it will be implemented

## (12) Fire Fighting

- (a) A description of a program to reduce pollutants from non-emergency fire fighting flows identified by the Copermittee to be significant sources of pollutants.
  - b. Each Copermittee shall submit to the Principal Permittee(s) each part of its individual Jurisdictional URMP document by the dates specified by the Principal Permittee(s).
  - c. In addition to submittal of the Jurisdictional URMP document, each Copermittee shall submit to the SDRWQCB its own adopted local SUSMP consistent with the approved Model SUSMP, as described in section F.1.b.(2) of this Order. Each Copermittee's own local SUSMP, along with its amended ordinances, shall be submitted to the SDRWQCB within 180 days of the SDRWQCB's approval of the Model SUSMP.
2. Unified – The Principal Permittee(s) shall submit the unified Jurisdictional URMP document to the SDRWQCB. The unified Jurisdictional URMP document shall be submitted in two parts (the collected Jurisdictional URMPs and the model SUSMP).

The unified Jurisdictional URMP document submittal shall address the requirements of the entire Jurisdictional URMP sections F.1 – F.8. of this Order, with the exception of the local SUSMP requirements (which are to be implemented 180 days after approval of the model SUSMP by the SDRWQCB). The unified Jurisdictional URMP document submittal shall contain a section covering common activities conducted collectively by the Copermittees, to be produced by the Principal Permittee(s), and the twenty individual Jurisdictional URMP documents. The Principal Permittee(s) shall be responsible for the development and production of a stand alone Model SUSMP document meeting the requirements of section F.1.b.(2) of this Order. The Principal Permittee(s) shall submit the unified Jurisdictional URMP document, including the Model SUSMP, to the SDRWQCB within 365 days of adoption of this Order.

## 3. Universal Reporting Requirements

All individual and unified Jurisdictional URMP document submittals shall include an executive summary, introduction, conclusion, recommendations, and signed certified statement. Each Copermittee shall submit its individual Jurisdictional Urban Runoff Management Program Document with a signed certified statement. The Principal Permittee(s) shall submit a signed certified statement referring to its individual Jurisdictional Urban Runoff Management Program Document, the section covering common activities conducted collectively by the Copermittees, and the Model SUSMP document meeting the requirements of section F.1.b.(2) of this Order as produced by the Principal Permittee(s).

**I. SUBMITTAL OF JURISDICTIONAL URMP ANNUAL REPORT**

- 1. Individual - Each individual Jurisdictional URMP Annual Report shall be a documentation of the activities conducted by each Copermittee during the past annual reporting period. Each Jurisdictional URMP Annual Report shall, at a minimum, contain the following:
  - 2. Comprehensive description of all activities conducted by the Copermittee to meet all requirements of each component of the Jurisdictional URMP section of this Order;
    - F.1. Land-Use Planning for New Development and Redevelopment Component
    - F.2. Construction Component
    - F.3. Existing Development Component (Including Municipal, Industrial, Commercial, Residential, and Education)

- F.4. Education Component
- F.5. Illicit Discharge Detection and Elimination Component
- F.6. Public Participation Component
- F.7. Assessment of Jurisdictional URMP Effectiveness Component
- F.8. Fiscal Analysis Component

- b. Each Copermittee's accounting of all:
    - (1) Reports of illicit discharges (i.e., complaints) and how each was resolved (indicating referral source);
    - (2) Inspections conducted;
    - (3) Enforcement actions taken; and
    - (4) Education efforts conducted.
  - c. Public participation mechanisms utilized during the Jurisdictional URMP implementation process;
  - d. Proposed revisions to the Jurisdictional URMP;
  - e. A summary of all urban runoff related data not included in the annual monitoring report (e.g., special investigations);
  - f. Budget for upcoming year;
  - g. Identification of management measures proven to be ineffective in reducing urban runoff pollutants and flow; and
  - h. Identification of water quality improvements or degradation.
2. Unified - The unified Jurisdictional URMP Annual Report shall contain a section covering common activities conducted collectively by the Copermittees, to be produced by the Principal Permittee(s), and the twenty individual Jurisdictional URMP Annual Reports. Each Copermittee shall submit to the Principal Permittee(s) an individual Jurisdictional URMP Annual Report by the date specified by the Principal Permittee(s). The Principal Permittee(s) shall submit a unified Jurisdictional URMP Annual Report to the SDRWQCB by **January 31, 2003 and every January 31 thereafter**. The reporting period for these annual reports shall be the previous fiscal year. For example, the report submitted January 31, 2003 shall cover the reporting period July 1, 2001 to June 30, 2002.
3. Universal Reporting Requirements

All individual and unified Jurisdictional URMP submittals shall include an executive summary, introduction, conclusion, recommendations, and signed certified statement. Each Copermittee shall submit its individual Jurisdictional Urban Runoff Management Program Annual Report with a signed certified statement. The Principal Permittee(s) shall submit a signed certified statement referring to its individual Jurisdictional Urban Runoff Management Program Annual Report and the section covering common activities conducted collectively by the Copermittees as produced by the Principal Permittee(s).

#### J. WATERSHED URBAN RUNOFF MANAGEMENT PROGRAM

1. Each Copermittee shall collaborate with other Copermittees within its watershed(s) as shown in Table 4. below to identify and mitigate the highest priority water quality issues/pollutants in the watershed(s).
2. Each Copermittee shall collaborate with all other Copermittees discharging urban runoff into the same watershed to develop and implement a Watershed Urban Runoff Management Program (Watershed URMP) for the respective watershed. Each Watershed URMP shall, at a minimum

contain the following:

- a. An accurate map of the watershed (preferably in Geographical Information System [GIS] format) that identifies all receiving waters (including the Pacific Ocean); all Clean Water Act section 303(d) impaired receiving waters (including the Pacific Ocean); land uses; MS4s, major highways; jurisdictional boundaries; and inventoried commercial, construction, industrial, municipal sites, and residential areas.
- b. An assessment of the water quality of all receiving waters in the watershed based upon (1) existing water quality data; and (2) annual watershed water quality monitoring that satisfies the watershed monitoring requirements of Attachment B ;
- c. An identification and prioritization of major water quality problems in the watershed caused or contributed to by MS4 discharges and the likely source(s) of the problem(s);
- d. An implementation time schedule of short and long-term recommended activities (individual and collective) needed to address the highest priority water quality problem(s). For this section, "short-term activities" shall mean those activities that are to be completed during the life of this Order and "long-term activities" shall mean those activities that are to be completed beyond the life of this Order;
- e. An identification of the Copermitttee(s) responsible for implementing each recommended activity, including the selection of the Lead Permitttee(s) and the time schedule for implementation. In the event that a Lead Permitttee is not selected and identified by the Copermitttees in a watershed, the Copermitttee identified in Table 4 as the Lead Permitttee for that watershed shall be responsible for implementing the requirements of the Lead Permitttee in that watershed by default;
- f. A mechanism for public participation throughout the entire watershed URMP process;
- g. A watershed based education program;
- h. A mechanism to facilitate collaborative "watershed-based" (i.e., natural resource-based) land use planning with neighboring local governments in the watershed.
- i. Long-term strategy for assessing the effectiveness of the Watershed URMP. The long-term assessment strategy shall identify specific direct and indirect measurements that will track the long-term progress of Watershed URMP towards achieving improvements in receiving water quality. Methods used for assessing effectiveness shall include the following or their equivalent: surveys, pollutant loading estimations, and receiving water quality monitoring. The long-term strategy shall also discuss the role of monitoring data in substantiating or refining the assessment.

Table 4. Copermitttees by Watershed

RESPONSIBLE COPERMITTEE(S)	WATERSHED URBAN RUNOFF MANAGEMENT PROGRAM	HYDROLOGIC UNIT OR AREA	MAJOR RECEIVING WATER BODIES
1. County of San Diego	Santa Margarita River	Santa Margarita HU (902.00)	Santa Margarita River and Estuary, Pacific Ocean
1. City of Escondido 2. City of Oceanside 3. City of Vista 4. County of San Diego	San Luis Rey River	San Luis Rey HU (903.00)	San Luis Rey River and Estuary, Pacific Ocean
1. City of Carlsbad 2. City of Encinitas 3. City of Escondido	Carlsbad	Carlsbad HU (904.00)	Batiquitos Lagoon San Elijo Lagoon Agua Hedionda Lagoon

RESPONSIBLE COPERMITTEE(S)	WATERSHED URBAN RUNOFF MANAGEMENT PROGRAM	HYDROLOGIC UNIT OR AREA	MAJOR RECEIVING WATER BODIES
4. City of Oceanside 5. City of San Marcos 6. City of Solana Beach 7. City of Vista 8. County of San Diego			Buena Vista Lagoon and Tributary Streams Pacific Ocean
1. City of Del Mar 2. City of Escondido 3. City of Poway 4. City of San Diego 5. City of Solana Beach 6. County of San Diego	San Dieguito River	San Dieguito HU (905.00)	San Dieguito River and Estuary Pacific Ocean
1. City of Del Mar 2. City of Poway 3. City of San Diego 4. County of San Diego	Peñasquitos	Miramar Reservoir HA (906.10) Poway HA (906.20)	Los Peñasquitos Creek Los Peñasquitos Lagoon Pacific Ocean
1. City of San Diego	Mission Bay	Scripps HA (906.30) Miramar HA(906.40) Tecolote HA (906.50)	Mission Bay Pacific Ocean
1. City of El Cajon 2. City of La Mesa 3. City of Poway 4. City of San Diego 5. City of Santee 6. County of San Diego	San Diego River	San Diego HU (907.00)	San Diego River Pacific Ocean
1. City of Chula Vista 2. City of Coronado 3. City of Imperial Beach 4. City of La Mesa 5. City of Lemon Grove 6. City of National City 7. City of San Diego 8. County of San Diego 9. San Diego Unified Port District	San Diego Bay	Pueblo San Diego HU (908.00) Sweetwater HU (909.00) Otay HU (910.00)	San Diego Bay Sweetwater River Otay River Pacific Ocean
1. City of Imperial Beach 2. City of San Diego 3. County of San Diego	Tijuana River	Tijuana (911.00)	Tijuana River and Estuary Pacific Ocean

- The Lead Watershed Copermitttee for each watershed is highlighted

#### K. IMPLEMENTATION OF WATERSHED URMP

Each Copermitttee shall have completed full implementation of all requirements of the Watershed URMP section of this Order no later than January 31, 2003 unless otherwise specified.

#### L. SUBMITTAL OF WATERSHED URMP DOCUMENT

The written account of the overall watershed program to be conducted by each Copermitttee during the remaining life of this Order is referred to as the "Watershed URMP Document". The Watershed URMP is conducted concurrently with the Jurisdictional URMP.<sup>6</sup>

<sup>6</sup>As each Copermitttee transitions from conducting its management program only within its jurisdiction to conducting it also throughout the entire watershed (with neighboring Copermitttees), it is expected that many activities will continue on a jurisdictional level (e.g., enforcement of local ordinances and permits). Implementation of the Watershed URMP is not meant to replace, but to expand implementation of the Jurisdictional URMP. For this reason, it is necessary to report management activities on both levels. This can be accomplished either by submitting both a Jurisdictional URMP Annual Report and a Watershed URMP Annual Report or by submitting a single Watershed URMP Annual Report that contains two separate sections (i.e., watershed activities and jurisdictional activities). Information need only be reported once (to the extent something is covered in the Watershed URMP Annual Report, it need not be covered again the Jurisdictional URMP Annual Report).

1. Each Watershed Specific URMP document shall state how the member Copermittees within each watershed will develop and implement the requirements of the Watershed URMP section J. of this Order. The Copermittees responsible for each of the nine Watershed URMPs are specified in Table 4 above. The Lead Watershed Copermittee for each watershed is highlighted, unless a different Lead Watershed Copermittee is designated. Each Lead Watershed Copermittee shall be responsible for producing its respective Watershed URMP document, as well as for coordination and meetings amongst all member watershed Copermittees. Each Lead Watershed Copermittee is further responsible for the submittal of the Watershed URMP document to the Principal Permittee(s) by the date specified by the Principal Permittee(s).
  - a. Each Watershed specific URMP document shall include:
    - (1) A completed watershed map
    - (2) A water quality assessment and watershed monitoring needed
    - (3) Prioritization of water quality problems
    - (4) Recommended activities (short and long term)
    - (5) Individual Copermittee implementation responsibilities and time schedules for implementation
    - (6) A description of watershed public participation mechanisms
    - (7) A description of watershed education mechanisms
    - (8) A description of the mechanism and implementation schedule for watershed-based land use planning
    - (9) A strategy for assessing the long-term effectiveness of the Watershed URMP
2. Unified - The unified Watershed URMP document shall contain a section covering common activities conducted collectively by the Copermittees, to be produced by the Principal Permittee(s), and the nine Watershed Specific URMP documents. The Principal Permittee(s) shall submit the unified Watershed URMP document to the SDRWQCB by **January 31, 2003**.
3. Universal Reporting Requirements.

All individual and unified Watershed URMP submittals shall include an executive summary, introduction, conclusion, recommendations, and signed certified statement. Each Copermittee shall submit a signed certified statement covering its responsibilities in the specific Watershed URMP Document. The Principal Permittee(s) shall submit a signed certified statement referring to its specific Watershed URMP Document and the section covering common activities conducted collectively by the Copermittees as produced by the Principal Permittee(s).

#### **M. SUBMITTAL OF WATERSHED URMP ANNUAL REPORT**

1. Watershed Specific - Each Watershed Specific URMP Annual Report shall be a documentation of the activities conducted by watershed member Copermittees during the previous annual reporting period to meet the requirements of all components of the Watershed URMP section of this Order. Each Watershed URMP Annual Report shall, at a minimum, contain the following:
  - a. Comprehensive description of all activities conducted by the watershed member Copermittees to meet all requirements of each component of Watershed URMP section J. of this Order
  - b. Public participation mechanisms utilized during the Watershed URMP implementation process;
  - c. Mechanism for watershed based land use planning;
  - d. Assessment of effectiveness of Watershed URMP;
  - e. Proposed revisions to the Watershed URMP;
  - f. A summary of watershed effort related data not included in the annual monitoring report (e.g., special investigations); and
  - g. Identification of water quality improvements or degradation.

2. Unified - The Unified Watershed URMP Annual Report shall contain a section covering common activities conducted collectively by the Copermittees, to be produced by the Principal Permittee(s), and the nine Watershed Specific URMP Annual Reports. Each Lead Watershed Copermittee shall submit to the Principal Permittee(s) a Watershed Specific URMP Annual Report by the date specified by the Principal Permittee(s). The Principal Permittee(s) shall submit the Unified Watershed URMP Annual Report to the SDRWQCB by January 31, 2004 and every January 31 thereafter. The reporting period for these annual reports shall be the previous fiscal year. For example, the report submitted January 31, 2004 shall cover the reporting period July 1, 2002 to June 30, 2003.

3. Universal Reporting Requirements

All individual and unified Watershed URMP submittals shall include an executive summary, introduction, conclusion, recommendations, and signed certified statement. Each Copermittee shall submit a signed certified statement covering its responsibilities in the specific Watershed URMP Annual Report. The Principal Permittee(s) shall submit a signed certified statement referring to its specific Watershed URMP Annual Report and the section covering common activities conducted collectively by the Copermittees as produced by the Principal Permittee(s).

#### N. ALL COPERMITTEE COLLABORATION

1. Each Copermittee shall collaborate with all other Copermittees regulated under this Order to address common issues, promote consistency among Jurisdictional Urban Runoff Management Programs (Jurisdictional URMPs) and Watershed Urban Runoff Management Programs (Watershed URMPs), and to plan and coordinate activities required under this Order
  - a. Management Structure - All Copermittees shall jointly execute and submit to the SDRWQCB no later than **365 days after adoption** of this Order, a Memorandum of Understanding, Joint Powers Authority, or other instrument of formal agreement which at a minimum provides a management structure for the following:
    - Designation of Joint Responsibilities
    - Decision making
    - Watershed activities;
    - Information management of data and reports, including the requirements under this Order; and
    - Any and all other collaborative arrangements for compliance with this Order.
  - b. All Copermittees shall jointly develop a standardized format(s) for all reports required under this Order (e.g., annual reports, monitoring reports, fiscal analysis reports, and program effectiveness reports, etc.). The standardized reporting format(s) shall be used by all Copermittees and shall include protocols for electronic reporting. The Principal Permittee(s) shall submit the standardized format(s) to the SDRWQCB no later than **365 days after adoption** of this Order.

#### O. PRINCIPAL PERMITTEE RESPONSIBILITIES

Within 90 days of adoption of this Order, the Copermittees shall designate the Principal Permittee(s) and notify the SDRWQCB of the name(s) of the Principal Permittee(s). The Principal Permittee(s) may require the Copermittees to reimburse the Principal Permittee(s) for reasonable costs incurred while performing coordination responsibilities and other related tasks. The Principal Permittee(s) shall, at a minimum:

1. Serve as liaison(s) between the Copermittees and the SDRWQCB on general permit issues.

2. Coordinate permit activities among the Copermitees and facilitate collaboration on the development and implementation of programs required under this Order;
3. Integrate individual Copermitee documents and reports required under this Order into single unified documents and reports for submittal to the SDRWQCB as described below. If a reporting date falls on a non-working day or State holiday, then the report is to be submitted on the following working day.
  - a. Unified Jurisdictional URMP Document – The Principal Permittee(s) shall submit the unified Jurisdictional URMP document in its entirety (including the model SUSMP) to the SDRWQCB within 365 days of the adoption of this Order.

The Principal Permittee(s) shall be responsible for producing the sections of the unified Jurisdictional URMP document submittals covering common activities conducted by the Copermitees. The Principal Permittee(s) shall be responsible for the development and production of a stand alone Model SUSMP document meeting the requirements of section F.1.b.(2). of this Order. The Principal Permittee(s) shall also be responsible for collecting and assembling the Individual Jurisdictional URMP document submittals covering the activities conducted by each individual Copermitee.

- b. Unified Jurisdictional URMP Annual Reports – The Principal Permittee(s) shall submit unified Jurisdictional URMP Annual Reports to the SDRWQCB by January 31 of each year, beginning on **January 31, 2003**. The reporting period for these annual reports shall be the previous fiscal year. For example, the report submitted January 31, 2003 shall cover the reporting period July 1, 2001 to June 30, 2002.

The Principal Permittee(s) shall be responsible for producing the section of the unified Jurisdictional URMP Annual Reports covering common activities conducted by the Copermitees. The Principal Permittee(s) shall also be responsible for collecting and assembling the individual Jurisdictional URMP Annual Reports covering the activities conducted by each individual Copermitee.

- c. Unified Watershed URMP Document – The Principal Permittee(s) shall submit the unified Watershed URMP document to the SDRWQCB by **January 31, 2003**. The Principal Permittee(s) shall be responsible for producing the section of the unified Watershed URMP document covering common activities conducted by the Copermitees. The Principal Permittee(s) shall also be responsible for collecting and assembling the watershed specific Watershed URMP documents covering the activities conducted by each individual Copermitee.
  - d. Unified Watershed URMP Annual Report - The Principal Permittee(s) shall submit unified Watershed URMP Annual Reports to the SDRWQCB by January 31 of each year, beginning on **January 31, 2004**. The reporting period for these annual reports shall be the previous fiscal year. For example, the report submitted January 3, 2004 shall cover the reporting period July 1, 2002 to June 30, 2003.

The Principal Permittee(s) shall be responsible for producing the section of the unified Watershed URMP Annual Reports covering common activities conducted by the Copermitees. The Principal Permittee(s) shall also be responsible for collecting and assembling the watershed specific Watershed URMP Annual Reports covering the activities conducted by each individual Copermitee.

- e. Receiving Waters Monitoring and Reporting Program - The Principal Permittee(s) shall be responsible for the production and submittal of the Previous Monitoring and Future Recommendations Report. The report shall be submitted to the SDRWQCB within 180 days.

of adoption of this Order.

- f. Receiving Waters Monitoring and Reporting Program - The Principal Permittee(s) shall be responsible for the development and production of the Receiving Waters Monitoring Program as it is outlined in Attachment B. The Principal Permittee(s) shall submit the Receiving Waters Monitoring Program to the SDRWQCB within 180 days of adoption of this Order.
- g. Receiving Waters Monitoring and Reporting Program - The Principal Permittee(s) shall submit the Receiving Waters Monitoring Annual Report to the SDRWQCB on January 31 of each year, beginning on January 31, 2003.
- h. Formal Agreements/Standardized Formats - The Principal Permittee(s) shall submit to the SDRWQCB, within 365 days of adoption of this Order, a formal agreement between the Copermittees which provides a management structure for meeting the requirements of this Order (as described in section N.1.a.). The Principal Permittee(s) shall submit to the SDRWQCB, within 365 days of adoption of this Order, standardized formats for all reports and documents required under this Order.
- i. Dry Weather Analytical Monitoring - The Principal Permittee(s) shall collectively submit the Copermittees' dry weather analytical monitoring maps and procedures to the SDRWQCB within 365 days of adoption of this Order.

#### P. RECEIVING WATERS MONITORING AND REPORTING PROGRAM

1. Pursuant to California Water Code section 13267, each Copermittee shall comply with Monitoring and Reporting Program for No. 2001-01 contained in Attachment B of this Order.
2. Each Copermittee shall also comply with standard provisions, reporting requirements, and notifications contained in Attachment C of this Order.

#### Q. TASKS AND SUBMITTAL SUMMARY

The tasks and submittals required under this Order are summarized in Tables 5 and 6 below:

Table 5. Task Summary

Task No.	Task	Permit Section	Completion Date	Frequency
1	Identify discharges not to be prohibited and BMPs required for treatment of discharges not prohibited	B.3.	365 days after adoption of Order	One Time
2	Examine field screening results to identify water quality problems resulting from non-prohibited non-storm water discharges, including follow-up of problems	B.5	January 31, 2003	Annually
3	Notify SDRWQCB of discharges causing or contributing to an exceedance of water quality standards	C.2.a.	Immediate	As Needed
4	Establish adequate legal authority to control pollutant discharges into and from MS4	D.1.	180 days after adoption of Order	One Time
5	Assess General Plan to incorporate water quality and watershed protection principles	F.1.a.	365 days after adoption of Order	One Time
6	Include Development Project Requirements in local permits	F.1.b.(1).	365 days after adoption of Order	One Time
7	Develop Model SUSMP	F.1.b.(2).	365 days after adoption of Order	One Time
8	Develop and adopt individual local SUSMP and amended ordinances	F.1.b.(2).	180 days after approval of Model SUSMP by SDRWQCB	One Time
9	Implement individual jurisdictional SUSMP	F.1.b.(2).	180 days after approval of Model SUSMP by	Continuous

			SDRWQCB	
10	Revise environmental review processes	F.1.c.(1).	365 days after adoption of Order	One Time
11	Conduct education program for municipal planning and development review staff, project applicants, developers, contractors, community planning groups, and property owners	F.1.d.(1). And F.1.d.(2).	365 days after adoption of Order	Ongoing
12	Implement all requirements of Construction Component of Jurisdictional URMP	F.2.a. - F.2.j.	365 days after adoption of Order	Ongoing
13	Notify SDRWQCB of non-compliant construction sites that pose a threat to human or environmental health	F.2.i	Within 24 hours of discovery of noncompliance	As Needed
14	Implement all requirements of Municipal Existing Development Component of Jurisdictional URMP	F.3.a.(1). - F.3.a.(8).	365 days after adoption of Order	Ongoing
15	Implement all requirements of Industrial Existing Development Component of Jurisdictional URMP	F.3.b.(1) - F.3.b.(8)	365 days after adoption of Order	Ongoing
16	Notify SDRWQCB of non-compliant industrial sites that pose a threat to human or environmental health	F.3.b.8	Within 24 hours of discovery of noncompliance	As Needed
17	Implement all requirements of Commercial Existing Development Component of Jurisdictional URMP	F.3.c.(1) - F.3.c.(5)	365 days after adoption of Order	Ongoing
18	Implement all requirements of Residential Existing Development Component of Jurisdictional URMP	F.3.d.(1) - F.3.d.(4)	365 days after adoption of Order	Ongoing
19	Implement all requirements of Education Component of Jurisdictional URMP	F.4.a. - F.4.c.	365 days after adoption of Order	Ongoing
20	Implement all requirements of Illicit Discharge Detection and Elimination Component of Jurisdictional URMP	F.5.a. - F.5.l.	365 days after adoption of Order	Ongoing
21	Implement all requirements of Public Participation Component of Jurisdictional URMP	F.6.	365 days after adoption of Order	Ongoing
22	Develop strategy for assessment of Jurisdictional URMP effectiveness	F.7.a.	365 days after adoption of Order	One Time
23	Assess Jurisdictional URMP effectiveness	F.7.b.	January 31, 2003	Annually
24	Develop strategy for fiscal analysis of urban runoff management program	F.8.	365 days after adoption of Order	One Time
25	Conduct fiscal analysis of urban runoff management program in entirety	F.8.	January 31, 2003	Annually
26	Develop and Implement Watershed URMP	J.2.	January 31, 2003	Ongoing
27	Execute formal agreement which provides management structure for meeting Order requirements	N.1.a.	365 days after adoption of Order	One Time
28	Develop standardized formats for all required reports of this Order	N.1.b.	365 days after adoption of Order	One Time
29	Develop Previous Monitoring and Future Recommendations Report	Attachment B	180 days after adoption of Order	One Time
30	Develop Receiving Waters Monitoring Program	Attachment B	180 days after adoption of Order	One Time
31	Implement Receiving Waters Monitoring Program	Attachment B	180 days after adoption of Order	Continuous
32	Develop dry weather analytical and field screening monitoring map and procedures	Attachment E	365 days after adoption of Order	One Time
33	Conduct dry weather analytical and field screening monitoring	Attachment E	May 1, 2002	Annually
34	Complete NPDES applications for issuance of renewal watershed based permits	Attachment C	At least 180 days prior to expiration of Order	One Time
35	Notify SDRWQCB of any incidence of non-compliance with this Order that poses a threat to human or environmental health.	R.1, B.6 of Attachment C	Within 24 hours of discovery of non-compliance	As Needed
36	Designate Principal Permittee(s) and notify SDRWQCB	O.	90 days after adoption of the Order	One Time

Table 6. Submittal Summary

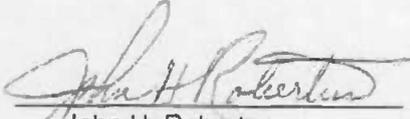
Submittal No.	Submittal	Permit Section	Completion Date	Frequency
1	Submit identification of discharges not to be prohibited and BMPs required for treatment of discharges not prohibited	B.3.	365 days after adoption of Order	One Time
2	Report on discharges causing or contributing to an exceedance of water quality standards, including description of BMP implementation	C.2.a.	With individual Jurisdictional URMP Annual Reports	As Needed
3	Submit Certified Statement of Adequate Legal Authority	D.2.	180 days after adoption of Order	One Time
4	Submit certified statement if particular high priority construction sites are to be inspected monthly rather than weekly in the rainy season	F.2.g.(2).	365 days after adoption of Order and as needed thereafter	As Needed
5	Submit report on non-compliant construction sites that pose a threat to human or environmental health.	F.2.i.	Within 5 Days of discovery of non-compliance	As Needed
6	Submit report on non-compliant industrial sites that pose a threat to human or environmental health.	F.3.b.8.	Within 5 days of discovery of non compliance	As Needed
7	Submit to Principal Permittee(s) Individual Jurisdictional URMP document covering requirements for all Components	H.1.a.	Prior to 365 days after adoption of Order (Principal Permittee(s) specifies date of submittal)	One Time
8	(This space reserved).			
9	Principal Permittee(s) shall submit to SDRWQCB unified Jurisdictional URMP document covering requirements for all Components, including Model SUSMP	H.2.a.	365 days after adoption of Order	One Time
10	(This space reserved).			
11	Submit to SDRWQCB local SUSMP and amended ordinances	F.1.b.(2). and H.1.d.	180 days after approval of Model SUSMP	One Time
12	Submit to Principal Permittee(s) individual Jurisdictional URMP Annual Report	I.1.	Prior to January 31, 2003 (Principal Permittee(s) specifies date of submittal)	Annually
13	Principal Permittee(s) shall submit 1st unified Jurisdictional URMP Annual Report to SDRWQCB	I.2.	January 31, 2003	One Time and Annually Thereafter
14	Submit to Principal Permittee(s) Watershed Specific URMP document	L.1.	Prior to January 31, 2003 (Principal Permittee(s) specifies date of submittal)	One Time
15	Principal Permittee(s) shall submit unified Watershed Specific URMP document to SDRWQCB	L.2.	January 31, 2003	One Time
16	Principal Permittee(s) shall submit 2nd unified Jurisdictional URMP Annual Report to SDRWQCB	I.2.	January 31, 2004	One Time
17	Submit to Principal Permittee(s) Watershed Specific URMP Annual Report	M.1.	Prior to January 31, 2004 (Principal Permittee(s) specifies date of submittal)	Annually
18	Principal Permittee(s) shall submit 1st unified Watershed Specific URMP Annual Report to SDRWQCB	M.2.	January 31, 2004	One Time and Annually Thereafter
19	Principal Permittee(s) shall submit 3rd unified Jurisdictional URMP Annual Report to SDRWQCB	I.2.	January 31, 2005	One Time
20	Principal Permittee(s) shall submit 2 <sup>nd</sup>	M.2.	January 31, 2005	One Time

	unified Watershed Specific URMP Annual Report to SDRWQCB			
21	Principal Permittee(s) shall submit 4 <sup>th</sup> unified Jurisdictional URMP Annual Report to SDRWQCB	I.2.	January 31, 2006	One Time
22	Principal Permittee(s) shall submit 3 <sup>rd</sup> unified Watershed Specific URMP Annual Report to SDRWQCB	M.2.	January 31, 2006	One Time
23	Principal Permittee(s) shall submit 5 <sup>th</sup> unified Jurisdictional URMP Annual Report to SDRWQCB	I.2.	January 31, 2007	One Time
24	Principal Permittee(s) shall submit formal agreement between Copermitees which provides management structure for meeting Order requirements	N.1.a.	365 days after adoption of Order	One Time
25	Principal Permittee(s) shall submit standardized formats for all reports required under this Order	N.1.b.	365 days after adoption of Order	One Time
26	Principal Permittee(s) submits Previous Monitoring and Future Recommendations Report to SDRWQCB	Attachment B	180 days after adoption of Order	One Time
27	Principal Permittee(s) submits Receiving Waters Monitoring Program document to SDRWQCB	Attachment B	180 days after adoption of Order	One Time
28	Principal Permittee(s) submits Receiving Waters Monitoring Annual Report to SDRWQCB	Attachment B	January 31, 2003	Annually
29	Submit to Principal Permittee(s) dry weather analytical monitoring map and procedures	Attachment E	Prior to 365 days after adoption of Order	One Time
30	Principal Permittee(s) submits collective dry weather analytical monitoring maps and procedures	Attachment E	365 days after adoption of Order	One Time
31	Submit to Principal Permittee(s) dry weather analytical monitoring results as part of individual Jurisdictional URMP Annual Report	Attachment E	Prior to January 31, 2003, as part of individual Jurisdictional URMP Annual Report	Annually
32	Principal Permittee(s) shall submit NPDES applications for issuance of renewal watershed based permits	Attachment C	At least 180 days prior to expiration of this Order	One Time
33	Submit reports of any incidence of non-compliance with this Order that poses a threat to human or environmental health.	R.1, B.6 of Attachment C	Within 5 days of discovery of non compliance	As Needed

## R. STANDARD PROVISIONS, REPORTING REQUIREMENTS AND NOTIFICATIONS

- Each Copermitee shall comply with Standard Provisions, Reporting Requirements, and Notifications contained in **Attachment C** of this Order. This includes 24 hour/5day reporting requirements for any instance of non-compliance with this Order as described in section B.6 of Attachment C.
- All plans, reports and subsequent amendments submitted in compliance with this Order shall be implemented immediately (or as otherwise specified) and shall be an enforceable part of this Order upon submission to the SDRWQCB. All submittals by Copermitees must be adequate to implement the requirements of this Order.

I, John H. Robertus, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Diego Region, on February 21, 2001, as amended by State Water Resources Control Board Order WQ 2001-15 adopted November 15, 2001.



John H. Robertus  
Executive Officer

**ATTACHMENT A****BASIN PLAN PROHIBITIONS**

California Water Code Section 13243 provides that a Regional Board, in a water quality control plan, may specify certain conditions or areas where the discharge of waste, or certain types of waste is not permitted. The following discharge prohibitions are applicable to any person, as defined by Section 13050(c) of the California Water Code, who is a citizen, domiciliary, or political agency or entity of California whose activities in California could affect the quality of waters of the state within the boundaries of the San Diego Region.

1. The discharge of waste to waters of the state in a manner causing, or threatening to cause a condition of pollution, contamination or nuisance as defined in California Water Code Section 13050, is prohibited.
2. The discharge of waste to land, except as authorized by waste discharge requirements or the terms described in California Water Code Section 13264 is prohibited.
3. The discharge of pollutants or dredged or fill material to waters of the United States except as authorized by an NPDES permit or a dredged or fill material permit (subject to the exemption described in California Water Code §13376) is prohibited.
4. Discharges of recycled water to lakes or reservoirs used for municipal water supply or to inland surface water tributaries thereto are prohibited, unless this Regional Board issues a NPDES permit authorizing such a discharge; the proposed discharge has been approved by the State Department of Health Services and the operating agency of the impacted reservoir; and the discharger has an approved fail-safe long-term disposal alternative.
5. The discharge of waste to inland surface waters, except in cases where the quality of the discharge complies with applicable receiving water quality objectives, is prohibited. Allowances for dilution may be made at the discretion of the Regional Board. Consideration would include streamflow data, the degree of treatment provided and safety measures to ensure reliability of facility performance. As an example, discharge of secondary effluent would probably be permitted if streamflow provided 100:1 dilution capability.
6. The discharge of waste in a manner causing flow, ponding, or surfacing on lands not owned or under the control of the discharger is prohibited, unless the discharge is authorized by the Regional Board.
7. The dumping, deposition, or discharge of waste directly into waters of the state, or adjacent to such waters in any manner which may permit its being transported into the waters, is prohibited unless authorized by the Regional Board.
8. Any discharge to a storm water conveyance system that is not composed entirely of "storm water" is prohibited unless authorized by the Regional Board. [The federal regulations, 40 CFR 122.26 (b) (13), define storm water as storm water runoff, snow melt runoff, and surface runoff and drainage. 40 CFR 122.26 (b) (2) defines an illicit discharge as any discharge to a storm water conveyance system that is not composed entirely of storm water except discharges pursuant to a NPDES permit and discharges resulting from fire fighting activities. [§122.26 amended at 56 FR 56553, November 5, 1991; 57 FR 11412, April 2, 1992].
9. The unauthorized discharge of treated or untreated sewage to waters of the state or to a storm water conveyance system is prohibited.

10. The discharge of industrial wastes to conventional septic tank/subsurface disposal systems, except as authorized by the terms described in California Water Code Section 13264, is prohibited.
11. The discharge of radioactive wastes amenable to alternative methods of disposal into the waters of the state is prohibited.
12. The discharge of any radiological, chemical, or biological warfare agent into waters of the state is prohibited.
13. The discharge of waste into a natural or excavated site below historic water levels is prohibited unless the discharge is authorized by the Regional Board.
14. The discharge of sand, silt, clay, or other earthen materials from any activity, including land grading and construction, in quantities which cause deleterious bottom deposits, turbidity or discoloration in waters of the state or which unreasonably affect, or threaten to affect, beneficial uses of such waters is prohibited.
15. The discharge of treated or untreated sewage from vessels to Mission Bay, Oceanside Harbor, Dana Point Harbor, or other small boat harbors is prohibited.
16. The discharge of untreated sewage from vessels to San Diego Bay is prohibited.
17. The discharge of treated sewage from vessels to portions of San Diego Bay that are less than 30 feet deep at mean lower low water (MLLW) is prohibited.
18. The discharge of treated sewage from vessels, which do not have a properly functioning US Coast Guard certified Type I or Type II marine sanitation device, to portions of San Diego Bay that are greater than 30 feet deep at mean lower low water (MLLW) is prohibited.

**ATTACHMENT B****RECEIVING WATERS MONITORING AND REPORTING PROGRAM  
FOR  
ORDER NO. 2001-01****Countywide to Watershed Based Monitoring and Reporting Program**

The primary objectives of the Receiving Waters Monitoring and Reporting Program include, but are not limited to: 1) assessing compliance with Order No. 2001-01; 2) measuring the effectiveness of Urban Runoff Management Plans; 3) assessing the chemical, physical, and biological impacts to receiving waters resulting from urban runoff; and 4) assessing the overall health and evaluating long-term trends in receiving water quality.

Like Order No. 2001-01 in general, the monitoring requirements below are intended to transition during the five-year permit period from a countywide approach to a watershed based approach. During the first two reporting periods<sup>1</sup> of this Order, this monitoring program shall be conducted and reported on the same countywide basis as previously conducted under Order No. 90-42. Specifically, all monitoring shall be conducted jointly by all Copermittees under a single contractor with countywide coordination.

Beginning with the third monitoring period of this Order (unless otherwise directed by the SDRWQCB Executive Officer) the design of the monitoring program will shift to a watershed based approach. The monitoring program design, implementation, analysis, assessment, and reporting shall be conducted on a watershed basis for each of the nine hydrologic units. Monitoring results shall be assessed and reported on a watershed basis as a single report by the Copermittees consisting of one common section and nine watershed sections. Monitoring, analysis, assessment, and reporting shall satisfy the requirements of specified below for each watershed as applicable.

Order No. 2001-01 may be modified by the SDRWQCB Executive Officer without further public notice to direct the Copermittees to participate in comprehensive regional monitoring activities in the Southern California Bight in lieu of specific Order 2001-01 receiving waters monitoring requirements during the term of this Order.

**I. Previous Monitoring and Future Recommendations Report**

The Copermittees shall collaborate to develop a "Previous Monitoring and Future Recommendations Report" that summarizes all previous wet weather monitoring results and recommends future monitoring activities including the possibility of participating in coordinated comprehensive regional monitoring in the Southern California Bight. The Principal Permittee shall be responsible for the writing of the report and submittal to the SDRWQCB within **180 days** of adoption of this Order. At a minimum, the report shall:

- A. Summarize the cumulative findings of all previous wet weather monitoring;
- B. Identify detectable trends in water quality data and receiving water quality, based on the cumulative previous wet weather monitoring findings;
- C. Interpret the cumulative previous wet weather monitoring findings;
- D. Draw conclusions regarding the cumulative previous wet weather monitoring findings;
- E. Provide recommendations for future monitoring activities; and
- F. Include an executive summary, introduction, conclusion, and summary of recommendations.

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<sup>1</sup> A reporting period is defined as October 1<sup>st</sup> to September 30<sup>th</sup> of any year. The first reporting period under this Order is October 1, 2001 to September 30, 2002.

## II. Receiving Waters Monitoring Program -- Year Round

Utilizing the findings of the "Previous Monitoring and Future Recommendations Report" discussed above, the Copermittees shall collaborate to develop, submit, conduct, and report on a year round countywide or watershed based Receiving Waters Monitoring Program<sup>2</sup>. The goals of both the countywide and watershed based Receiving Waters Monitoring Program shall be clearly stated. The Receiving Waters Monitoring Program goals shall focus on assessing compliance with this Order, achieving water quality objectives, protecting beneficial uses, and assessing the overall health and long-term water quality trends of receiving waters. For purposes of conducting the countywide or watershed based Receiving Waters Monitoring Program, the Copermittees are encouraged to collaborate with other agencies conducting similar monitoring, such as the Southern California Coastal Water Research Project (SCCWRP), the California Department of Fish and Game, or other municipalities in Southern California. Implementation of the countywide or watershed based Receiving Waters Monitoring Program shall begin within 180 days of adoption of this Order. The countywide or watershed based Receiving Waters Monitoring Program shall include, at a minimum, the following components:

- A. Urban Stream Bioassessment Monitoring
- B. Long-term Mass Loading Monitoring
- C. Coastal Storm Drain Outfall Monitoring
- D. Ambient Bay, Lagoon, and Coastal Receiving Water Monitoring
- E. Toxic Hot Spots Monitoring in San Diego Bay

### A. Urban Stream Bioassessment Monitoring

1. The Copermittees shall collaborate to develop and implement an urban stream bioassessment monitoring program. At a minimum, the program shall consist of station identification, sampling, monitoring, and analysis of data for 20 bioassessment stations in order to determine the biological and physical integrity of urban streams within the County of San Diego. In addition to the urban stream bioassessment stations, three reference bioassessment stations shall be identified, sampled, monitored, and analyzed. The selection, sampling, monitoring, and analysis of bioassessment stations shall meet the following requirements:
  - a. Each urban stream bioassessment station shall be selected using the following criteria. Each urban stream bioassessment station shall:
    - (1) be located within the jurisdiction of a Copermittee; or
    - (2) be located within one of the nine watersheds specified in Section J, Table 4 of this Order; and
    - (3) be representative of urban stream conditions within one of the nine watersheds specified in Section J, Table 4 of this Order; and
    - (4) meet the physical criteria of the California Stream Bioassessment Procedure<sup>3</sup>; and
    - (5) to the extent feasible, coincide with the location of an already existing monitoring station used by the California Department of Fish and Game in the conduct of the SDRWQCB's Ambient Bioassessment Program.

<sup>2</sup> During the first two years, monitoring and reporting will be conducted and reported on a countywide basis. Beginning in the third monitoring period of Order 2001-01, the monitoring and reporting program will shift to a watershed based approach.

<sup>3</sup> California Stream Bioassessment Procedure (Protocol Brief for Biological and Physical/Habitat Assessment in Wadeable Streams), California Department of Fish and Game – Aquatic Bioassessment Laboratory, May 1999.

- b. Each bioassessment station shall be monitored twice annually, in May and October of each year, beginning in May 2001. A minimum of three replicate samples shall be collected at each station during each sampling event.
- c. Sampling, laboratory, quality assurance, and analysis procedures shall follow the standardized procedures set forth in the California Department of Fish and Game's California Stream Bioassessment Procedure (CSBP). Analysis procedures shall include comparison between station mean values for various biological metrics. Sampling, laboratory, quality assurance, and analytical procedures shall follow the standardized "Non-Point Source Bioassessment Sampling Procedures" for professional bioassessment set forth in the CSBP. In the event that the CSBP "Point-Source Professional Bioassessment Procedure" is performed in place of the "Non Point Source Bioassessment Sampling Procedure," justification and documentation of the procedure shall be submitted with the report. Results of the Urban Stream Bioassessment Monitoring shall be reported annually as part of the overall Receiving Waters Monitoring and Reporting Program for Order No. 2001-01. Reporting of the bioassessment data shall follow the format of the San Diego Regional Water Quality Control Board 1999 Biological Assessment Annual Report<sup>4</sup>. The report shall include:
- (1) All physical, chemical and biological data collected in the assessment;
  - (2) Photographic documentation of assessment and reference stations;
  - (3) Documentation of quality assurance and control procedures;
  - (4) Analysis that shall include calculation of the metrics used in both the CSBP and the 1999 Annual Report.
  - (5) The report shall provide interpretation for comparisons of mean biological and habitat assessment metric values between assessment and reference stations.
  - (6) Utilize a regional index of biological integrity as part of the analysis.
  - (7) Electronic data formatted to California Department of Fish and Game Aquatic Bioassessment Laboratory specifications for inclusion in the Statewide Access Bioassessment database.
- d. A professional environmental laboratory shall perform all sampling, laboratory, quality assurance, and analytical procedures. While valuable, data collected by volunteer monitoring organizations shall not be submitted in place of professional assessments.
- e. Reference stations shall be selected following the recommendations in the 1999 Annual Report, Hughes (1995)<sup>5</sup> and Barbour et. al. (1999)<sup>6</sup>. Reference stations shall be evaluated annually by the Copermittees for suitability and the results included in the annual report. New reference stations will be selected as needed by the Copermittees.

<sup>4</sup> San Diego Regional Water Quality Control Board, 1999 Biological Assessment Annual Report. A Water Quality Inventory Series: Biological and Physical/Habitat Assessment of California Water Bodies. California Department of Fish and Game Office of Spill Prevention and Response, Water Pollution Control Laboratory. December 1999.

<sup>5</sup> Hughes, R. M. (1995) Defining Acceptable Biological Status by Comparing with Reference Conditions in Biological Assessment and Criteria: Tools for Water Resource Planning and Decision Making, Wayne S. Davis and Thomas P. Simon eds. Lewis Publishers, Boca Raton, LA.

<sup>6</sup> Barbour, M.T., J Gerritsen, B.D. Synder, and J.B. Stribling (1999) Rapid Bioassessment Protocols For Use in Streams and Wadeable Rivers: Periphyton, Benthic Macroinvertebrates, and Fish. Second Edition. EPA 841-B-99-002.

2. The Copermitees shall design and implement a program to conduct standardized toxicity testing at urban stream bioassessment stations where the bioassessment data indicates significant impairment. When findings indicate the presence of toxicity, a Toxicity Identification Evaluation (TIE) shall be conducted to determine the cause(s) of the toxicity.

#### B. Long-term Mass Loading Monitoring

For purposes of evaluating long-term trends, the Copermitees shall continue to monitor the five existing long-term mass loading stations as specified in Monitoring and Reporting Program No. 95-76 and amended by Technical Change Order Nos. 1-4. When findings indicate the presence of toxicity, a Toxicity Identification Evaluation (TIE) shall be conducted to determine the cause(s) of the toxicity.

#### C. Coastal Storm Drain Outfall Monitoring

The Copermitees shall collaborate to develop and implement a monitoring program for discharges of urban runoff from coastal storm drain outfalls. The program shall meet the following requirements:

1. The program shall include rationale and criteria for selection of storm drain outfalls to be monitored.
2. The program shall include collection of samples for analysis of total coliform, fecal coliform, and enterococci, in addition to any other indicators or pathogens identified by the Copermitees.
3. Samples shall be collected at both the storm drain outfall and in the surf zone (at ankle to knee water depths) directly in front of the outfall.
4. Samples shall be collected during both dry and wet weather periods.
5. Exceedances of public health standards for bacteria must be reported to the County Department of Public Health as soon as possible by the Copermitees.

#### D. Ambient Bay, Lagoon, and Coastal Receiving Water Monitoring

The Copermitees shall collaborate to develop and implement a program to assess the overall health of the receiving water and monitor the impact of urban runoff on ambient receiving water quality. This monitoring shall include San Diego Bay, Mission Bay, Oceanside Harbor, the Pacific Ocean coastline, coastal lagoons and estuaries, and all Clean Water Act section 303(d) water bodies or other environmentally sensitive areas as defined in F.1.b(2)(a)vii of this Order.

#### E. Toxic Hot Spots Monitoring in San Diego Bay

The Copermitees shall collaborate to develop and implement a program to assess the relative contribution of urban runoff on Toxic Hot Spots in San Diego Bay.

### III. **Submittal of Receiving Waters Monitoring Program Document**

The Principal Permittee shall submit to the SDRWQCB the countywide or watershed based Receiving Waters Monitoring Program within **180 days** of adoption of this Order. The regional or watershed based Receiving Waters Monitoring Program shall describe how the Copermitees will meet the requirements of the components outlined in Section II of this Attachment.

**IV. Submittal of Receiving Waters Monitoring Annual Reports**

The Principal Permittee shall submit the Receiving Waters Monitoring Annual Report to the SDRWQCB on January 31 of each year, beginning on January 31, 2003.

**V. Monitoring Annual Report Requirements**

- A. Monitoring reports shall provide the data/results, methods of evaluating the data, graphical summaries of the data, and an explanation/discussion of the data for each monitoring program component listed above.
- B. Monitoring reports shall include an analysis of the findings of each monitoring program component listed above. The analysis shall identify and prioritize water quality problems. Based on the identification and prioritization of water quality problems, the analysis shall identify potential sources of the problems, and recommend future monitoring and BMP implementation measures for identifying and addressing the sources. The analysis shall also include an evaluation of the effectiveness of existing control measures.
- C. Monitoring reports shall include identification and analysis of any long-term trends in storm water or receiving water quality.
- D. Monitoring reports shall provide an estimation of total pollutant loads (wet weather loads plus dry weather loads) due to urban runoff for each of the watersheds specified in Section J, Table 4 of Order No. 2001-01.
- E. Monitoring reports shall for each monitoring program component listed above, include an assessment of compliance with applicable water quality standards.
- F. All monitoring reports shall use a standard report format and shall include the following:
  1. A stand alone comprehensive executive summary addressing all sections of the monitoring report;
  2. Comprehensive interpretations and conclusions; and
  3. Recommendations for future actions.
- G. All monitoring reports submitted to the Principal Permittee or the SDRWQCB shall contain the certified perjury statement described in Standard Reporting Requirements in Attachment C section B.10.d.
- H. All monitoring reports shall be reviewed prior to submittal to the SDRWQCB by a committee (consisting of no less than three members). All review comments shall also be submitted to the SDRWQCB.
- I. All monitoring reports shall be submitted in both electronic and paper formats.
- J. All monitoring reports shall describe monitoring station locations by latitude and longitude coordinates, frequency of sampling, quality assurance/quality control procedures and sampling and analysis protocols.
- K. Monitoring programs and reports shall comply with Section VI of Attachment B, as well as Attachment C.

**VI. Standard Monitoring Requirements**

A. All monitoring activities shall meet the following requirements:

1. Monitoring and Records [40 CFR 122.41(j)(1)]

Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.

2. Monitoring and Records [40 CFR 122.41(j)(2)] [California Water Code § 13383(a)]

The discharger shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this Order, and records of all data used to complete the application for this permit, for a period of at least three years from the date of the sample, measurement, report or application. This period may be extended by request of the SDRWQCB at any time.

3. Monitoring and Records [40 CFR 122.21(j)(3)]

Records of monitoring information shall include the information requested in Attachment B and the following:

- 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. Monitoring and Records [40 CFR 122.21(j)(4)]

Monitoring results must be conducted according to test procedures approved under 40 CFR part 136 unless other test procedures have been specified in this Order.

5. Monitoring and Records [40 CFR 122.21(j)(5)]

The Clean Water Act 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.

6. Monitoring and Records [40 CFR 122.41(k)(2)]

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.

7. Monitoring Reports [40 CFR 122.41(l)(4)]

Monitoring results shall be reported at the intervals specified elsewhere in this Order.

8. Monitoring Reports [40 CFR 122.41(l)(4)(ii)]

If the discharger monitors any pollutant more frequently than required by the permit using test procedures approved under 40 CFR part 136, unless otherwise specified in the Order, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the reports requested by the SDRWQCB.

9. Monitoring Reports [40 CFR 122.41(l)(4)(iii)]

Calculations for all limitations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified by the SDRWQCB in the Order.

**ATTACHMENT C****STANDARD PROVISIONS  
REPORTING REQUIREMENTS, AND  
NOTIFICATIONS****A. STANDARD PROVISIONS**

1. Duty To Comply [40 CFR 122.41(a)(1)]  
The discharger shall comply with effluent standards or prohibitions established under Section 307(a) of the Clean Water Act for toxic pollutants and with standards for sewage sludge use or disposal established under Section 405(d) of the Clean Water Act within the time provided in the regulations that establish these standards or prohibitions or standards for sewage sludge use or disposal, even if this Order has not yet been modified to incorporate the requirement.
2. Need to Halt or Reduce Activity Not a Defense [40 CFR 122.41(c)]  
It shall not be a defense for the discharger in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this Order. Upon reduction, loss, or failure of a treatment facility, the discharger shall, to the extent necessary to maintain compliance with this Order, control production or all discharges, or both, until the facility is restored or an alternative method of treatment is provided. This provision applies, for example, when the primary source of power of a treatment facility fails, is reduced, or is lost.
3. Duty to Mitigate [40 CFR 122.41(d)]  
The discharger shall take all reasonable steps to minimize or prevent any discharge or prevent any discharge or sludge use or disposal in violation of this Order which has a reasonable likelihood of adversely affecting human health or the environment.
4. Proper Operation and Maintenance [40 CFR 122.41(e)]  
The discharger shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the discharger to achieve compliance with the conditions of this Order. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by the discharger only when the operation is necessary to achieve compliance with the conditions of this Order.
5. Permit Actions [40 CFR 122.41(f)] [California Water Code § 13381]  
This Order may be modified, revoked and reissued, or terminated for cause including, but not limited to, the following:
  - a. Violation of any terms or conditions of this Order;
  - b. Obtaining this Order by misrepresentation or failure to disclose fully all relevant facts;
  - c. A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge; or
  - d. A determination that the permitted activity endangers human health or the environment and can only be regulated to acceptable levels by permit modification or termination.

The filing of a request by the discharger for modification, revocation and reissuance, or termination of this Order, or a notification of planned changes or anticipated noncompliance does not stay any condition of this Order.

6. Property Rights [40 CFR 122.41(g)] [California Water Code §13263(g)]

This Order does not convey any property rights of any sort or any exclusive privilege. The requirements prescribed herein do not authorize the commission of any act causing injury to persons or property, nor protect the discharger from liabilities under federal, state, or local laws, nor create a vested right for the discharger to continue the waste discharge.
7. Inspection and Entry [40 CFR 122.41(i)] [California Water Code § 13267(c)]

The discharger shall allow the SDRWQCB, or an authorized SDRWQCB representative, or an authorized representative of the USEPA (including an authorized contractor acting as a representative of the SDRWQCB or USEPA), upon presentation of credentials and other documents as may be required by law, to:

  - a. Enter upon the discharger's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this Order;
  - b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Order;
  - c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order; and
  - d. Sample or monitor at reasonable times, for the purposes of assuring compliance with this Order or as otherwise authorized by the Clean Water Act or California Water Code, any substances or parameters at any location.
8. Bypass of Treatment Facilities [40 CFR 122.41(m)]
  - a. Definitions
    - (1) "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility.
    - (2) "Severe property damage" means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.
  - b. Bypass not Exceeding Limitations

The discharger may allow any bypass to occur which does not cause effluent limitations of this Order or the concentrations of pollutants set forth in Ocean Plan Table A or Table B to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of paragraphs c. and d. of this provision.
  - c. Notice
    - (1) Anticipated bypass. If the discharger knows in advance of the need for a bypass, it shall submit prior notice, if possible, at least ten days before the date of the bypass.
    - (2) Unanticipated bypass. The discharger shall submit notice of an unanticipated bypass as required in section B.7 of Attachment C.

d. Prohibition of Bypass

Bypass is prohibited, and the SDRWQCB may take enforcement action against the discharger for bypass, unless:

- (1) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
- (2) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and
- (3) The discharger submitted notices as required under paragraph c. of this section. The SDRWQCB may approve an anticipated bypass, after considering its adverse effects, if the SDRWQCB determines that it will meet the three conditions listed above in paragraph d.(1) of this section.

9. Upset [40 CFR 122.41(n)]

- a. Definition "Upset" means an exceptional incident in which there is unintentional and temporary noncompliance with technology based effluent limitations because of factors beyond the reasonable control of the discharger. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.
- b. Effect of an Upset An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of paragraph c. of this section are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.
- c. Conditions Necessary for a Demonstration of Upset A discharger who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:
  - (1) An upset occurred and that the discharger can identify the cause(s) of the upset;
  - (2) The permitted facility was at the time being properly operated;
  - (3) The discharger submitted notice of the upset as required in section B.7 of Attachment C of this Order; and
  - (4) The discharger complied with any remedial measures required under Provision A.5. of Attachment C of this Order.
- d. Burden of Proof In any enforcement proceeding the discharger seeking to establish the occurrence of an upset has the burden of proof.

10. Other Effluent Limitations and Standards [40 CFR 122.44(b)(1)]

If any toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is promulgated under Section 307(a) of the Clean Water Act for a toxic pollutant which is present in the discharge and that standard or prohibition is more stringent than any limitation on the pollutant in this Order, the SDRWQCB may institute proceedings under these regulations to modify or revoke

and reissue the Order to conform to the toxic effluent standard or prohibition.

11. The discharger shall take all reasonable steps to minimize or correct any adverse impact on the environment resulting from noncompliance with this Order, including such accelerated or additional monitoring as may be necessary to determine the nature and impact of the noncomplying discharge.
12. The provisions of this Order are severable, and if any provision of this Order, or the application of any provision of this Order to any circumstances, is held invalid, the application of such provision to other circumstances, and the remainder of this Order, shall not be affected thereby.
13. The discharger shall comply with any interim effluent limitations as established by addendum, enforcement action, or revised waste discharge requirements which have been, or may be, adopted by this SDRWQCB.

## B. REPORTING REQUIREMENTS

1. Duty to Reapply [40 CFR 122.41(b)] This Order expires on **February 21, 2006**. If the discharger wishes to continue any activity regulated by this Order after the expiration date of this Order, the discharger must apply for and obtain new waste discharge requirements. The discharger must file a Report of Waste Discharge in accordance with Title 23, California Code of Regulations not later than **180 days** in advance of the expiration date of this Order as application for issuance of new waste discharge requirements.
2. Duty to Provide Information [40 CFR 122.41(h)] The discharger shall furnish to the SDRWQCB, SWRCB, or USEPA, within a reasonable time, any information which the SDRWQCB, SWRCB, or USEPA may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Order, or to determine compliance with this Order. The discharger shall also furnish to the SDRWQCB, SWRCB, or USEPA, upon request, copies of records required to be kept by this Order.
3. Planned Changes [40 CFR 122.41(l)(1)] The discharger shall give notice to the SDRWQCB as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when:
  - a. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 CFR Part 122.29(b);
  - b. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in this Order, nor to notification requirements under 40 CFR 122.42(a)(1); or
  - c. The alteration or addition results in a significant change in the discharger's sludge use or disposal practices, and such alteration, addition, or change may justify the application of conditions in this Order that are different from or absent in the existing Order, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan.
4. Anticipated Non-Compliance [40 CFR 122.41(l)(2)] The discharger shall give advance notice to the SDRWQCB of any planned changes in the permitted facility or activity which may result in noncompliance with the requirements of this Order.

5. Transfers [40 CFR 122.41(l)(3)] This Order is not transferable to any person except after notice to the SDRWQCB. The SDRWQCB may require modification or revocation and reissuance of this Order to change the name of the discharger and incorporate such other requirements as may be necessary under the Clean Water Act or the California Water Code in accordance with the following:
- a. Transfers by Modification [40 CFR 122.61(a)]  
Except as provided in paragraph b. of this reporting requirement, this Order may be transferred by the discharger to a new owner or operator only if this Order has been modified or revoked and reissued, or a minor modification made to identify the new discharger and incorporate such other requirements as may be necessary under the Clean Water Act or California Water Code.
  - b. Automatic Transfers [40 CFR 122.61(b)]  
As an alternative to transfers under paragraph a. of this reporting requirement, any NPDES permit may be automatically transferred to a new discharger if:
    - (1) The current discharger notifies the SDRWQCB at least 30 days in advance of the proposed transfer date in paragraph b.(2) of this reporting requirement;
    - (2) The notice includes a written agreement between the existing and new dischargers containing a specific date for transfer of permit responsibility, coverage, and liability between them; and
    - (3) The SDRWQCB does not notify the existing discharger and the proposed new discharger of his or her intent to modify or revoke and reissue the Order. A modification under this subparagraph may also be a minor modification under 40 CFR Part 122.63. If this notice is not received, the transfer is effective on the date specified in the agreement mentioned in paragraph b.(2) of this reporting requirement.
6. Twenty-four Hour Reporting [40 CFR 122.41(l)(6)]  
Each Copermittee shall develop and submit criteria by which to evaluate events of non-compliance to determine whether they pose a threat to human or environmental health. These criteria shall be submitted in the Jurisdictional Urban Runoff Management Program Document and Annual Reports for SDRWQCB review. Using these criteria the discharger shall report any noncompliance with this Order or any noncompliance that may endanger human health or environmental health. Any information shall be provided orally to the SDRWQCB within **24 hours** from the time the discharger becomes aware of the circumstances. A written description of any noncompliance shall be submitted to the SDRWQCB within **five days** of such an occurrence and contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance. The following shall be included as information which must be reported within 24 hours under this reporting requirement:
- a. Any unanticipated bypass which exceeds any effluent limitation in this Order;
  - b. Any discharge of treated or untreated wastewater, including reclaimed or recycled wastewater, resulting from pipeline breaks, obstruction, surcharge or any other circumstance;
  - c. Any discharge or spill of raw or potable water not authorized by this order or resulting from pipeline breaks, obstruction, surcharge or any other circumstance;

- d. Any upset which exceeds any effluent limitation in this Order;
  - e. Any spill or discharge of non-storm water not authorized by this Order. Non-storm water discharges not prohibited by the Copermittees pursuant to Section B of this Order need not be reported under this section; and
  - f. Any violation of this Order.
7. Other Non-Compliance [40 CFR 122.41(l)(7)]  
The discharger shall report all instances of noncompliance not reported elsewhere under other sections of this Order at the time annual reports are submitted. The reports shall contain the information listed in part B.6 of Attachment C of this Order.
8. Other Information [40 CFR 122.41(l)(8)]  
Where the discharger becomes aware that it failed to submit any relevant facts in a Report of Waste Discharge, or submitted incorrect information in a Report of Waste Discharge, or in any report to the SDRWQCB, it shall promptly submit such facts or information.
9. Signatory Requirements [40 CFR 122.41(k)(1) and 40 CFR 122.22]  
All applications, reports, or information submitted to the SDRWQCB shall be signed and certified.
- a. All Reports of Waste Discharge shall be signed as follows:
    - (1) For a corporation: by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means: (a) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation; or (b) the manager of one or more manufacturing, production, or operating facilities employing more than 250 persons or having gross annual sales or expenditures exceeding \$25 million (in second-quarter 1980 dollars), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.
    - (2) For a partnership or sole proprietorship: by a general partner or the proprietor, respectively; or
    - (3) For a municipality, State, Federal or other public agency: by either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a Federal agency includes: (a) the chief executive officer of the agency; or (b) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of USEPA).
  - b. All reports required by this Order, and other information requested by the SDRWQCB shall be signed by a person described in paragraph a. of this reporting requirement, or by a duly authorized representative of that person. A person is a duly authorized representative only if:
    - (1) The authorization is made in writing by a person described in paragraph a. of this reporting requirement;
    - (2) The authorization specifies 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,

(3) The written authorization is submitted to the SDRWQCB.

- c. If an authorization under paragraph b. of this reporting requirement is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of paragraph b. of this reporting requirement must be submitted to the SDRWQCB prior to or together with any reports, information, or applications to be signed by an authorized representative.
- d. Any person signing a document under paragraph a. or b. of this reporting requirement shall 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.

10. Except for data determined to be confidential under 40 CFR Part 2, all reports prepared in accordance with the terms of this Order shall be available for public inspection at the offices of the SDRWQCB. As required by the Clean Water Act, Reports of Waste Discharge, this Order, and effluent data shall not be considered confidential.
11. The discharger shall submit reports and provide notifications as required by this Order to the following:

Phil Hammer  
STORM WATER UNIT  
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
SAN DIEGO REGION  
9771 CLAIREMONT MESA BLVD SUITE A  
SAN DIEGO CA 92124-1324  
Telephone: (858) 467-2952  
Fax: (858) 571-6972

Eugene Bromley  
US ENVIRONMENTAL PROTECTION AGENCY  
REGION IX  
PERMITS ISSUANCE SECTION (W-5-1)  
75 HAWTHORNE STREET  
SAN FRANCISCO CA 94105

12. Unless otherwise directed, the discharger shall submit three copies of each report required under this Order to the SDRWQCB and one copy to USEPA.

**C> NOTIFICATIONS**

1. California Water Code Section 13263(g)  
No discharge of waste into the waters of the state, whether or not such discharge is made pursuant to waste discharge requirements, shall create a vested right to continue such discharge. All discharges of waste into waters of the state are privileges, not rights.
2. The SDRWQCB has, in prior years, issued a limited number of individual NPDES permits for non-storm water discharges to municipal storm water conveyance systems. The SDRWQCB or SWRCB may in the future, upon prior notice to the Copermitee(s), issue an NPDES permit for any non-storm water discharge (or class of non-storm water discharges) to a municipal storm water conveyance system. Copermitees may prohibit any non-storm water discharge (or class of non-storm water discharges) to a municipal storm water conveyance system that is authorized under such separate NPDES permits.
3. Enforcement Provisions [40 CFR 122.41(a)(2)] [California Water Code §§ 13385 and 13387]  
The Clean Water Act provides that any person who violates section 301, 302, 306, 307, 308, 318 or 405 of the Act, or any condition or limitation of this Order, is subject to a civil penalty not to exceed \$25,000 per day for each violation. The Clean Water Act provides that any person who negligently violates sections 301, 302, 306, 307, 308, 318, or 405 of the Act, or any condition or limitation of this Order, is subject to criminal penalties of \$2,500 to \$25,000 per day of violation, or imprisonment of not more than one year, or both. In the case of a second or subsequent conviction for a negligent violation, a person shall be subject to criminal penalties of not more than \$50,000 per day of violation, or by imprisonment of not more than two years, or both. Any person who knowingly violates such sections, or such conditions or limitations is subject to criminal penalties of \$5,000 to \$50,000 per day of violation, or imprisonment for not more than three years, or both. In the case of a second or subsequent conviction for a knowing violation, a person shall be subject to criminal penalties of not more than \$100,000 per day of violation, or imprisonment of not more than six years, or both. Any person who knowingly violates section 301, 302, 303, 306, 307, 308, 318 or 405 of the Act, or any condition or limitation of this Order, and who knows at that time that he or she thereby places another person in imminent danger of death or serious bodily injury, shall, upon conviction, be subject to a fine of not more than \$250,000 or imprisonment of not more than 15 years, or both. In the case of a second or subsequent conviction for a knowing endangerment violation, a person shall be subject to a fine of not more than \$500,000 or by imprisonment of not more than 30 years, or both. An organization, as defined in section 309(c)(3)(B)(iii) of the Clean Water Act, shall, upon conviction of violating the imminent danger provision, be subject to a fine of not more than \$1,000,000 and can be fined up to \$2,000,000 for second or subsequent convictions.
4. Except as provided in Standard Provisions A.10. and A.11. in Attachment C of this Order, nothing in this Order shall be construed to relieve the discharger from civil or criminal penalties for noncompliance.
5. Nothing in this Order shall be construed to preclude the institution of any legal action or relieve the discharger from any responsibilities, liabilities, or penalties to which the discharger is or may be subject to under Section 311 of the Clean Water Act.
6. Nothing in this Order shall be construed to preclude institution of any legal action or relieve the discharger from any responsibilities, liabilities, or penalties established pursuant to any applicable State law or regulation under authority preserved by Section 510 of the Clean Water Act.

7. This Order shall become effective on **February 21, 2001**, provided the USEPA Regional Administrator has no objection. If the Regional Administrator objects to its issuance, this Order shall not become effective until such objection is withdrawn.
8. This Order supersedes Order No. 90-42 upon the effective date of this Order.

**ATTACHMENT D****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" of the waters of the State 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, as 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, operating methods that eliminate amounts of chemical, physical, and biological characteristics of pollutant constituents to the degree of reduction attainable through the application of the best management practices to the maximum extent practicable.

**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 trophic 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.

**Bioconcentration** – A process by which there is a net accumulation of a chemical directly from water into aquatic organisms resulting from simultaneous uptake and elimination by gill or epithelial tissue. Bioconcentration differs from bioaccumulation in that bioaccumulation refers to the progressive concentration of contaminants in the tissues of organisms through multiple pathways.

**Biocriteria** - Under the Clean Water Act, numerical values or narrative expressions that define a desired biological condition for a water body that are legally enforceable. The U.S. EPA defines biocriteria as: "numerical values or narrative expressions that describe the reference biological integrity of aquatic communities inhabiting waters of a given designated aquatic life use...(that)...describe the characteristics of water body segments least impaired by human activities."

**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.

**Biomagnification** – The transfer and progressive increase in tissue concentrations of a contaminant along the food chain. Because some pollutants can be transferred to higher trophic levels, carnivores at the top of the food chain, such as predatory fish, birds, and mammals (including humans), obtain most of their pollution burden from aquatic ecosystems by ingestion. Thus, although such pollutants may only be present in receiving waters in low concentrations, they can have a significant impact to the integrity of the ecosystem through biomagnification.

**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) 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 Copermittees 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 state are affected."

**Designated Waste** - Designated waste is defined as a "nonhazardous waste which consists of pollutants which, under ambient environmental conditions at the waste management unit, could be released at concentrations in excess of applicable water quality objectives, or which could cause degradation of waters of the state." [CCR Title 27, Chapter 3, Subchapter 2, Article 2, Section 20210; WC Section 13173]

**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), but can also be narrative (e.g., no toxics in toxic amounts).

**Erosion** – When land is diminished or worn away due to 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 Waste** - Hazardous waste is 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, Article 1]

**Illicit Discharge** - Any discharge to a municipal separate storm sewer that is not composed entirely of storm water except discharges pursuant to a NPDES permit (other than the NPDES permit for discharges from the municipal separate storm sewer) and discharges resulting from fire fighting activities.

**Inert Waste** - Inert waste is defined as one that "does not contain hazardous waste or soluble pollutants at concentrations in excess of applicable water quality objectives, and does not contain significant quantities of decomposable waste." [CCR Title 27, Chapter 3, Subchapter 2, Article 2, Section 20230]

**MEP** – MEP is the acronym for Maximum Extent Practicable. 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 best management practices (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 Plan. Their total collective and individual activities conducted pursuant to the Urban Runoff 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 SDRWQCB, the SDRWQCB 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 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."*

**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 or 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)** - These permits pertain to the discharge of waste to surface waters only. All State and Federal NPDES permits are also WDRs.

**Non-hazardous Solid Waste** - Non-hazardous solid waste means all putrescible and nonputrescible solid, semi-solid, and liquid wastes, including garbage, trash, refuse, paper, rubbish, ashes, industrial wastes, demolition and construction wastes, abandoned vehicles and parts thereof, discarded home and industrial appliances, manure, vegetable or animal solid and

semi-solid wastes and other discarded solid or semi-solid waste; provided that such wastes do not contain wastes which must be managed as hazardous wastes, or wastes which contain soluble pollutants in concentration which exceed applicable water quality objectives or could cause degradation of waters of the state." [CCR Title 27, Chapter 3, Subchapter 2, Article 2, Section 20220]

**Non Point Source (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 State by waste, to a degree that unreasonably affects the 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.

**Pre-Development Runoff Conditions** - The runoff conditions that exist onsite immediately before the planned development activities occur. This definition is not intended to be interpreted as that period before any human-induced land activities occurred. This definition pertains to redevelopment as well as initial development.

**Receiving Water Limitations** - Waste discharge requirements issued by the SDRWQCB 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). The water quality objectives for toxicity provided in the Water Quality Control Plan, San Diego Basin, Region 9, (Basin Plan), state in part...*"All waters shall be free of toxic substances in concentrations that are toxic to, or that produce detrimental physiological responses in human, plant, animal, or aquatic life...The survival of aquatic life in surface waters subjected to a waste discharge or other controllable water quality factors, shall not be less than that for the same water body in areas unaffected by the waste discharge"...* Urban runoff discharges from MS4s are considered toxic when (1) the toxic effect observed in an acute toxicity test exceeds zero Toxic Units Acute ( $T_{ua}=0$ ); or (2) the toxic effect observed in a chronic toxicity test exceeds one Toxic Unit Chronic ( $T_{uc}=1$ ). Urban runoff discharges from MS4s often contain pollutants that cause toxicity.

**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 and 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."

A more comprehensive list of legal authority containing water quality objectives applicable to this Order can be found in Finding 37 and in Section VII Directives Discussion Underlying Broad Legal Authority for Order 2001-01 pp. 61-63.

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 State** - Any water, surface or underground, including saline waters within the boundaries of the State [California Water Code Section 13050 (e)]. The definition of the Waters of the State is broader than that for the Waters of the United States in that all water in the State is

considered to be a Waters of the State regardless of circumstances or condition. Under this definition, a Municipal Separate Storm Sewer System (MS4) is always considered to be a Waters of the State.

**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. Under this definition (see below), a Municipal Separate Storm Sewer System (MS4) is always considered a Waters of the United States.

As defined in the 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).

**ATTACHMENT E****DRY WEATHER ANALYTICAL AND FIELD SCREENING MONITORING SPECIFICATIONS - URBAN RUNOFF**

Dry weather analytical and field screening monitoring consists of (1) field observations; (2) field screening monitoring; and (3) analytical monitoring at selected stations. Pursuant to section F.5 of this Order, the purpose of dry weather analytical and field screening monitoring is to detect and eliminate illicit connections and illegal discharges to the MS4 using frequent, geographically widespread dry weather discharge monitoring and follow-up investigations. Each Copermitttee shall conduct the following dry weather analytical and field screening monitoring tasks:

**1. Develop MS4 Map**

Each Copermitttee shall develop or obtain an up-to-date labeled map of its entire municipal separate storm sewer system (MS4) and the corresponding drainage watersheds within its jurisdiction. The use of a Geographic Information System (GIS) is highly recommended, but not required. The accuracy of the MS4 map shall be confirmed during monitoring activities (See Task 6).

**2. Select Dry Weather Analytical Monitoring Stations**

Based upon a review of its past Dry Weather Monitoring Programs, each Copermitttee shall select dry weather analytical monitoring stations within its jurisdiction. Stations shall be either major outfalls or other outfall points (or any other point of access such as manholes) randomly located throughout the MS4 by placing a grid over a drainage system map and identifying those cells of the grid which contain a segment of the MS4 or major outfall; or, stations may be selected non-randomly provided adequate coverage of the entire MS4 system is ensured and that the selection of stations meets or exceeds the requirements given below. The dry weather analytical and field screening monitoring stations shall be established using the following guidelines and criteria:

- a. A grid system consisting of perpendicular north-south and east-west lines spaced  $\frac{1}{4}$  mile apart shall be overlaid on a map of the MS4, creating a series of cells;
- b. All cells that contain a segment of the MS4 shall be identified and one dry weather analytical monitoring station shall be selected in each cell;
- c. Stations should be located downstream of any sources of suspected illegal or illicit activity;
- d. Stations shall be located to the degree practicable at the farthest manhole or other accessible location downstream in the system within each cell;
- e. Hydrological conditions, total drainage area of the site, traffic density, age of the structures or buildings in the area, history of the area, and land use types shall be considered in locating stations;
- f. Determining Number of Stations: Based upon review of previous Dry Weather Monitoring Programs, each Copermitttee shall determine a minimum number of stations to be sampled each year with provisions for alternate stations to be sampled in place of selected stations that do not have flow.

**3. Complete MS4 Map**

Each Copermitttee shall clearly identify each dry weather analytical monitoring station on its MS4 Map as either a separate GIS layer or a map overlay hereafter referred to as a Dry Weather Analytical Stations Map. Each Copermitttee shall confirm that each drainage area within its jurisdiction contains at least one station.

4. Develop Dry Weather Analytical Monitoring Procedures

Each Copermittee shall develop written procedures for dry weather analytical and field screening monitoring (consistent with 40 CFR part 136), including field observations, monitoring, and analyses to be conducted at a minimum between May 1<sup>st</sup> and September 30<sup>th</sup> of each year. The dry weather analytical and field screening monitoring program shall be designed to emphasize frequent, geographically widespread monitoring to detect illicit discharges and illegal connections. At a minimum, the procedures must be based on the following guidelines and criteria:

- a. **Determining Sampling Frequency:** Dry weather analytical and field screening monitoring shall be conducted at each identified station at least once between May 1<sup>st</sup> and September 30<sup>th</sup> of each year or as often as the Copermittee determines is necessary to comply with the requirements of Section F.5 of the Order.
- b. If flow or ponded runoff is observed at a dry weather analytical monitoring station and there has been at least seventy-two (72) hours of dry weather, make observations and collect at least one (1) grab sample. Record general information such as time since last rain, quantity of last rain, site descriptions (i.e., conveyance type, dominant watershed land uses), flow estimation (i.e., width of water surface, approximate depth of water, approximate flow velocity, flow rate), and visual observations (i.e., odor, color, clarity, floatables, deposits/stains, vegetation condition, structural condition, and biology).
- c. At a minimum, collect samples for analytical laboratory analysis of the following constituents:
  - (1) Total Hardness
  - (2) Surfactants (MBAS)
  - (3) Oil and Grease
  - (4) Diazinon and Chlorpyrifos
  - (5) Cadmium (Dissolved)
  - (6) Copper (Dissolved)
  - (7) Lead (Dissolved)
  - (8) Zinc (Dissolved)
  - (9) Enterococcus bacteria
  - (10) Total Coliform bacteria
  - (11) Fecal Coliform bacteria
- d. At a minimum, conduct field screening analysis of the following constituents:
  - (1) Specific conductance (calculate estimated Total Dissolved Solids).
  - (2) Turbidity
  - (3) pH
  - (4) Reactive Phosphorous
  - (5) Nitrate Nitrogen
  - (6) Ammonia Nitrogen
- e. If the station is dry (no flowing or ponded runoff), make and record all applicable observations and select another station from the list of alternate stations for monitoring.
- f. Develop criteria for dry weather analytical and field screening monitoring results whereby exceedance of the criteria will require follow-up investigations to be conducted to identify the source causing the exceedance of the criteria.
- g. Dry weather analytical and field screening monitoring stations identified to exceed dry weather analytical monitoring criteria for any constituents shall continue to be screened in

subsequent years.

- h. Develop procedures for source identification follow up investigations in the event of exceedance of dry weather analytical and field screening monitoring result criteria. These procedures shall be consistent with procedures required in section F.5.c. of this Order.
- i. Develop procedures to eliminate detected illicit discharges and connections. These procedures shall be consistent with each Copermittees Illicit Discharge and Elimination component of its Jurisdictional Urban Runoff Management Plan as discussed in section F.5 of this Order.

5. Submit Dry Weather Analytical Monitoring Map and Procedures

Each Copermittee shall submit its dry weather analytical and field screening monitoring map (including the MS4, drainage watersheds, and station locations) and dry weather analytical monitoring procedures to the Principal Permittee as part of its Jurisdictional Urban Runoff Management Program Document on the date prescribed by the Principal Permittee. The procedures shall, at a minimum, address all issues included in sections 1-4 of this Attachment. The Principal Permittee shall collectively submit the dry weather monitoring analytical maps and procedures to the SDRWQCB within 365 days of adoption of this Order. Implementation of dry weather analytical monitoring under the requirements of this Order shall commence by May 1, 2002.

6. Conduct Dry Weather Analytical Monitoring

Until the Dry Weather Analytical and Field Screening Monitoring Program is implemented under the requirements of this Order, each Copermittee shall continue to implement the Dry Weather Monitoring Program most recently implemented pursuant to Order No. 90-42. Starting May 1, 2002, each Copermittee shall conduct dry weather analytical and field screening monitoring in accordance with its storm water conveyance system map and dry weather analytical and field screening monitoring procedures as described in Tasks 1 – 4 above. If monitoring indicates an illicit connection or illegal discharge, conduct the follow-up investigation and elimination activities as described in submitted dry weather analytical and field screening monitoring procedures and sections F.5.c. and F.5.d. of this Order.

During monitoring, the accuracy of its MS4 map and shall be confirmed. Correct any inaccuracies in the either the MS4 map or the Dry Weather Analytical Stations Map and resubmit the corrected maps in the next annual report.

7. Summarize and Report Dry Weather Analytical Monitoring Results

As part of its individual Jurisdictional URMP Annual Report, each Copermittee shall summarize and report on its dry weather analytical monitoring results. The data shall be presented in tabular and graphical form. The reporting shall include analytical monitoring results, as well as follow up and elimination activities for potential illicit discharges and connections. Dry weather analytical monitoring reports shall comply with all monitoring and standard reporting requirements in Attachments B and C of Order 2001-01. The Principal Permittee shall submit to the SDRWQCB the individual dry weather analytical monitoring reports as part of the unified Jurisdictional URMP Annual Report on January 31, 2003, and every year thereafter.

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
SAN DIEGO REGION  
ORDER NO. R9-2002-0001  
NPDES NO. CAS0108740**

**WASTE DISCHARGE REQUIREMENTS  
FOR DISCHARGES OF URBAN RUNOFF FROM  
THE MUNICIPAL SEPARATE STORM SEWER SYSTEMS (MS4s)  
DRAINING THE WATERSHEDS OF THE  
COUNTY OF ORANGE,  
THE INCORPORATED CITIES OF ORANGE COUNTY,  
AND THE  
ORANGE COUNTY FLOOD CONTROL DISTRICT  
WITHIN THE SAN DIEGO REGION**

The California Regional Water Quality Control Board, San Diego Region (hereinafter SDRWQCB), finds that:

1. **COPERMITTEES ARE DISCHARGERS OF URBAN RUNOFF:** Each of the persons in Table 1 below, hereinafter called Copermittees or dischargers, owns or operates a municipal separate storm sewer system (MS4), through which it discharges urban runoff into waters of the United States within the San Diego Region. The Copermittees serve a population of approximately 500,000 people within the San Diego Region. The MS4s operated by the Copermittees fall 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) a small MS4 that is “interrelated” to a medium or large MS4; or (3) an MS4 which contributes to a violation of a water quality standard; or (4) an MS4 which is a significant contributor of pollutants to waters of the United States.

Table 1. Municipal Copermittees

1.	City of Aliso Viejo	8.	City of Mission Viejo
2.	City of Dana Point	9.	City of Rancho Santa Margarita
3.	City of Laguna Beach	10.	City of San Clemente
4.	City of Lake Forest	11.	City of San Juan Capistrano
5.	City of Laguna Hills	12.	County of Orange
6.	City of Laguna Niguel	13.	Orange County Flood Control District
7.	City of Laguna Woods		

2. **URBAN RUNOFF CONTAINS “WASTE” AND IS A “POINT SOURCE DISCHARGE OF POLLUTANTS”:** Urban runoff contains waste, as defined in the California Water Code, and pollutants that adversely affect the quality of the waters of the State. The discharge of urban runoff from an MS4 is a “discharge of pollutants from a point source” into waters of the United States as defined in the Clean Water Act.
3. **URBAN DEVELOPMENT AND RUNOFF CAUSES RECEIVING WATER DEGRADATION:** Urban runoff discharges from MS4s are a leading cause of receiving water quality impairment in the San Diego Region and throughout the United States. As runoff flows over urban areas, it picks up harmful pollutants such as pathogens, sediment (resulting from human activities), fertilizers, pesticides, heavy metals, and petroleum products. These pollutants often become dissolved or suspended in urban runoff and are conveyed and discharged to receiving waters, such as streams, lakes, lagoons, bays, and the ocean without treatment. Once in receiving waters, these pollutants harm aquatic life primarily through toxicity and habitat degradation. Furthermore, the pollutants can enter the food chain and may eventually enter the tissues of fish and humans.

There is a strong direct correlation between "urbanization" and "impacts to receiving water quality". In general, the more heavily developed the area, the greater the impacts to receiving waters from urban runoff.

These impacts especially threaten environmentally sensitive areas (such as Clean Water Act section 303(d) impaired water bodies, areas designated as Areas of Special Biological Significance, water bodies designated with the RARE beneficial use, riparian or estuarine areas designated by the Copermittees as Critical Aquatic Resources (CARS), and regional parks and preserves containing receiving waters within the Cities and County of Orange). Such environmentally sensitive areas have a much lower capacity to withstand pollutant shocks than might be acceptable in the general circumstance. In essence, urban development that is ordinarily insignificant in its impact on the environment may, in a particularly sensitive environment, be significant.

- 4. URBAN DEVELOPMENT INCREASES POLLUTANT LOAD, VOLUME, AND VELOCITY OF RUNOFF:** During urban development two important changes occur. First, 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 a very effective natural purification process. Because pavement and concrete can neither absorb water nor remove pollutants, the natural purification characteristics of the land are lost.

Secondly, urban development creates new pollution sources as human population density increases and brings with it proportionately higher levels of car emissions, car maintenance wastes, municipal sewage, pesticides, household hazardous wastes, pet wastes, trash, etc. which can either be washed or directly dumped into the MS4.

As a result of these two changes, the runoff leaving the developed urban area is significantly greater in volume, velocity and pollutant load than the pre-development runoff from the same area.

The significance of the impacts of urban development on receiving waters is determined by the scope of the project, such as the size of the project, the project land-use type, etc. Large projects (such as commercial developments greater than 100,000 square feet, home subdivisions greater than 10 units, and streets, roads, highways, and freeways) generally have large amounts of impervious surface, and therefore have greater potential to significantly impact receiving waters by increasing erosion (through increased peak flow rates, flow velocities, flow volumes, and flow durations) than smaller projects. Projects of particular land use types also have greater potential to significantly impact receiving waters due to the presence of typically large amounts of pollutants on site or an increased potential for pollutants to move off site (such as automotive repair shops, restaurants, parking lots, streets, roads, highways, and freeways, hillside development, and retail gasoline outlets).

- 5. WATER QUALITY DEGRADATION INCREASES WITH PERCENT IMPERVIOUSNESS:** The increased volume and velocity of runoff from developed urban areas greatly accelerates the erosion of downstream natural channels. Numerous studies have demonstrated a direct correlation between the degree of imperviousness of an area and the degradation of its receiving water quality. Significant declines in the biological integrity and physical habitat of streams and other receiving waters have been found to occur with as little as a 10% conversion from natural to impervious surfaces. (Developments of medium density single family homes range between 25 to 60% impervious). Today "% impervious coverage" is believed to be a reliable indicator and predictor of the water quality degradation expected from planned new development.
- 6. URBAN RUNOFF IS A HUMAN HEALTH THREAT:** Urban runoff contains pollutants, which threaten human health. Human illnesses have been clearly linked to recreating (i.e., swimming, surfing, etc.) near storm drains flowing to coastal beach waters. Such flows from urban areas often result in the posting or closure of local beaches.

Pollutants transported to receiving waters by urban runoff can also enter the food chain. Once in the food chain they can "bioaccumulate" in the tissues of invertebrates (e.g., mussels, oysters, and

lobsters) and fish which may be eventually consumed by humans. Furthermore, some pollutants are also known to "biomagnify". This phenomenon can result in pollutant concentrations in the body fat of top predators that are millions of times greater than the concentrations in the tissues of their lower trophic (food chain) counterparts or in ambient waters.

7. **POLLUTANT TYPES:** The most common categories of pollutants in urban runoff include total suspended solids, sediment (due to anthropogenic activities); 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 trash.
8. **URBAN STREAMS AS AN MS4 COMPONENT:** Historic and current development make use of natural drainage patterns and features as conveyances for urban runoff. Urban streams used in this manner are both MS4s and receiving waters.
9. **URBAN RUNOFF CAUSES BENEFICIAL USE IMPAIRMENT:** Individually and in combination, the discharge of pollutants and increased flows from MS4s can cause or threaten to cause a condition of pollution (i.e., unreasonable impairment of water quality for designated beneficial uses), contamination, or nuisance. The discharge of pollutants from MS4s can cause the concentration of pollutants to exceed applicable receiving water quality objectives and impair or threaten to impair designated beneficial uses. The discharge of urban runoff may also impact the physical habitat of receiving waters. Significant stream channel incision and bank erosion is a feature common in the Aliso Creek watershed and other drainages in Orange County and may be caused in part by changes in peak flow rates and volumes resulting from urban development. Preliminary results of the Ambient Bioassessment Monitoring Program in Aliso Creek and San Juan Creek in 1998 and 1999 indicate impacts to the benthic community that may be the result of water quality and habitat degradation.
10. **COPERMITTEES IMPLEMENT URBAN RUNOFF MANAGEMENT PROGRAMS (URMPs):** Copermittee implementation of Urban Runoff Management Programs (URMPs) designed to reduce discharges of pollutants and flow into and from MS4s to the maximum extent practicable (MEP) can protect receiving water quality by promoting attainment of water quality objectives necessary to support designated beneficial uses. To be most effective, URMPs must contain both structural and non-structural best management practices (BMPs).
11. **BEST MANAGEMENT PRACTICES (BMPs):** Pollutants can be effectively reduced in urban runoff by the application of a combination of pollution prevention, source control, and treatment control BMPs. Source control BMPs (both structural and non-structural) minimize the contact between pollutants and flows (e.g., rerouting run-on around pollutant sources or keeping pollutants on-site and out of receiving waters). Treatment control (or structural) BMPs remove pollutants from urban runoff. Where feasible, use of BMPs that utilize natural processes should be assessed. These types of BMPs, such as grassy swales and constructed wetlands, can frequently be as effective as less natural BMPs, while providing additional benefits such as aesthetics and habitat.
12. **POLLUTION PREVENTION:** Pollution prevention, the initial reduction/elimination of pollutant generation at its source, is the best "first line of defense" for Copermittees and should be used in conjunction with source control and treatment control BMPs. Pollutants that are never generated do not have to be controlled or treated. Encouragement during planning processes of the use of pollution prevention BMPs can be an effective means for pollution prevention BMPs to be implemented, through such methods as education, landscaping, etc.
13. **RECEIVING WATER LIMITATIONS:** Compliance with receiving water limits based on applicable water quality objectives is necessary to ensure that MS4 discharges will not cause or contribute to violations of water quality objectives and the creation of conditions of pollution.

14. **RECEIVING WATER LIMITATION COMPLIANCE STRATEGY:** Implementation of BMPs cannot ensure attainment of receiving water quality objectives under all circumstances; some BMPs may not prove to be as effective as anticipated. An iterative process of BMP development, implementation, monitoring, and assessment is necessary to assure that an Urban Runoff Management Program is sufficiently comprehensive and effective to achieve compliance with receiving water quality objectives.
15. **COPERMITTEES' RESPONSIBILITY FOR ILLICIT DISCHARGES FROM THIRD PARTIES:** As operators of MS4s, the Copermittees cannot passively receive and discharge pollutants from third parties. By providing free and open access to an MS4 that conveys discharges to the waters of the United States, the operator of an MS4 that does not prohibit and/or control discharges into its system essentially accepts responsibility for those discharges. These discharges may cause or contribute to a condition of contamination or exceedances of receiving water quality objectives.
16. **COPERMITTEES' RESPONSIBILITY BASED ON LAND USE AUTHORITY:** Utilizing their land use authority, Copermittees authorize and realize benefits from the urban development which generates the pollutants and runoff that impair receiving waters. Since the Copermittees utilize their legal authority to authorize urbanization, they must also exercise their legal authority to ensure that the resulting increased pollutant loads and flows do not further degrade receiving waters.
17. **THREE PHASES OF URBAN DEVELOPMENT:** Urban development has three major phases: (1) land use planning for new development; (2) construction; and (3) the "use" or existing development phase. Because the Copermittees authorize, permit, and realize benefits from each of these phases, and because each phase has a profound impact on water quality, the Copermittees have commensurate responsibilities to protect water quality during each phase. In other words, Copermittees are held responsible for the short and long-term water quality consequences of their land use planning, construction, and existing development decisions.
18. **PLANNING PHASE FOR NEW DEVELOPMENT:** Because land use planning and zoning is where urban development is conceived, it is the phase in which the greatest and most cost-effective opportunities to protect water quality exists. When a Copermittee incorporates policies and principles designed to safeguard water resources into its General Plan and development project approval processes, it has taken a far-reaching step towards the preservation of local water resources for future generations.
19. **CONSTRUCTION PHASE:** Construction activities are a significant cause of receiving water impairment. Siltation is currently the largest cause of river impairment in the United States. Sediment runoff rates from construction sites greatly exceed natural erosion rates of undisturbed lands causing siltation and impairment of receiving waters. In addition to requiring implementation of the full range of BMPs, an effective construction runoff program must include local plan review, permit conditions, field inspections, and enforcement.
20. **EXISTING DEVELOPMENT:** The Copermittees' wet weather monitoring results collected during the past decade, as well as volumes of other references in the literature today, confirm substantial pollutant loads to receiving waters in runoff from existing urban development. Implementation of jurisdictional and watershed URMPs, which include extensive controls on existing development, can reduce pollutant loadings over the long term.
21. **CHANGES NEEDED:** Because the urbanization process is a direct and leading cause of water quality degradation in this Region, fundamental changes to existing policies and practices about urban development are needed if the beneficial uses of the San Diego Region's natural water resources are to be protected.
22. **DUAL REGULATION OF INDUSTRIAL AND CONSTRUCTION SITES:** Discharges of runoff from industrial and construction sites in this Region are subject to dual (state and local) regulation. (1) All industries and construction sites are subject to the local permits, plans, and ordinances of the municipal jurisdiction in which it is located. Pursuant to this Order, local (storm water, grading,

construction, and use) permits, plans, and ordinances must (a) prohibit the discharge of pollutants and non-storm water into the MS4; and (b) require the routine use of BMPs to reduce pollutants in site runoff. (2) Many industries and construction sites are also subject to regulation under the statewide General Industrial Storm Water Permit or statewide General Construction Storm Water Permit<sup>1</sup>. These statewide general permits are adopted by the State Water Resources Control Board and enforced by the nine Regional Water Quality Control Boards throughout California. Like the Copermittees' local permits and ordinances, the statewide General Industrial and Construction Permits also (a) prohibit the discharge of pollutants and non-storm water; and (b) require the routine use of BMPs to reduce pollutants in site runoff.

Recognizing that both authorities share a common goal, the federal storm water regulations at 40 CFR 122.26 (and its preamble) call for the dual system to ensure the most effective oversight of industrial and construction site discharges. Under this dual system, each municipal Copermittee is responsible for enforcing its local permits, plans, and ordinances within its jurisdiction. Similarly, the SDRWQCB is responsible for enforcing both statewide general permits and this Order within the San Diego Region.

23. **EDUCATION:** Education is the foundation of every effective URMP and the basis for changes in behavior at a societal level. Education of municipal planning, inspection, and maintenance department staffs is especially critical to ensure that in-house staffs 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 impact receiving water quality and how these impacts can be minimized. The proposed Drainage Area Management Plan (DAMP) that was submitted to the SDRWQCB by the Orange County Copermittees in September 2000 has a strong emphasis on education measures.
24. **ENFORCING LOCAL LEGAL AUTHORITY:** Enforcement of local urban runoff related ordinances, permits, and plans is an essential component of every URMP and is specifically required in the federal storm water regulations and this Order. Routine inspections provide an effective means by which Copermittees can evaluate compliance with their permits and ordinances. Inspections are especially important at high-risk areas for pollutant discharges such as industrial and construction sites.
- When industrial or construction site discharges occur in violation of local permits and ordinances, the SDRWQCB looks to the municipality that has authorized the discharge for appropriate actions (typically education followed by enforcement where education has been unsuccessful). Each Copermittee must also provide enforcement against illegal discharges from other land uses it has authorized, such as commercial and residential developments.
25. **PUBLIC PARTICIPATION:** Public participation during the URMP development process is necessary to ensure that all stakeholder interests and a variety of creative solutions are considered.
26. **TOXICITY:** Urban runoff discharges from MS4s often contain pollutants that cause toxicity, (i.e., adverse responses of organisms to chemicals or physical agents ranging from mortality to physiological responses such as impaired reproduction or growth anomalies). The water quality objectives for toxicity provided in the Water Quality Control Plan, San Diego Basin, Region 9, (Basin Plan), state in part *"All waters shall be free of toxic substances in concentrations that are toxic to, or that produce detrimental physiological responses in human, plant, animal, or aquatic life.... The survival of aquatic life in surface waters subjected to a waste discharge or other controllable water quality factors, shall not be less than*

<sup>1</sup> The "statewide General Industrial Storm Water Permit" refers to State Water Resources Control Board Water Quality Order No. 97-03-DWQ National Pollutant Discharge Elimination System General Permit No. CAS000001, Waste Discharge Requirements for Discharges of Storm Water Associated with Industrial Activities Excluding Construction Activities. The "statewide General Construction Storm Water Permit" refers to State Water Resources Control Board Order No. 99-08-DWQ National Pollutant Discharge Elimination System General Permit No. CAS000002, Waste Discharge Requirements for Discharges of Storm Water Runoff Associated with Construction Activity.

*that for the same water body in areas unaffected by the waste discharge...*” Urban runoff discharges from MS4s are considered toxic when (1) the toxic effect observed in an acute toxicity test exceeds zero Toxic Units Acute (TU<sub>a</sub>=0); or (2) the toxic effect observed in a chronic toxicity test exceeds one Toxic Unit Chronic (TU<sub>c</sub>=1).

**27. FOCUS ON MAN-MADE POLLUTANTS AND FLOWS:** The focus of this Order is on the control of urban runoff pollutants and flows, which are either generated or accelerated by human activities. This Order is not meant to control background or naturally occurring pollutants and flows.

**28. COMMON WATERSHEDS AND CWA SECTION 303(d) IMPAIRED WATERS:** The Copermittees discharge urban runoff into lakes, streams, creeks, bays, the Pacific Ocean, and tributaries thereto within six hydrologic areas within Orange County as shown in Table 2 below. During its downstream course, urban runoff is conveyed through lined and unlined (natural, manmade, and partially modified) channels, all of which are defined as components of the Copermittees’ MS4.

Some of the receiving water bodies listed below, which receive or convey urban runoff discharges, have been designated as impaired by the SDRWQCB and USEPA in 1998 pursuant to Clean Water Act section 303(d). Additional water bodies may be listed during the term of this Order pursuant to Clean Water Act section 303(d) as impaired as more information is collected and analyzed.

Table 2. Watershed Management Areas (WMAs)

SDRWQCB WATERSHED MANAGEMENT AREA (WMA)	HYDROLOGIC UNIT(S)	MAJOR SURFACE WATER BODIES	303(d) POLLUTANT(S) OF CONCERN OR WATER QUALITY EFFECT	COPERMITTEES
San Juan Creek WMA	San Juan Hydrologic Unit (901.00)	Moro Canyon Creek Laguna Canyon Creek Aliso Creek English Canyon Creek Sulphur Creek Wood Canyon Creek Salt Creek San Juan Creek Bell Canyon Creek Canada Gobernadora Arroyo Trabuco Oso Creek Prima Deshecha Canada Segunda Deshecha Canada Pacific Ocean	1. Coliform Bacteria	1. County of Orange 2. City of Aliso Viejo 3. City of Dana Point 4. City of Laguna Beach 5. City of Lake Forest 6. City of Laguna Hills 7. City of Laguna Niguel 8. City of Laguna Woods 9. City of Mission Viejo 10. City of Rancho Santa Margarita 11. City of San Juan Capistrano 12. City of San Clemente 13. Orange County Flood Control District

**29. CUMULATIVE POLLUTANT LOAD CONTRIBUTIONS:** Because they are interconnected, each MS4 within a watershed contributes to the cumulative pollutant loading, volume, and velocity of urban runoff and the ensuing degradation of downstream receiving water bodies. Accordingly, inland MS4s contribute to coastal impairments.

**30. LAND USE PLANNING ON A WATERSHED SCALE:** Because urban runoff does not recognize political boundaries, “watershed-based” land use planning (pursued collaboratively by neighboring local governments) can greatly enhance the protection of shared natural water resources. Such planning enables multiple jurisdictions to work together to plan for both development and resource conservation that can be environmentally as well as economically sustainable.

**31. INTERGOVERNMENTAL COORDINATION:** Within their common watersheds it is essential for the Copermittees to coordinate their water quality protection and land use planning activities to achieve the greatest protection of receiving water bodies. Copermittee coordination with other watershed stakeholders, especially CALTRANS and the Department of Defense is also critical.

Continued implementation of the management structure developed under previous permits, within which the Copermittees subject to this Order, will fund and coordinate those aspects of their joint obligations will promote implementation of Urban Runoff Management Programs on a watershed and regional basis in the most cost effective manner.

32. **WASTE REMOVAL:** Waste and pollutants which are deposited and accumulate in MS4 drainage structures will be discharged from these structures to waters of the United States unless they are removed. These discharges may cause or contribute to, or threaten to cause or contribute to, a condition of pollution in receiving waters. Once removed, such accumulated wastes must be characterized and lawfully disposed.
33. **CHANGING THE STORM WATER MANAGEMENT APPROACH:** In contrast to the conventional "conveyance" approach, a more natural approach to storm water management seeks to filter and infiltrate runoff by allowing it to flow slowly over permeable vegetated surfaces. By "preserving and restoring the natural hydrologic cycle", filtration and infiltration can greatly reduce the volume/peak rate, velocity, and pollutant loads of urban runoff. The greatest opportunities for changing from a "conveyance" to a more natural management approach occur during the land use planning and zoning processes and when new development projects are under early design.
34. **INFILTRATION AND POTENTIAL GROUNDWATER CONTAMINATION:** Any drainage feature that infiltrates runoff poses some risk of potential groundwater contamination. Although dependent on several factors, the risks typically associated with properly managed infiltration of runoff (especially from residential land use areas) are not significant. The risks associated with infiltration can be managed by many techniques, including (1) designing landscape drainage features that promote infiltration of runoff, but do not "inject" runoff (injection bypasses the natural processes of filtering and transformation that occur in the soil); (2) taking reasonable steps to prevent the illegal disposal of wastes; and (3) ensuring that each drainage feature is adequately maintained in perpetuity. Minimum conditions needed to protect groundwater are specified in section F.1.b. of this Order.
35. **VECTOR CONTROL:** Certain BMPs implemented or required by municipalities for urban runoff management may create a habitat for vectors (e.g. mosquitoes and rodents) if not properly designed or maintained. Close collaboration and cooperative effort between municipalities and local vector control agencies and the State Department of Health Services during the development and implementation of the Urban Runoff Management Programs is necessary to minimize nuisances and public health impacts resulting from vector breeding.
36. **LEGAL AUTHORITY:** This Order is based on the federal Clean Water Act, 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, the Regional Water Quality Control Plan (Basin Plan) adopted by the Regional Board, the California Toxics Rule, and the California Toxics Rule Implementation Plan.
37. **TOTAL MAXIMUM DAILY LOADS (TMDLs):** 40 CFR 122.44 (d)(vii)(B) requires that NPDES permits contain effluent limitations that are consistent with waste load allocations developed under a TMDL. Several TMDLs are being developed in the San Diego Region for impaired water bodies that receive Copermittees' discharge. Once these TMDLs are approved by the SDRWQCB and USEPA, Copermittees' discharge of urban runoff into an impaired water body will be subject to load allocations established by the TMDLs. This Order may be revised by the Regional Board to implement the TMDL waste load allocations for specific water bodies within the Orange County watersheds.
38. **ANTIDegradation:** Conscientious implementation of URMPs that satisfy the requirements contained in this Order will reduce the likelihood that discharges from MS4s will cause or contribute to unreasonable degradation of the quality of receiving waters. Therefore, this Order is in

conformance with SWRCB Resolution No. 68-16 and the federal antidegradation policy described in 40 CFR 131.12.

39. **CEQA:** The issuance of waste discharge requirements for the discharge of urban runoff from MS4s to waters of the United States is exempt from the requirement for preparation of environmental documents under the California Environmental Quality Act (CEQA) (Public Resources Code, Division 13, Chapter 3, § 21000 et seq.) in accordance with the CWC § 13389.
40. **COMMON INTEREST DEVELOPMENTS AND HOMEOWNERS ASSOCIATIONS:** Common interest developments occur within the jurisdiction of the Copermittees. Commonly owned areas can include those used to convey urban runoff. State Law (Civil code 1350-1376) requires that an association be established to manage the commonly owned areas. Urban runoff from storm water conveyance systems within common interest developments is discharged to receiving waters and/or MS4s. This runoff is expected to have water quality and quantity characteristics similar to runoff from areas of similar land use and drainage area.
41. **REPORT OF WASTE DISCHARGE:** In September 2000, the Orange County Copermittees submitted a Report of Waste Discharge and a proposed Drainage Area Management Plan (DAMP) for 2001-2006 to the SDRWQCB.
42. **PUBLIC NOTICE:** The SDRWQCB has notified the Copermittees, all known interested parties, and the public of its intent to consider adoption of an Order prescribing waste discharge requirements that would serve to renew an NPDES permit for the existing discharge of urban runoff.
43. **PUBLIC HEARING:** The SDRWQCB has, at a public meeting on January 9, 2002, held a public hearing and heard and considered all comments pertaining to the terms and conditions of this Order.

**IT IS HEREBY ORDERED** that the Copermittees, 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 and regulations adopted thereunder, shall each comply with the following:

**A. PROHIBITIONS -- DISCHARGES**

1. Discharges into and from MS4s in a manner causing, or threatening to cause, a condition of pollution, contamination, or nuisance (as defined in CWC § 13050), in waters of the state are prohibited.
2. Discharges from MS4s that cause or contribute to exceedances of receiving water quality objectives for surface water or groundwater are prohibited.
3. Discharges from MS4s containing pollutants which have not been reduced to the maximum extent practicable (MEP) are prohibited.
4. In addition to the above prohibitions, discharges from MS4s are subject to all Basin Plan prohibitions cited in **Attachment A** to this Order.

**B. PROHIBITIONS -- NON-STORM WATER DISCHARGES**

1. Each Copermittee shall effectively prohibit **all** types of non-storm water discharges into its Municipal Separate Storm Sewer System (MS4) unless such discharges are either authorized by a separate NPDES permit; or not prohibited in accordance with B.2. and B.3. below.
2. Pursuant to 40 CFR 122.26(d)(2)(iv)(B)(1), the following categories of non-storm water discharges need only be prohibited from entering an MS4 if such categories of discharges are identified by the Copermittee as a significant source of pollutants to waters of the United States:

- a. Diverted stream flows;
  - b. Rising ground waters;
  - c. Uncontaminated ground water infiltration [as defined at 40 CFR 35.2005(20)] to MS4s;
  - d. Uncontaminated pumped ground water;
  - e. Foundation drains;
  - f. Springs;
  - g. Water from crawl space pumps;
  - h. Footing drains;
  - i. Air conditioning condensation;
  - j. Flows from riparian habitats and wetlands;
  - k. Water line flushing;
  - l. Landscape irrigation;
  - m. Discharges from potable water sources other than water main breaks;
  - n. Irrigation water;
  - o. Lawn watering;
  - p. Individual residential car washing; and
  - q. Dechlorinated swimming pool discharges.
3. When a discharge category above is identified as a significant source of pollutants to waters of the United States, the Copermittee shall either:
- a. Prohibit the discharge category from entering its MS4; **OR**
  - b. Not prohibit the discharge category and implement, or require the responsible party(ies) to implement, BMPs which will reduce pollutants to the MEP; **AND**
  - c. For each discharge category not prohibited, the Copermittee shall submit the following information to the SDRWQCB within **365 days** of adoption of this Order:
    - (1) The non-storm water discharge category listed above which the Copermittee elects not to prohibit; and
    - (2) The BMP(s) for each discharge category listed above which the Copermittee will implement, or require the responsible party(ies) to implement, to prevent or reduce pollutants to the MEP.
4. **Fire Fighting Flows:** Emergency and non-emergency fire fighting flows need not be prohibited. However, where applicable, when not interfering with health and safety issues, BMPs for non-emergency fire fighting flows are encouraged.
5. **Dry Weather Monitoring and Non-Storm Water Discharges:** Each Copermittee shall examine all dry weather monitoring results collected in accordance with section F.5. and Attachment E of this Order to identify water quality problems which may be the result of any non-prohibited discharge category(ies) identified above in Non-Storm Water Discharges to MS4s Prohibition B.2. Follow-up investigations shall be conducted as necessary to identify and control any non-prohibited discharge category(ies) listed above.

### C. RECEIVING WATER LIMITATIONS

1. Discharges from MS4s that cause or contribute to the violation of water quality standards (designated beneficial uses and water quality objectives developed to protect beneficial uses) are prohibited.
2. Each Copermittee shall comply with Part C.1., Part A.2, and Part A.4 as it applies to Prohibition 5 in Attachment A of this Order through timely implementation of control measures and other actions to

reduce pollutants in urban runoff discharges in accordance with the Jurisdictional Urban Runoff Management Program (Jurisdictional URMP) and other requirements of this Order including any modifications. The Jurisdictional URMP shall be designed to achieve compliance with Part C.1., Part A.2, and Part A.4 as it applies to Prohibition 5 in Attachment A of this Order. If exceedance(s) of water quality standards persist notwithstanding implementation of the URMP and other requirements of this Order, the Copermittee shall assure compliance with Part C.1., Part A.2, and Part A.4 as it applies to Prohibition 5 in Attachment A of this Order by complying with the following procedure:

- a. Upon a determination by either the Copermittee or the SDRWQCB that MS4 discharges are causing or contributing to an exceedance of an applicable water quality standard, the Copermittee shall promptly notify and thereafter submit a report to the SDRWQCB 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 Jurisdictional URMP unless the SDRWQCB directs an earlier submittal. The report shall include an implementation schedule. The SDRWQCB may require modifications to the report;
- b. Submit any modifications to the report required by the SDRWQCB within 30 days of notification;
- c. Within 30 days following approval of the report described above by the SDRWQCB, the Copermittee shall revise its Jurisdictional URMP 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 Jurisdictional URMP and monitoring program in accordance with the approved schedule.

So long as the Copermittee has complied with the procedures set forth above and are implementing the revised Jurisdictional URMP, the Copermittee does not have to repeat the same procedure for continuing or recurring exceedances of the same receiving water limitations unless directed by the SDRWQCB to do so.

3. Nothing in this section shall prevent the SDRWQCB from enforcing any provision of this Order while the Copermittee prepares and implements the above report.

#### D. LEGAL AUTHORITY

1. Each Copermittee shall establish, maintain, and enforce adequate legal authority to control pollutant discharges **into** and **from** its MS4 through ordinance, statute, permit, contract or similar means. This legal authority must, at a minimum, authorize the Copermittee to:
  - a. Control the contribution of pollutants in discharges of runoff associated with industrial and construction activity **to** its MS4 and control the quality of runoff **from** industrial and construction sites. This requirement applies both to industrial and construction sites that have coverage under the statewide general industrial or construction storm water permits, as well as to those sites that do not. Grading ordinances shall be upgraded and enforced as necessary to comply with this Order.
  - b. Prohibit **all** identified illicit discharges not otherwise allowed pursuant to section B.2 including but not limited to:
    - (1) Sewage;

- (2) Discharges of wash water resulting from the hosing or cleaning of gas stations, auto repair garages, or other types of automotive services facilities;
  - (3) Discharges resulting from the cleaning, repair, or maintenance of any type of equipment, machinery, or facility including motor vehicles, cement-related equipment, and port-a-potty servicing, etc.;
  - (4) Discharges of wash water from mobile operations such as mobile automobile washing, steam cleaning, power washing, and carpet cleaning, etc.;
  - (5) Discharges of wash water from the cleaning or hosing of impervious surfaces in municipal, industrial, commercial, and residential areas including parking lots, streets, sidewalks, driveways, patios, plazas, work yards and outdoor eating or drinking areas, etc.;
  - (6) Discharges of runoff from material storage areas containing chemicals, fuels, grease, oil, or other hazardous materials;
  - (7) Discharges of pool or fountain water containing chlorine, biocides, or other chemicals; discharges of pool or fountain filter backwash water;
  - (8) Discharges of sediment, pet waste, vegetation clippings, or other landscape or construction-related wastes; and
  - (9) Discharges of food-related wastes (e.g., grease, fish processing, and restaurant kitchen mat and trash bin wash water, etc.).
- c. Prohibit and eliminate illicit connections to the MS4;
  - d. Control the discharge of spills, dumping, or disposal of materials other than storm water to its MS4;
  - e. Require compliance with conditions in Copermittee ordinances, permits, contracts or orders (i.e., hold dischargers to its MS4 accountable for their contributions of pollutants and flows);
  - f. Utilize enforcement mechanisms to require compliance with Copermittee storm water ordinances, permits, contracts, or orders;
  - g. Control the contribution of pollutants from one portion of the shared MS4 to another portion of the MS4 through interagency agreements among Copermittees. Control of the contribution of pollutants from one portion of the shared MS4 to another portion of the MS4 through interagency agreements with other owners of the MS4 such as CALTRANS, Native American Tribes, and the Department of Defense is encouraged;
  - h. Carry out all inspections, surveillance, and monitoring necessary to determine compliance and noncompliance with local ordinances and permits and with this Order, including the prohibition on illicit discharges to the MS4. This means the Copermittee must have authority to enter, sample, inspect, review and copy records, and require regular reports from industrial facilities discharging into its MS4, including construction sites; and
  - i. Require the use of best management practices (BMPs) to prevent or reduce the discharge of pollutants to MS4s.
2. Within **365 days** of adoption of this Order, each Copermittee shall provide to the SDRWQCB a statement certified by its chief legal counsel that the Copermittee has adequate legal authority to

implement and enforce each of the requirements contained in 40 CFR 122.26(d)(2)(i)(A-F) and this Order. This statement shall include:

- a. Identification of all departments within the jurisdiction that conduct urban runoff related activities, and their roles and responsibilities under this Order. Include an up to date organizational chart specifying these departments and key personnel;
- b. Citation of urban runoff related ordinances and the reasons they are enforceable;
- c. Identification of the local administrative and legal procedures available to mandate compliance with urban runoff related ordinances and therefore with the conditions of this Order;
- d. Description of how these ordinances are implemented and appealed; and
- e. Description of whether the municipality can issue administrative orders and injunctions or if it must go through the court system for enforcement actions.

**E. TECHNOLOGY BASED STANDARDS**

Each Copermittee shall implement, or require implementation of, best management practices to ensure that the following pollutant discharges **into** and/or **from** its MS4 are reduced to the applicable technology based standard as specified below:

Table 3. Technology Based Standards<sup>2</sup>

POLLUTANT DISCHARGE FROM	DESCRIPTION	APPLICABLE PERFORMANCE STANDARD
Industrial Activity <u>owned by the Copermittee</u>	Categorical Industry in 40 CFR 122.26	The Copermittees are required to implement BMPs to the BAT/BCT standard (pursuant to Statewide General Industrial Permit)
Industrial Activity	All other industry	The Copermittees are required to implement or require the implementation of BMPs to the MEP standard for discharges into their MS4s. <sup>3</sup>
Construction Activity <u>owned by the Copermittee</u>	Greater than or Equal to 5 Acres (or less than 5 acres and Part of a Larger Common Plan of Sale or Development)	The Copermittees are required to implement BMPs to the BAT/BCT standard (pursuant to Statewide General Construction Permit)
Construction Activity	All Other construction	The Copermittees are required to implement or require the implementation of BMPs to the MEP standard for discharges into their MS4s <sup>4</sup>
Other Sources	All Other Land Use Activities	The Copermittees are required to implement or require the implementation of BMPs to the MEP standard for discharges into their MS4s
MS4s	All discharges from MS4s	The Copermittees are required to implement or require the implementation of BMPs to the MEP standard for all discharges from their MS4s

<sup>2</sup> Pursuant to this Order, each Copermittee shall ensure that pollutants in runoff from industrial and construction sites within its jurisdiction have been reduced to the MEP standard before entering its MS4. The industrial and construction site dischargers themselves however must ensure that pollutants in runoff leaving their sites have been reduced to the BAT/BCT standard pursuant to either the statewide General Industrial or Construction Storm Water Permit. Runoff from industrial and construction sites owned by municipalities and subject to either the General Industrial or Construction Storm Water Permits, must meet the BAT/BCT standard.

<sup>3</sup> The facility operator is required to implement BMPs to the BAT/BCT standard pursuant to the Statewide General Industrial permit.

<sup>4</sup> The facility operator is required to implement BMPs to the BAT/BCT standard pursuant to the Statewide General Construction permit.

**F. JURISDICTIONAL URBAN RUNOFF MANAGEMENT PROGRAM**

Each Copermittee shall take appropriate actions to reduce discharges of pollutants and runoff flow during each of the three major phases of urban development, i.e., the planning, construction, and existing development (or use) phases. Following the adoption of the Order and prior to the full implementation of the Jurisdictional URMP, each Copermittee shall at a minimum implement the provisions and commitments of the proposed DAMP submitted in September 2000.

Each Copermittee shall implement a Jurisdictional Urban Runoff Management Program (Jurisdictional URMP) that contains the components shown below as described in Sections F.1. through F.9:

- F.1. Land-Use Planning for New Development and Redevelopment Component**
- F.2. Construction Component**
- F.3. Existing Development Component**
  - a. Municipal**
  - b. Industrial**
  - c. Commercial**
  - d. Residential**
- F.4. Education Component**
- F.5. Illicit Discharge Detection and Elimination Component**
- F.6. Common Interest Areas and Homeowners Associations**
- F.7. Public Participation Component**
- F.8. Assessment of Jurisdictional URMP Effectiveness Component**
- F.9. Fiscal Analysis Component**

***F.1. Land-Use Planning for New Development and Redevelopment Component***

Each Copermittee shall minimize the short and long-term impacts on receiving water quality from new development and redevelopment. In order to reduce pollutants and runoff flows from new development and redevelopment to the maximum extent practicable, each Copermittee shall at a minimum:

- F.1.a Assess General Plan
- F.1.b Modify Development Project Approval Processes
- F.1.c Revise Environmental Review Processes
- F.1.d Conduct Education Efforts Focused on New Development and Redevelopment

***F.1.a. Assess General Plan***

Each Copermittee's General Plan or equivalent plan (e.g., Comprehensive, Master, or Community Plan) shall include water quality and watershed protection principles and policies to direct land-use decisions and require implementation of consistent water quality protection measures for development projects. As part of its Jurisdictional Urban Runoff Management Program document, each Copermittee shall provide a workplan with time schedule detailing any changes to its General Plan regarding water quality and watershed protection. Examples of water quality and watershed protection principles and policies to be considered include the following:

- (1) Minimize the amount of impervious surfaces and directly connected impervious surfaces in areas of new development and redevelopment and where feasible slow runoff and maximize on-site infiltration of runoff.
- (2) Implement pollution prevention methods supplemented by pollutant source controls and treatment. Use small collection strategies located at, or as close as possible to, the source (i.e., the point where water initially meets the ground) to minimize the transport of urban runoff and pollutants offsite and into an MS4.

- (3) Preserve, and where possible, create or restore areas that provide important water quality benefits, such as riparian corridors, wetlands, and buffer zones. Encourage land acquisition of such areas.
- (4) Limit disturbances of natural water bodies and natural drainage systems caused by development including roads, highways, and bridges.
- (5) Prior to making land use decisions, utilize methods available to estimate increases in pollutant loads and flows resulting from projected future development. Require incorporation of structural and non-structural BMPs to mitigate the projected increases in pollutant loads and flows.
- (6) Avoid development of areas that are particularly susceptible to erosion and sediment loss; or establish development guidance that identifies these areas and protects them from erosion and sediment loss.
- (7) Reduce pollutants associated with vehicles and increasing traffic resulting from development. Coordinate local traffic management reduction efforts with Orange County Transit Authority's Congestion Management Plan.
- (8) Post-development runoff from a site shall not contain pollutant loads that cause or contribute to an exceedance of receiving water quality objectives and which have not been reduced to the maximum extent practicable.

F.1.b. Modify Development Project Approval Processes

Prior to project approval and issuance of local permits, Copermittees shall require each proposed project to implement measures to ensure that pollutants and runoff from the development will be reduced to the maximum extent practicable and will not cause or contribute to an exceedance of receiving water quality objectives. Each Copermittee shall further ensure that all development will be in compliance with Copermittee storm water ordinances, local permits, all other applicable ordinances and requirements, and this Order.

(1) *Development Project Requirements*

Each Copermittee shall include development project requirements in local permits to ensure that pollutant discharges from development are reduced to the maximum extent practicable, peak runoff velocities and runoff volumes from development are controlled, and that receiving water quality objectives are not violated throughout the life of the project. Such requirements shall, at a minimum:

- (a) Require project proponent to implement source control BMPs for all applicable development projects.
- (b) Require project proponent to implement site design/landscape characteristics where feasible which maximize infiltration, provide retention, slow runoff, and minimize impervious land coverage for all development projects.
- (c) Require project proponent to implement buffer zones for natural water bodies, where feasible. Where buffer zone implementation is infeasible, require project proponent to implement other buffers such as trees, lighting restrictions, access restrictions, etc.
- (d) Require industrial applicants subject to California's statewide General NPDES Permit for Storm Water Discharges Associated with Industrial Activities (Except Construction), (hereinafter General Industrial Permit), to provide evidence of coverage under the General Industrial Permit.
- (e) Require project proponent to ensure its grading or other construction activities meet the provisions specified in Section F.2. of this Order.

- (f) Require project proponent to provide proof of a mechanism which will ensure ongoing long-term maintenance of all structural post-construction BMPs.

(2) *Standard Urban Storm Water Mitigation Plans (SUSMPs)*

Within 365 days of adoption of this Order, the Copermittees shall collectively develop a model Standard Urban Storm Water Mitigation Plan (SUSMP) to reduce pollutants and to maintain or reduce downstream erosion and stream habitat from all new development and significant redevelopment projects falling under the priority project categories or locations listed in section F.1.b.(2)(a) below. The Copermittees shall submit the model SUSMP to the SDRWQCB. Within 180 days of development of the model SUSMP, each Copermittee shall adopt its own local SUSMP, and amended ordinances consistent with the model SUSMP, and shall submit both (local SUSMP and amended ordinances) to the SDRWQCB.

Immediately following adoption of its local SUSMP, each Copermittee shall ensure that all new development and significant redevelopment projects falling under the priority project categories or locations listed in F.1.b.(2)(a) below meet SUSMP requirements. The SUSMP requirements shall apply to all priority projects or phases of priority projects that have not yet begun grading or construction activities. If a Copermittee determines that lawful prior approval of a project exists, whereby application of SUSMP requirements to the project is infeasible, SUSMP requirements need not apply to the project. Where feasible, the Copermittees shall utilize the 18-month SUSMP implementation period to ensure that projects undergoing approval processes include application of SUSMP requirements in their plans.

- (a) *Priority Development Project Categories - SUSMP requirements shall apply to all new development and significant redevelopment projects falling under the priority project categories or locations listed below.* Significant redevelopment is defined as the creation or addition of at least 5,000 square feet of impervious surfaces on an already developed site. Significant redevelopment includes, but is not limited to: the expansion of a building footprint or addition or replacement of a structure; structural development including an increase in gross floor area and/or exterior construction or remodeling; replacement of impervious surface that is not part of a routine maintenance activity; and land disturbing activities related with structural or impervious surfaces. Where significant 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 SUSMP requirements, the numeric sizing criteria discussed in section F.1.b.(2)(c) applies only to the addition, and not to the entire development.
  - i. *Home subdivisions of 10 or more housing units.* This category includes single-family homes, multi-family homes, condominiums, and apartments.
  - ii. *Commercial developments greater than 100,000 square feet.* This category is defined as any development on private land that is not for heavy industrial or residential uses where the land area for development is greater than 100,000 square feet. The category includes, but is not limited to: hospitals; laboratories and other medical facilities; educational institutions; recreational facilities; commercial nurseries; multi-apartment buildings; car wash facilities; mini-malls and other business complexes; shopping malls; hotels; office buildings; public warehouses; automotive dealerships; commercial airfields; and other light industrial facilities.
  - iii. *Automotive repair shops.* This category is defined as a facility that is categorized in any one of the following Standard Industrial Classification (SIC) codes: 5013, 5014, 5541, 7532-7534, or 7536-7539.

- iv. *Restaurants.* This category is defined as a facility that sells prepared foods and drinks for consumption, including stationary lunch counters and refreshment stands selling prepared foods and drinks for immediate consumption (SIC code 5812), where the land area for development is greater than 5,000 square feet. Restaurants where land development is less than 5,000 square feet shall meet all SUSMP requirements except for structural treatment BMP and numeric sizing criteria requirement F.1.b.(2)(c) and peak flow rate requirement F.1.b(2)(b)(i).
  - v. *All hillside development greater than 5,000 square feet.* This category is defined as any development which creates 5,000 square feet of impervious surface which is located in an area with known erosive soil conditions, where the development will grade on any natural slope that is twenty-five percent or greater.
  - vi. *Environmentally Sensitive Areas: All development and redevelopment located within or directly adjacent to or discharging directly to an environmentally sensitive area (where discharges from the development or redevelopment will enter receiving waters within the environmentally sensitive area), which either creates 2,500 square feet of impervious surface on a proposed project site or increases the area of imperviousness of a proposed project site to 10% or more of its naturally occurring condition.* Environmentally sensitive areas 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 San Diego 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 San Diego Basin (1994) and amendments); areas designated as preserves or equivalent under the Natural Community Conservation Planning Program; and any areas designated as Critical Aquatic Resources (CARS) or other equivalent environmentally sensitive areas which have been identified by the Copermitttees. "Directly adjacent" means situated within 200 feet of the environmentally sensitive area. "Discharging directly to" means outflow from a drainage conveyance system that is composed entirely of flows from the subject development or redevelopment site, and not commingled with flows from adjacent lands.
  - vii. *Parking lots 5,000 square feet or more or with 15 or more parking spaces and potentially exposed to urban runoff.* Parking lot is defined as a land area or facility for the temporary parking or storage of motor vehicles used personally, for business, or for commerce.
  - viii. *Street, roads, highways, and freeways.* This category includes any paved surface that is 5,000 square feet or greater used for the transportation of automobiles, trucks, motorcycles, and other vehicles.
- (b) BMP Requirements – The SUSMP shall include a list of recommended source control and structural treatment BMPs. The SUSMP shall require all new development and significant redevelopment projects falling under the above priority project categories or locations to implement a combination of BMPs selected from the recommended BMP list, including at a minimum (1) source control BMPs and (2) structural treatment BMPs. The BMPs shall, at a minimum:
- i. Control the post-development peak storm water runoff discharge rates and velocities to maintain or reduce pre-development downstream erosion, and to protect stream habitat;

- ii. Conserve natural areas where feasible;
  - iii. Minimize storm water pollutants of concern in urban runoff from the new development or significant redevelopment (through implementation of source control BMPs). Identification of pollutants of concern should include at a minimum consideration of any pollutants for which water bodies receiving the development's runoff are listed as impaired under Clean Water Act section 303(d), any pollutant associated with the land use type of the development, and any pollutant commonly associated with urban runoff;
  - iv. Remove pollutants of concern from urban runoff (through implementation of structural treatment BMPs);
  - v. Minimize directly connected impervious areas where feasible;
  - vi. Protect slopes and channels from eroding;
  - vii. Include storm drain stenciling and signage;
  - viii. Include properly designed outdoor material storage areas;
  - ix. Include properly designed trash storage areas;
  - x. Include proof of a mechanism, to be provided by the project proponent or Copermittee, which will ensure ongoing long-term structural BMP maintenance;
  - xi. Include additional water quality provisions applicable to individual priority project categories;
  - xii. Be correctly designed so as to remove pollutants to the maximum extent practicable;
  - xiii. Be implemented close to pollutant sources, when feasible, and prior to discharging into receiving waters supporting beneficial uses; and
  - xiv. Ensure that post-development runoff does not contain pollutant loads which cause or contribute to an exceedance of water quality objectives and which have not been reduced to the maximum extent practicable.
- (c) Numeric Sizing Criteria – The SUSMP shall require structural treatment BMPs to be implemented for all priority development projects. All structural treatment BMPs shall be located so as to infiltrate, filter, or treat the required runoff volume or flow prior to its discharge to any receiving water body supporting beneficial uses. Structural treatment BMPs may be shared by multiple new development projects as long as construction of any shared structural treatment BMPs is completed prior to the use of any new development project from which the structural treatment BMP will receive runoff.

In addition to meeting the BMP requirements listed in item F.1.b.(2)(b) above, all structural treatment BMPs for a single priority development project shall collectively be sized to comply with the following numeric sizing criteria:

Volume

Volume-based BMPs shall be designed to mitigate (infiltrate, filter, or treat) either:

- i. The volume of runoff produced from a 24-hour 85<sup>th</sup> percentile storm event, as determined from the local historical rainfall record (0.8 inch approximate average for the Orange County area);<sup>5</sup> or
- ii. The volume of runoff produced by the 85<sup>th</sup> percentile 24-hour rainfall event, determined as the maximized capture storm water volume for the area, from the formula recommended in Urban Runoff Quality

<sup>5</sup>This volume is not a single volume to be applied to all of Orange County. The size of the 85<sup>th</sup> percentile storm event is different for various parts of the County. The Copermittees are encouraged to calculate the 85<sup>th</sup> percentile storm event for each of their jurisdictions using local rain data pertinent to their particular jurisdiction (the 0.8 inch standard is a rough average for the County and should only be used where appropriate rain data is not available). In addition, isopluvial maps may be used to extrapolate rainfall data to areas where insufficient data exists in order to determine the volume of the local 85<sup>th</sup> percentile storm event in such areas. Where the Copermittees will use isopluvial maps to determine the 85<sup>th</sup> percentile storm event in areas lacking rain data, the Copermittees shall describe their method for using isopluvial maps in the model and local SUSMPs.

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 90% 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 85<sup>th</sup> percentile 24-hour runoff event;<sup>6</sup>

OR

Flow

Flow-based BMPs shall be designed to mitigate (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, for each hour; or
- ii. The maximum flow rate of runoff produced by the 85<sup>th</sup> 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 85<sup>th</sup> percentile hourly rainfall intensity multiplied by a factor of two.

- (d) Equivalent Numeric Sizing Criteria - The Copermittees may develop, as part of the model SUSMP, any equivalent method for calculating the volume or flow which must be mitigated (i.e., any equivalent method for calculating numeric sizing criteria) by post-construction structural treatment BMPs. Such equivalent sizing criteria may be authorized by the SDRWQCB for use in place of the above criteria. In the absence of development and subsequent authorization of such equivalent numeric sizing criteria, the above numeric sizing criteria requirement shall be implemented.
- (e) Pollutants or Conditions of Concern – As part of the model SUSMP, the Copermittees shall develop a procedure for pollutants or conditions of concern to be identified for each new development or significant redevelopment project. The procedure shall include, at a minimum, consideration of (1) receiving water quality (including pollutants for which receiving waters are listed as impaired under Clean Water Act section 303(d)); (2) land use type of the development project and pollutants associated with that land use type; (3) pollutants expected to be present on site; (4) changes in storm water discharge flow rates, velocities, durations, and volumes resulting from the development project; and (5) sensitivity of receiving waters to changes in storm water discharge flow rates, velocities, durations, and volumes.
- (f) Implementation Process – As part of the model SUSMP, the Copermittees shall develop a process by which SUSMP requirements will be implemented. The process shall identify at what point in the planning process development projects will be required to meet SUSMP requirements. The process shall also include identification of the roles and responsibilities of various municipal departments in implementing the SUSMP requirements, as well as any other measures necessary for the implementation of SUSMP requirements.

<sup>6</sup> Under this volume criteria, hourly rainfall data may be used to calculate the 85<sup>th</sup> percentile storm event, where each storm event is identified by its separation from other storm events by at least six hours of no rain. Where the Copermittees may use hourly rainfall data to calculate the 85<sup>th</sup> percentile storm event, the Copermittees shall describe their method for using hourly rainfall data to calculate the 85<sup>th</sup> percentile storm event in the model and local SUSMPs.

- (g) Waiver Provision – A Copermittee may provide for a project to be waived from the requirement of implementing all structural treatment BMPs (F.1.b.(2)(b) & F.1.b.(2)(c)) if infeasibility can be established. A waiver of infeasibility shall only be granted by a Copermittee when all available structural treatment BMPs have been considered and rejected as infeasible. Copermittees shall notify the SDRWQCB within 5 days of each waiver issued and shall include the name of the person granting each waiver.

As part of the model SUSMP, the Copermittees may develop a program to require project proponents who have received waivers to transfer the savings in cost, as determined by the Copermittee(s), to a storm water mitigation fund. This program may be implemented by all Copermittees that choose to provide waivers. Funds may be used on projects to improve urban runoff quality within the watershed of the waived project. The waiver program may identify:

- i. The entity or entities that will manage the storm water mitigation fund (i.e., assume full responsibility for)
  - ii. The range and types of acceptable projects for which mitigation funds may be expended;
  - iii. The entity or entities that will assume full responsibility for each mitigation project including its successful completion
  - iv. How the dollar amount of fund contributions will be determined.
- (h) Infiltration and Groundwater Protection – To protect groundwater quality, each Copermittee shall apply restrictions to the use of structural treatment BMPs which are designed to primarily function as infiltration devices (such as infiltration trenches and infiltration basins). Such restrictions shall ensure that the use of such infiltration structural treatment BMPs shall not cause or contribute to an exceedance of groundwater quality objectives. At a minimum, use of structural treatment BMPs which are designed to primarily function as infiltration devices shall meet the following conditions:<sup>7</sup>
- i. Urban runoff shall undergo pretreatment such as sedimentation or filtration prior to infiltration.
  - ii. All dry weather flows shall be diverted from infiltration devices.
  - iii. Pollution prevention and source control BMPs shall be implemented at a level appropriate to protect groundwater quality at sites where infiltration structural treatment BMPs are to be used.
  - iv. Infiltration structural treatment BMPs shall be adequately maintained so that they remove pollutants to the maximum extent practicable.
  - v. The vertical distance from the base of any infiltration structural treatment BMP to the seasonal high groundwater mark shall be at least 10 feet. Where groundwater basins do not support beneficial uses, this vertical distance criteria may be reduced, provided groundwater quality is maintained.
  - vi. The soil through which infiltration is to occur shall have physical and chemical characteristics (such as appropriate cation exchange capacity, organic content, clay content, and infiltration rate) which are adequate for proper infiltration durations and treatment of urban runoff for the protection of groundwater beneficial uses.
  - vii. Infiltration structural treatment BMPs shall not be used for areas of industrial or light industrial activity; areas subject to high vehicular traffic (25,000 or greater average daily traffic on main roadway or 15,000 or more average daily traffic on any intersecting roadway); automotive repair shops; car washes; fleet storage

<sup>7</sup> These conditions do not apply to structural treatment BMPs which allow incidental infiltration and are not designed to primarily function as infiltration devices (such as grassy swales, detention basins, vegetated buffer strips, constructed wetlands, etc.)

- areas (bus, truck, etc.); nurseries; and other high threat to water quality land uses and activities as designated by each Copermittee.
- viii. Infiltration structural BMPs shall be located a minimum of 100 feet horizontally from any water supply wells.

As part of the model and local SUSMPs, the Copermittees may develop alternative restrictions on the use of structural treatment BMPs which are designed to primarily function as infiltration devices.

- (i) Downstream Erosion – As part of the model SUSMP and the local SUSMPs, the Copermittees shall develop criteria to ensure that discharges from new development and significant redevelopment maintain or reduce pre-development downstream erosion and protect stream habitat. At a minimum, criteria shall be developed to control peak storm water discharge rates and velocities in order to maintain or reduce pre-development downstream erosion and protect stream habitat. Storm water discharge volumes and durations should also be considered.

#### F.1.c. Revise Environmental Review Processes

- (1) To the extent feasible, the Copermittees shall revise their current environmental review processes to include requirements for evaluation of water quality effects and identification of appropriate mitigation measures. The following questions are examples to be considered in addressing increased pollutants and flows from proposed projects:
- (a) Could the proposed project result in an increase in pollutant discharges to receiving waters? Consider water quality parameters such as temperature, dissolved oxygen, turbidity and other typical storm water pollutants (e.g., heavy metals, pathogens, petroleum derivatives, synthetic organics, sediment, nutrients, oxygen-demanding substances, and trash).
  - (b) Could the proposed project result in significant alteration of receiving water quality during or following construction?
  - (c) Could the proposed project result in increased impervious surfaces and associated increased runoff?
  - (d) Could the proposed project create a significant adverse environmental impact to drainage patterns due to changes in runoff flow rates or volumes?
  - (e) Could the proposed project result in increased erosion downstream?
  - (f) Is the project tributary to an already impaired water body, as listed on the Clean Water Act Section 303(d) list? If so, can it result in an increase in any pollutant for which the water body is already impaired?
  - (g) Is project tributary to other environmentally sensitive areas? If so, can it exacerbate already existing sensitive conditions?
  - (h) Could the proposed project have a potentially significant environmental impact on surface water quality, to either marine, fresh, or wetland waters?
  - (i) Could the proposed project have a potentially significant adverse impact on ground water quality?
  - (j) Could the proposed project cause or contribute to an exceedance of applicable surface or groundwater receiving water quality objectives or degradation of beneficial uses?
  - (k) Can the project impact aquatic, wetland, or riparian habitat?

#### F.1.d. Conduct Education Efforts Focused on New Development and Redevelopment

- (1) Internal: Municipal Staff and Others

Each Copermittee shall implement an education program to ensure that its planning and development review staffs (and Planning Boards and Elected Officials, if applicable) have an understanding of:

- (a) Federal, state, and local water quality laws and regulations applicable to development projects;
  - (b) The connection between land use decisions and short and long-term water quality impacts (i.e., impacts from land development and urbanization); and
  - (c) How impacts to receiving water quality resulting from development can be minimized (i.e., through implementation of various source control and structural BMPs).
- (2) External: Project Applicants, Developers, Contractors, Property Owners, Community Planning Groups

As early in the planning and development process as possible, each Copermittee shall implement a program to educate project applicants, developers, contractors, property owners, and community planning groups on the following topics:

- (a) Federal, state, and local water quality laws and regulations applicable to development projects;
- (b) Required federal, state, and local permits pertaining to water quality;
- (c) Water quality impacts of urbanization; and
- (d) Methods for minimizing the impacts of development on receiving water quality.

## ***F.2. Construction Component***

Each Copermittee shall implement a Construction Component of its Jurisdictional URMP to reduce pollutants in runoff from construction sites during all construction phases. At a minimum the construction component shall address:

- F.2.a. Pollution Prevention
- F.2.b. Grading Ordinance Update
- F.2.c. Modify Construction and Grading Approval Process
- F.2.d. Source Identification
- F.2.e. Threat to Water Quality Prioritization
- F.2.f. BMP Implementation
- F.2.g. Inspection of Construction Sites
- F.2.h. Enforcement of Construction Sites
- F.2.i. Reporting of Non-compliant Sites
- F.2.j. Education Focused on Construction Activities

### ***F.2.a. Pollution Prevention (Construction)***

Each Copermittee shall implement pollution prevention methods in its Construction Component and shall require its use by construction site owners, developers, contractors, and other responsible parties, where appropriate.

### ***F.2.b. Grading Ordinance Update (Construction)***

Each Copermittee shall review and update its grading ordinances as necessary for compliance with its storm water ordinances and this Order. The updated grading ordinance shall require implementation of BMPs and other measures during all construction activities, including the following BMPs and other measures or their equivalent:

- (1) Erosion prevention;
- (2) Seasonal restrictions on grading;
- (3) Slope stabilization requirements;
- (4) Phased grading;
- (5) Revegetation as early as feasible;

- (6) Preservation of natural hydrologic features;
- (7) Preservation of riparian buffers and corridors;
- (8) Maintenance of all source control and structural treatment BMPs; and
- (9) Retention and proper management of sediment and other construction pollutants on site.

#### F.2.c Modify Construction and Grading Approval Process (Construction)

Prior to approval and issuance of local construction and grading permits, each Copermittee shall require all individual proposed construction and grading projects to implement measures to ensure that pollutants from the site will be reduced to the maximum extent practicable and will not cause or contribute to an exceedance of water quality objectives. Each Copermittee shall further ensure that all grading and construction activities will be in compliance with applicable Copermittee ordinances (e.g., storm water, grading, construction, etc.) and other applicable requirements, including this Order.

##### (1) Construction and Grading Project Requirements

Include construction and grading project requirements in local grading and construction permits to ensure that pollutant discharges are reduced to the maximum extent practicable and water quality objectives are not violated during the construction phase. Such requirements shall include the following requirements or their equivalent:

- (a) Require project proponent to develop and implement a plan to manage storm water and non-storm water discharges from the site at all times;
- (b) Require project proponent to minimize grading during the wet season and coincide grading with seasonal dry weather periods to the extent feasible. If grading does occur during the wet season, require project proponent to implement additional BMPs for any rain events which may occur, as necessary for compliance with this Order;
- (c) Require project proponent to emphasize erosion prevention as the most important measure for keeping sediment on site during construction;
- (d) Require project proponent to utilize sediment controls as a supplement to erosion prevention for keeping sediment on-site during construction, and never as the single or primary method;
- (e) Require project proponent to minimize areas that are cleared and graded to only the portion of the site that is necessary for construction;
- (f) Require project proponent to minimize exposure time of disturbed soil areas;
- (g) Require project proponent to temporarily stabilize and reseed disturbed soil areas as rapidly as possible;
- (h) Require project proponent to permanently revegetate or landscape as early as feasible;
- (i) Require project proponent to stabilize all slopes; and
- (j) Require project proponents subject to California's statewide General NPDES Permit for Storm Water Discharges Associated With Construction Activities, (hereinafter General Construction Permit), to provide evidence of existing coverage under the General Construction Permit.

#### F.2.d. Source Identification (Construction)

Each Copermittee shall annually develop and update, prior to the rainy season, a watershed-based inventory of all construction sites within its jurisdiction regardless of site size or ownership. This requirement is applicable to all construction sites regardless of whether the construction site is subject to the California statewide General NPDES Permit for Storm Water Discharges Associated With Construction Activities (hereinafter General Construction Permit), or other individual NPDES permit. The use of an automated database system, such as Geographical Information System (GIS) is highly recommended, but not required.

F.2.e. Threat to Water Quality Prioritization (Construction)

- (1) To establish priorities for construction oversight activities under this Order, the Copermittee shall prioritize its watershed-based inventory (developed pursuant to F.2.d. above) by threat to water quality. Each construction site shall be classified as high, medium, or low threat to water quality. In evaluating threat to water quality each Copermittee shall consider (1) soil erosion potential; (2) site slope; (3) project size and type; (4) sensitivity of receiving water bodies; (5) proximity to receiving water bodies; (6) non-storm water discharges; and (7) any other relevant factors.
- (2) A high priority construction site shall at a minimum be defined as a site meeting either of the following criteria or equivalent criteria:
  - (a) The site is 50 acres or more and grading will occur during the wet season; OR
  - (b) The site is (1) 5 acres or more and (2) tributary to a Clean Water Act section 303(d) water body impaired for sediment or is within or directly adjacent to or discharging directly to a receiving water within an environmentally sensitive area (as defined in section F.1.b.(2)(a)vi. of this Order).

F.2.f. BMP Implementation (Construction)

- (1) Each Copermittee shall designate a set of minimum BMPs for high, medium, and low threat to water quality construction sites (as determined under section F.2.e). BMPs are to be implemented year round.
- (2) Each Copermittee shall implement, or require the implementation of, the designated minimum BMPs (based upon the site's threat to water quality rating) at each construction site within its jurisdiction year round. If particular minimum BMPs are infeasible at any specific site, each Copermittee shall implement, or require the implementation of, other equivalent BMPs. Each Copermittee shall also implement or require any additional site specific BMPs as necessary to comply with this Order, including BMPs which are more stringent than those required under the statewide General Construction Permit.
- (3) Each Copermittee shall implement, or require the implementation of, BMPs year round; however, BMP implementation requirements can vary based on wet and dry seasons.
- (4) Each Copermittee shall implement, or require implementation of, additional controls for construction sites tributary to Clean Water Act section 303(d) water bodies impaired for sediment as necessary to comply with this Order. Each Copermittee shall implement, or require implementation of, additional controls for construction sites within or adjacent to or discharging directly to receiving waters within environmentally sensitive areas (as defined in section F.1.b.(2)(a)vi. of this Order) as necessary to comply with this Order.

F.2.g. Inspection of Construction Sites (Construction)

- (1) Each Copermittee shall conduct construction site inspections for compliance with its ordinances (grading, storm water, etc.), permits (construction, grading, etc.), and this Order. Inspections shall include review of site erosion control and BMP implementation plans.
- (2) Each Copermittee shall establish inspection frequencies and priorities as determined by the threat to water quality prioritization described in F.2.e above. During the wet season (i.e., October 1 through April 30 of each year), each Copermittee shall inspect, at a minimum, each High Priority construction site, either:

(a) Weekly

**OR**

- (b) Monthly for any site that the responsible Copermittee certifies in a written statement to the SDRWQCB all of the following (certified statements may be submitted to the SDRWQCB at any time for one or more sites):
- i. Copermittee has record of construction site's Waste Discharge Identification Number (WDID#) documenting construction site's coverage under the statewide General Construction Permit; and
  - ii. Copermittee has reviewed the construction site's Storm Water Pollution Prevention Plan (SWPPP); and
  - iii. Copermittee finds SWPPP to be in compliance with all local ordinances, permits, and plans; and
  - iv. Copermittee finds that the SWPPP is being properly implemented on site.

At a minimum, Medium and Low Priority construction sites shall be inspected by Copermittees twice during the wet season. All construction sites shall be inspected by the Copermittees as needed during the dry season (i.e., May 1 through September 30 of each year).

- (3) Based upon site inspection findings, each Copermittee shall implement all follow-up actions necessary to comply with this Order.

F.2.h. Enforcement of Construction Sites (Construction)

Each Copermittee shall enforce its ordinances (grading, storm water, etc.) and permits (construction, grading, etc.) at all construction sites as necessary to maintain compliance with this Order. Copermittee ordinances or other regulatory mechanisms shall include sanctions to ensure compliance. Sanctions shall include the following or their equivalent: Non-monetary penalties, fines, bonding requirements, and/or permit denials for non-compliance.

F.2.i. Reporting of Non-compliant Sites (Construction)

Each Copermittee shall provide oral notification to the SDRWQCB of non-compliant sites that are determined to pose a threat to human or environmental health within its jurisdiction within 24 hours of the discovery of noncompliance, as required under section R.1 (and B.6 of Attachment C) of this Order.

Each Copermittee shall develop and submit criteria by which to evaluate events of non-compliance to determine whether they pose a threat to human or environmental health. These criteria shall be submitted in the Jurisdictional Urban Runoff Management Program Document and Annual Reports for SDRWQCB review.

Such oral notification shall be followed up by a written report to be submitted to the SDRWQCB within 5 days of the incidence of non-compliance as required under section R.1 (and B.6 of Attachment C) of this Order. Sites are considered non-compliant when one or more violations of local ordinances, permits, plans, or this Order exist on the site.

F.2.j. Education Focused on Construction Activities (Construction)

## (1) Internal: Municipal Staff

Each Copermittee shall implement an education program to ensure that its construction, building, and grading review staffs and inspectors have an understanding of:

- (a) Federal, state, and local water quality laws and regulations applicable to construction and grading activities.
- (b) The connection between construction activities and water quality impacts (i.e., impacts from land development and urbanization).
- (c) How erosion can be prevented.
- (d) How impacts to receiving water quality resulting from construction activities can be minimized (i.e., through implementation of various source control and structural BMPs).
- (e) Applicable topics listed in section F.4. of this Order.

## (2) External: Project Applicants, Contractors, Developers, Property Owners, and other Responsible Parties

Each Copermittee shall implement an education program to ensure that project applicants, contractors, developers, property owners, and other responsible parties have an understanding of the topics outlined in section F.2.j.(1) above of this Order.

**F.3. Existing Development Component**

Each Copermittee shall minimize the short and long-term impacts on receiving water quality from all types of existing development.

**F.3.a. Municipal (Existing Development)**

Each Copermittee shall implement a Municipal (Existing Development) Component to prevent or reduce pollutants in runoff from all municipal land use areas and activities. At a minimum the municipal component shall address:

- |           |   |
|-----------|---|
| F.3.a.(1) | Pollution Prevention                                  |
| F.3.a.(2) | Source Identification                                 |
| F.3.a.(3) | Threat to Water Quality Prioritization                |
| F.3.a.(4) | BMP Implementation                                    |
| F.3.a.(5) | Maintenance of Municipal Separate Storm Sewer System  |
| F.3.a.(6) | Management of Pesticides, Herbicides, and Fertilizers |
| F.3.a.(7) | Inspection of Municipal Areas and Activities          |
| F.3.a.(8) | Enforcement of Municipal Areas and Activities         |

F.3.a.(1) Pollution Prevention (Municipal)

Each Copermittee shall include and describe pollution prevention methods within its Municipal (Existing Development) Component. Each Copermittee shall require the use of pollution prevention methods by municipal departments, contractors, and personnel, where appropriate.

F.3.a.(2) Source Identification (Municipal)

Each Copermittee shall develop, and update annually, a watershed-based inventory of the name, address (if applicable), and description of all municipal land use areas and activities which generate pollutants.

F.3.a.(3) Threat to Water Quality Prioritization (Municipal)

- (a) To establish priorities for oversight of municipal areas and activities required under this Order, each Copermittee shall prioritize each watershed inventory in F.3.a.2. above by threat to water quality and update annually. Each municipal area and activity shall be classified as high, medium, or low threat to water quality. In evaluating threat to water quality, each Copermittee shall consider (1) type of municipal area or activity; (2) materials used; (3) wastes generated; (4) pollutant discharge potential; (5) non-storm water discharges; (6) size of facility or area; (7) proximity to receiving water bodies; (8) sensitivity of receiving water bodies; and (9) any other relevant factors.
- (b) At a minimum, the high priority municipal areas and activities shall include the following:
- i. Roads, Streets, Highways, and Parking Facilities.
  - ii. Flood Management Projects and Flood Control Devices.
  - iii. Areas and activities tributary to a Clean Water Act section 303(d) impaired water body, where an area or activity generates pollutants for which the water body is impaired. Areas and activities within or adjacent to or discharging directly to receiving waters within environmentally sensitive areas (as defined in section F.1.b.(2)(a)vi of this Order).
  - iv. Municipal Waste Facilities.
    - Active or closed municipal landfills;
    - Publicly owned treatment works (including water and wastewater treatment plants) and sanitary sewage collection systems;
    - Municipal separate storm sewer systems;
    - Incinerators;
    - Solid waste transfer facilities;
    - Land application sites;
    - Uncontrolled sanitary landfills;
    - Corporate yards including maintenance and storage yards for materials, waste, equipment and vehicles;
    - Sites for disposing and treating sewage sludge; and
    - Hazardous waste treatment, disposal, and recovery facilities.
  - v. Other municipal areas and activities that the Copermittee determines may contribute a significant pollutant load to the MS4.
  - vi. Municipal airfields.

F.3.a.(4) BMP Implementation (Municipal)

- (a) Each Copermittee shall designate a set of minimum BMPs for high, medium, and low threat to water quality municipal areas and activities (as determined under section F.3.a.(3)). The designated minimum BMPs for high threat to water quality municipal areas and activities shall be area or activity specific as appropriate.
- (b) Each Copermittee shall implement, or require the implementation of, the designated minimum BMPs (based upon the threat to water quality rating) at each municipal area or activity within its jurisdiction. If particular minimum BMPs are infeasible for any specific area or activity, each Copermittee shall implement, or require implementation of other equivalent BMPs. Each Copermittee shall also implement any additional BMPs as are necessary to comply with this Order.
- i. Each Copermittee shall evaluate feasibility of retrofitting existing structural flood control devices and retrofit where needed.
- (c) Each Copermittee shall implement, or require implementation of, any additional controls for municipal areas and activities tributary to Clean Water Act section 303(d) impaired

water bodies (where an area or activity generates pollutants for which the water body is impaired) as necessary to comply with this Order. Each Copermittee shall implement, or require implementation of, additional controls for municipal areas and activities within or directly adjacent to or discharging directly to receiving waters within environmentally sensitive areas (as defined in section F.1.b.(2)(a)vi. of this Order) as necessary to comply with this Order.

F.3.a.(5) Maintenance of Municipal Separate Storm Sewer System (Municipal)

- (a) Each Copermittee shall implement a schedule of maintenance activities at all structural controls designed to reduce pollutant discharges to or from its MS4s and related drainage structures.
- (b) Each Copermittee shall implement a schedule of maintenance activities for the municipal separate storm sewer system.
- (c) The maintenance activities must, at a minimum, include:
  - i. Inspection and removal of accumulated waste (e.g. sediment, trash, debris and other pollutants) between May 1 and September 30 of each year;
  - ii. Additional cleaning as necessary between October 1 and April 30 of each year;
  - iii. Record keeping of cleaning and the overall quantity of waste removed;
  - iv. Proper disposal of waste removed pursuant to applicable laws;
  - v. Measures to eliminate waste discharges during MS4 maintenance and cleaning activities.

F.3.a.(6) Management of Pesticides, Herbicides, and Fertilizers (Municipal)

The Copermittees shall implement BMPs to reduce the contribution of pollutants associated with the application, storage, and disposal of pesticides, herbicides and fertilizers from municipal areas and activities to MS4s. Important municipal areas and activities include municipal facilities, public rights-of-way, parks, recreational facilities, golf courses, cemeteries, botanical or zoological gardens and exhibits, landscaped areas, etc.

Such BMPs shall include, at a minimum: (1) educational activities, permits, certifications and other measures for municipal applicators and distributors; (2) integrated pest management measures that rely on non-chemical solutions; (3) the use of native vegetation; (4) schedules for irrigation and chemical application; and (5) the collection and proper disposal of unused pesticides, herbicides, and fertilizers.

F.3.a.(7) Inspection of Municipal Areas and Activities (Municipal)

At a minimum, each Copermittee shall inspect high priority municipal areas and activities annually. Based upon site inspection findings, each Copermittee shall implement all follow-up actions necessary to comply with this Order.

F.3.a.(8) Enforcement of Municipal Areas and Activities (Municipal)

Each Copermittee shall enforce its storm water ordinance for all municipal areas and activities as necessary to maintain compliance with this Order.

**F.3.b. Industrial (Existing Development)**

Each Copermittee shall implement an Industrial (Existing Development) Component to reduce pollutants in runoff from all industrial sites. At a minimum the industrial component shall address:

- F.3.b.(1) Pollution Prevention
- F.3.b.(2) Source Identification
- F.3.b.(3) Threat to Water Quality Prioritization
- F.3.b.(4) BMP Implementation
- F.3.b.(5) Monitoring of Industrial Sites
- F.3.b.(6) Inspection of Industrial Sites
- F.3.b.(7) Enforcement Measures for Industrial Sites
- F.3.b.(8) Reporting of Non-compliant Sites

**F.3.b.(1) Pollution Prevention (Industrial)**

Each Copermittee shall include and describe pollution prevention methods within its Industrial (Existing Development) Component. Each Copermittee shall require the use of pollution prevention methods by industry, where appropriate.

**F.3.b.(2) Source Identification (Industrial)**

Each Copermittee shall develop and update annually a watershed-based inventory of all industrial sites within its jurisdiction regardless of site ownership. This requirement is applicable to all industrial sites regardless of whether the industrial site is subject to the California statewide General NPDES Permit for Storm Water Discharges Associated With Industrial Activities, Except Construction (hereinafter General Industrial Permit) or other individual NPDES permit.

The inventory shall include the following minimum information for each industrial site: name; address; and a narrative description including SIC codes which best reflects the principal products or services provided by each facility.

**F.3.b.(3) Threat to Water Quality Prioritization (Industrial)**

- (a) To establish priorities for industrial oversight activities under this Order, the Copermittee shall prioritize each watershed-based inventory in F.3.b.(2) above by threat to water quality and update annually. Each industrial site shall be classified as high, medium, or low threat to water quality. In evaluating threat to water quality each Copermittee shall consider (1) type of industrial activity (SIC Code); (2) materials used in industrial processes; (3) wastes generated; (4) pollutant discharge potential; (5) non-storm water discharges; (6) size of facility; (7) proximity to receiving water bodies; (8) sensitivity of receiving water bodies; (9) whether the industrial site is subject to the statewide General Industrial Permit; and (10) any other relevant factors.
- (b) At a minimum the high priority industrial sites shall include industrial facilities that are subject to section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA); industrial facilities tributary to a Clean Water Act section 303(d) impaired water body, where a facility generates pollutants for which the water body is impaired; industrial facilities within or directly adjacent to or discharging directly to receiving waters within environmentally sensitive areas (as defined in section F.1.b.(2)(a)vi. of this Order); facilities subject to the statewide General Industrial Permit (excluding those facilities that have been approved for No Exposure Certification); and all other industrial facilities that the Copermittee determines are contributing significant pollutant loading to its MS4, regardless of whether such facilities are covered under the statewide General Industrial Permit or other NPDES permit.

F.3.b.(4) BMP Implementation (Industrial)

- (a) Each Copermittee shall designate a set of minimum BMPs for high, medium, and low threat to water quality industrial sites (as determined under section F.3.b.(3)). The designated minimum BMPs for high threat to water quality industrial sites shall be industry and site specific as appropriate.
- (b) Each Copermittee shall implement, or require the implementation of, the designated minimum BMPs (based upon the site's threat to water quality rating) at each industrial site within its jurisdiction. If particular minimum BMPs are infeasible at any specific site, each Copermittee shall implement, or require implementation of, other equivalent BMPs. Each Copermittee shall also implement or require any additional site specific BMPs as necessary to comply with this Order including BMPs which are more stringent than those required under the statewide General Industrial Permit.
- (c) Each Copermittee shall implement, or require implementation of, additional controls for industrial sites tributary to Clean Water Act section 303(d) impaired water bodies (where a site generates pollutants for which the water body is impaired) as necessary to comply with this Order. Each Copermittee shall implement, or require implementation of, additional controls for industrial sites within or directly adjacent to or discharging directly to receiving waters within environmentally sensitive areas (as defined in section F.1.b.(2)(a)vi. of this Order) as necessary to comply with this Order.

F.3.b.(5) Monitoring of Industrial Sites (Industrial)

- (a) Each Copermittee shall conduct, or require industry to conduct, a monitoring program for runoff from each high threat to water quality industrial site (identified in F.3.b.(3) above). Group monitoring by multiple industrial sites conducted under group monitoring programs approved by the State Water Resources Control Board is acceptable.
- (b) At a minimum, the monitoring program shall provide quantitative data from two storm events per year on the following constituents:
  - i. Any pollutant listed in effluent guidelines subcategories where applicable;
  - ii. Any pollutant for which an effluent limit has been established in an existing NPDES permit for the facility;
  - iii. Oil and grease or Total Organic Carbon (TOC);
  - iv. pH;
  - v. Total suspended solids (TSS);
  - vi. Specific conductance; and
  - vii. Toxic chemicals and other pollutants that are likely to be present in storm water discharges.
  - viii. Any pollutant that may be used, stored, or generated at the facility, which may be discharged to a water body or a tributary of that water body that is listed as impaired under Clean Water Act Section 303(d) for that pollutant(s), unless the facility can demonstrate approval of No Exposure Certification.

F.3.b.(6) Inspection of Industrial Sites (Industrial)

- (a) Each Copermittee shall conduct industrial site inspections for compliance with its ordinances, permits, and this Order. Inspections shall include review of BMP implementation plans.
- (b) Each Copermittee shall establish inspection frequencies and priorities as determined by the threat to water quality prioritization described in F.3.b.(3) above. Each Copermittee shall inspect high priority industrial sites, at a minimum:

i. Annually

**OR**

ii. Bi-annually for any site that the responsible Copermittee certifies in a written statement to the SDRWQCB all of the following (certified statements may be submitted to the SDRWQCB at any time for one or more sites):

- Copermittee has record of industrial site's Waste Discharge Identification Number (WDID#) documenting industrial site's coverage under the statewide General Industrial Permit; and
- Copermittee has reviewed the industrial site's Storm Water Pollution Prevention Plan (SWPPP); and
- Copermittee finds SWPPP to be in compliance with all local ordinances, permits, and plans; and
- Copermittee finds that the SWPPP is being properly implemented on site.

Each Copermittee shall inspect medium and low threat to water quality industrial sites as needed.

- (c) Based upon site inspection findings, each Copermittee shall implement all follow-up actions necessary to comply with this Order.
- (d) To the extent that the SDRWQCB has conducted an inspection of a high priority industrial site during a particular year, the requirement for the responsible Copermittee to inspect this site during the same year will be satisfied.

**F.3.b.(7) Enforcement of Industrial Sites (Industrial)**

Each Copermittee shall enforce its storm water ordinance at all industrial sites as necessary to maintain compliance with this Order. Copermittee ordinances or other regulatory mechanisms shall include sanctions to ensure compliance. Sanctions shall include the following or their equivalent: Non-monetary penalties, fines, bonding requirements, and/or permit denials for non-compliance.

**F.3.b.(8) Reporting of Non-compliant Sites (Industrial)**

Each Copermittee shall provide oral notification to the SDRWQCB of non-compliant sites that are determined to pose a threat to human or environmental health within its jurisdiction within 24 hours of the discovery of noncompliance, as required under section R.1 (and B.6 of Attachment C) of this Order.

Each Copermittee shall develop and submit criteria by which to evaluate events of non-compliance to determine whether they pose a threat to human or environmental health. These criteria shall be submitted in the Jurisdictional Urban Runoff Management Program Document and Annual Reports for SDRWQCB review.

Such oral notification shall be followed up by a written report to be submitted to the SDRWQCB within 5 days of the incidence of non-compliance as required under section R.1 (and B.6 of Attachment C) of this Order. Sites are considered non-compliant when one or more violations of local ordinances, permits, plans, or this Order exist on the site.

**F.3.c. Commercial (Existing Development)**

Each Copermittee shall implement a Commercial (Existing Development) Component to reduce pollutants in runoff from commercial sites. At a minimum the commercial component shall address:

- F.3.c.(1) Pollution Prevention
- F.3.c.(2) Source Identification
- F.3.c.(3) BMP Implementation
- F.3.c.(4) Inspection of Commercial Sites and Sources
- F.3.c.(5) Enforcement of Commercial Sites and Sources

**F.3.c.(1) Pollution Prevention (Commercial)**

Each Copermittee shall include and describe pollution prevention methods within its Commercial (Existing Development) Component. Each Copermittee shall require the use of pollution prevention methods by commercial facilities, where appropriate.

**F.3.c.(2) Source Identification (Commercial)**

Each Copermittee shall develop and update annually an inventory of the following high priority threat to water quality commercial sites/sources listed below. (If any commercial site/source listed below is inventoried as an industrial site, as required under section F.3.b.(2) of this Order, it is not necessary to also inventory it as a commercial site/source).

- (a) Automobile mechanical repair, maintenance, fueling, or cleaning;
- (b) Airplane mechanical repair, maintenance, fueling, or cleaning;
- (c) Boat mechanical repair, maintenance, fueling, or cleaning;
- (d) Equipment repair, maintenance, fueling, or cleaning;
- (e) Automobile and other vehicle body repair or painting;
- (f) Mobile automobile or other vehicle washing;
- (g) Automobile (or other vehicle) parking lots and storage facilities;
- (h) Retail or wholesale fueling;
- (i) Pest control services;
- (j) Eating or drinking establishments;
- (k) Mobile carpet, drape or furniture cleaning;
- (l) Cement mixing or cutting;
- (m) Masonry;
- (n) Painting and coating;
- (o) Botanical or zoological gardens and exhibits;
- (p) Landscaping;
- (q) Nurseries and greenhouses;
- (r) Golf courses, parks and other recreational areas/facilities;
- (s) Cemeteries;
- (t) Pool and fountain cleaning;
- (u) Marinas;
- (v) Port-a-Potty servicing;
- (w) Other commercial sites/sources that the Copermittee determines may contribute a significant pollutant load to the MS4;
- (x) Any commercial site or source tributary to a Clean Water Act section 303(d) impaired water body, where the site or source generates pollutants for which the water body is impaired; and
- (y) Any commercial site or source within or directly adjacent to or discharging directly to a coastal lagoon or other receiving water within an environmentally sensitive area (as defined in F.1.b(2)(a)vi. of this Order).

**F.3.c.(3) BMP Implementation (Commercial)**

- (a) Each Copermittee shall designate a set of minimum BMPs for the high priority threat to water quality commercial sites/sources (listed above in section F.3.c.(2)). The designated minimum BMPs for the high threat to water quality commercial sites/sources shall be site and source specific as appropriate.
- (b) Each Copermittee shall implement, or require the implementation of, the designated minimum BMPs at each high priority threat to water quality commercial site/source within its jurisdiction. If particular minimum BMPs are infeasible for any specific site/source, each Copermittee shall implement, or require the implementation of, other equivalent BMPs. Each Copermittee shall also implement or require any additional site specific BMPs as necessary to comply with this Order.
- (c) Each Copermittee shall implement, or require implementation of, additional controls for commercial sites or sources tributary to Clean Water Act section 303(d) impaired water bodies (where a site or source generates pollutants for which the water body is impaired) as necessary to comply with this Order. Each Copermittee shall implement, or require implementation of, additional controls for commercial sites or sources within or directly adjacent to or discharging directly to coastal lagoons or other receiving waters within environmentally sensitive areas (as defined in section F.1.b.(2)(a)vi. of this Order) as necessary to comply with this Order.

**F.3.c.(4) Inspection of Commercial Sites and Sources (Commercial)**

Each Copermittee shall inspect high priority commercial sites and sources as needed. Based upon site inspection findings, each Copermittee shall implement all follow-up actions necessary to comply with this Order.

**F.3.c.(5) Enforcement of Commercial Sites and Sources (Commercial)**

Each Copermittee shall enforce its storm water ordinance for all commercial sites and sources as necessary to maintain compliance with this Order.

**F.3.d. Residential (Existing Development)**

Each Copermittee shall implement a Residential (Existing Development) Component to prevent or reduce pollutants in runoff from all residential land use areas and activities. At a minimum the residential component shall address:

- F.3.d.(1) Pollution Prevention
- F.3.d.(2) Threat to Water Quality Prioritization
- F.3.d.(3) BMP Implementation
- F.3.d.(4) Enforcement of Residential Areas and Activities

**F.3.d.(1) Pollution Prevention (Residential)**

Each Copermittee shall include pollution prevention methods in its Residential (Existing Development) Component and shall encourage their use by residents, where appropriate.

**F.3.d.(2) Threat to Water Quality Prioritization (Residential)**

Each Copermittee shall identify high priority residential areas and activities. At a minimum, these shall include:

- Automobile repair and maintenance;
- Automobile washing;
- Automobile parking;
- Home and garden care activities and product use (pesticides, herbicides, and fertilizers);
- Disposal of household hazardous waste (e.g., paints, cleaning products, and other wastes generated during home improvement or maintenance activities);
- Disposal of pet waste;
- Disposal of green waste;
- Any other residential source that the Copermittee determines may contribute a significant pollutant load to the MS4;
- Any residence tributary to a Clean Water Act section 303(d) impaired water body, where the residence generates pollutants for which the water body is impaired; and
- Any residence within or directly adjacent to or discharging directly to coastal waters or other receiving waters within an environmentally sensitive area (as defined in F.1.b.(2)(a)vi. of this Order).

F.3.d.(3) BMP Implementation (Residential)

- (a) Each Copermittee shall designate a set of minimum BMPs for high threat to water quality residential areas and activities (as required under section F.3.d.(2)). The designated minimum BMPs for high threat to water quality residential areas and activities shall be area or activity specific.
- (b) Each Copermittee shall implement or require implementation of the designated minimum BMPs for high threat to water quality residential areas and activities. If particular minimum BMPs are infeasible for any specific site/source, each Copermittee shall require implementation of other equivalent BMPs. Each Copermittee shall also implement, or require implementation of, any additional BMPs as are necessary to comply with this Order.
- (c) Each Copermittee shall implement, or require implementation of, any additional controls for residential areas and activities tributary to Clean Water Act Section 303(d) impaired water bodies (where a residential area or activity generates pollutants for which the water body is impaired) as necessary to comply with this Order. Each Copermittee shall implement, or require implementation of, additional controls for residential areas within or directly adjacent to or discharging directly to coastal waters or other receiving waters within environmentally sensitive areas (as defined in section F.1.b.(2)(a)vi. of this Order) as necessary to comply with this Order.

F.3.d.(4) Enforcement of Residential Areas and Activities (Residential)

Each Copermittee shall enforce its storm water ordinance for all residential areas and activities as necessary to maintain compliance with this Order.

**F.4. Education Component**

Each Copermittee shall implement an Education Component using all media as appropriate to (1) measurably increase the knowledge of the target communities regarding MS4s, impacts of urban runoff on receiving waters, and potential BMP solutions for the target audience; and (2) to measurably change the behavior of target communities and thereby reduce pollutant releases to MS4s and the environment. At a minimum the education component shall address the following target communities:

- Municipal Departments and Personnel

- Construction Site Owners and Developers
- Industrial Owners and Operators
- Commercial Owners and Operators
- Residential Community, General Public, and School Children
- Quasi-Governmental Agencies/Districts (i.e., educational institutions, water districts, sanitation districts, etc.)

F.4.a. All Target Communities

The Education Program for each target audience may contain information on the following topics where applicable:

- State and Federal water quality laws
- Requirements of local municipal permits and ordinances (e.g., storm water and grading ordinances and permits)
- Water conservation
- Impacts of urban runoff on receiving waters
- Watershed concepts (i.e., stewardship, connection between inland activities and coastal problems, etc.)
- Distinction between MS4s and sanitary sewers
- Importance of good housekeeping (e.g., sweeping impervious surfaces instead of hosing)
- Pollution prevention and safe alternatives
- Household hazardous waste collection
- Recycling
- BMPs: Site specific, structural and source control
- BMP maintenance
- Non-storm water disposal alternatives (e.g., all wash waters)
- Pet and animal waste disposal
- Proper solid waste disposal (e.g., garbage, tires, appliances, furniture, vehicles)
- Equipment and vehicle maintenance and repair
- Public reporting mechanisms
- Green waste disposal
- Integrated pest management
- Native vegetation
- Proper disposal of boat and recreational vehicle waste
- Traffic reduction, alternative fuel use

F.4.b. Municipal, Construction, Industrial, Commercial, and Quasi-Governmental (educational institutions, water districts, sanitation districts, etc.) Communities

In addition to the topics listed in F.4.a. above, the Municipal, Construction, Industrial, Commercial, and Quasi-Governmental (Educational Institutions, Water Districts, Sanitation Districts) Communities may also be educated on the following topics where applicable:

- Basic urban runoff training for all personnel
- Additional urban runoff training for appropriate personnel
- Illicit Discharge Detection and Elimination observations and follow-up during daily work activities
- Lawful disposal of catchbasin and other MS4 cleanout wastes
- Water quality awareness for Emergency/First Responders
- California's Statewide General NPDES Permit for Storm Water Discharges Associated with Industrial Activities (Except Construction).

- California's Statewide General NPDES Permit for Storm Water Discharges Associated with Construction Activities
- SDRWQCB's General NPDES Permit for Groundwater Dewatering
- 401 Water Quality Certification by the SDRWQCB
- Statewide General NPDES Utility Vault Permit (NPDES No. CAG990002)
- SDRWQCB Waste Discharge Requirements for Dredging Activities
- Local requirements beyond statewide general permits
- Federal, state and local water quality regulations that affect development projects
- Water quality impacts associated with land development
- Alternative materials & designs to maintain peak runoff values
- How to conduct a storm water inspection
- Potable water discharges to the MS4
- Dechlorination techniques
- Hydrostatic testing
- Spill response, containment, & recovery
- Preventive maintenance
- How to do your job and protect water quality

F.4.c. Residential, General Public, School Children Communities

In addition to the topics listed in F.4.a. above, the Residential, General Public, and School Children Communities may be educated on the following topics where applicable:

- Public reporting information resources
- Residential and charity car-washing
- Community activities (e.g., "Adopt a Storm Drain, Watershed, or Highway" Programs, citizen monitoring, creek/beach cleanups, environmental protection organization activities, etc.)

**F.5. *Illicit Discharge Detection and Elimination Component***

Each Copermittee shall implement an Illicit Discharge Detection and Elimination Component containing measures to actively seek and eliminate illicit discharges and connections. At a minimum the Illicit Discharge Detection and Elimination Component shall address:

- F.5.a Illicit Discharges and Connections
- F.5.b Dry Weather Monitoring Program
- F.5.c Investigation / Inspection and Follow-up
- F.5.d Elimination of Illicit Discharges and Connections
- F.5.e Enforce Ordinances
- F.5.f Prevent and Respond To Sewage Spills (Including from Private Laterals and Failing Septic Systems) and Other Spills
- F.5.g Facilitate Public Reporting of Illicit Discharges and Connections – Public Hotline
- F.5.h Facilitate Disposal of Used Oil and Toxic Materials
- F.5.i Limit Infiltration From Sanitary Sewer to MS4

F.5.a. Illicit Discharges and Connections

Each Copermittee shall implement a program to actively seek and eliminate illicit discharges and connections into its MS4. The program shall address all types of illicit discharges and connections excluding those non-storm water discharges not prohibited by the Copermittee in accordance with Section B. of this Order.

F.5.b. Dry Weather Monitoring Program

Each Copermittee shall conduct dry weather inspections, field screening, and analytical monitoring of MS4 outfalls within its jurisdiction to detect illicit discharges and connections in accordance with Attachment E of this Order.

F.5.c. Investigation / Inspection and Follow-Up

Each Copermittee shall investigate and inspect any portion of the MS4 that, based on dry weather monitoring results or other appropriate information, indicates a reasonable potential for illicit discharges, illicit connections, or other sources of non-storm water (including non-prohibited discharge(s) identified in Section B. of this Order). Each Copermittee shall establish criteria to identify portions of the system where such follow-up investigations are appropriate.

F.5.d. Elimination of Illicit Discharges and Connections

Each Copermittee shall eliminate all detected illicit discharges, discharge sources, and connections immediately.

F.5.e. Enforce Ordinances

Each Copermittee shall implement and enforce its ordinances, orders, or other legal authority to prevent illicit discharges and connections to its MS4. Each Copermittee shall also implement and enforce its ordinance, orders, or other legal authority to eliminate detected illicit discharges and connections to its MS4.

F.5.f. Prevent and Respond to Sewage Spills (Including from Private Laterals and Failing Septic Systems) and Other Spills

Each Copermittee shall prevent, respond to, contain and clean up all sewage and other spills that may discharge into its MS4 from any source (including private laterals and failing septic systems). Spill response teams shall prevent entry of spills into the MS4 and contamination of surface water, ground water and soil to the maximum extent practicable. Each Copermittee shall coordinate spill prevention, containment and response activities throughout all appropriate departments, programs and agencies to ensure maximum water quality protection at all times.

Each Copermittee shall develop and implement a mechanism whereby it is notified of all sewage spills from private laterals and failing septic systems into its MS4. Each Copermittee shall prevent, respond to, contain and clean up sewage from any such notification.

F.5.g. Facilitate Public Reporting of Illicit Discharges and Connections - Public Hotline

Each Copermittee shall promote, publicize and facilitate public reporting of illicit discharges or water quality impacts associated with discharges into or from MS4s. Each Copermittee shall facilitate public reporting through development and operation of a public hotline. Public hotlines can be Copermittee-specific or shared by Copermittees. All storm water hotlines shall be capable of receiving reports in both English and Spanish 24 hours per day / seven days per week. Copermittees shall respond to and resolve each reported incident. All reported incidents, and how each was resolved, shall be summarized in each Copermittee's individual Jurisdictional URMP Annual Report.

F.5.h. Facilitate Disposal of Used Oil and Toxic Materials

Each Copermittee shall facilitate the proper management and disposal of used oil, toxic materials, and other household hazardous wastes. Such facilitation shall include educational

activities, public information activities, and establishment of collection sites operated by the Copermittee or a private entity. Neighborhood collection of household hazardous wastes is encouraged.

**F.5.i. Limit Infiltration From Sanitary Sewer to MS4/ Provide Preventive Maintenance of Both**

Each Copermittee shall implement controls and measures to limit infiltration of seepage from municipal sanitary sewers to MS4s through thorough, routine preventive maintenance of the MS4. Each Copermittee that operates both a municipal sanitary sewer system and a MS4 shall implement controls and measures to limit infiltration of seepage from the municipal sanitary sewers to the MS4s that shall include overall sanitary sewer and MS4 surveys and thorough, routine preventive maintenance of both.

***F.6. Common Interest Areas and Homeowners Associations***

- a. Each Copermittee shall develop and implement a plan for ensuring that urban runoff within common interest areas from private roads, drainage facilities, and other components of the storm water conveyance system, including those managed by associations, meets the objectives of this Order.
- b. As part of its individual Jurisdictional URMP Annual Report, each Copermittee shall describe the measures taken to ensure that urban runoff from common interest areas to the MS4 meets the objectives of this Order.

***F.7. Public Participation Component***

Each Copermittee shall incorporate a mechanism for public participation in the implementation of the Jurisdictional URMP.

***F.8. Assessment of Jurisdictional URMP Effectiveness Component***

- a. As part of its individual Jurisdictional URMP, each Copermittee shall develop a long-term strategy for assessing the effectiveness of its individual Jurisdictional URMP. The long-term assessment strategy shall identify specific direct and indirect measurements that each Copermittee will use to track the long-term progress of its individual Jurisdictional URMP towards achieving improvements in receiving water quality. Methods used for assessing effectiveness shall include the following or their equivalent: surveys, pollutant loading estimations, and receiving water quality monitoring. The long-term strategy shall also discuss the role of monitoring data in substantiating or refining the assessment.
- b. As part of its individual Jurisdictional URMP Annual Report, each Copermittee shall include an assessment of the effectiveness of its Jurisdictional URMP using the direct and indirect assessment measurements and methods developed in its long-term assessment strategy.

***F.9. Fiscal Analysis Component***

Each Copermittee shall secure the resources necessary to meet the requirements of this Order. As part of its individual Jurisdictional URMP, each Copermittee shall develop a strategy to conduct a fiscal analysis of its urban runoff management program in its entirety. In order to demonstrate sufficient financial resources to implement the conditions of this Order, each Copermittee shall conduct an annual fiscal analysis as part of its individual Jurisdictional URMP Annual Report. This analysis shall, for each fiscal year covered by this Order, evaluate the expenditures (such as capital, operation and maintenance, education, and administrative expenditures) necessary to accomplish the activities of the Copermittee's urban runoff management program. Such analysis shall include a description of the source(s) of funds that are proposed to meet the necessary expenditures, including legal restrictions on the use of such funds.

## G. IMPLEMENTATION OF JURISDICTIONAL URMP

Each Copermittee shall have completed full implementation of all requirements of the Jurisdictional URMP section of this Order no later than **365 days after adoption** of this Order, except as stated as follows: Within 180 days of development of the model SUSMP, each Copermittee shall adopt its own local SUSMP, and amended ordinances consistent with the model SUSMP, and shall submit both (local SUSMP and amended ordinances) to the SDRWQCB.

Following the adoption of the Order and prior to the full implementation of the Jurisdictional URMP, the Copermittees shall at a minimum implement the provisions and commitments of the proposed DAMP submitted in September 2000.

## H. SUBMITTAL OF JURISDICTIONAL URMP DOCUMENT

The written account of the overall program to be conducted by each Copermittee within its jurisdiction during the five-year life of this Order is referred to as the "Jurisdictional URMP Document".

1. Individual – Each Copermittee shall submit to the Principal Permittee(s) an individual Jurisdictional URMP document which describes all activities it has undertaken or is undertaking to implement the requirements of each component of the Jurisdictional URMP section F. of this Order.

a. At a minimum, the individual Jurisdictional URMP document shall contain the following information for the following components:

(1) Construction Component

- (a) Which pollution prevention methods will be required for implementation, and how and where they will be required
- (b) Updated grading ordinances
- (c) A description of the modified construction and grading approval process
- (d) Updated construction and grading project requirements in local grading and construction permits
- (e) A completed watershed-based inventory of all construction sites
- (f) A completed prioritization of all construction sites based on threat to water quality
- (g) Which BMPs will be implemented, or required to be implemented, for each priority category
- (h) How BMPs will be implemented, or required to be implemented, for each priority category
- (i) Planned inspection frequencies for each priority category
- (j) Methods for inspection
- (k) A description of enforcement mechanisms and how they will be used
- (l) A description of how non-compliant sites will be identified and the process for notifying the SDRWQCB, including a list of current non-compliant sites
- (m) A description of the construction education program and how it will be implemented

(2) Municipal (Existing Development) Component

- (a) Which pollution prevention methods will be required for implementation, and how and where they will be required
- (b) A completed watershed-based inventory of all municipal land use areas and activities
- (c) A completed prioritization of all municipal areas and activities based on threat to water quality
- (d) Which BMPs will be implemented, or required to be implemented, for each priority category
- (e) How BMPs will be implemented, or required to be implemented, for each priority category

- (f) Municipal maintenance activities and schedules
- (g) Management strategy for pesticides, herbicides, and fertilizer use.
- (h) Planned inspection frequencies for the high priority category
- (i) Methods for inspection
- (j) A description of enforcement mechanisms and how they will be used

(3) Industrial (Existing Development) Component

- (a) Which pollution prevention methods will be required for implementation, and how and where they will be required
- (b) A completed watershed-based inventory of all industrial sites
- (c) A completed prioritization of all industrial sites based on threat to water quality
- (d) Which BMPs will be implemented, or required to be implemented, for each priority category
- (e) How BMPs will be implemented, or required to be implemented, for each priority category
- (f) A description of the monitoring program to be conducted, or required to be conducted
- (g) Planned inspection frequencies for each priority category
- (h) Methods for inspection
- (i) A description of enforcement mechanisms and how they will be used
- (j) A description of how non-compliant sites will be identified and the process for notifying the SDRWQCB, including a list of current non-compliant sites

(4) Commercial (Existing Development) Component

- (a) Which pollution prevention methods will be required for implementation, and how and where they will be required
- (b) A completed watershed-based inventory of high priority commercial sites
- (c) Which BMPs will be implemented, or required to be implemented, for high priority sites
- (d) How BMPs will be implemented, or required to be implemented, for high priority sites
- (e) Planned inspection frequencies for high priority sites
- (f) Methods for inspection
- (g) A description of enforcement mechanisms and how they will be used

(5) Residential (Existing Development) Component

- (a) Which pollution prevention methods will be encouraged for implementation, and how and where they will be encouraged
- (b) A completed inventory of high priority residential areas and activities
- (c) Which BMPs will be implemented, or required to be implemented, for high priority areas and activities
- (d) How BMPs will be implemented, or required to be implemented, for high priority areas and activities
- (e) A description of enforcement mechanisms and how they will be used

(6) Education Component

- (a) A description of the content, form, and frequency of education efforts for each target community

(7) Illicit Discharges Detection and Elimination Component

- (a) A description of the program to actively seek and eliminate illicit discharges and connections

- (b) A description of dry weather monitoring to be conducted to detect illicit discharges and connections (see Attachment E)
  - (c) A description of investigation and inspection procedures to follow-up on dry weather monitoring results or other information which indicate potential for illicit discharges and connections
  - (d) A description of procedures to eliminate detected illicit discharges and connections
  - (e) A description of enforcement mechanisms and how they will be used
  - (f) A description of methods to prevent, respond to, contain, and clean up all sewage (including spills from private laterals and failing septic systems) and other spills in order to prevent entrance into the MS4
  - (g) A description of the mechanism to receive notification of spills from private laterals
  - (h) A description of efforts to facilitate public reporting of illicit discharges and connections, including a public hotline
  - (i) A description of efforts to facilitate proper disposal of used oil and other toxic materials
  - (j) A description of controls and measures to be implemented to limit infiltration of seepage from sanitary sewers to MS4s
  - (k) A description of routine preventive maintenance activities on the sanitary system (where applicable) and the MS4
- (8) Public Participation Component
- (a) A description of how public participation will be included in the implementation of the Jurisdictional URMP
- (9) Assessment of Jurisdictional URMP Effectiveness Component
- (a) A description of strategies to be used for assessing the long-term effectiveness of the individual Jurisdictional URMP.
- (10) Fiscal Analysis Component
- (a) A description of the strategy to be used to conduct a fiscal analysis of the urban runoff management program.
- (11) Land-Use Planning for New Development and Redevelopment Component
- (a) Workplan for inclusion in General Plan (or equivalent plan) of water quality and watershed protection principles and policies
  - (b) Development project requirements in local development permits
  - (c) Participation efforts conducted in the development of the Model SUSMP
  - (d) Environmental review processes revisions
  - (e) A description of the planning education program and how it will be implemented
- (12) Fire Fighting
- (a) A description of a program to reduce pollutants from non-emergency fire fighting flows identified by the Copermittee to be significant sources of pollutants.
- (13) Common Interest Areas and Homeowners Associations
- (a) A description of the program that will be implemented to ensure that urban runoff within common interest areas from private roads, drainage facilities, and other components of the storm water conveyance system including those managed by associations meets the objectives of this Order.

- b. Each Copermittee shall submit to the Principal Permittee(s) each part of its individual Jurisdictional URMP document by the dates specified by the Principal Permittee(s).
  - c. In addition to submittal of the Jurisdictional URMP document, each Copermittee shall submit to the SDRWQCB its own adopted local SUSMP consistent with the submitted Model SUSMP, as described in section F.1.b.(2). of this Order. Each Copermittee's own local SUSMP, along with its amended ordinances, shall be submitted to the SDRWQCB within 180 days of the submittal of the Model SUSMP to the SDRWQCB.
2. Unified – The Principal Permittee(s) shall submit the unified Jurisdictional URMP document to the SDRWQCB. The unified Jurisdictional URMP document shall be submitted in two parts (the collected Jurisdictional URMPs and the model SUSMP).
- a. The unified Jurisdictional URMP document submittal shall address the requirements of the entire Jurisdictional URMP sections F.1 - F.9. of this Order, with the exception of the local SUSMP requirements (which are to be implemented 180 days after submittal of the model SUSMP by the SDRWQCB).
  - b. The unified Jurisdictional URMP document submittal shall contain a section covering common activities conducted collectively by the Copermittees including jointly developed reporting formats (section O.4), to be produced by the Principal Permittee(s), and the thirteen individual Jurisdictional URMP documents.
  - c. The Principal Permittee(s) shall be responsible for the development and production of a stand alone Model SUSMP document meeting the requirements of section F.1.b.(2) of this Order.
  - d. The Principal Permittee(s) shall submit the unified Jurisdictional URMP document, including the Model SUSMP, to the SDRWQCB within **365 days of adoption** of this Order.
3. Universal Reporting Requirements

All individual and unified Jurisdictional URMP document submittals shall include an executive summary, introduction, conclusion, recommendations, and signed certified statement. Each Copermittee shall submit its individual Jurisdictional Urban Runoff Management Program Document with a signed certified statement. The Principal Permittee(s) shall submit a signed certified statement referring to its individual Jurisdictional Urban Runoff Management Program Document, the section covering common activities conducted collectively by the Copermittees, and the Model SUSMP document meeting the requirements of section F.1.b.(2) of this Order as produced by the Principal Permittee(s).

#### I. SUBMITTAL OF JURISDICTIONAL URMP ANNUAL REPORT

- 1. Individual - Each individual Jurisdictional URMP Annual Report shall be a documentation of the activities conducted by each Copermittee during the past annual reporting period. Each Jurisdictional URMP Annual Report shall, at a minimum, contain the following:
  - a. Comprehensive description of all activities conducted by the Copermittee to meet all requirements of each component of the Jurisdictional URMP section of this Order;
    - F.1. Land-Use Planning for New Development and Redevelopment Component
    - F.2. Construction Component
    - F.3. Existing Development Component (Including Municipal, Industrial, Commercial, Residential, and Education)
    - F.4. Education Component
    - F.5. Illicit Discharge Detection and Elimination Component
    - F.6. Common Interest Areas and Homeowners Associations

- F.7. Public Participation Component
- F.8. Assessment of Jurisdictional URMP Effectiveness Component
- F.9. Fiscal Analysis Component

- b. Each Copermittee's accounting of all:
    - (1) Reports of illicit discharges (i.e., complaints) and how each was resolved (indicating referral source);
    - (2) Inspections conducted;
    - (3) Enforcement actions taken; and
    - (4) Education efforts conducted.
  - c. Public participation mechanisms utilized during the Jurisdictional URMP implementation process;
  - d. Proposed revisions to the Jurisdictional URMP;
  - e. A summary of all urban runoff related data not included in the annual monitoring report (e.g., special investigations);
  - f. Budget for upcoming year;
  - g. Identification of management measures proven to be ineffective in reducing urban runoff pollutants and flow; and
  - h. Identification of water quality improvements or degradation.
2. Unified - The unified Jurisdictional URMP Annual Report shall contain a section covering common activities conducted collectively by the Copermittees, to be produced by the Principal Permittee(s), and the thirteen individual Jurisdictional URMP Annual Reports. Each Copermittee shall submit to the Principal Permittee(s) an individual Jurisdictional URMP Annual Report by the date specified by the Principal Permittee(s). The Principal Permittee(s) shall submit a unified Jurisdictional URMP Annual Report to the SDRWQCB prior to **November 9, 2003 and prior to every November 9th thereafter**. The reporting period for these annual reports shall be the previous fiscal year. For example, the report submitted prior to November 9, 2003 shall cover the reporting period July 1, 2002 to June 30, 2003.
3. Universal Reporting Requirements

All individual and unified Jurisdictional URMP submittals shall include an executive summary, introduction, conclusion, recommendations, and signed certified statement. Each Copermittee shall submit its individual Jurisdictional Urban Runoff Management Program Annual Report with a signed certified statement. The Principal Permittee(s) shall submit a signed certified statement referring to its individual Jurisdictional Urban Runoff Management Program Annual Report and the section covering common activities conducted collectively by the Copermittees as produced by the Principal Permittee(s).

#### J. WATERSHED URBAN RUNOFF MANAGEMENT PROGRAM

- 1. Each Copermittee shall collaborate with other Copermittees to identify, address, and mitigate the highest priority water quality issues/pollutants in the six (Table 4) watersheds in the San Juan Creek Watershed Management Area.
- 2. Each Copermittee shall collaborate with all other Copermittees discharging urban runoff into the same watershed to develop and implement a Watershed Urban Runoff Management Program (Watershed URMP) for the six watersheds in the San Juan Creek Watershed Management Area.

The Watershed URMP shall, at a minimum contain the following:

- a. An accurate map of the watersheds of the San Juan Creek Watershed Management Area in Orange County (preferably in Geographical Information System [GIS] format) that identifies all receiving waters (including the Pacific Ocean); all Clean Water Act section 303(d) impaired receiving waters (including the Pacific Ocean); existing and planned land uses; MS4s, major highways; jurisdictional boundaries; and inventoried commercial, construction, industrial, municipal sites, and residential areas.
- b. An assessment of the water quality of all receiving waters in the watershed based upon (1) existing water quality data; and (2) annual dry weather monitoring that satisfies requirements of section F.5 and Attachment E of this Order; and (3) watershed receiving water quality monitoring that satisfies the watershed monitoring requirements of Attachment B;
- c. An identification and prioritization of major water quality problems in the watershed caused or contributed to by MS4 discharges and the likely source(s) of the problem(s);
- d. An implementation time schedule of short and long-term recommended activities (individual and collective) needed to address the highest priority water quality problem(s) identified in section J.2.c of this Order. For this section, "short-term activities" shall mean those activities that are to be completed during the life of this Order and "long-term activities" shall mean those activities that are to be completed beyond the life of this Order;
- e. A mechanism for public participation throughout the entire watershed URMP process;
- f. A watershed-based education program that builds on and expands upon the education activities conducted by each Copermittee in a given watershed and that can focus on water quality issues specific to that watershed;
- g. A mechanism to facilitate collaborative "watershed-based" (i.e., natural resource-based) land use planning with neighboring local governments in the watershed.
- h. Short-term strategy for assessing the effectiveness of the activities and programs implemented under the Watershed URMP. The short term assessment strategy shall identify methods to assess the Watershed URMP effectiveness and include specific direct and indirect performance measurements that will track the immediate progress and accomplishments of the Watershed URMP towards improving receiving water quality impacted by urban runoff discharges. The short-term strategy shall also discuss the role of monitoring data collected by the Copermittees in substantiating or refining the assessment.
- i. Long-term strategy for assessing the effectiveness of the Watershed URMP. The long-term assessment strategy shall identify specific direct and indirect performance measurements that will track the long-term progress of Watershed URMP towards achieving improvements in receiving water quality impacted by urban runoff discharges. Methods used for assessing effectiveness shall include the following or their equivalent: surveys, pollutant loading estimations, and receiving water quality monitoring. The long-term strategy shall also discuss the role of monitoring data in substantiating or refining the assessment.

Table 4. Orange County Copermittees by Watershed  
for the San Juan Creek Watershed Management Area

<b>Watershed</b>	<b>Major Receiving Water Bodies<sup>8</sup></b>	<b>Copermittees</b>
Orange County Coastal Streams - Laguna	Moro Canyon Creek Emerald Canyon Creek Laguna Canyon Creek Blue Bird Canyon Creek Rim Rock Canyon Creek Hobo Canyon Creek	County of Orange Laguna Beach Laguna Woods Orange County Flood Control District Aliso Viejo
Aliso Creek	Aliso Creek English Canyon Creek Sulphur Canyon Creek Wood Canyon Creek	Aliso Viejo Laguna Beach Laguna Hills Laguna Niguel Laguna Woods Lake Forest Mission Viejo County of Orange Orange County Flood Control District
Dana Point Coastal Streams	Salt Creek Arroyo Salada Creek San Juan Canyon	Dana Point Laguna Niguel Orange County Flood Control District
San Juan Creek	San Juan Creek Trampas Canyon Creek Canada Gobernadora Canada Chiquita Horno Creek Arroyo Trabuco Creek Tijeras Canyon Creek Live Oak Canyon Creek Oso Creek La Paz Creek Lucas Canyon Creek Verdugo Canyon Creek Bell Canyon Creek Dove Canyon Creek Crow Canyon Creek	San Juan Capistrano Mission Viejo Laguna Hills Laguna Niguel Dana Point Rancho Santa Margarita County of Orange Orange County Flood Control District San Clemente
Orange County Coastal Streams - San Clemente	Prima Deshecha Canada Segunda Deshecha Canada	San Clemente San Juan Capistrano County of Orange Orange County Flood Control District Dana Point
San Mateo Creek	Christianitos Creek Gambino Canyon Creek La Paz Canyon Creek Talega Canyon Creek	San Clemente County of Orange Orange County Flood Control District

<sup>8</sup> Indented water bodies are tributary to the above water body.

**K. IMPLEMENTATION OF WATERSHED URMP**

Each Copermittee shall implement all requirements of the Watershed URMP section of this Order by August 13, 2003 unless otherwise specified. Following the adoption of the Order and prior to the full implementation of the Watershed URMP, the Copermittees shall at a minimum collectively implement the provisions and commitments of the proposed DAMP submitted in September 2000.

**L. SUBMITTAL OF WATERSHED URMP DOCUMENT**

The written account of the overall watershed program to be conducted by each Copermittee during the remaining life of this Order is referred to as the "Watershed URMP Document". The Watershed URMP is conducted concurrently with the Jurisdictional URMP.<sup>9</sup>

1. The Watershed URMP document shall state how the member Copermittees within each watershed will develop and implement the requirements of the Watershed URMP section J. of this Order. The Watershed URMP document shall include:
  - (1) A completed watershed map
  - (2) A water quality assessment of the San Juan Creek Watershed Management Area within Orange County and watershed monitoring needed
  - (3) Prioritization of water quality problems within Orange County in the San Diego Region
  - (4) Recommended activities (short and long term) to be conducted jointly by the Copermittees and a timeline for implementation
  - (5) Individual Copermittee implementation responsibilities and time schedules for implementation
  - (6) A description of watershed public participation mechanisms
  - (7) A description of watershed education mechanisms
  - (8) A description of the mechanism and implementation schedule for watershed-based land use planning
  - (9) A strategy for assessing the short-term effectiveness of the Watershed URMP
  - (10) A strategy for assessing the long-term effectiveness of the Watershed URMP
  - (11) A program to address common interest areas and homeowners associations
2. The Principal Permittee(s) shall submit the Watershed URMP document to the SDRWQCB by August 13, 2003.
3. Universal Reporting Requirements.

All Watershed URMP submittals shall include an executive summary, introduction, conclusion, recommendations, and signed certified statement. Each Copermittee shall submit a signed certified statement covering its responsibilities in the Watershed URMP Document. The Principal Permittee(s) shall submit a signed certified statement referring to its responsibilities in the Watershed URMP Document and the section covering common activities conducted collectively by the Copermittees as produced by the Principal Permittee(s).

<sup>9</sup>As the Copermittees jointly revise and implement the submitted proposed DAMP and each Copermittee revises and implements its jurisdictional level program to satisfy the requirements of this Order, it is expected that many activities will be conducted on both a jurisdictional level (e.g., enforcement of local ordinances and permits) and a watershed level. Implementation of the Watershed URMP is not meant to replace, but to expand and complement implementation of the Jurisdictional URMP. For this reason, it is necessary to report management activities on both levels. This can be accomplished either by submitting both a Jurisdictional URMP Annual Report and a Watershed URMP Annual Report or by submitting a single Watershed URMP Annual Report that contains two separate sections (i.e., watershed activities and jurisdictional activities). Information need only be reported once (to the extent something is covered in the Watershed URMP Annual Report, it need not be covered again in the Jurisdictional URMP Annual Report).

**M. SUBMITTAL OF WATERSHED URMP ANNUAL REPORT**

1. Each Watershed URMP Annual Report shall be a documentation of the activities conducted by watershed member Copermittees during the previous annual reporting period to meet the requirements of all components of the Watershed URMP section of this Order. Each Watershed URMP Annual Report shall, at a minimum, contain the following:
  - a. Comprehensive description of all activities conducted by the watershed member Copermittees to meet all requirements of each component of Watershed URMP section J. of this Order
  - b. A section covering common activities conducted collectively by the Copermittees, to be produced by the Principal Permittee(s)
  - c. Public participation mechanisms utilized during the Watershed URMP implementation process;
  - d. Mechanism for watershed-based land use planning;
  - e. Assessment of effectiveness of Watershed URMP;
  - f. Proposed revisions to the Watershed URMP;
  - g. A summary of watershed effort related data not included in the annual monitoring report (e.g., special investigations); and
  - h. Identification of water quality improvements or degradation.
2. The Principal Permittee(s) shall submit the Watershed URMP Annual Report to the SDRWQCB prior to November 9, 2004 and prior to every November 9th thereafter. The reporting period for these annual reports shall be the previous fiscal year. For example, the report submitted prior to November 9, 2004 shall cover the reporting period July 1, 2003 to June 30, 2004.
3. Universal Reporting Requirements

All Watershed URMP submittals shall include an executive summary, introduction, conclusion, recommendations, and signed certified statement. Each Copermittee shall submit a signed certified statement covering its responsibilities in the Watershed URMP Annual Report. The Principal Permittee(s) shall submit a signed certified statement referring to its responsibilities in the Watershed URMP Annual Report and the section covering common activities conducted collectively by the Copermittees as produced by the Principal Permittee(s).

**N. PROGRAM MANAGEMENT**

1. The Copermittees shall implement the Program Management activities and commitments as described in section 2 (Program Management) of the proposed DAMP.

**O. PRINCIPAL PERMITTEE RESPONSIBILITIES**

Within 90 days of adoption of this Order, the Copermittees shall designate the Principal Permittee(s) and notify the SDRWQCB of the name(s) of the Principal Permittee(s). The Principal Permittee(s) may require the Copermittees to reimburse the Principal Permittee(s) for reasonable costs incurred while performing coordination responsibilities and other related tasks. The Principal Permittee(s) shall, at a minimum:

1. Be responsible for implementing or coordinating the implementation of the Program Management activities and commitments described in section 2 (Program Management) of the proposed DAMP.
2. Serve as liaison(s) between the Copermittees and the SDRWQCB on general permit issues.
3. Coordinate permit activities among the Copermittees and facilitate collaboration on the development and implementation of programs required under this Order;

4. Coordinate the joint development by all of the Copermittees of standardized format(s) for all reports required under this Order (e.g., annual reports, monitoring reports, fiscal analysis reports, and program effectiveness reports, etc.). The standardized reporting format(s) shall be used by all Copermittees and shall include protocols for electronic reporting. The Principal Permittee(s) shall submit the standardized format(s) to the SDRWQCB as part of the unified Jurisdictional URMP document no later than **365 days after adoption** of this Order.
5. Integrate individual Copermittee documents and reports required under this Order into single unified documents and reports for submittal to the SDRWQCB as described below. If a reporting date falls on a non-working day or State holiday, then the report is to be submitted on the following working day.
  - a. Unified Jurisdictional URMP Document – The Principal Permittee(s) shall submit the unified Jurisdictional URMP document in its entirety (including the model SUSMP) to the SDRWQCB within 365 days of the adoption of this Order.

The Principal Permittee(s) shall be responsible for producing the sections of the unified Jurisdictional URMP document submittals covering common activities conducted by the Copermittees. The Principal Permittee(s) shall be responsible for the development and production of a stand alone Model SUSMP document meeting the requirements of section F.1.b.(2). of this Order. The Principal Permittee(s) shall also be responsible for collecting and assembling the individual Jurisdictional URMP document submittals covering the activities conducted by each individual Copermittee.

- b. Unified Jurisdictional URMP Annual Reports – The Principal Permittee(s) shall submit unified Jurisdictional URMP Annual Reports to the SDRWQCB prior to November 9<sup>th</sup> of each year, beginning on **November 9, 2003**. The reporting period for these annual reports shall be the previous fiscal year. For example, the report submitted prior to November 9, 2003 shall cover the reporting period July 1, 2002 to June 30, 2003.

The Principal Permittee(s) shall be responsible for producing the section of the unified Jurisdictional URMP Annual Reports covering common activities conducted by the Copermittees. The Principal Permittee(s) shall also be responsible for collecting and assembling the individual Jurisdictional URMP Annual Reports covering the activities conducted by each individual Copermittee.

- c. Watershed URMP Document – The Principal Permittee(s) shall prepare and submit the Watershed URMP document to the SDRWQCB by **August 13, 2003** .
    - d. Watershed URMP Annual Report - The Principal Permittee(s) shall prepare and submit the Watershed URMP Annual Reports to the SDRWQCB prior to November 9<sup>th</sup> of each year, beginning on **November 9, 2004**. The reporting period for these annual reports shall be the previous fiscal year. For example, the report submitted prior to November 9, 2004 shall cover the reporting period July 1, 2003 to June 30, 2004.
    - e. Receiving Waters Monitoring and Reporting Program - The Principal Permittee(s) shall be responsible for the production and submittal of the Previous Monitoring and Future Recommendations Report. The report shall be submitted to the SDRWQCB within 180 days of adoption of this Order.
    - f. Receiving Waters Monitoring and Reporting Program - The Principal Permittee(s) shall be responsible for the development and production of the Receiving Waters Monitoring Program as it is outlined in Attachment B. The Principal Permittee(s) shall submit the Receiving Waters Monitoring Program to the SDRWQCB within 180 days of adoption of this Order.

- g. Receiving Waters Monitoring and Reporting Program – The Principal Permittee(s) shall be responsible for coordinating the joint development by all of the Copermittees of monitoring reporting formats (Section O.4) and for implementing the Receiving Waters Monitoring Program as outlined in Attachment B by August 13, 2002.
- h. Receiving Waters Monitoring and Reporting Program - The Principal Permittee(s) shall submit the Receiving Waters Monitoring Annual Report to the SDRWQCB prior to November 9<sup>th</sup> of each year, beginning on November 9, 2003.
- i. Formal Agreements/Standardized Formats - The Principal Permittee(s) shall submit to the SDRWQCB, within 365 days of adoption of this Order, a formal agreement between the Copermittees which provides a management structure for meeting the requirements of this Order (as described in section N.1.). The Principal Permittee(s) shall submit to the SDRWQCB, within 365 days of adoption of this Order, standardized formats for all reports and documents required under this Order.
- j. Dry Weather Monitoring - The Principal Permittee(s) shall collectively submit the Copermittees' dry weather monitoring maps and procedures to the SDRWQCB within 365 days of adoption of this Order.

**P. RECEIVING WATERS MONITORING AND REPORTING PROGRAM**

- 1. Pursuant to California Water Code section 13267, each Copermittee shall comply with the Receiving Waters Monitoring and Reporting Program for Order No. R9-2002-0001 contained in **Attachment B** of this Order.
- 2. Each Copermittee shall also comply with standard provisions, reporting requirements, and notifications contained in **Attachment C** of this Order.

**Q. TASKS AND SUBMITTAL SUMMARY**

The tasks and submittals required under this Order are summarized in Tables 5 and 6 below:

Table 5. Task Summary

Task No.	Task	Permit Section	Completion Date	Frequency
1	Identify discharges not to be prohibited and BMPs required for treatment of discharges not prohibited	B.3.	365 days after adoption of Order	One Time
2	Examine field screening results to identify water quality problems resulting from non-prohibited non-storm water discharges, including follow-up of problems	B.5.	Prior to November 9, 2003	Annually
3	Notify SDRWQCB of discharges causing or contributing to an exceedance of water quality standards	C.2.a.	Immediate	As Needed
4	Establish adequate legal authority to control pollutant discharges into and from MS4	D.1.	365 days after adoption of Order	One Time
5	Assess General Plan to incorporate water quality and watershed protection principles	F.1.a.	365 days after adoption of Order	One Time
6	Include Development Project Requirements in local permits	F.1.b.(1).	365 days after adoption of Order	One Time
7	Develop Model SUSMP	F.1.b.(2).	365 days after adoption of Order	One Time
8	Develop and adopt individual local SUSMP and amended ordinances	F.1.b.(2).	180 days after development of Model SUSMP	One Time
9	Implement individual jurisdictional SUSMP	F.1.b.(2).	180 days after submittal of Model SUSMP to SDRWQCB	Continuous

Task No.	Task	Permit Section	Completion Date	Frequency
10	Revise environmental review processes	F.1.c.(1).	365 days after adoption of Order	One Time
11	Conduct education program for municipal planning and development review staff, project applicants, developers, contractors, community planning groups, and property owners	F.1.d.(1). And F.1.d.(2).	365 days after adoption of Order	Ongoing
12	Implement all requirements of Construction Component of Jurisdictional URMP	F.2.a. – F.2.j.	365 days after adoption of Order	Ongoing
13	Notify SDRWQCB of non-compliant construction sites that pose a threat to human or environmental health	F.2.i.	Within 24 hours of discovery of noncompliance	As Needed
14	Implement all requirements of Municipal Existing Development Component of Jurisdictional URMP	F.3.a.(1). – F.3.a.(8).	365 days after adoption of Order	Ongoing
15	Implement all requirements of Industrial Existing Development Component of Jurisdictional URMP	F.3.b.(1) – F.3.b.(8)	365 days after adoption of Order	Ongoing
16	Notify SDRWQCB of non-compliant industrial sites that pose a threat to human or environmental health	F.3.b.8.	Within 24 hours of discovery of noncompliance	As Needed
17	Implement all requirements of Commercial Existing Development Component of Jurisdictional URMP	F.3.c.(1) – F.3.c.(5)	365 days after adoption of Order	Ongoing
18	Implement all requirements of Residential Existing Development Component of Jurisdictional URMP	F.3.d.(1) – F.3.d.(4)	365 days after adoption of Order	Ongoing
19	Implement all requirements of Education Component of Jurisdictional URMP	F.4.a. – F.4.c.	365 days after adoption of Order	Ongoing
20	Implement all requirements of Illicit Discharge Detection and Elimination Component of Jurisdictional URMP	F.5.a. – F.5.i.	365 days after adoption of Order	Ongoing
21	Develop a plan to manage urban runoff from common interest areas, private roads, drainage facilities, and other components of the storm water conveyance system, including those managed by homeowners associations.	F.6.	365 days after adoption of Order	One Time
22	Implement all requirements of Public Participation Component of Jurisdictional URMP	F.7.	365 days after adoption of Order	Ongoing
23	Develop strategy for assessment of Jurisdictional URMP effectiveness	F.8.a.	365 days after adoption of Order	One Time
24	Assess Jurisdictional URMP effectiveness	F.8.b.	Prior to November 9, 2003	Annually
25	Develop strategy for fiscal analysis of urban runoff management program	F.9.	365 days after adoption of Order	One Time
26	Conduct fiscal analysis of urban runoff management program in entirety	F.9.	Prior to November 9, 2003	Annually
27	Develop and implement Watershed URMP	J.2.	August 13, 2003	Ongoing
28	Implement Program Management activities and commitments in proposed DAMP	N.1.	Immediately	Ongoing
29	Develop standardized formats for all required reports of this Order	O.4.	365 days after adoption of Order	One Time
30	Develop Receiving Waters Monitoring Document	Attachment B	180 days after adoption of Order	One Time
31	Implement Receiving Waters Monitoring Program	Attachment B	180 days after adoption of Order	Continuous
32	Develop Dry Weather Monitoring Program Document	Attachment E	365 days after adoption of Order	One Time
33	Conduct Dry Weather Monitoring Program	Attachment E	Begins May 1, 2003 Thereafter conducted May 1 <sup>st</sup> to September 30 <sup>th</sup>	Annually
34	Complete NPDES applications for issuance of renewal watershed-based permits	Attachment C	At least 180 days prior to expiration of Order	One Time

Task No.	Task	Permit Section	Completion Date	Frequency
35	Notify SDRWQCB of any incidence of non-compliance with this Order that poses a threat to human or environmental health.	R.1, B.6 of Attachment C	Within 24 hours of discovery of non-compliance	As Needed
36	Designate Principal Permittee(s) and notify SDRWQCB	O.	90 days after adoption of the Order	One Time

Table 6. Submittal Summary

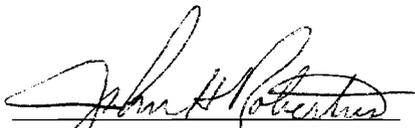
Submittal No.	Submittal	Permit Section	Completion Date	Frequency
1	Submit identification of discharges not to be prohibited and BMPs required for treatment of discharges not prohibited	B.3.	365 days after adoption of Order	One Time
2	Report on discharges causing or contributing to an exceedance of water quality standards, including description of BMP implementation	C.2.a.	With individual Jurisdictional URMP Annual Reports	As Needed
3	Submit Certified Statement of Adequate Legal Authority	D.2.	365 days after adoption of Order	One Time
4	Submit certified statement if particular high priority construction sites are to be inspected monthly rather than weekly in the rainy season	F.2.g.(2).	365 days after adoption of Order and as needed thereafter	As Needed
5	Submit report on non-compliant construction sites that pose a threat to human or environmental health.	F.2.i.	Within 5 Days of discovery of non-compliance	As Needed
6	Submit report on non-compliant industrial sites that pose a threat to human or environmental health.	F.3.b.8.	Within 5 days of discovery of non compliance	As Needed
7	Submit to Principal Permittee(s) individual Jurisdictional URMP document covering requirements for all Components	H.1.a.	Prior to 365 days after adoption of Order (Principal Permittee(s) specifies date of submittal)	One Time
8	(This space reserved).			
9	Principal Permittee(s) shall submit to SDRWQCB unified Jurisdictional URMP document covering requirements for all Components, including Model SUSMP	H.2.a.	365 days after adoption of Order	One Time
10	(This space reserved).			
11	Submit to SDRWQCB local SUSMP and amended ordinances	F.1.b.(2). and H.1.d.	180 days after development of Model SUSMP	One Time
12	Submit to Principal Permittee(s) individual Jurisdictional URMP Annual Report	I.1.	Prior to November 9, 2003 (Principal Permittee(s) specifies date of submittal)	Annually
13	Principal Permittee(s) shall submit 1st unified Jurisdictional URMP Annual Report to SDRWQCB	I.2.	Prior to November 9, 2003	One Time and Annually Thereafter
14	Submit to Principal Permittee(s) Watershed Specific URMP document	L.1.	Prior to August 13, 2003 (Principal Permittee(s) specifies date of submittal)	One Time
15	Principal Permittee(s) shall submit Watershed URMP document to SDRWQCB	L.2.	August 13, 2003	One Time
16	Principal Permittee(s) shall submit 2nd unified Jurisdictional URMP Annual Report to SDRWQCB	I.2.	Prior to November 9, 2004	One Time
17	(This space reserved).			
18	Principal Permittee(s) shall submit 1st Watershed URMP Annual Report to SDRWQCB	M.2.	Prior to November 9, 2004	One Time and Annually Thereafter
19	Principal Permittee(s) shall submit 3rd unified Jurisdictional URMP Annual Report to SDRWQCB	I.2.	Prior to November 9, 2005	One Time

Submittal No.	Submittal	Permit Section	Completion Date	Frequency
20	Principal Permittee(s) shall submit 2 <sup>nd</sup> Watershed URMP Annual Report to SDRWQCB	M.2.	Prior to November 9, 2005	One Time
21	Principal Permittee(s) shall submit 4 <sup>th</sup> unified Jurisdictional URMP Annual Report to SDRWQCB	I.2.	Prior to November 9, 2006	One Time
22	Principal Permittee(s) shall submit 3 <sup>rd</sup> Watershed URMP Annual Report to SDRWQCB	M.2.	Prior to November 9, 2006	One Time
23	Principal Permittee(s) shall submit 5 <sup>th</sup> unified Jurisdictional URMP Annual Report to SDRWQCB	I.2.	Prior to November 9, 2007	One Time
24	Principal Permittee(s) shall submit standardized formats for all reports required under this Order	O.4.	365 days after adoption of Order	One Time
25	Principal Permittee(s) submits Receiving Waters Monitoring Program Document	Attachment B	180 days after adoption of Order	One Time
26	Principal Permittee(s) submits Receiving Waters Monitoring Annual Report to SDRWQCB	Attachment B	Prior to November 9, 2003	Annually
27	Submit to Principal Permittee(s) Dry Weather Monitoring Program Document	Attachment E	Prior to 365 days after adoption of Order	One Time
28	Principal Permittee(s) submits collective Dry Weather Monitoring Program Documents	Attachment E	365 days after adoption of Order	One Time
29	Submit to Principal Permittee(s) Dry Weather Monitoring Program results as part of individual Jurisdictional URMP Annual Report	Attachment E	Prior to November 9, 2003, as part of individual Jurisdictional URMP Annual Report	Annually
30	Principal Permittee(s) shall submit NPDES applications for issuance of renewal watershed-based permits	Attachment C	At least 180 days prior to expiration of this Order	One Time
31	Submit reports of any incidence of non-compliance with this Order that poses a threat to human or environmental health.	R.1, B.6 of Attachment C	Within 5 days of discovery of non compliance	As Needed

#### R. STANDARD PROVISIONS, REPORTING REQUIREMENTS AND NOTIFICATIONS

1. Each Copermitee shall comply with Standard Provisions, Reporting Requirements, and Notifications contained in **Attachment C** of this Order. This includes 24 hour/5day reporting requirements for any instance of non-compliance with this Order as described in section B.6 of Attachment C.
2. All plans, reports and subsequent amendments submitted in compliance with this Order shall be implemented immediately (or as otherwise specified) and shall be an enforceable part of this Order upon submission to the SDRWQCB. All submittals by Copermitees must be adequate to implement the requirements of this Order.

I, John H. Robertus, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Diego Region, on **February 13, 2002**.

  
 John H. Robertus  
 Executive Officer

**ATTACHMENT A****BASIN PLAN PROHIBITIONS**

California Water Code Section 13243 provides that a Regional Board, in a water quality control plan, may specify certain conditions or areas where the discharge of waste, or certain types of waste is not permitted. The following discharge prohibitions are applicable to any person, as defined by Section 13050(c) of the California Water Code, who is a citizen, domiciliary, or political agency or entity of California whose activities in California could affect the quality of waters of the state within the boundaries of the San Diego Region.

1. The discharge of waste to waters of the state in a manner causing, or threatening to cause a condition of pollution, contamination or nuisance as defined in California Water Code Section 13050, is prohibited.
2. The discharge of waste to land, except as authorized by waste discharge requirements or the terms described in California Water Code Section 13264 is prohibited.
3. The discharge of pollutants or dredged or fill material to waters of the United States except as authorized by an NPDES permit or a dredged or fill material permit (subject to the exemption described in California Water Code §13376) is prohibited.
4. Discharges of recycled water to lakes or reservoirs used for municipal water supply or to inland surface water tributaries thereto are prohibited, unless this Regional Board issues a NPDES permit authorizing such a discharge; the proposed discharge has been approved by the State Department of Health Services and the operating agency of the impacted reservoir; and the discharger has an approved fail-safe long-term disposal alternative.
5. The discharge of waste to inland surface waters, except in cases where the quality of the discharge complies with applicable receiving water quality objectives, is prohibited. Allowances for dilution may be made at the discretion of the Regional Board. Consideration would include streamflow data, the degree of treatment provided and safety measures to ensure reliability of facility performance. As an example, discharge of secondary effluent would probably be permitted if streamflow provided 100:1 dilution capability.
6. The discharge of waste in a manner causing flow, ponding, or surfacing on lands not owned or under the control of the discharger is prohibited, unless the discharge is authorized by the Regional Board.
7. The dumping, deposition, or discharge of waste directly into waters of the state, or adjacent to such waters in any manner which may permit its being transported into the waters, is prohibited unless authorized by the Regional Board.
8. Any discharge to a storm water conveyance system that is not composed entirely of "*storm water*" is prohibited unless authorized by the Regional Board. [The federal regulations, 40 CFR 122.26 (b) (13), define storm water as storm water runoff, snow melt runoff, and surface runoff and drainage. 40 CFR 122.26 (b) (2) defines an illicit discharge as any discharge to a storm water conveyance system that is not composed entirely of storm water except discharges pursuant to a NPDES permit and discharges resulting from fire fighting activities. [§122.26 amended at 56 FR 56553, November 5, 1991; 57 FR 11412, April 2, 1992].

9. The unauthorized discharge of treated or untreated sewage to waters of the state or to a storm water conveyance system is prohibited.
10. The discharge of industrial wastes to conventional septic tank/subsurface disposal systems, except as authorized by the terms described in California Water Code Section 13264, is prohibited.
11. The discharge of radioactive wastes amenable to alternative methods of disposal into the waters of the state is prohibited.
12. The discharge of any radiological, chemical, or biological warfare agent into waters of the state is prohibited.
13. The discharge of waste into a natural or excavated site below historic water levels is prohibited unless the discharge is authorized by the Regional Board.
14. The discharge of sand, silt, clay, or other earthen materials from any activity, including land grading and construction, in quantities which cause deleterious bottom deposits, turbidity or discoloration in waters of the state or which unreasonably affect, or threaten to affect, beneficial uses of such waters is prohibited.
15. The discharge of treated or untreated sewage from vessels to Mission Bay, Oceanside Harbor, Dana Point Harbor, or other small boat harbors is prohibited.
16. The discharge of untreated sewage from vessels to San Diego Bay is prohibited.
17. The discharge of treated sewage from vessels to portions of San Diego Bay that are less than 30 feet deep at mean lower low water (MLLW) is prohibited.
18. The discharge of treated sewage from vessels, which do not have a properly functioning US Coast Guard certified Type I or Type II marine sanitation device, to portions of San Diego Bay that are greater than 30 feet deep at mean lower low water (MLLW) is prohibited.

**ATTACHMENT B****RECEIVING WATERS MONITORING AND REPORTING PROGRAM  
FOR  
ORDER NO. R9-2002-0001****B.1 Receiving Waters Monitoring Program**

The Copermittees shall collaborate to develop, implement, and report annually on a Receiving Waters Monitoring Program for Orange County within the San Diego Region. The primary objectives of the Receiving Waters Monitoring and Reporting Program include:

- Assessing compliance with Order No. R9-2002-0001;
- Measuring the effectiveness of Urban Runoff Management Plans;
- Assessing the chemical, physical, and biological impacts to receiving waters resulting from urban runoff; and
- Assessing the overall health and evaluating long-term trends in receiving water quality.

Order No. R9-2002-0001 may be modified by the SDRWQCB Executive Officer without further public notice to direct the Copermittees to participate in comprehensive regional monitoring activities in the Southern California Bight in lieu of specific Order R9-2002-0001 receiving waters monitoring requirements during the term of this Order.

**B.2 Receiving Waters Monitoring Program Document**

Within **180** days of the adoption of this Order the Copermittees shall submit to the SDRWQCB a Receiving Waters Monitoring Program document, subject to SDRWQCB review, that incorporates the following components:

- a. Previous Monitoring and Future Recommendations Technical Report; and
- b. Receiving Waters Monitoring Program

**B.2.a. Previous Monitoring and Future Recommendations Technical Report**

The Copermittees shall collaborate to prepare a technical report that provides analysis, interpretation, and summary of all previous wet weather monitoring results from programs conducted in the watersheds within the San Diego Region under the First Term Permit, the Second Term Permit, and the Orange County Water Quality Monitoring Program (99-04 Plan) currently being implemented by the Copermittees. The report shall also provide recommendations for the Receiving Waters Monitoring Program to comply with the objectives listed in Attachment B.1 above and incorporates the specific receiving waters monitoring requirements of Attachment B.2.b. At a minimum, the report shall:

- (1) Summarize the cumulative findings of all previous wet weather monitoring;
- (2) Identify detectable trends in water quality data and receiving water quality, based on the cumulative previous wet weather monitoring findings;
- (3) Interpret the cumulative previous wet weather monitoring findings;
- (4) Describe the monitoring design, sampling and analytical methods employed in the 99-04 Plan within the San Diego Region;
- (5) Describe the identification of Critical Aquatic Resources and Warm Spots in the 99-04 Plan within the San Diego Region and how these will be addressed in the Receiving Waters Monitoring Program;
- (6) Draw conclusions regarding the cumulative previous wet weather monitoring findings;

- (7) Describe how the monitoring data collected under the previous monitoring programs, including the 99-04 Plan, have been utilized by the Copermittees in the implementation of the 1993 DAMP under Order No. 96-03;
- (8) Describe how the monitoring data collected under this Order will be utilized in the implementation of the Jurisdictional and Watershed Urban Runoff Management Plans;
- (9) Provide recommendations for future monitoring activities in the San Diego Region (i.e. number and location of sampling stations, frequency of sampling, parameters to be analyzed, methods and materials to be used, and a rationale for each) that achieves the objectives listed in section B.1 and incorporates the specific program requirements of section B.2.b of this Attachment; and
- (10) Include an executive summary, introduction, conclusion, and summary of recommendations.

#### B.2.b. Receiving Waters Monitoring Program

The Copermittees shall collaborate to review and revise the existing 99-04 Plan utilizing the findings of the Previous Monitoring and Future Recommendations Technical Report. The revised 99-04 Plan shall incorporate the specific requirements of this section for Orange County within the San Diego Region and henceforth referred to under this Order as the Receiving Waters Monitoring Program. The Receiving Waters Monitoring Program shall at a minimum include, satisfy, or exceed the following requirements:

- (1) The Receiving Waters Monitoring shall be conducted during each reporting period under the Order. A reporting period is defined as October 1<sup>st</sup> to September 30<sup>th</sup> of any year. The first reporting period under this Order is October 1, 2002 to September 30, 2003.
- (2) Both the annual and long-term objectives of the Receiving Waters Monitoring Program shall be clearly stated and reported annually and shall focus on the primary objectives of the program listed in Attachment B.1.
- (3) The monitoring program design, implementation, analysis, assessment, and reporting shall be conducted annually on a watershed basis for each of the six hydrologic units in the San Juan Creek Watershed Management Area within Orange County (Orange County Coastal Streams – Laguna, Aliso Creek Watershed, Dana Point Watershed, San Juan Creek Watershed, Orange County Coastal Streams – San Clemente, and San Mateo Creek) as defined in the Water Quality Control Plan for the San Diego Region (9) and Watershed Management Chapter for the San Diego Region.
- (4) Monitoring results shall be assessed and reported annually on a watershed basis as a single report by the Copermittees consisting of one common section and six watershed sections. Monitoring, analysis, assessment, and reporting shall satisfy the requirements of specified below for each watershed as applicable.
- (5) Describe how the Copermittees may collaborate with other agencies or organizations conducting similar monitoring, such as the Southern California Coastal Water Research Project (SCCWRP), including the possibility of participating in coordinated comprehensive regional monitoring in the Southern California Bight under this Order.
- (6) The Receiving Waters Monitoring Program document shall be submitted to the SDRWQCB for review and comment no later than 180 days following the adoption of this Order.
- (7) Implementation of the Receiving Waters Monitoring Program shall begin no later than August 13, 2002.
- (8) The Receiving Waters Monitoring Program shall incorporate the components listed below and shall address the primary objectives of the Receiving Waters Monitoring Program:
  - (a) Urban Stream Bioassessment
  - (b) Long Term Mass Loading

- (c) Coastal Storm Drain Outfall Monitoring
- (d) Ambient Coastal Receiving Waters Monitoring

B.2.b.8.a Urban Stream Bioassessment Monitoring

1. The Copermittees shall collaborate to develop and implement an urban stream bioassessment monitoring program. At a minimum, the program shall consist of station identification, sampling, monitoring, and analysis of data for 12 bioassessment stations in order to determine the biological and physical integrity of urban streams within the County of Orange. In addition to the urban stream bioassessment stations, three reference bioassessment stations shall be identified, sampled, monitored, and analyzed. The selection, sampling, monitoring, and analysis of bioassessment stations shall meet the following requirements:
  - a. Each urban stream bioassessment station shall be selected using the following criteria. Each urban stream bioassessment station shall:
    - (1) be located within the jurisdiction of a Copermittee; or
    - (2) be located within one of the six watersheds described above; and
    - (3) be representative of urban stream conditions within one of the six watersheds specified in Section J, Table 4 of this Order; and
    - (4) meet the physical criteria of the California Stream Bioassessment Procedure<sup>1</sup>; and
    - (5) to the extent feasible, coincide with the location of an already existing monitoring station used by the California Department of Fish and Game in the conduct of the SDRWQCB's Ambient Bioassessment Program.
  - b. Each bioassessment station shall be monitored twice annually, in May and October of each year, beginning in October 2002<sup>2</sup>. A minimum of three replicate samples shall be collected at each station during each sampling event.
  - c. Sampling, laboratory, quality assurance, and analysis procedures shall follow the standardized procedures set forth in the California Department of Fish and Game's California Stream Bioassessment Procedure (CSBP). Analysis procedures shall include comparison between station mean values for various biological metrics. Sampling, laboratory, quality assurance, and analytical procedures shall follow the standardized "Non-Point Source Bioassessment Sampling Procedures" for professional bioassessment set forth in the CSBP. In the event that the CSBP "Point-Source Professional Bioassessment Procedure" is performed in place of the "Non Point Source Bioassessment Sampling Procedure," justification and documentation of the procedure shall be submitted with the report. Results of the Urban Stream Bioassessment Monitoring shall be reported annually as part of the overall Receiving Waters Monitoring and Reporting Program for Order No. R9-2002-0001. Reporting of the bioassessment data shall follow the format of the San Diego Regional Water Quality Control Board 1999 Biological Assessment Annual Report<sup>3</sup>. The report shall include:

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<sup>1</sup> California Stream Bioassessment Procedure (Protocol Brief for Biological and Physical/Habitat Assessment in Wadeable Streams), California Department of Fish and Game – Aquatic Bioassessment Laboratory, May 1999.

<sup>2</sup> Bioassessment sampling shall be performed in May and October each year.

<sup>3</sup> San Diego Regional Water Quality Control Board, 1999 Biological Assessment Annual Report. A Water Quality Inventory Series: Biological and Physical/Habitat Assessment of California Water Bodies. California Department of Fish and Game Office of Spill Prevention and Response, Water Pollution Control Laboratory. December 1999.

- (1) All physical, chemical and biological data collected in the assessment;
  - (2) Photographic documentation of assessment and reference stations;
  - (3) Documentation of quality assurance and control procedures;
  - (4) Analysis that includes calculation of the metrics used in both the CSBP and the 1999 Annual Report.
  - (5) The assessment shall utilize a regional index of biological integrity when it becomes available.
  - (6) The report shall provide interpretation for comparisons of mean biological and habitat assessment metric values between assessment and reference stations.
  - (7) Electronic data formatted to California Department of Fish and Game Aquatic Bioassessment Laboratory specifications for inclusion in the Statewide Access Bioassessment database.
- d. A professional environmental laboratory or Copermittee staff shall perform all sampling, laboratory, quality assurance, and analytical procedures. While valuable, data collected by volunteer monitoring organizations shall not be submitted in place of professional assessments.
- e. Reference stations shall be selected following the recommendations in the 1999 Annual Report, Hughes (1995)<sup>4</sup> and Barbour et. al. (1999)<sup>5</sup>. Reference stations shall be evaluated annually by the Copermittees for suitability and the results included in the annual report. New reference stations will be selected as needed by the Copermittees.
2. The Copermittees shall design and implement a program to conduct standardized toxicity testing at urban stream bioassessment stations where the bioassessment data indicates significant impairment. When findings indicate the presence of toxicity, a Toxicity Identification Evaluation (TIE) shall be conducted to determine the cause(s) of the toxicity.

#### B.2.b.8.b Long Term Mass Loading

For purposes of evaluating long-term trends and assessing the effectiveness of urban runoff management programs, the Copermittees shall continue to implement the mass loading monitoring conducted under the 99-04 Plan in Orange County within the San Diego Region. The mass loading monitoring component shall, however, be revised as necessary to ensure adequate coverage of the San Diego Region and to specify that when findings or observations indicate the possible presence of toxicity, a Toxicity Identification Evaluation (TIE) shall be conducted to determine the cause(s) of the toxicity.

#### B.2.b.8.c. Coastal Storm Drain Outfall Monitoring

The Copermittees shall collaborate to develop and implement a monitoring program for discharges of urban runoff from coastal storm drain outfalls. The program shall meet the following requirements:

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4 Hughes, R. M. (1995) Defining Acceptable Biological Status by Comparing with Reference Conditions in Biological Assessment and Criteria: Tools for Water Resource Planning and Decision Making, Wayne S. Davis and Thomas P. Simon eds. Lewis Publishers, Boca Raton, LA.

5 Barbour, M.T. , J Gerritsen, B.D. Synder, and J.B. Stribling (1999) Rapid Bioassessment Protocols For Use in Streams and Wadeable Rivers: Periphyton, Benthic Macroinvertebrates, and Fish. Second Edition. EPA 841-B-99-002.

1. The program shall include rationale and criteria for selection of storm drain outfalls to be monitored.
2. The program shall include collection of samples for analysis of total coliform, fecal coliform, and enterococci, in addition to any other indicators or pathogens identified by the Copermitees.
3. Samples shall be collected at both the storm drain outfall and in the surf zone (at ankle to knee water depths) directly in front of the outfall.
4. Samples shall be collected during both dry and wet weather periods.
5. Exceedances of public health standards for bacteria must be reported to the County of Orange Health Care Agency, Regulatory Health Services, Environmental Health, Ocean Recreation Protection Program as soon as possible by the Copermitees.

**B.2.b.8.d. Ambient Coastal Receiving Water Monitoring**

The Copermitees shall collaborate to develop and implement a program to assess the overall health of the coastal receiving waters and monitor the impact of urban runoff on ambient receiving water quality. This monitoring shall include Dana Cove, the creek and stream mouths, the Pacific Ocean coastline of Orange County within the San Diego region, and all Clean Water Act section 303(d) water bodies or other environmentally sensitive areas as defined in F.1.b.(2)(a)vi of this Order.

**B.3 Implementation of the Receiving Waters Monitoring Program**

Upon approval by the SDRWQCB the Copermitees shall implement the Receiving Waters Monitoring Program.

**B.4 Interim Implementation of the 99-04 Plan**

Until approval of the Receiving Waters Monitoring Program by the SDRWQCB, the Copermitees shall continue to implement the 99-04 Plan as described in Appendix K of the proposed DAMP.

**B.5 Submittal of Receiving Waters Monitoring Annual Reports**

The Principal Permittee shall submit the Receiving Waters Monitoring Annual Report to the SDRWQCB prior to November 9<sup>th</sup> of each year, beginning on November 9, 2003.

**B.6 Monitoring Annual Report Requirements**

- a. Monitoring reports shall provide the data/results, methods of evaluating the data, graphical summaries of the data, and an explanation/discussion of the data for each monitoring program component listed above.
- b. Monitoring reports shall include an analysis of the findings of each monitoring program component listed above. The analysis shall identify and prioritize water quality problems. Based on the identification and prioritization of water quality problems, the analysis shall identify potential sources of the problems, and recommend future monitoring and BMP implementation measures for identifying and addressing the sources. The analysis shall also include an evaluation of the effectiveness of existing control measures.

- c. Monitoring reports shall include identification and analysis of any long-term trends in storm water or receiving water quality.
- d. Monitoring reports shall provide an estimation of total pollutant loads (wet weather loads plus dry weather loads) due to urban runoff for each of the watersheds specified in Section J, Table 4 of Order No. R9-2002-0001.
- e. Monitoring reports shall for each monitoring program component listed above, include an assessment of compliance with applicable water quality standards.
- f. All monitoring reports shall use a standard report format and shall include the following:
  - 1. A stand alone comprehensive executive summary addressing all sections of the monitoring report;
  - 2. Comprehensive interpretations and conclusions; and
  - 3. Recommendations for future actions.
- g. All monitoring reports submitted to the Principal Permittee or the SDRWQCB shall contain the certified perjury statement described in Standard Reporting Requirements in Attachment C section B.9.d.
- h. A committee (consisting of no less than three members) shall review all monitoring reports prior to submittal to the SDRWQCB. All review comments shall also be submitted to the SDRWQCB.
- i. All monitoring reports shall be submitted in both electronic and paper formats.
- j. All monitoring reports shall describe monitoring station locations by latitude and longitude coordinates, frequency of sampling, quality assurance/quality control procedures and sampling and analysis protocols.
- k. Monitoring programs and reports shall comply with Section B.7 of Attachment B, as well as Attachment C.

### **B.7 Standard Monitoring Requirements**

- a. All monitoring activities shall meet the following requirements:

- 1. Monitoring and Records [40 CFR 122.41(j)(1)]

Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.

- 2. Monitoring and Records [40 CFR 122.41(j)(2)] [California Water Code § 13383(a)]

The discharger shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this Order, and records of all data used to complete the application for this permit, for a period of at least three years from the date of the sample, measurement, report or application. This period may be extended by request of the SDRWQCB at any time.

## 3. Monitoring and Records [40 CFR 122.21(j)(3)]

Records of monitoring information shall include the information requested in Attachment B and the following:

- 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. Monitoring and Records [40 CFR 122.21(j)(4)]

Monitoring results must be conducted according to test procedures approved under 40 CFR part 136 unless other test procedures have been specified in this Order.

## 5. Monitoring and Records [40 CFR 122.21(j)(5)]

The Clean Water Act 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.

## 6. Monitoring and Records [40 CFR 122.41(k)(2)]

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.

## 7. Monitoring Reports [40 CFR 122.41(l)(4)]

Monitoring results shall be reported at the intervals specified elsewhere in this Order.

## 8. Monitoring Reports [40 CFR 122.41(l)(4)(ii)]

If the discharger monitors any pollutant more frequently than required by the permit using test procedures approved under 40 CFR part 136, unless otherwise specified in the Order, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the reports requested by the SDRWQCB.

## 9. Monitoring Reports [40 CFR 122.41(l)(4)(iii)]

Calculations for all limitations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified by the SDRWQCB in the Order.

**ATTACHMENT C****STANDARD PROVISIONS  
REPORTING REQUIREMENTS, AND  
NOTIFICATIONS****A. STANDARD PROVISIONS**

1. Duty To Comply [40 CFR 122.41(a)(1)]  
The discharger shall comply with effluent standards or prohibitions established under Section 307(a) of the Clean Water Act for toxic pollutants and with standards for sewage sludge use or disposal established under Section 405(d) of the Clean Water Act within the time provided in the regulations that establish these standards or prohibitions or standards for sewage sludge use or disposal, even if this Order has not yet been modified to incorporate the requirement.
2. Need to Halt or Reduce Activity Not a Defense [40 CFR 122.41(c)]  
It shall not be a defense for the discharger in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this Order. Upon reduction, loss, or failure of a treatment facility, the discharger shall, to the extent necessary to maintain compliance with this Order, control production or all discharges, or both, until the facility is restored or an alternative method of treatment is provided. This provision applies, for example, when the primary source of power of a treatment facility fails, is reduced, or is lost.
3. Duty to Mitigate [40 CFR 122.41(d)]  
The discharger shall take all reasonable steps to minimize or prevent any discharge or prevent any discharge or sludge use or disposal in violation of this Order which has a reasonable likelihood of adversely affecting human health or the environment.
4. Proper Operation and Maintenance [40 CFR 122.41(e)]  
The discharger shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the discharger to achieve compliance with the conditions of this Order. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by the discharger only when the operation is necessary to achieve compliance with the conditions of this Order.
5. Permit Actions [40 CFR 122.41(f)] [California Water Code § 13381]  
This Order may be modified, revoked and reissued, or terminated for cause including, but not limited to, the following:
  - a. Violation of any terms or conditions of this Order;
  - b. Obtaining this Order by misrepresentation or failure to disclose fully all relevant facts;
  - c. A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge; or
  - d. A determination that the permitted activity endangers human health or the environment and can only be regulated to acceptable levels by permit modification or termination.

The filing of a request by the discharger for modification, revocation and reissuance, or termination of this Order, or a notification of planned changes or anticipated noncompliance does not stay any condition of this Order.

6. Property Rights [40 CFR 122.41(g)] [California Water Code §13263(g)]  
This Order does not convey any property rights of any sort or any exclusive privilege. The requirements prescribed herein do not authorize the commission of any act causing injury to persons or property, nor protect the discharger from liabilities under federal, state, or local laws, nor create a vested right for the discharger to continue the waste discharge.
7. Inspection and Entry [40 CFR 122.41(i)] [California Water Code § 13267(c)]  
The discharger shall allow the SDRWQCB, or an authorized SDRWQCB representative, or an authorized representative of the USEPA (including an authorized contractor acting as a representative of the SDRWQCB or USEPA), upon presentation of credentials and other documents as may be required by law, to:
  - a. Enter upon the discharger's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this Order;
  - b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Order;
  - c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order; and
  - d. Sample or monitor at reasonable times, for the purposes of assuring compliance with this Order or as otherwise authorized by the Clean Water Act or California Water Code, any substances or parameters at any location.
8. Bypass of Treatment Facilities [40 CFR 122.41(m)]
  - a. Definitions
    - (1) "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility.
    - (2) "Severe property damage" means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.
  - b. Bypass not Exceeding Limitations

The discharger may allow any bypass to occur which does not cause effluent limitations of this Order or the concentrations of pollutants set forth in Ocean Plan Table A or Table B to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of paragraphs c. and d. of this provision.
  - c. Notice
    - (1) Anticipated bypass. If the discharger knows in advance of the need for a bypass, it shall submit prior notice, if possible, at least ten days before the date of the bypass.
    - (2) Unanticipated bypass. The discharger shall submit notice of an unanticipated bypass as required in section B.7 of Attachment C.

d. Prohibition of Bypass

Bypass is prohibited, and the SDRWQCB may take enforcement action against the discharger for bypass, unless:

- (1) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
- (2) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and
- (3) The discharger submitted notices as required under paragraph c. of this section. The SDRWQCB may approve an anticipated bypass, after considering its adverse effects, if the SDRWQCB determines that it will meet the three conditions listed above in paragraph d.(1) of this section.

9. Upset [40 CFR 122.41(n)]

- a. Definition "Upset" means an exceptional incident in which there is unintentional and temporary noncompliance with technology based effluent limitations because of factors beyond the reasonable control of the discharger. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.
- b. Effect of an Upset An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of paragraph c. of this section are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.
- c. Conditions Necessary for a Demonstration of Upset A discharger who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:
  - (1) An upset occurred and that the discharger can identify the cause(s) of the upset;
  - (2) The permitted facility was at the time being properly operated;
  - (3) The discharger submitted notice of the upset as required in section B.7 of Attachment C of this Order; and
  - (4) The discharger complied with any remedial measures required under Provision A.5. of Attachment C of this Order.
- d. Burden of Proof In any enforcement proceeding the discharger seeking to establish the occurrence of an upset has the burden of proof.

10. Other Effluent Limitations and Standards [40 CFR 122.44(b)(1)]

If any toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is promulgated under Section 307(a) of the Clean Water Act for a toxic pollutant which is present in the discharge and that standard or prohibition is more stringent than any limitation on the pollutant in this Order, the SDRWQCB may institute proceedings under these regulations to modify or revoke and reissue the Order to conform to the toxic effluent standard or prohibition.

11. The discharger shall take all reasonable steps to minimize or correct any adverse impact on the environment resulting from noncompliance with this Order, including such accelerated or additional monitoring as may be necessary to determine the nature and impact of the noncomplying discharge.
12. The provisions of this Order are severable, and if any provision of this Order, or the application of any provision of this Order to any circumstances, is held invalid, the application of such provision to other circumstances, and the remainder of this Order, shall not be affected thereby.
13. The discharger shall comply with any interim effluent limitations as established by addendum, enforcement action, or revised waste discharge requirements which have been, or may be, adopted by this SDRWQCB.

## B. REPORTING REQUIREMENTS

1. Duty to Reapply [40 CFR 122.41(b)] This Order expires on **February 13, 2007**. If the discharger wishes to continue any activity regulated by this Order after the expiration date of this Order, the discharger must apply for and obtain new waste discharge requirements. The discharger must file a Report of Waste Discharge in accordance with Title 23, California Code of Regulations not later than **180 days** in advance of the expiration date of this Order as application for issuance of new waste discharge requirements.
2. Duty to Provide Information [40 CFR 122.41(h)] The discharger shall furnish to the SDRWQCB, SWRCB, or USEPA, within a reasonable time, any information which the SDRWQCB, SWRCB, or USEPA may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Order, or to determine compliance with this Order. The discharger shall also furnish to the SDRWQCB, SWRCB, or USEPA, upon request, copies of records required to be kept by this Order.
3. Planned Changes [40 CFR 122.41(l)(1)] The discharger shall give notice to the SDRWQCB as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when:
  - a. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 CFR Part 122.29(b);
  - b. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in this Order, nor to notification requirements under 40 CFR 122.42(a)(l); or
  - c. The alteration or addition results in a significant change in the discharger's sludge use or disposal practices, and such alteration, addition, or change may justify the application of conditions in this Order that are different from or absent in the existing Order, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan.
4. Anticipated Non-Compliance [40 CFR 122.41(l)(2)] The discharger shall give advance notice to the SDRWQCB of any planned changes in the permitted facility or activity which may result in noncompliance with the requirements of this Order.

5. Transfers [40 CFR 122.41(l)(3)] This Order is not transferable to any person except after notice to the SDRWQCB. The SDRWQCB may require modification or revocation and reissuance of this Order to change the name of the discharger and incorporate such other requirements as may be necessary under the Clean Water Act or the California Water Code in accordance with the following:
  - a. Transfers by Modification [40 CFR 122.61(a)]

Except as provided in paragraph b. of this reporting requirement, this Order may be transferred by the discharger to a new owner or operator only if this Order has been modified or revoked and reissued, or a minor modification made to identify the new discharger and incorporate such other requirements as may be necessary under the Clean Water Act or California Water Code.
  - b. Automatic Transfers [40 CFR 122.61(b)]

As an alternative to transfers under paragraph a. of this reporting requirement, any NPDES permit may be automatically transferred to a new discharger if:

    - (1) The current discharger notifies the SDRWQCB at least 30 days in advance of the proposed transfer date in paragraph b.(2) of this reporting requirement;
    - (2) The notice includes a written agreement between the existing and new dischargers containing a specific date for transfer of permit responsibility, coverage, and liability between them; and
    - (3) The SDRWQCB does not notify the existing discharger and the proposed new discharger of his or her intent to modify or revoke and reissue the Order. A modification under this subparagraph may also be a minor modification under 40 CFR Part 122.63. If this notice is not received, the transfer is effective on the date specified in the agreement mentioned in paragraph b.(2) of this reporting requirement.
6. Twenty-four Hour Reporting [40 CFR 122.41(l)(6)]

Each Copermittee shall develop and submit criteria by which to evaluate events of non-compliance to determine whether they pose a threat to human or environmental health. These criteria shall be submitted in the Jurisdictional Urban Runoff Management Program Document and Annual Reports for SDRWQCB review. Using these criteria the discharger shall report any noncompliance with this Order or any noncompliance that may endanger human health or environmental health. Any information shall be provided orally to the SDRWQCB within **24 hours** from the time the discharger becomes aware of the circumstances. A written description of any noncompliance shall be submitted to the SDRWQCB within **five days** of such an occurrence and contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance. The following shall be included as information which must be reported within 24 hours under this reporting requirement:

  - a. Any unanticipated bypass which exceeds any effluent limitation in this Order;
  - b. Any discharge of treated or untreated wastewater, including reclaimed or recycled wastewater, resulting from pipeline breaks, obstruction, surcharge or any other circumstance;
  - c. Any discharge or spill of raw or potable water not authorized by this order or resulting from pipeline breaks, obstruction, surcharge or any other circumstance;

- d. Any upset which exceeds any effluent limitation in this Order;
  - e. Any spill or discharge of non-storm water not authorized by this Order. Non-storm water discharges not prohibited by the Copermittees pursuant to Section B of this Order need not be reported under this section; and
  - f. Any violation of this Order.
7. Other Non-Compliance [40 CFR 122.41(l)(7)]  
The discharger shall report all instances of noncompliance not reported elsewhere under other sections of this Order at the time annual reports are submitted. The reports shall contain the information listed in part B.6 of Attachment C of this Order.
8. Other Information [40 CFR 122.41(l)(8)]  
Where the discharger becomes aware that it failed to submit any relevant facts in a Report of Waste Discharge, or submitted incorrect information in a Report of Waste Discharge, or in any report to the SDRWQCB, it shall promptly submit such facts or information.
9. Signatory Requirements [40 CFR 122.41(k)(1) and 40 CFR 122.22]  
All applications, reports, or information submitted to the SDRWQCB shall be signed and certified.
- a. All Reports of Waste Discharge shall be signed as follows:
    - (1) For a corporation: by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means: (a) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation; or (b) the manager of one or more manufacturing, production, or operating facilities employing more than 250 persons or having gross annual sales or expenditures exceeding \$25 million (in second-quarter 1980 dollars), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.
    - (2) For a partnership or sole proprietorship: by a general partner or the proprietor, respectively; or
    - (3) For a municipality, State, Federal or other public agency: by either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a Federal agency includes: (a) the chief executive officer of the agency; or (b) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of USEPA).
  - b. All reports required by this Order, and other information requested by the SDRWQCB shall be signed by a person described in paragraph a. of this reporting requirement, or by a duly authorized representative of that person. A person is a duly authorized representative only if:
    - (1) The authorization is made in writing by a person described in paragraph a. of this reporting requirement;
    - (2) The authorization specifies 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,

(3) The written authorization is submitted to the SDRWQCB.

- c. If an authorization under paragraph b. of this reporting requirement is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of paragraph b. of this reporting requirement must be submitted to the SDRWQCB prior to or together with any reports, information, or applications to be signed by an authorized representative.
- d. Any person signing a document under paragraph a. or b. of this reporting requirement shall 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.

- 10. Except for data determined to be confidential under 40 CFR Part 2, all reports prepared in accordance with the terms of this Order shall be available for public inspection at the offices of the SDRWQCB. As required by the Clean Water Act, Reports of Waste Discharge, this Order, and effluent data shall not be considered confidential.
- 11. The discharger shall submit reports and provide notifications as required by this Order to the following:

DAVE GIBSON  
NORTHERN WATERSHED PROTECTION UNIT  
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
SAN DIEGO REGION  
9174 SKY PARK COURT, SUITE 100  
SAN DIEGO CA 92123-4340  
Telephone: (858) 467-4387 Fax: (858) 571-6972

EUGENE BROMLEY  
US ENVIRONMENTAL PROTECTION AGENCY  
REGION IX  
PERMITS ISSUANCE SECTION (W-5-1)  
75 HAWTHORNE STREET  
SAN FRANCISCO CA 94105

- 12. Unless otherwise directed, the discharger shall submit three copies of each report required under this Order to the SDRWQCB and one copy to USEPA.

**C. NOTIFICATIONS**

1. California Water Code Section 13263(g)  
No discharge of waste into the waters of the state, whether or not such discharge is made pursuant to waste discharge requirements, shall create a vested right to continue such discharge. All discharges of waste into waters of the state are privileges, not rights.
2. The SDRWQCB has, in prior years, issued a limited number of individual NPDES permits for non-storm water discharges to municipal storm water conveyance systems. The SDRWQCB or SWRCB may in the future, upon prior notice to the Copermitttee(s), issue an NPDES permit for any non-storm water discharge (or class of non-storm water discharges) to a municipal storm water conveyance system. Copermitttees may prohibit any non-storm water discharge (or class of non-storm water discharges) to a municipal storm water conveyance system that is authorized under such separate NPDES permits.
3. Enforcement Provisions [40 CFR 122.41(a)(2)] [California Water Code §§ 13385 and 13387]  
The Clean Water Act provides that any person who violates section 301, 302, 306, 307, 308, 318 or 405 of the Act, or any condition or limitation of this Order, is subject to a civil penalty not to exceed \$25,000 per day for each violation. The Clean Water Act provides that any person who negligently violates sections 301, 302, 306, 307, 308, 318, or 405 of the Act, or any condition or limitation of this Order, is subject to criminal penalties of \$2,500 to \$25,000 per day of violation, or imprisonment of not more than one year, or both. In the case of a second or subsequent conviction for a negligent violation, a person shall be subject to criminal penalties of not more than \$50,000 per day of violation, or by imprisonment of not more than two years, or both. Any person who knowingly violates such sections, or such conditions or limitations is subject to criminal penalties of \$5,000 to \$50,000 per day of violation, or imprisonment for not more than three years, or both. In the case of a second or subsequent conviction for a knowing violation, a person shall be subject to criminal penalties of not more than \$100,000 per day of violation, or imprisonment of not more than six years, or both. Any person who knowingly violates section 301, 302, 303, 306, 307, 308, 318 or 405 of the Act, or any condition or limitation of this Order, and who knows at that time that he or she thereby places another person in imminent danger of death or serious bodily injury, shall, upon conviction, be subject to a fine of not more than \$250,000 or imprisonment of not more than 15 years, or both. In the case of a second or subsequent conviction for a knowing endangerment violation, a person shall be subject to a fine of not more than \$500,000 or by imprisonment of not more than 30 years, or both. An organization, as defined in section 309(c)(3)(B)(iii) of the Clean Water Act, shall, upon conviction of violating the imminent danger provision, be subject to a fine of not more than \$1,000,000 and can be fined up to \$2,000,000 for second or subsequent convictions.
4. Except as provided in Standard Provisions A.10. and A.11. in Attachment C of this Order, nothing in this Order shall be construed to relieve the discharger from civil or criminal penalties for noncompliance.
5. Nothing in this Order shall be construed to preclude the institution of any legal action or relieve the discharger from any responsibilities, liabilities, or penalties to which the discharger is or may be subject to under Section 311 of the Clean Water Act.
6. Nothing in this Order shall be construed to preclude institution of any legal action or relieve the discharger from any responsibilities, liabilities, or penalties established pursuant to any applicable State law or regulation under authority preserved by Section 510 of the Clean Water Act.

7. This Order shall become effective on **February 13, 2002**, provided the USEPA Regional Administrator has no objection. If the Regional Administrator objects to its issuance, this Order shall not become effective until such objection is withdrawn.
8. This Order supersedes Order No. 96-03 upon the effective date of this Order.

## ATTACHMENT D

### 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" of the waters of the State 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, as 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, operating methods that eliminate amounts of chemical, physical, and biological characteristics of pollutant constituents to the degree of reduction attainable through the application of the best management practices to the maximum extent practicable.

**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 trophic 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.

**Bioconcentration** – A process by which there is a net accumulation of a chemical directly from water into aquatic organisms resulting from simultaneous uptake and elimination by gill or epithelial tissue. Bioconcentration differs from bioaccumulation in that bioaccumulation refers to the progressive concentration of contaminants in the tissues of organisms through multiple pathways.

**Biocriteria** - Under the Clean Water Act, numerical values or narrative expressions that define a desired biological condition for a water body that are legally enforceable. The U.S. EPA defines biocriteria as: “numerical values or narrative expressions that describe the reference biological integrity of aquatic communities inhabiting waters of a given designated aquatic life use...(that)...describe the characteristics of water body segments least impaired by human activities.”

**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.

**Biomagnification** – The transfer and progressive increase in tissue concentrations of a contaminant along the food chain. Because some pollutants can be transferred to higher trophic levels, carnivores at the top of the food chain, such as predatory fish, birds, and mammals (including humans), obtain most of their pollution burden from aquatic ecosystems by ingestion. Thus, although such pollutants may only be present in receiving waters in low concentrations, they can have a significant impact to the integrity of the ecosystem through biomagnification.

**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) 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 Copermitttees 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 state are affected.”

**Designated Waste** - Designated waste is defined as a “nonhazardous waste which consists of pollutants which, under ambient environmental conditions at the waste management unit, could be released at concentrations in excess of applicable water quality objectives, or which could cause degradation of waters of the state.” [CCR Title 27, Chapter 3, Subchapter 2, Article 2, Section 20210; WC Section 13173]

**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), but can also be narrative (e.g., no toxics in toxic amounts).

**Erosion** – When land is diminished or worn away due to 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 Waste** - Hazardous waste is 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, Article 1]

**Illicit Discharge** - Any discharge to a municipal separate storm sewer that is not composed entirely of storm water except discharges pursuant to a NPDES permit (other than the NPDES permit for discharges from the municipal separate storm sewer) and discharges resulting from fire fighting activities.

**Inert Waste** - Inert waste is defined as one that “does not contain hazardous waste or soluble pollutants at concentrations in excess of applicable water quality objectives, and does not contain significant quantities of decomposable waste.” [CCR Title 27, Chapter 3, Subchapter 2, Article 2, Section 20230]

**MEP** – MEP is the acronym for Maximum Extent Practicable. 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 best management practices (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 Plan. Their total collective and individual activities conducted pursuant to the Urban Runoff 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 SDRWQCB, the SDRWQCB 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 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.”*

**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 or 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)** - These permits pertain to the discharge of waste to surface waters only. All State and Federal NPDES permits are also WDRs.

**Non-hazardous Solid Waste** - Non-hazardous solid waste means all putrescible and nonputrescible solid, semi-solid, and liquid wastes, including garbage, trash, refuse, paper, rubbish, ashes, industrial wastes, demolition and construction wastes, abandoned vehicles and parts thereof, discarded home and industrial appliances, manure, vegetable or animal solid and semi-solid wastes and other discarded solid or semi-solid waste; provided that such wastes do not contain wastes which must be managed as hazardous wastes, or wastes which contain soluble pollutants in concentration which exceed applicable water quality objectives or could cause degradation of waters of the state." [CCR Title 27, Chapter 3, Subchapter 2, Article 2, Section 20220]

**Non Point Source (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 State by waste, to a degree that unreasonably affects the 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.

**Pre-Development Runoff Conditions** - The runoff conditions that exist onsite immediately before the planned development activities occur. This definition is not intended to be interpreted as that period before any human-induced land activities occurred. This definition pertains to redevelopment as well as initial development.

**Receiving Water Limitations** - Waste discharge requirements issued by the SDRWQCB 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). The water quality objectives for toxicity provided in the Water Quality Control Plan, San Diego Basin, Region 9, (Basin Plan), state in part... *“All waters shall be free of toxic substances in concentrations that are toxic to, or that produce detrimental physiological responses in human, plant, animal, or aquatic life....The survival of aquatic life in surface waters subjected to a waste*

*discharge or other controllable water quality factors, shall not be less than that for the same water body in areas unaffected by the waste discharge”....* Urban runoff discharges from MS4s are considered toxic when (1) the toxic effect observed in an acute toxicity test exceeds zero Toxic Units Acute (Tua=0); or (2) the toxic effect observed in a chronic toxicity test exceeds one Toxic Unit Chronic (Tuc=1). Urban runoff discharges from MS4s often contain pollutants that cause toxicity.

**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 and 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."

A more comprehensive list of legal authority containing water quality objectives applicable to this Order can be found in Finding 37 and in Section VII Directives Discussion Underlying Broad Legal Authority for Order R9-2002-0001 pp. 76-78.

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 State** - Any water, surface or underground, including saline waters within the boundaries of the State [California Water Code Section 13050 (e)]. The definition of the Waters of the State is broader than that for the Waters of the United States in that all water in the State is considered to be a Waters of the State regardless of circumstances or condition. Under this definition, a Municipal Separate Storm Sewer System (MS4) is always considered to be a Waters of the State.

**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 the 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).

**ATTACHMENT E****DRY WEATHER MONITORING PROGRAM  
SPECIFICATIONS - URBAN RUNOFF****E.1 Dry Weather Monitoring Program**

Each Copermittees shall review and revise as necessary its Dry Weather Monitoring Program to comply with section F.5 of this Order. The Dry Weather Monitoring Program for each Copermittee shall meet or exceed the specifications of this Attachment. The objectives of the Dry Weather Monitoring Program are:

- Assessing compliance with Order No. R9-2002-0001;
- Detect and eliminate illicit discharges and illegal connections to the MS4; and
- Characterize urban runoff within the MS4 system with respect to water quality constituents that may cause or contribute to exceedances of receiving water quality objectives when discharged to receiving waters.

**E.2 Dry Weather Monitoring Program Document**

Based upon a review of its Detection/Elimination of Illegal Discharges and Illicit Connections Program, each Copermittee shall revise or develop a Dry Weather Monitoring Program Document that meets or exceeds the specifications listed in section E.4 of this Attachment. The Dry Weather Monitoring Program shall be designed and implemented to address the objectives listed in section E.1 of this Attachment. Each Copermittee shall submit its Dry Weather Monitoring Program to the Principal Permittee as part of its Jurisdictional Urban Runoff Management Program Document on the date prescribed by the Principal Permittee. The Principal Permittee shall collectively submit the dry weather monitoring maps and procedures to the SDRWQCB within **365** days of adoption of this Order.

**E.3 Implementation of the Dry Weather Monitoring Program**

Each Copermittee shall implement its Dry Weather Monitoring Program by May 1, 2003. Following the adoption of this Order and prior to implementation of the Dry Weather Monitoring Program under the Jurisdictional URMP, each Copermittee shall continue to implement the Illicit Discharge and Illegal Connection programs and commitments described in the Orange County Water Quality Monitoring Program (99-04 Plan) and the proposed Drainage Area Management Plan (DAMP).

**E.4 Dry Weather Monitoring Program Specifications**

Each Copermittee shall develop or revise its Dry Weather Monitoring Program to meet or exceed the following requirements:

- a. Develop MS4 Map: Each Copermittee shall develop or obtain an up-to-date labeled map of its entire municipal separate storm sewer system (MS4) and the corresponding drainage watersheds within its jurisdiction. The use of a Geographic Information System (GIS) is highly recommended, but not required. The accuracy of the MS4 map shall be confirmed and updated at least annually during monitoring activities.

- b. Monitoring Stations: Based upon a review of its past Dry Weather Monitoring Programs, each Copermittee shall select dry weather monitoring stations within its jurisdiction to be monitored in the Dry Weather Monitoring Program.
- (1) Each Copermittee shall develop or revise its program to describe the rationale used to determine the number and locations of stations necessary to comply with the Order.
  - (2) Each Copermittee shall confirm that each major drainage area within its jurisdiction contains at least one station.
  - (3) Stations shall be either major outfalls or other outfall points (or any other point of access such as manholes) located throughout the MS4 to provide adequate coverage of the entire MS4 system.
  - (4) Each Copermittee shall clearly identify each dry weather monitoring station on its MS4 Map as either a separate GIS layer or a map overlay hereafter referred to as a Dry Weather Monitoring Stations Map.
- c. Determining Sampling Frequency: Dry weather analytical and field screening monitoring shall be conducted at each identified station at least twice between May 1<sup>st</sup> and September 30<sup>th</sup> of each year or as more frequently as the Copermittee determines is necessary to comply with the requirements of Section F.5 of the Order.
- (1) Each Copermittee shall develop or revise written procedures that describe the criteria and process used to determine the number and frequency of inspections, field screening and analytical monitoring to be performed.
  - (2) Any changes in Dry Weather Monitoring inspection or sampling frequency shall be described and reported in detail annually in the Dry Weather Monitoring Report section of the Jurisdictional URMP Annual Report.
- d. Develop Dry Weather Analytical Monitoring Procedures: Each Copermittee shall develop or revise written procedures for dry weather analytical and field screening monitoring (consistent with 40 CFR part 136), that shall include field observations, field screening monitoring, and analytical monitoring.
- (1) The Dry Weather Monitoring Program shall be designed to emphasize frequent, geographically widespread inspections, monitoring, and follow up investigations to detect illicit discharges and illegal connections. At a minimum, the procedures must be based on or incorporate the following guidelines and criteria:
    - (a) At each site inspected or sampled, record general information such as time since last rain, quantity of last rain, site descriptions (i.e., conveyance type, dominant watershed land uses), flow estimation (i.e., width of water surface, approximate depth of water, approximate flow velocity, flow rate), and visual observations (e.g., odor, color, clarity, floatables, deposits/stains, vegetation condition, structural condition, and biology).
    - (b) If flow or ponded runoff is observed at a station and there has been at least seventy-two (72) hours of dry weather, shall make observations and collect at least one (1) set of grab samples for field screening and/or analytical testing that meets or exceeds the requirements of section E.4.d.1.d (Field Screening Parameters) or E.4.d.1.e (Analytical Monitoring Parameters).
    - (c) Perform field screening analysis on all sites with ponded or flowing water and at a minimum collect samples at no less than 25% of these sites for analytical testing.
    - (d) Field Screening Monitoring Parameters: At a minimum, conduct field screening analysis of the following constituents:
      - (1) Specific conductance (calculate estimated Total Dissolved Solids).
      - (2) Turbidity
      - (3) pH

- (4) Reactive Phosphorous
  - (5) Nitrate Nitrogen
  - (6) Ammonia Nitrogen
  - (7) Phenol
  - (8) Surfactants (MBAS)
- (e) Analytical Monitoring Parameters: At a minimum, collect samples for analytical laboratory analysis of the following constituents:
- (1) Total Hardness
  - (2) Oil and Grease
  - (3) Diazinon and Chlorpyrifos
  - (4) Cadmium (Dissolved)
  - (5) Copper (Dissolved)
  - (6) Lead (Dissolved)
  - (7) Zinc (Dissolved)
  - (8) Enterococcus Bacteria
  - (9) Total Coliform Bacteria
  - (10) Fecal Coliform Bacteria
- (f) If the station is dry (no flowing or ponded runoff), make and record all applicable observations and select another station from the list of alternate stations for monitoring.
- (2) The Dry Weather Monitoring Program shall include criteria for dry weather inspection, analytical and field screening monitoring results whereby exceedance of the criteria will require follow-up investigations to be conducted to identify the source causing the exceedance of the criteria.
  - (3) Dry weather analytical and field screening monitoring stations identified to exceed dry weather monitoring criteria for any constituents shall continue to be screened in subsequent years.
  - (4) The Dry Weather Monitoring Program shall include procedures for source identification follow up investigations in the event of exceedance of dry weather analytical and field screening monitoring result criteria. These procedures shall be consistent with procedures required in section F.5.c. of this Order.
  - (5) The Dry Weather Monitoring Program shall include procedures to eliminate detected illicit discharges and connections. These procedures shall be consistent with each Copermittee's Illicit Discharge and Elimination component of its Jurisdictional Urban Runoff Management Plan as discussed in section F.5 of this Order.
  - (6) During monitoring, the accuracy of its MS4 map and shall be confirmed. Correct any inaccuracies in either the MS4 map or the Dry Weather Monitoring Stations Map and resubmit the corrected maps in the next annual report.

#### **E.5 Summarize and Report Dry Weather Monitoring Results**

As part of its individual Jurisdictional URMP Annual Report, each Copermittee shall summarize and report on its Dry Weather Monitoring Program results. The data shall be presented in tabular and graphical form. The reporting shall include all inspection, field screening, and analytical monitoring results. Each Copermittee shall also report all follow up and elimination activities for potential illicit discharges and connections undertaken by the Copermittee during that year. Dry weather analytical monitoring reports shall comply with all monitoring and standard reporting requirements in Attachments B and C of Order R9-2002-0001. The Principal Permittee shall submit to the SDRWQCB the individual Dry Weather Monitoring reports as part of the unified Jurisdictional URMP Annual Report prior to November 9, 2003, and every year thereafter.

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
SAN DIEGO REGION  
ORDER NO. R9-2004-001  
NPDES NO. CAS0108766  
WASTE DISCHARGE REQUIREMENTS  
FOR DISCHARGES OF URBAN RUNOFF FROM  
THE MUNICIPAL SEPARATE STORM SEWER SYSTEMS (MS4s)  
DRAINING THE COUNTY OF RIVERSIDE,  
THE CITY OF MURRIETA, THE CITY OF TEMECULA AND THE  
RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION  
DISTRICT WITHIN THE SAN DIEGO REGION**

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**MONITORING AND REPORTING PROGRAM No. R9-2004-001**

**FINDINGS**

The California Regional Water Quality Control Board, San Diego Region (hereinafter SDRWQCB), finds that:

1. The Riverside County Flood Control and Water Conservation District (District), the County of Riverside and the Cities of Murrieta and Temecula (hereinafter called Permittees), own or operate municipal separate storm sewer systems (MS4s), through which urban runoff is discharged into waters of the United States (U.S.) within the Santa Margarita Watershed area of Riverside County in the San Diego Region (hereinafter referred to as the Upper Santa Margarita Watershed).
2. The SDRWQCB has previously issued two MS4 permits for the Upper Santa Margarita Watershed. The first-round MS4 permit was issued on July 16, 1990, and the second-round MS4 permit was issued on May 13, 1998 (Order No. R9-98-02). On May 26, 1998, the United States Environmental Protection Agency (EPA), Region IX, objected to Order No. 98-02 due to concerns regarding the Receiving Water Limitations (RWL) language. The EPA concluded that the RWL language in the permit did not comply with the federal Clean Water Act (CWA) and its implementing regulations. On April 27, 1999, the EPA reissued the MS4 permit, which the SDRWQCB adopted as Addendum No. 1 to Order No. R9-98-02 on November 8, 2000. On May 30, 2003 and in accordance with Order No. R9-98-02, the District, as the Principal Permittee, submitted a Report of Waste Discharge (ROWD) for renewal of their MS4 Permit.
3. The Water Quality Control Plan for the San Diego Basin (Basin Plan), identifies the following beneficial uses for water bodies in the Santa Margarita Watershed: Municipal and Domestic Supply (MUN), Agricultural Supply (AGR), Industrial Process Supply (PROC), Industrial Service Supply (IND), Ground Water Recharge (GWR), Contact Water Recreation (REC1) (potential use), Non-contact Water Recreation (REC2), Warm Freshwater Habitat WARM, Cold Freshwater Habitat (COLD), Wildlife Habitat (WILD), and Rare, Threatened, or Endangered Species (RARE).
4. Urban runoff contains waste, as defined in the California Water Code (CWC), and pollutants that adversely affect the quality of the waters of the State. The discharge of urban runoff from an MS4 is a "discharge of pollutants from a point source" into waters of the U.S. as defined in the CWA.
5. The most common categories of pollutants in urban runoff include total suspended solids, sediment (due to anthropogenic activities); 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 trash.
6. The discharge of pollutants and/or increased flows from MS4s may cause or threaten to cause the concentration of pollutants to exceed applicable receiving water quality objectives and impair or threaten to impair designated beneficial uses resulting in a condition of pollution (i.e., unreasonable impairment of water quality for designated beneficial uses), contamination, or nuisance.
7. Pollutants in urban runoff can threaten human health. Human illnesses have been clearly linked to recreating near storm drains flowing to coastal waters. Also, urban runoff pollutants in receiving waters can bioaccumulate in the tissues of invertebrates and fish, which may be eventually consumed by humans.

8. Development and urbanization especially threaten environmentally sensitive areas (ESAs), such as water bodies designated as supporting a RARE beneficial use (supporting rare, threatened or endangered species) and CWA 303(d) impaired water bodies. Such areas have a much lower capacity to withstand pollutant shocks than might be acceptable in the general circumstance. In essence, development that is ordinarily insignificant in its impact on the environment may become significant in a particular sensitive environment. Therefore, additional control to reduce pollutants from new and existing development may be necessary for areas adjacent to or discharging directly to an ESA.
9. Urban runoff often contains pollutants that cause toxicity to aquatic organisms (i.e., adverse responses of organisms to chemicals or physical agents ranging from mortality to physiological responses such as impaired reproduction or growth anomalies). Toxic pollutants impact the overall quality of aquatic systems and beneficial uses of receiving waters.
10. The Final 2002 CWA Section 303(d) List of Water Quality Limited Segments identifies the entire length of Murrieta Creek (12 miles) and the upper portion of the Santa Margarita River (18 miles) as impaired for phosphorus. Potential sources of the phosphorus impairment include urban runoff and unknown point and nonpoint sources. The Santa Margarita Lagoon is listed as impaired for eutrophication.
11. The Permittees' water quality monitoring data submitted to date documents persistent exceedances of Basin Plan water quality objectives for various urban runoff-related pollutants (chlorpyrifos, chromium, diazinon, dissolved oxygen, fecal coliform, MBAS, phosphorus, etc.) at eight different monitoring stations in the Upper Santa Margarita Watershed. The data indicate that urban runoff from activities such as over-application of pesticides and potential illicit discharges from industrial and commercial activities may be contributing to potential water quality impairments. Also, bioassessment monitoring, conducted by the California Department of Fish and Game, and physical assessments, conducted as part of the development of the Draft Operational Guidebook For Referenced Based Assessment of the Functions of Riverine Waters/Wetlands in the Santa Margarita Watershed, indicate that impacts to the biological and physical integrity of receiving waters have occurred as a result of urbanization in the upper watershed.
12. Peak storm water discharge rates, velocities and durations must be controlled to prevent downstream erosion and protect stream habitat. When natural vegetated pervious ground cover is converted to impervious surfaces such as paved highways, streets, rooftops, and parking lots, the natural absorption and infiltration abilities of the land are lost. Therefore, runoff leaving a developed urban area is significantly greater in volume, velocity, peak flow rate, and pollutant load than pre-development runoff from the same area. The increased volume, velocity, rate, and duration of runoff greatly accelerate the erosion of downstream natural channels.
13. As part of the ROWD, the Permittees proposed to update and modify their existing Drainage Area Management Plan (DAMP), dated March 1993, to incorporate new programs, requirements, and commitments. Direction to the Permittees in revising the DAMP, hereinafter referred to as a Storm Water Management Plan (SWMP), is necessary to ensure that the document provides a written description of the specific urban runoff management measures and programs that each Permittee will implement to fulfill its individual responsibilities and the area-wide and watershed-based activities necessary to meet the maximum extent practicable (MEP) standard. It is practicable for the Permittees to update the SWMP within one year. The SWMP is an integral and enforceable component of this Order.

14. The MEP standard is an ever-evolving, flexible, and advancing concept, which considers technical and economic feasibility. As knowledge about controlling urban runoff continues to evolve, so does that which constitutes MEP. Reducing the discharge of pollutants in urban runoff to the MEP requires Permittees to conduct and document evaluation and assessment of each program component and revise activities, control measures, best management practices (BMPs), and measurable goals, as necessary to meet MEP. Because MEP is a dynamic performance standard, it is necessary to describe in greater detail, measures that are essential for compliance.
15. Pollutants can be effectively reduced in urban runoff by the application of a combination of pollution prevention, source control, and treatment control BMPs. Pollution prevention is the reduction or elimination of pollutant generation at its source and is the best "first line of defense". Source control BMPs (both structural and non-structural) minimize the contact between pollutants and flows (e.g., rerouting run-on around pollutant sources or keeping pollutants on-site and out of receiving waters). Treatment control BMPs remove pollutants from urban runoff.
16. Developing minimum BMPs and implementing or requiring their implementation at industrial and commercial facilities, construction sites, and residential areas is necessary for the Permittees to ensure that, ultimately, discharges of pollutants into and from its MS4 are reduced to the MEP.
17. Controlling urban runoff pollution by using a combination of onsite source control BMPs augmented with treatment control BMPs before the runoff enters the MS4 is important for the following reasons: (1) Many end-of-pipe BMPs (such as diversion to the sanitary sewer) are typically ineffective during significant storm events. Whereas, onsite source control BMPs can be applied during all runoff conditions; (2) End-of-pipe BMPs are often incapable of capturing and treating the wide range of pollutants which can be generated on a sub-watershed scale; (3) End-of-pipe BMPs are more effective when used as polishing BMPs, rather than the sole BMP to be implemented; (4) End-of-pipe BMPs do not protect the quality or beneficial uses of receiving waters between the source and the BMP; and (5) Offsite end-of-pipe BMPs do not aid in the effort to educate the public regarding sources of pollution and their prevention.
18. Urban runoff treatment and/or mitigation must occur prior to the discharge of urban runoff into a receiving water. Federal regulations at 40 CFR 131.10(a) state that in no case shall a state adopt waste transport or waste assimilation as a designated use for any waters of the U.S. Authorizing the construction of an urban runoff treatment facility within a water of the U.S., or using the water body itself as a treatment system or for conveyance to a treatment system, would be tantamount to accepting waste assimilation as an appropriate use for that water body. Furthermore, the construction, operation, and maintenance of a pollution control facility in a water body can negatively impact the physical, chemical, and biological integrity, as well as the beneficial uses, of the water body. This is consistent with EPA guidance to avoid locating structural controls in natural wetlands.
19. Historic and current developments make use of natural drainage patterns and features as conveyances for urban runoff. Urban streams used in this manner are both MS4s and receiving waters.
20. As operators of the MS4s, the Permittees cannot passively receive and discharge pollutants from third parties. By providing free and open access to an MS4 that conveys discharges to waters of the U.S., the operator essentially accepts responsibility for discharges into the MS4 that it does not prohibit or control. These discharges may cause or contribute to a condition of contamination or exceedances of water quality objectives.

21. In accordance with federal NPDES regulations and to ensure the most effective oversight of industrial and construction site discharges, discharges of runoff from industrial and construction sites are subject to dual (state and local) storm water regulation. Under this dual system, the SDRWQCB is responsible for enforcing the General Construction Activities Storm Water Permit, SWRCB Order 97-03 DWQ, NPDES No. CAS000001 (General Construction Permit) and the General Industrial Activities Storm Water Permit, SWRCB Order 99-08 DWQ, NPDES No. CAS000002 (General Industrial Permit), and each municipal Permittee is responsible for enforcing its local permits, plans, and ordinances, which may require the implementation of additional BMPs than required under the statewide general permits.
22. This Order implements the federal CWA, the Porter-Cologne Water Quality Control Act (Division 7 of the CWC, 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 (SWRCB), and the Basin Plan.
23. The RWL language specified in this Order is consistent with language recommended by the EPA and established in SWRCB Water Quality Order 99-05, adopted by the SWRCB on June 17, 1999. The RWL in this Order require compliance with water quality standards through an iterative approach requiring the implementation of improved and better-tailored BMPs over time.
24. The Standard Urban Storm Water Management Plan (SUSMP) requirements contained in this Order are consistent with Order WQ-2000-11 adopted by the SWRCB on October 5, 2000. In the precedential order, the SWRCB found that the design standards, which essentially require that urban runoff generated by 85 percent of storm events from specific development categories be infiltrated or treated, reflects the MEP standard. The order also found that the design standards are appropriately applied to the majority of the Priority Development Project categories contained in Section F of this Order. It gave Regional Water Quality Control Boards (RWQCBs) the discretion to include additional categories and locations, such as retail gasoline outlets (RGOs) and ESAs, in future SUSMPs.
25. RGOs are significant sources of pollutants in urban runoff. RGOs are points of convergence for motor vehicles for automotive related services such as repair, refueling, tire inflation, and radiator fill-up and consequently produce significantly higher loadings of hydrocarbons and trace metals (including copper and zinc) than other urban areas. To meet MEP, source control and treatment control BMPs are needed at RGOs that meet the following criteria: (a) 5,000 square feet or more, or (b) a projected Average Daily Traffic (ADT) of 100 or more vehicles per day. These are appropriate thresholds since vehicular development size and volume of traffic are good indicators of potential impacts of urban runoff from RGOs on receiving waters.
26. This Order is in conformance with SWRCB Resolution No. 68-16 and the federal Antidegradation Policy described in 40 CFR 131.12.
27. Section 6217(g) of the Coastal Zone Act Reauthorization Amendments of 1990 (CZARA) requires coastal states with approved coastal zone management programs to address non-point pollution impacting or threatening coastal water quality. CZARA addresses five sources of non-point pollution: agriculture, silviculture, urban, marinas, and hydromodification. This NPDES permit addresses the management measures required for the urban category, with the exception of septic systems. The adoption and implementation of this NPDES permit relieves the Permittee from developing a non-point source plan, for the urban category, under CZARA. The SDRWQCB addresses septic systems through the administration of other programs.

28. Each Permittee is individually responsible for adoption and enforcement of ordinances and/or policies, implementation of identified control measures/BMPs needed to prevent or reduce pollutants in storm water runoff, and for the allocation of funds for the capital, operation and maintenance, and enforcement expenditures necessary to implement and enforce such control measures/BMPs under its jurisdiction.
29. Although dependent on several factors, the risks typically associated with properly managed infiltration of runoff (especially from residential land use areas) are not significant. The risks associated with infiltration can be managed by many techniques, including (1) designing landscape drainage features that promote infiltration of runoff, but do not "inject" runoff (injection bypasses the natural processes of filtering and transformation that occur in the soil); (2) taking reasonable steps to prevent the illegal disposal of wastes; and (3) ensuring that each drainage feature is adequately maintained in perpetuity.
30. If not properly designed or maintained, certain BMPs implemented or required by municipalities for urban runoff management may create a habitat for vectors (e.g. mosquitoes and rodents). However, proper BMP design to avoid standing water can prevent the creation of vector habitat. Nuisances and public health impacts resulting from vector breeding can be prevented with close collaboration and cooperative effort between municipalities and local vector control agencies and the State Department of Health Services during the development and implementation of the SWMP.
31. The issuance of waste discharge requirements and an NPDES permit for the discharge of urban runoff from MS4s to waters of the U.S. is exempt from the requirement for preparation of environmental documents under the California Environmental Quality Act (CEQA) (Public Resources Code, Division 13, Chapter 3, section 21000 et seq.) in accordance with the CWC section 13389.
32. The SDRWQCB has notified the Permittees, all known interested parties, and the public of its intent to consider adoption of an Order prescribing waste discharge requirements that would serve to renew an NPDES permit for the existing discharge of urban runoff.
33. The SDRWQCB has, at public meetings on February 11, 2004 and July 14, 2004, held public hearings and heard and considered all comments pertaining to the terms and conditions of this Order.

**PERMIT PROVISIONS**

**IT IS HEREBY ORDERED:** That the Permittees, in order to meet the provisions contained in Division 7 of the CWC and regulations adopted thereunder, and the provisions of the CWA and regulations adopted thereunder, shall each comply with the following:

**A. PROHIBITIONS**

1. Discharges into and from MS4s in a manner causing, or threatening to cause, a condition of pollution, contamination, or nuisance (as defined in CWC section 13050), in waters of the State are prohibited.
2. Discharges from MS4s that cause or contribute to exceedances of water quality objectives for surface water or groundwater are prohibited.
3. Discharges from MS4s containing pollutants which have not been reduced to the MEP are prohibited.
4. In addition to the above prohibitions, discharges from MS4s are subject to all Basin Plan prohibitions cited in **Attachment A** to this Order.

**B. NON-STORM WATER DISCHARGES**

1. Each Permittee shall effectively prohibit all types of non-storm water discharges into its MS4 unless such discharges are either authorized by a separate NPDES permit; or authorized in accordance with Requirements B.2 and B.3 below.
2. The following categories of non-storm water discharges are not prohibited unless a Permittee or the SDRWQCB identifies the discharge category as a source of pollutants to waters of the U.S. For such a discharge category, the Permittee shall either prohibit the discharge category or develop and implement appropriate control measures under the SWMP to reduce pollutants to the MEP and submit the report to the SDRWQCB pursuant to section III.A.1.d of Monitoring and Reporting Program No. R9-2004-001 (hereafter referred to as the MRP).
  - a) Diverted stream flows;
  - b) Rising ground waters;
  - c) Uncontaminated ground water infiltration [as defined at 40 CFR 35.2005(20)] to MS4s;
  - d) Uncontaminated pumped ground water;
  - e) Foundation drains;
  - f) Springs;
  - g) Water from crawl space pumps;
  - h) Footing drains;
  - i) Air conditioning condensation;
  - j) Flows from riparian habitats and wetlands;
  - k) Water line flushing;
  - l) Landscape irrigation;
  - m) Discharges from potable water sources not subject to NPDES Permit No. CAG679001, other than water main breaks;
  - n) Irrigation water;
  - o) Lawn watering;

- p) Individual residential car washing;
  - q) Non-emergency fire fighting flows; and
  - r) Dechlorinated swimming pool discharges.
3. Discharges from emergency fire fighting activities are not prohibited. If discharges are determined to be a significant source of pollutants to waters of the U.S., the Permittees shall require the implementation of appropriate BMPs to reduce the discharge of pollutants to the MEP, when not interfering with the protection of health and property.
  4. Each Permittee shall examine its Illicit Discharge Monitoring results collected in accordance with Requirement J.3 of this Order and section II.B of the MRP to identify water quality problems which may be the result of any non-prohibited discharge category(ies) listed above in Requirement B.2. Follow-up investigations shall be conducted as necessary to identify and control any non-prohibited discharge category(ies) listed above.

### C. RECEIVING WATER LIMITATIONS

1. Discharges from MS4s that cause or contribute to the violation of water quality standards (designated beneficial uses and water quality objectives developed to protect beneficial uses of receiving waters) are prohibited.
2. Each Permittee shall comply with Requirement C.1, Prohibition A.2, and Prohibition A.4 as it applies to Prohibition No. 5 in **Attachment A** of this Order through timely implementation of control measures and other actions to reduce pollutants in urban runoff discharges in accordance with the SWMP and other requirements of this Order including any modifications. The SWMP shall be designed to achieve compliance with Requirement C.1, Prohibition A.2, and Prohibition A.4 as it applies to Prohibition 5 in **Attachment A** of this Order. If exceedance(s) of water quality standards persist notwithstanding implementation of the SWMP and other requirements of this Order, the Permittee shall assure compliance with Requirement C.1, Prohibition A.2, and Prohibition A.4 as it applies to Prohibition 5 in **Attachment A** of this Order by complying with the following procedure:
  - a) Upon a determination by either a Permittee or the SDRWQCB that MS4 discharges are causing or contributing to an exceedance of an applicable water quality standard, the Permittee shall promptly notify and thereafter submit a report to the SDRWQCB 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 SWMP Annual Report unless the SDRWQCB directs an earlier submittal. The report shall include an implementation schedule. The SDRWQCB may require modifications to the report;
  - b) Submit any modifications to the report required by the SDRWQCB within 30 days of notification;
  - c) Within 30 days following SDRWQCB approval of the report described above, the Permittee shall revise its SWMP and monitoring program to incorporate the approved modified BMPs that have been and will be implemented, the implementation schedule, and any additional monitoring required;
  - d) Implement the revised SWMP and monitoring program in accordance with the approved schedule.

So long as the Permittee has complied with the procedures set forth above and are implementing

the revised SWMP, the Permittee does not have to repeat the same procedure for continuing or recurring exceedances of the same receiving water limitations unless directed by the SDRWQCB to develop additional BMPs.

#### D. LEGAL AUTHORITY

1. Each Permittee shall establish, maintain, and enforce adequate legal authority to control pollutant discharges into and from its MS4 through ordinance, statute, permit, contract or similar means. This legal authority must, at a minimum, authorize the Permittee to:
  - a) Control the contribution of pollutants in discharges of runoff associated with industrial and construction activity to its MS4 and control the quality of runoff from industrial and construction sites. This requirement applies both to industrial and construction sites that have coverage under the General Industrial Permit and General Construction Permit, as well as to those sites that do not. Grading ordinances shall be upgraded and enforced as necessary to comply with this Order.
  - b) Prohibit all identified illicit discharges not otherwise allowed pursuant to Requirement B.2 including but not limited to:
    - (1) Sewage;
    - (2) Discharges of wash water resulting from the hosing or cleaning of gas stations, auto repair garages, or other types of automotive services facilities;
    - (3) Discharges resulting from the cleaning, repair, or maintenance of any type of equipment, machinery, or facility including motor vehicles, cement-related equipment, and port-a-potty servicing, etc.;
    - (4) Discharges of wash water from mobile operations such as mobile automobile washing, steam cleaning, power washing, and carpet cleaning, etc.;
    - (5) Discharges of wash water from the cleaning or hosing of impervious surfaces in municipal, industrial, commercial, and residential areas including parking lots, streets, sidewalks, driveways, patios, plazas, work yards and outdoor eating or drinking areas, etc.;
    - (6) Discharges of runoff from material storage areas containing chemicals, fuels, grease, oil, or other hazardous materials;
    - (7) Discharges of pool or fountain water containing chlorine, biocides, or other chemicals; discharges of pool or fountain filter backwash water;
    - (8) Discharges of sediment, pet waste, vegetation clippings, or other landscape or construction-related wastes; and
    - (9) Discharges of food-related wastes (e.g., grease, fish processing, and restaurant kitchen mat and trash bin wash water, etc.).
  - c) Prohibit and eliminate illicit connections to the MS4;
  - d) Control the discharge of spills, dumping, or disposal of materials other than storm water to its MS4;
  - e) Require compliance with conditions in Permittee ordinances, permits, contracts or orders (i.e., hold dischargers to its MS4 accountable for their contributions of pollutants and flows);

- f) Require the use of BMPs to prevent or reduce the discharge of pollutants into MS4s to the MEP.
  - g) Carry out all inspections, surveillance, and monitoring necessary to determine compliance and noncompliance with local ordinances and permits and with this Order, including the prohibition on illicit discharges to the MS4. This means the Permittee must have authority to enter, sample, inspect, review and copy records, and require regular reports from industrial facilities discharging into its MS4, including construction sites;
  - h) Utilize enforcement mechanisms to require compliance with Permittee storm water ordinances, permits, contracts, or orders; and
  - i) Control the contribution of pollutants from one portion of the shared MS4 to another portion of the MS4 through interagency agreements among Permittees;
2. Each Permittee shall include as part of its Individual SWMP, which must be submitted within 365 days of adoption of this Order, a statement certified by its chief legal counsel that the Permittee has adequate legal authority to implement and enforce each of the requirements contained in 40 CFR 122.26(d)(2)(i)(A-F) and this Order.

#### **E. STORM WATER MANAGEMENT PLAN (SWMP)**

1. Within 365 days from the date of this Order, the Principal Permittee shall submit a SWMP to the SDRWQCB. The SWMP shall describe the various urban runoff management programs that will be implemented to comply with this Order and to reduce pollutants in urban runoff to the MEP for the duration of this Order. The SWMP is an integral and enforceable component of this Order and shall consist of the following:
  - a) Individual SWMP - The written description of each Permittee's individual programs that address Sections B through J of this Order. **Attachment D** contains direction for the preparation of the Individual SWMP. Each Permittee shall submit their Individual SWMP to the Principal Permittee by a date determined by the Principal Permittee for inclusion in the SWMP.
  - b) Watershed SWMP - The written account of all area-wide and watershed-based programs and activities conducted by the Permittees. The Watershed SWMP shall contain the programs and items required above in Requirements K.1 – K.4 of this Order.
2. Unless otherwise specified, within 365 days of the adoption of this Order, each Permittee shall have completed full implementation of the SWMP and all requirements in this Order. Prior to the implementation of new or revised programs, each Permittee shall, at a minimum, continue implementation of existing programs developed pursuant to Order No. R9-98-02 and described in the 2002-2003 Annual Progress Report.
3. Each Permittee shall incorporate a mechanism for public participation during the development and implementation of its SWMP.

#### **F. DEVELOPMENT PLANNING**

Permittees shall implement a program, including but not limited to, the requirements in this section, to reduce pollutants in urban runoff from developments to the MEP.

## 1. Assess General Plan

Each Permittee's General Plan or equivalent plan (e.g., Comprehensive, Master, or Community Plan) shall include water quality and watershed protection principles and policies to direct land-use decisions and require implementation of consistent water quality protection measures for development projects. As part of its Individual SWMP, each Permittee shall provide a workplan with a time schedule detailing any changes to its General Plan regarding water quality and watershed protection. Examples of water quality and watershed protection principles and policies to be considered include the following:

- a) Minimize the amount of impervious surfaces and directly connected impervious surfaces in areas of development and, where feasible, slow runoff and maximize on-site infiltration of runoff.
- b) Implement pollution prevention methods supplemented by source control and treatment control BMPs. Use small collection strategies located at, or as close as possible to, the source (i.e., the point where water initially meets the ground) to minimize the transport of urban runoff and pollutants offsite and into an MS4.
- c) Preserve, and where possible, create or restore areas that provide important water quality benefits, such as riparian corridors, wetlands, and buffer zones. Encourage land acquisition of such areas.
- d) Limit disturbances of natural water bodies and natural drainage systems caused by development including roads, highways, and bridges.
- e) Prior to making land use decisions, utilize methods available to estimate increases in pollutant loads and flows resulting from projected future development. Require incorporation of appropriate BMPs to mitigate the projected increases in pollutant loads and flows.
- f) Avoid development of areas that are particularly susceptible to erosion and sediment loss; or establish development guidance that identifies these areas and protects them from erosion and sediment loss.
- g) Reduce pollutants associated with vehicles and increasing traffic resulting from development.
- h) Post-development runoff from a site shall not contain pollutant loads that cause or contribute to an exceedance of receiving water quality objectives and which have not been reduced to the MEP.

## 2. Modify Development Project Approval Processes

### a) Requirements for all Development Projects (New Development and Redevelopment)

During the planning process, prior to the issuance of permits, Permittees shall require all proposed development projects to implement BMPs to ensure that the discharge of pollutants from the development will be reduced to the MEP and will comply with this Order and all local ordinances, plans, and permits. Development project requirements shall ensure that water quality objectives are not violated throughout the life of the development. At a minimum, requirements shall:

- (1) Require project proponent to implement applicable pollution prevention and source control BMPs for applicable development projects.
- (2) Require project proponent to implement site design/landscape characteristics where feasible which maximize infiltration, provide retention, slow runoff, and minimize impervious land coverage for all development projects.

- (3) Require project proponent to incorporate buffer zones for natural water bodies, where feasible. Where buffer zones are infeasible, require project proponent to implement other buffers such as trees, access restrictions, etc.
  - (4) When known, require industrial facility operators subject to the General Industrial Permit to provide evidence of permit coverage prior to occupancy.
  - (5) Require project proponent to ensure its grading or other construction activities meet the provisions specified in Section G of this Order.
  - (6) Require project proponent to provide proof of a mechanism which will ensure ongoing long-term maintenance of all structural post-construction BMPs.
- b) Standard Urban Storm Water Mitigation Plans (SUSMPs) – Requirements for Priority Development Projects

Within 365 days of adoption of this Order, each Permittee shall develop, adopt, and implement a SUSMP to reduce pollutants to the MEP and to maintain or reduce downstream erosion and protect stream habitat from all Priority Development Projects. Priority Development Projects are: a) all new development projects, and b) those redevelopment projects that create, add or replace at least 5,000 square feet of impervious surfaces on an already developed site, that are listed under the project categories or locations in Requirement F.2.b.(1) below. Redevelopment includes, but is not limited to: the expansion of a building footprint or addition or replacement of a structure; structural development including an increase in gross floor area and/or exterior construction or remodeling; replacement of impervious surface that is not part of a routine maintenance activity; and land disturbing activities related with structural or impervious surfaces. 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 SUSMP requirements, the numeric sizing criteria discussed in Requirement F.2.b.(3) applies only to the addition, and not to the entire development. Each Permittee shall submit both the adopted SUSMP and amended ordinances to the SDRWQCB no later than 365 days after the adoption of this Order.

Immediately following adoption of its SUSMP, each Permittee shall review and ensure that all Priority Development Projects meet SUSMP requirements. The SUSMP requirements shall apply to all Priority Development Projects or phases of Priority Development Projects that have not yet begun grading or construction activities. If a Permittee determines that lawful prior approval of a project exists, whereby application of SUSMP requirements to the project is infeasible, SUSMP requirements need not apply to the project. Where feasible, the Permittees shall utilize the 12-month SUSMP development and implementation period to ensure that projects undergoing approval processes include application of SUSMP requirements in their plans.

(1) Priority Development Project Categories

- (a) *Housing subdivisions of 10 or more dwelling units.* This category includes single-family homes, multi-family homes, condominiums, and apartments.
- (b) *Commercial developments greater than 100,000 square feet.* This category is defined as any development on private land that is not for heavy industrial or residential uses where the land area for development is greater than 100,000 square feet. The category includes, but is not limited to: hospitals; laboratories and other medical facilities; educational institutions; recreational facilities; municipal facilities; commercial nurseries; multi-apartment buildings; car wash facilities; mini-

- malls and other business complexes; shopping malls; hotels; office buildings; public warehouses; automotive dealerships; airfields; and other light industrial facilities.
- (c) *Automotive repair shops.* This category is defined as a facility that is categorized in any one of the following Standard Industrial Classification (SIC) codes: 5013, 5014, 5541, 7532-7534, or 7536-7539.
  - (d) *Restaurants.* This category is defined as a facility that sells prepared foods and drinks for consumption, including stationary lunch counters and refreshment stands selling prepared foods and drinks for immediate consumption (SIC code 5812), where the land area for development is greater than 5,000 square feet. Restaurants where land development is less than 5,000 square feet shall meet all SUSMP requirements except for structural treatment BMP and numeric sizing criteria requirement F.2.b.(3) and peak flow rate requirement F.2.b.(2)(a).
  - (e) *All hillside development greater than 5,000 square feet.* This category is defined as any development which creates 5,000 square feet of impervious surface which is located in an area with known erosive soil conditions, where the development will grade on any natural slope that is twenty-five percent or greater.
  - (f) *Environmentally Sensitive Areas (ESAs).* All development located within or directly adjacent to or discharging directly to an ESA (where discharges from the development or redevelopment will enter receiving waters within the ESA), which either creates 2,500 square feet of impervious surface on a proposed project site or increases the area of imperviousness of a proposed project site to 10% or more of its naturally occurring condition. "Directly adjacent" means situated within 200 feet of the ESA. "Discharging directly to" means outflow from a drainage conveyance system that is composed entirely of flows from the subject development or redevelopment site, and not commingled with flows from adjacent lands.
  - (g) *Parking lots 5,000 square feet or more.* Parking lot is defined as a land area or facility for the temporary parking or storage of motor vehicles used personally, for business, or for commerce.
  - (h) *Street, roads, highways, and freeways.* This category includes any paved surface that is 5,000 square feet or greater used for the transportation of automobiles, trucks, motorcycles, and other vehicles.
  - (i) *Retail Gasoline Outlets.* This category includes RGOs that meet the following criteria: (a) 5,000 square feet or more or (b) a projected Average Daily Traffic (ADT) of 100 or more vehicles per day
- (2) **BMP Requirements** – The SUSMP shall include a list of recommended source control and treatment control BMPs. The SUSMP shall require all Priority Development Projects to implement a combination of on-site source control and on-site/shared treatment control BMPs (to treat the runoff specifically generated from each project) selected from the recommended BMP list. The BMPs shall, at a minimum:
- (a) Control the post-development urban runoff discharge velocities, volumes, durations, and peak rates to maintain or reduce pre-development downstream erosion, and to protect stream habitat;
  - (b) Conserve natural areas where feasible;

- (c) Minimize storm water pollutants of concern in urban runoff from the Priority Development Projects (through implementation of source control BMPs). Identification of pollutants of concern shall include, at a minimum, all pollutants for which water bodies receiving the development's runoff are listed as impaired under CWA section 303(d), all pollutants associated with the land use type of the development, and all pollutants commonly associated with urban runoff;
- (d) Be effective at removing or treating the pollutants of concern associated with the project;
- (e) Minimize directly connected impervious areas where feasible;
- (f) Protect slopes and channels from eroding;
- (g) Include storm drain stenciling and signage;
- (h) Include properly designed outdoor material storage areas;
- (i) Include properly designed trash storage areas;
- (j) Include proof of a mechanism, to be provided by the project proponent or Permittee, which will ensure ongoing long-term BMP maintenance;
- (k) Include additional water quality provisions applicable to individual Priority Development Project categories;
- (l) Be correctly designed so as to remove pollutants to the MEP;
- (m) Be implemented close to pollutant sources, when feasible, and prior to discharging into receiving waters; and
- (n) Ensure that post-development runoff does not contain pollutant loads which cause or contribute to an exceedance of water quality objectives and which have not been reduced to the MEP.

Under no circumstances can a BMP be constructed in a receiving water.

- (3) Numeric Sizing Criteria – The SUSMP shall require treatment control BMPs to be implemented for all Priority Development Projects. All treatment control BMPs shall be located so as to infiltrate, filter, or treat the required runoff volume or flow prior to its discharge to any receiving water. Treatment control BMPs may be shared by multiple Priority Development Projects as long as construction of any shared treatment control BMPs is completed prior to the use of any development project from which the treatment control BMP will receive runoff, and prior to discharge to a receiving water.

In addition to meeting the BMP requirements listed in Requirement F.2.b.(2) above, all treatment control BMPs for a single Priority Development Project shall collectively be sized to comply with the following numeric sizing criteria:

- (a) *Volume* - Volume-based BMPs shall be designed to mitigate (infiltrate, filter, or treat) either:

- (i) The volume of runoff produced from a 24-hour 85th percentile rainfall depth, as determined from the local historical rainfall record (0.6 inch approximate average for the Riverside County area)<sup>1</sup>; or
- (ii) The volume of runoff produced by the 85th percentile 24-hour runoff 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 90% or more volume treatment by the method recommended in *California Stormwater Best Management Practices Handbook New Development and Redevelopment* (2003)); 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;<sup>2</sup>

OR

(b) *Flow* - Flow-based BMPs shall be designed to mitigate (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, for each hour of a storm event; or
- (ii) The maximum flow rate of runoff produced by the 85<sup>th</sup> percentile hourly rainfall intensity (for each hour of a storm event), as determined from the local historical rainfall record, multiplied by a factor of two; or
- (iii) The maximum flow rate of runoff for each hour of a storm event, 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 85<sup>th</sup> percentile hourly rainfall intensity multiplied by a factor of two.

(4) Equivalent Numeric Sizing Criteria - The Permittees may develop, as part of the SUSMP, any equivalent method for calculating the volume or flow which must be mitigated (i.e., any equivalent method for calculating numeric sizing criteria) by post-construction treatment control BMPs. Such equivalent sizing criteria may be authorized by the SDRWQCB for use in place of the above criteria. In the absence of development and subsequent authorization of such equivalent numeric sizing criteria, the above numeric sizing criteria requirement shall be implemented.

<sup>1</sup> This volume is not a single volume to be applied to all of Riverside County. The size of the 85<sup>th</sup> percentile storm event is different for various parts of the County. The Permittees are encouraged to calculate the 85<sup>th</sup> percentile storm event for each of their jurisdictions using local rain data pertinent to their particular jurisdiction (inch standard is a rough average for the County and should only be used where appropriate rain data is not available). In addition, isopluvial maps may be used to extrapolate rainfall data to areas where insufficient data exists in order to determine the volume of the local 85<sup>th</sup> percentile storm event in such areas. Where the Permittees will use isopluvial maps to determine the 85<sup>th</sup> percentile storm event in areas lacking rain data, the Permittees shall describe their method for using isopluvial maps in their SUSMPs.

<sup>2</sup> Under this volume criteria, hourly rainfall data may be used to calculate the 85<sup>th</sup> percentile storm event, where each storm event is identified by its separation from other storm events by at least six hours of no rain. Where the Permittees may use hourly rainfall data to calculate the 85<sup>th</sup> percentile storm event, the Permittees shall describe their method for using hourly rainfall data to calculate the 85<sup>th</sup> percentile storm event in their SUSMPs.

- (5) Pollutants or Conditions of Concern – As part of the SUSMP, the Permittees shall develop a procedure for pollutants or conditions of concern to be identified for each Priority Development Project. The procedure shall address, at a minimum: (1) Receiving water quality (including pollutants for which receiving waters are listed as impaired under CWA section 303(d)); (2) Land use type of the development project and pollutants associated with that land use type; (3) Pollutants expected to be present on site; (4) Changes in storm water discharge flow rates, velocities, durations, and volumes resulting from the development project; and (5) Sensitivity of receiving waters to changes in storm water discharge flow rates, velocities, durations, and volumes.
- (6) Implementation Process – As part of the SUSMP, the Permittees shall develop a process by which SUSMP requirements will be implemented. The process shall identify at what point in the planning process development projects will be required to meet SUSMP requirements. The process shall also include identification of the roles and responsibilities of various municipal departments in implementing the SUSMP requirements, as well as any other measures necessary for the implementation of SUSMP requirements.
- (7) Waiver Provision – A Permittee may provide for a project to be waived from the requirement of implementing all treatment control BMPs (Requirements F.2.b.(2) & F.2.b.(3)) if infeasibility can be established. A waiver of infeasibility shall only be granted by a Permittee when all available treatment control BMPs have been considered and rejected as infeasible. Permittees shall notify the SDRWQCB within 5 days of each waiver issued and shall include the following information in the notification:
- (a) Name of the person granting each waiver;
  - (b) Name of developer receiving the waiver;
  - (c) Site location;
  - (d) Reason for waiver; and
  - (e) Description of BMPs required.

As part of the SUSMP, the Permittees may develop a program to require project proponents who have received waivers to transfer the savings in cost, as determined by the Permittee(s), to a storm water mitigation fund. This program may be implemented by all Permittees that choose to provide waivers. Funds may be used on projects to improve urban runoff quality within the watershed of the waived project. The waiver mitigation program should, at a minimum, identify:

- (a) The entity or entities that will manage the storm water mitigation fund (i.e., assume full responsibility for);
  - (b) The range and types of acceptable projects for which mitigation funds may be expended;
  - (c) The entity or entities that will assume full responsibility for each mitigation project including its successful completion; and
  - (d) How the dollar amount of fund contributions will be determined.
- (8) Infiltration and Groundwater Protection – To protect groundwater quality, each Permittee shall apply restrictions to the use of treatment control BMPs that are designed to primarily function as infiltration devices (such as infiltration trenches and infiltration

basins). Such restrictions shall ensure that the use of such infiltration treatment control BMPs shall not cause or contribute to an exceedance of groundwater quality objectives. At a minimum, use of treatment control BMPs that are designed to primarily function as infiltration devices shall meet the following conditions.<sup>3</sup> As part of the SUSMP, the Permittees may develop alternative restrictions on the use of treatment control BMPs which are designed to primarily function as infiltration devices.

- (a) Urban runoff shall undergo pretreatment such as sedimentation or filtration prior to infiltration;
  - (b) All dry weather flows shall be diverted from infiltration devices;
  - (c) Pollution prevention and source control BMPs shall be implemented at a level appropriate to protect groundwater quality at sites where infiltration treatment control BMPs are to be used;
  - (d) Infiltration treatment control BMPs shall be adequately maintained so that they remove pollutants to the MEP;
  - (e) The vertical distance from the base of any infiltration treatment control BMP to the seasonal high groundwater mark shall be at least 10 feet. Where groundwater basins do not support beneficial uses, this vertical distance criteria may be reduced, provided groundwater quality is maintained;
  - (f) The soil through which infiltration is to occur shall have physical and chemical characteristics (such as appropriate cation exchange capacity, organic content, clay content, and infiltration rate) which are adequate for proper infiltration durations and treatment of urban runoff for the protection of groundwater beneficial uses;
  - (g) Infiltration treatment control BMPs shall not be used for areas of industrial or light industrial activity; areas subject to high vehicular traffic (25,000 or greater average daily traffic on main roadway or 15,000 or more average daily traffic on any intersecting roadway); automotive repair shops; car washes; fleet storage areas (bus, truck, etc.); nurseries; and other high threat to water quality land uses and activities as designated by each Permittee; and
  - (h) Infiltration treatment control BMPs shall be located a minimum of 100 feet horizontally from any water supply wells. As part of the SUSMPs, the Permittees may develop alternative restrictions on the use of treatment control BMPs that are designed to primarily function as infiltration devices.
- (9) Downstream Erosion – The Permittees shall develop numeric criteria to ensure that discharges from Priority Development Projects maintain or reduce pre-development downstream erosion and protect stream habitat. At a minimum, numeric criteria shall be developed to control urban runoff discharge velocities, volumes, durations, and peak rates in order to maintain or reduce pre-development downstream erosion and protect stream habitat. The Permittees shall propose numeric criteria and a time-schedule for implementation of the criteria on new development projects within 365 days of the identification of the criteria and no later than the fourth-year Annual Report, or the application for permit renewal, to be submitted no later than October 31, 2008.

<sup>3</sup> These conditions do not apply to treatment control BMPs that allow incidental infiltration and are not designed to primarily function as infiltration devices (such as grassy swales, detention basins, vegetated buffer strips, constructed wetlands, etc.).

The Permittees shall be prepared to implement the numeric criteria upon renewal of this Order.

3. Revise Environmental Review Processes

Permittees shall revise their current environmental review processes as necessary to include requirements for evaluation of water quality effects and identification of appropriate mitigation measures for all development projects. The following questions are examples to be considered in addressing increased pollutants and flows from proposed projects:

- a) Could the proposed project result in an increase in pollutant discharges to receiving waters? Consider water quality parameters such as temperature, dissolved oxygen, turbidity and other typical storm water pollutants (e.g., heavy metals, pathogens, petroleum derivatives, synthetic organics, sediment, nutrients, oxygen-demanding substances, and trash).
- b) Could the proposed project result in significant alteration of receiving water quality during or following construction?
- c) Could the proposed project result in increased impervious surfaces and associated increased runoff?
- d) Could the proposed project create a significant adverse environmental impact to drainage patterns due to changes in runoff flow rates or volumes?
- e) Could the proposed project result in increased erosion downstream?
- f) Is the project tributary to an already impaired water body, as listed on the CWA section 303(d) list? If so, can it result in an increase in any pollutant for which the water body is already impaired?
- g) Is the project tributary to other environmentally sensitive areas? If so, can it exacerbate already existing sensitive conditions?
- h) Could the proposed project have a potentially significant environmental impact on surface water quality of marine, fresh, or wetland waters?
- i) Could the proposed project have a potentially significant adverse impact on groundwater quality?
- j) Could the proposed project cause or contribute to an exceedance of applicable surface or groundwater receiving water quality objectives or degradation of beneficial uses?
- k) Can the project impact aquatic, wetland, or riparian habitat?

4. Conduct Education Efforts Focused on Development

- a) Internal: Municipal Staff

Each Permittee shall implement an education program that includes annual training to ensure that planning and development review staffs (and Planning Boards and Elected Officials, if applicable) have an understanding of:

- (1) Federal, state, and local water quality laws and regulations applicable to development projects;
- (2) The connection between land use decisions and short and long-term water quality impacts (i.e., impacts from land development and urbanization); and

- (3) How impacts to receiving water quality resulting from development can be minimized (i.e., through implementation of various source control and treatment control BMPs).
- b) External: Project Applicants, Developers, Contractors, Property Owners, Community Planning Groups

As early in the planning and development process as possible, each Permittee shall implement a program to educate project applicants, developers, contractors, property owners, and community planning groups on the following topics:

- (1) Federal, state, and local water quality laws and regulations applicable to development projects;
- (2) Required federal, state, and local permits pertaining to water quality;
- (3) Water quality impacts of urbanization; and
- (4) Methods for minimizing the impacts of development on water quality.

## G. CONSTRUCTION

Each Permittee shall implement a program to address construction sites to reduce pollutants in runoff to the MEP during all construction phases. At a minimum the construction component shall address:

1. Pollution Prevention

Each Permittee shall implement pollution prevention methods in its Construction Component and shall require its use by construction site owners, developers, contractors, and other responsible parties, where appropriate.

2. Grading Ordinance Update

Within 365 days of adoption of this Order, each Permittee shall review and update its grading ordinances as necessary for compliance with its storm water ordinances and this Order. The updated grading ordinance shall require implementation of BMPs designated by the Permittees pursuant to Requirements G.5 of this Order and other measures during all construction activities.

3. Modify Construction and Grading Approval Process

Each Permittee shall develop and implement a process to ensure that BMPs to reduce the discharge of pollutants to the MEP are applicable to construction and grading permits and plans prior to their approval and issuance. Such BMPs shall include the following requirements or their equivalent:

- a) Require project proponent to develop and implement a plan to manage storm water and non-storm water discharges from the site at all times;
- b) Require project proponent to minimize grading during the wet season and coincide grading with seasonal dry weather periods to the extent feasible. If grading does occur during the wet season, require project proponent to implement additional BMPs for any rain events which may occur, as necessary for compliance with this Order;
- c) Require project proponent to emphasize erosion prevention as the most important measure for keeping sediment on site during construction;
- d) Require project proponent to utilize sediment controls as a supplement to erosion prevention for keeping sediment on-site during construction, and never as the single or primary method;

- e) Require project proponent to minimize areas that are cleared and graded to only the portion of the site that is necessary for construction;
- f) Require project proponent to minimize exposure time of disturbed soil areas;
- g) Require project proponent to temporarily stabilize and reseed disturbed soil areas as rapidly as possible;
- h) Require project proponent to permanently revegetate or landscape as early as feasible;
- i) Require project proponent to stabilize all slopes; and
- j) Require project proponents subject to the General Construction Permit to provide evidence of existing permit coverage.

4. Source Identification

Each Permittee shall annually develop and update, prior to the rainy season, an inventory of all construction sites within its jurisdiction regardless of site size or ownership. This requirement is applicable to all construction sites regardless of whether the construction site is subject to the General Construction Permit, or other individual NPDES permit. The use of an automated database system, such as Geographical Information System (GIS) is highly recommended, but not required.

5. BMP Implementation

- a) Each Permittee shall designate a set of minimum BMPs that ensure the following at all construction sites:
  - (1) Erosion prevention;
  - (2) Slope stabilization;
  - (3) Phased grading;
  - (4) Revegetation as early as feasible;
  - (5) Preservation of natural hydrologic features where feasible;
  - (6) Preservation of riparian buffers and corridors where feasible;
  - (7) Maintenance of all source control and treatment control BMPs; and
  - (8) Retention and proper management of sediment and other construction pollutants on site.
- b) Each Permittee shall implement, or require the implementation of, the designated minimum BMPs at each construction site within its jurisdiction year round. If a particular minimum BMP is infeasible at any specific site, each Permittee shall implement, or require the implementation of, other equivalent BMPs. Each Permittee shall also implement or require any additional site specific BMPs as necessary to comply with this Order, including BMPs which are more stringent than those required under the General Construction Permit.
- c) Each Permittee shall implement, or require the implementation of, BMPs year round; however, BMP implementation requirements can vary based on wet and dry seasons.
- d) Each Permittee shall implement, or require implementation of, additional controls for construction sites tributary to CWA section 303(d) water bodies impaired for sediment as necessary to comply with this Order. Each Permittee shall implement, or require implementation of, additional controls for construction sites within or adjacent to or discharging directly to receiving waters within ESAs as necessary to comply with this Order.

6. Inspection of Construction Sites

- a) Each Permittee shall conduct construction site inspections for compliance with its local ordinances (grading, storm water, etc.), permits (construction, grading, etc.), and this Order.
- b) During the wet season Permittees shall, at a minimum, inspect the following sites every two weeks<sup>4</sup>:
  - (1) All sites 50 acres or more in size and grading will occur during the wet season;
  - (2) All sites 5 acres or more, and tributary to a CWA section 303(d) water body impaired for sediment or within or directly adjacent to or discharging directly to a receiving water within ESA; and
  - (3) Other sites determined by the Permittees or the SDRWQCB as a significant threat to water quality. In evaluating threat to water quality, the following factors shall be considered: (1) soil erosion potential; (2) site slope; (3) project size and type; (4) sensitivity of receiving water bodies; (5) proximity to receiving water bodies; (6) non-storm water discharges; and (7) any other relevant factors.
- c) The Permittees, at a minimum, shall inspect all construction sites that do not meet the criteria specified in Requirement G.6.b above, but encompass 1 acre or more of soil disturbance at least three times during the wet season.
- d) The Permittees shall inspect construction sites less than 1 acre in size on as needed basis.
- e) Permittees shall inspect all construction sites as needed during the dry season.
- f) Based upon site inspection findings, each Permittee shall implement all follow-up actions necessary to comply with this Order.

7. Enforcement of Construction Sites

Each Permittee shall enforce its ordinances (grading, storm water, etc.) and permits (building, grading, etc.) at all construction sites as necessary to maintain compliance with this Order. Permittee ordinances or other regulatory mechanisms shall include sanctions to ensure compliance. Sanctions shall include the following or their equivalent: stop work authority, non-monetary penalties, fines, financial security, and/or permit denials for non-compliance.

8. Education Focused on Construction Activities

a) Internal: Municipal Staff

Each Permittee shall implement an education program that includes annual training to ensure that its construction, building, and grading review staff and inspectors have, at a minimum, an understanding of:

- (1) Federal, state, and local water quality laws and regulations applicable to construction and grading activities;

<sup>4</sup> Any site may be inspected on a monthly basis if the responsible Permittee certifies in a written statement to the SDRWQCB ALL of the following (certified statements may be submitted to the SDRWQCB at any time for one or more sites):

- Permittee has record of construction site's WDID number documenting the site's coverage under the General Construction Permit;
- Permittee has reviewed the construction site's SWPPP and finds the SWPPP to be in compliance with all local ordinances, permits, and plans; and
- Permittee finds that the SWPPP is being properly implemented on site.

- (2) The connection between construction activities and water quality impacts (i.e., impacts from land development and urbanization);
  - (3) How erosion can be prevented;
  - (4) How impacts to receiving water quality resulting from construction activities can be minimized (i.e., through implementation of various source control and treatment control BMPs); and
  - (5) How to assess construction sites for adequate BMP implementation and compliance with local codes, ordinances, and permits, and this Order.
- b) External: Project Applicants, Contractors, Developers, Property Owners, and other Responsible Parties

Each Permittee shall implement an education program to ensure that project applicants, contractors, developers, property owners, and other responsible parties have an understanding of the topics outlined above.

## H. EXISTING DEVELOPMENT

Each Permittee shall develop and implement programs to prevent or reduce pollutants in runoff to the MEP from all existing development under its jurisdiction. The Existing Development programs shall address Sections H.1 through H.3 for municipal facilities and activities, industrial and commercial facilities, and residential activities.

### 1. Municipal Program

a) Pollution Prevention

Each Permittee shall require the use of pollution prevention methods by municipal departments, contractors, and personnel, where appropriate.

b) Source Identification

Each Permittee shall develop, and update annually, an inventory of the name, address (if applicable), and description of all of the Permittee's municipal facilities and activities that generate pollutants. Municipal facilities and activities to be inventoried shall include, but are not limited to, the following:

- Roads, streets, highways, and parking facilities;
- Flood management projects and flood control devices;
- Drainage facilities;
- Active or closed municipal landfills;
- Publicly owned treatment works (including water and wastewater treatment plants) and sanitary sewage collection systems;
- Incinerators;
- Solid waste transfer facilities;
- Land application sites;
- Uncontrolled sanitary landfills;
- Corporate yards including maintenance and storage yards for materials, waste, equipment and vehicles;
- Sites for disposing and treating sewage sludge;
- Hazardous waste treatment, disposal, and recovery facilities;
- Household hazardous waste collection facilities;

- Municipal airfields;
- Parks and recreational facilities;
- Golf courses;
- Cemeteries;
- Other landscaped areas;
- Channel maintenance activities involving mowing and pesticide/herbicide application;
- Municipal facilities and activities tributary to a CWA section 303(d) impaired water body, where an area or activity generates pollutants for which the water body is impaired. Facilities and activities within or adjacent to or discharging directly to receiving waters within ESAs; and
- Other municipal facilities and activities that the Permittee determines may contribute a significant pollutant load to the MS4.

c) BMP Implementation

- (1) Within 365 days from the date of this Order, each Permittee shall implement or require the implementation of BMPs to reduce pollutants in urban runoff to the MEP from all of the Permittee's municipal facilities and activities. The required BMPs shall be facility or activity specific as appropriate.
- (2) For facilities and/or activities tributary to CWA section 303(d) impaired water bodies that generate pollutants for which the water body is impaired, each Permittee shall implement or require the implementation of additional BMPs to target that pollutant. Each Permittee shall implement, or require implementation of, additional controls for municipal facilities and activities within or directly adjacent to or discharging directly to receiving waters within ESAs as necessary to comply with this Order.

d) MS4 Maintenance

- (1) Each Permittee shall implement a schedule of maintenance activities for its structural source and treatment control BMPs designed to reduce pollutant discharges to or from its MS4s and related drainage structures.
- (2) Each Permittee shall implement a schedule of maintenance activities for its MS4. The maintenance activities must, at a minimum, include:
  - (a) Inspection of all of the Permittee's catch basins and storm drain inlets at least once a year between May 1 and September 30. If accumulated waste is visible, the catch basin, or storm drain inlet, shall be cleaned out. Additional cleaning shall be conducted as necessary;
  - (b) Removal of anthropogenic litter from the Permittee's open channels at least once a year between May 1 and September 30, with additional removal as necessary;
  - (c) Record keeping of the Permittee's MS4 cleaning activities;
  - (d) Proper disposal of waste removed from the Permittee's MS4 pursuant to applicable laws; and
  - (e) Measures to eliminate waste discharges during MS4 maintenance and cleaning activities.

e) Management of Pesticides, Herbicides, and Fertilizers

The Permittees shall implement BMPs to reduce the contribution of pollutants to the MEP

associated with the application, storage, and disposal of pesticides, herbicides and fertilizers from municipal facilities and activities to MS4s. Such BMPs shall include, at a minimum: (1) educational activities, permits, certifications and other measures for municipal applicators and distributors; (2) integrated pest management measures that rely on non-chemical solutions; (3) the use of native vegetation; (4) schedules for irrigation and chemical application; and (5) the collection and proper disposal of unused pesticides, herbicides, and fertilizers.

f) Inspection of Municipal Facilities and Activities

At a minimum, each Permittee shall inspect all municipal facilities and activities annually. Inspections shall include an assessment of BMP implementation and effectiveness. Based upon site inspection findings, each Permittee shall implement all follow-up actions necessary to comply with this Order.

g) Enforcement of Municipal Facilities and Activities

Each Permittee shall enforce its storm water ordinance at all of its municipal facilities and activities as necessary to maintain compliance with this Order.

**2. Industrial/Commercial Facilities Program**

a) Pollution Prevention

Each Permittee shall require the use of pollution prevention methods by industrial/commercial facilities, where appropriate.

b) Source Identification

Each Permittee shall develop an inventory or database of all industrial and commercial facilities under its jurisdiction (regardless of site ownership) that could contribute a significant pollutant load to the MS4. At a minimum, the following facilities shall be included:

(1) Commercial Facilities:

- Automobile mechanical repair, maintenance, fueling, or cleaning;
- Airplane mechanical repair, maintenance, fueling, or cleaning;
- Boat mechanical repair, maintenance, fueling, or cleaning;
- Equipment repair, maintenance, fueling, or cleaning;
- Automobile and other vehicle body repair or painting;
- Mobile automobile or other vehicle washing (base of operations);
- Automobile (or other vehicle) parking lots and storage facilities;
- Retail or wholesale fueling;
- Pest control services (base of operations);
- Eating or drinking establishments;
- Mobile carpet, drape or furniture cleaning (base of operations);
- Concrete mixing or cutting (base of operations);
- Masonry (base of operations);
- Painting and coating (base of operations);
- Landscaping (base of operations);
- Nurseries and greenhouses;
- Golf courses, parks and other recreational areas/facilities;

- Cemeteries;
  - Pool and fountain cleaning (base of operations);
  - Port-a-Potty servicing (base of operations);
- (2) Industrial Facilities:
- Industrial facilities, as defined at 40 CFR 122.26(b)(14), including those subject to the General Industrial Permit;
  - Operating and closed municipal landfills;
  - Facilities subject to SARA Title III;
  - Hazardous waste treatment, disposal, storage and recovery facilities;
- (3) All other facilities tributary to a CWA section 303(d) impaired water body, where a facility generates pollutants for which the water body is impaired; and
- (4) All other facilities that the Permittee determines may contribute a significant pollutant load to the MS4.

The inventory shall include the following minimum information for each facility: name; address; a narrative description that best reflects the principal products or services provided by each facility, and the SIC code for industrial facilities.

Each Permittee shall maintain an up-to-date inventory. New information obtained during inspections or through other intra-agency informational sources (e.g. business licenses, pretreatment permits, sanitary sewer hook-up permits, yellow pages, etc.) shall be used to update the inventory on a regular basis.

c) BMP Implementation

- (1) Within 365 days from the date of this Order, each Permittee shall designate a set of minimum BMP requirements for all inventoried industrial/commercial facilities to reduce the discharge of pollutants in runoff to the MEP. Designated BMPs may be specific to facility types or to pollutant-generating activities conducted at the facilities.
- (2) For facilities and/or activities tributary to CWA section 303(d) impaired water bodies that generate pollutants for which the water body is impaired, each Permittee shall designate additional BMPs to target that pollutant. Each Permittee shall implement, or require implementation of, additional controls for industrial/commercial facilities and activities within or directly adjacent to or discharging directly to receiving waters within ESAs as necessary to comply with this Order.
- (3) Within 365 days from the date of this Order, each Permittee shall notify all inventoried facilities of their applicable minimum BMP requirements, and a description of the local codes or ordinances requiring compliance with reducing the discharge of pollutants in runoff to the MEP.
- (4) Each Permittee shall implement, or require the implementation of, the designated minimum BMPs at each inventoried facility within its jurisdiction. If a particular minimum BMP is infeasible at any specific site, each Permittee shall implement, or require implementation of, other equivalent BMPs. Each Permittee shall also implement or require any additional site specific BMPs as necessary to comply with this Order including BMPs which are more stringent than those required under the General Industrial Permit.

d) Inspection of Industrial/Commercial Facilities

- (1) To establish priorities for inspections and oversight of industrial/commercial facilities, the Permittees shall prioritize each inventory described in Requirement H.2.b. above by threat to water quality (high, medium, or low). In evaluating threat to water quality, each Permittee shall consider, at a minimum, the following:
  - Type of facility (SIC Code);
  - Materials used at the facility;
  - Wastes generated;
  - Exposure of activities and pollutant discharge potential;
  - History of non-storm water discharges;
  - Size of facility;
  - Proximity to receiving water bodies and sensitivity of receiving water bodies;
  - Whether the industrial site is subject to the General Industrial Permit;
  - Any available source monitoring data; and
  - Any other relevant factors.
- (2) Each Permittee shall inspect and ensure minimum BMP implementation at all inventoried industrial/commercial facilities in accordance with the following schedule:
  - (a) High priority facilities shall be inspected annually;
  - (b) Medium priority facilities shall be inspected biannually (twice during the 5-year term of the permit);
  - (c) Low priority facilities shall be inspected once during the 5-year term of the permit; and
  - (d) Mobile operations shall be inspected as needed.
- (3) Inspections of industrial facilities shall include, but not be limited to:
  - (a) Check for coverage under the General Industrial Permit (Notice of Intent (NOI) and/or Waste Discharge Identification No.);
  - (b) Assessment of compliance with Permittee ordinances and permits related to urban runoff, including the implementation and maintenance of designated minimum BMPs;
  - (c) Assessment of BMP effectiveness;
  - (d) Visual observations for non-storm water discharges, potential illicit connections, and potential discharge of pollutants in storm water runoff; and
  - (e) Education and outreach on storm water pollution prevention.
- (4) Inspections of commercial facilities shall include, but not be limited to:
  - (a) Assessment of compliance with Permittee ordinances and permits related to urban runoff, including the implementation and maintenance of designated minimum BMPs;
  - (b) Assessment of BMP effectiveness;
  - (c) Visual observations for non-storm water discharges, potential illicit connections, and potential discharge of pollutants in storm water runoff; and
  - (d) Education and outreach on storm water pollution prevention.

- (5) To the extent that the SDRWQCB has conducted an inspection of an industrial facility during a particular year, the requirement for the responsible Permittee to inspect this site during the same year will be satisfied.
- (6) Based upon facility inspection findings, each Permittee shall implement all follow-up actions necessary to comply with this Order.

e) Enforcement of Industrial/Commercial Facilities

Each Permittee shall enforce its storm water ordinance at all industrial/commercial facilities as necessary to maintain compliance with this Order. Permittee ordinances or other regulatory mechanisms shall include sanctions to ensure compliance. Sanctions shall include the following or their equivalent: Non-monetary penalties, fines, bonding requirements, and/or permit denials for non-compliance.

f) Reporting of Industrial Non-Fileers

As part of each Annual Report, each Permittee shall report a list of industrial facilities, including the name, address, and SIC code, that may require coverage under the General Industrial Permit for which a NOI has not been filed.

g) Industrial/Commercial Inspection Training

Each Permittee shall train staff responsible for conducting inspections of industrial/commercial facilities at least once a year. Permittees are encouraged to conduct training programs and provide compliance assistance to industrial/commercial facility owners, operators, and employers.

### 3. Residential Program

a) Pollution Prevention

Each Permittee shall encourage the use of pollution prevention methods by residents, where appropriate.

b) Source Identification

Each Permittee shall identify high priority residential activities that may contribute a significant pollutant load to the MS4. These activities may include:

- Automobile repair and maintenance;
- Automobile washing;
- Automobile parking;
- Home and garden care activities and product use (pesticides, herbicides, and fertilizers);
- Disposal of household hazardous waste;
- Disposal of pet waste;
- Disposal of green waste; and
- Any other residential source that the Permittee determines may contribute a significant pollutant load to the MS4.

c) BMP Implementation

- (1) Within 365 days from the date of this Order, each Permittee shall designate a set of minimum BMP requirements for all high priority residential activities to reduce the discharge of pollutants in urban runoff to the MEP.

- (2) For residential activities tributary to CWA section 303(d) impaired water bodies that generate pollutants for which the waterbody is impaired, each Permittee shall designate additional BMPs to target that pollutant. Each Permittee shall implement, or require implementation of, additional controls for high priority residential activities within or directly adjacent to or discharging directly to receiving waters within ESAs as necessary to comply with this Order.
- (3) Each Permittee shall implement, or require implementation of, the designated minimum BMPs for the high priority residential activities identified pursuant to Requirement H.3.b. above. If a particular minimum BMP is infeasible for any specific site/source, each Permittee shall require implementation of other equivalent BMPs. Each Permittee shall also implement, or require implementation of, any additional BMPs necessary to comply with this Order.
- (4) Within 365 days from the date of this Order, each Permittee shall notify residents of the applicable minimum BMP requirements, and a description of the local codes or ordinances requiring compliance with reducing the discharge of pollutants in runoff to the MEP.

d) Enforcement of Residential Areas and Activities

Each Permittee shall enforce its storm water ordinance for residential activities as necessary to maintain compliance with this Order.

## I. EDUCATION

Each Permittee shall implement an Education Component using all media as appropriate to (1) measurably increase the knowledge of the target communities regarding MS4s, impacts of urban runoff on receiving waters, and potential BMP solutions for the target audience; and (2) to measurably change the behavior of target communities and thereby reduce pollutant releases to MS4s and the environment. At a minimum the education component shall address the following target communities:

1. Municipal Departments and Personnel
2. Construction Site Owners and Developers
3. Industrial Owners and Operators
4. Commercial Owners and Operators
5. Residential Community, General Public, and School Children
6. Quasi-Governmental Agencies/Districts (i.e., educational institutions, water districts, sanitation districts, etc.)

## J. ILLICIT DISCHARGE DETECTION AND ELIMINATION PROGRAM

Each Permittee shall implement an Illicit Discharge Detection and Elimination program containing measures to actively seek and eliminate illicit discharges and connections. At a minimum the Illicit Discharge Detection and Elimination program shall address:

1. Illicit Discharges and Connections

Each Permittee shall implement a program to actively seek and eliminate illicit discharges and connections into its MS4. The program shall address all types of illicit discharges and connections excluding those non-storm water discharges not prohibited by the Permittee in accordance with Section B of this Order.

2. Develop/Maintain MS4 Map

Each Permittee shall develop or obtain an up-to-date labeled map of its entire MS4 and the corresponding drainage areas within its jurisdiction. The use of a GIS is highly recommended. The accuracy of the MS4 map shall be confirmed and updated at least annually.

3. Illicit Discharge Monitoring

Each Permittee shall implement the Illicit Discharge Monitoring Program in accordance with Section II.B of the MRP to detect illicit discharges and connections.

4. Investigation/Inspection and Follow-Up

Each Permittee shall investigate and inspect any portion of its MS4 that, based on visual observations, monitoring results or other appropriate information, indicates a reasonable potential for illicit discharges, illicit connections, or other sources of non-storm water (including non-prohibited discharge(s) identified in Section B of this Order). Each Permittee shall develop numeric criteria in accordance with section II.B.3. of the MRP to determine when follow-up actions will be necessary. Numeric criteria and follow-up procedures shall be described in each Permittees' Individual SWMP.

5. Elimination of Illicit Discharges and Connections

Each Permittee shall eliminate all illicit discharges, illicit discharge sources, and illicit connections as soon as possible after detection. Elimination measures may include an escalating series of enforcement actions for those illicit discharges that are not a serious threat to public health or the environment. Illicit discharges that are a serious threat to public health or the environment must be eliminated immediately.

6. Enforce Ordinances

Each Permittee shall implement and enforce its ordinances, orders, or other legal authority to prevent illicit discharges and connections to its MS4. Each Permittee shall also implement and enforce its ordinance, orders, or other legal authority to eliminate detected illicit discharges and connections to it MS4.

7. Sewage Spill Prevention and Response

Each Permittee shall take appropriate actions to prevent, respond to, contain and cleanup sewage spills (including private laterals and failing septic systems) into the MS4 and to prevent the contamination of surface water, ground water and soil to the MEP. Appropriate actions may include the following:

- Develop and implement a mechanism to be notified of all sewage spills from private laterals and failing septic systems into the MS4;
- Coordinate sewage spill prevention, containment and response activities throughout all appropriate departments, programs and agencies to ensure maximum water quality protection at all times;
- Require adequately sized and properly maintained private property sewerage systems, such as at residential and commercial complexes;
- Require proper connections of private laterals to the public sewer main;
- Require adequately-sized, and properly maintained grease control devices at food establishments which otherwise could result in sewer line grease blockages;

- Conduct municipal activities such as street repair or tree plantings in a manner that minimizes sewer line damages or root blockages;
- Identify priority areas, produce maps and other information on systems obtained during development review;
- Educate the public on measures to prevent sewage spills; and
- Ensure that private sewer lines are inspected.

8. Facilitate Public Reporting of Illicit Discharges and Connections - Public Hotline

Each Permittee shall promote, publicize and facilitate public reporting of illicit discharges or water quality impacts associated with discharges into or from MS4s. Each Permittee shall facilitate public reporting through development and operation of a public hotline. Public hotlines can be Permittee-specific or shared by Permittees. All storm water hotlines shall be capable of receiving reports in both English and Spanish 24 hours per day / seven days per week. Permittees shall respond to and resolve each reported incident. All reported incidents, and how each was resolved, shall be summarized in each Permittee's Individual Annual Report.

9. Facilitate Disposal of Used Oil and Toxic Materials

Each Permittee shall facilitate the proper management and disposal of used oil, toxic materials, and other household hazardous wastes. Such facilitation shall include educational activities, public information activities, and establishment of collection sites operated by the Permittee or a private entity. Neighborhood collection of household hazardous wastes is encouraged.

**K. WATERSHED-BASED ACTIVITIES**

1. Each Permittee shall collaborate with other Permittees to identify, address, and mitigate the highest priority water quality issues/pollutants in the Upper Santa Margarita Watershed.
2. Each Permittee shall collaborate with all other Permittees to develop and implement a Watershed SWMP for the Upper Santa Margarita Watershed. The Watershed SWMP shall, at a minimum, contain the following:
  - a) An accurate map of the Upper Santa Margarita Watershed (preferably in GIS format) that identifies all receiving waters, all CWA section 303(d) impaired receiving waters, existing and planned land uses, MS4s, major highways, jurisdictional boundaries, and industrial and commercial facilities, municipal sites, and residential areas.
  - b) A description of any interagency agreement, or other efforts, with non-Permittee owners of the MS4 (such as Caltrans, Native American Tribes, and school districts) to control the contribution of pollutants from one portion of the shared MS4 to another portion of the shared MS4;
  - c) An assessment of the water quality of all receiving waters in the watershed based upon (1) existing water quality data; and (2) results from the Receiving Waters and Illicit Discharge Monitoring Programs described in the MRP;
  - d) An identification and prioritization of major water quality problems in the watershed caused or contributed to by MS4 discharges and the likely source(s) of the problem(s);
  - e) An implementation time schedule of short and long-term recommended activities (individual and collective) needed to address the highest priority water quality problem(s) identified in Requirement K.2.d. above. For this section, "short-term activities" shall mean those activities

that are to be completed during the life of this Order and “long-term activities” shall mean those activities that are to be completed beyond the life of this Order;

- f) A watershed-based education program, which focuses on water quality issues specific to the Santa Margarita watershed;
  - g) A mechanism to facilitate collaborative “watershed-based” (i.e., natural resource-based) land use planning with neighboring local governments in the watershed.
  - h) A description of any other urban runoff management programs or activities being conducted collectively by the Permittees to address water quality issues;
  - i) A description of Permittee responsibilities for implementing the programs described in the Watershed SWMP;
  - j) The expenditures and funding sources for the area-wide and watershed-based activities and programs;
  - k) Standardized reporting formats developed collectively by the Permittees, as specified in Requirement M.1;
  - l) Short-term strategy for assessing the effectiveness of the activities and programs implemented as part of the Watershed SWMP. The short-term assessment strategy shall identify methods to assess program effectiveness and include specific direct and indirect performance measurements that will track the immediate progress and accomplishments of the Watershed SWMP towards improving receiving water quality impacted by urban runoff discharges. The short-term strategy shall also discuss the role of monitoring data collected by the Permittees in substantiating or refining the assessment; and
  - m) Long-term strategy for assessing the effectiveness of the Watershed SWMP. The long-term assessment strategy shall identify specific direct and indirect performance measurements that will track the long-term progress of the Watershed SWMP towards achieving improvements in receiving water quality impacted by urban runoff discharges. Methods used for assessing effectiveness shall include the following or their equivalent: surveys, pollutant loading estimations, receiving water quality monitoring, and achievement of measurable goals. The long-term strategy shall also discuss the role of monitoring data in substantiating or refining the assessment.
3. Permittees shall, as appropriate, participate in watershed management efforts to address storm water quality issues within the entire Santa Margarita Watershed, including efforts conducted by other entities in the watershed, such as San Diego County, U.S. Marine Corps Base Camp Pendleton, Native American tribes, and other state, federal, and local agencies.
4. At least once a year, all Permittees shall meet to review and assess available water quality data (from the MRP and other reliable sources), assess program effectiveness, and to review and update the Watershed SWMP.

#### **L. MONITORING AND REPORTING PROGRAM**

Pursuant to CWC section 13267, the Permittees shall comply with all requirements contained in the MRP.

#### **M. PRINCIPAL PERMITTEE RESPONSIBILITIES**

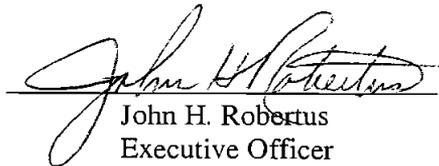
The Principal Permittee shall, at a minimum:

1. Coordinate the joint development by all of the Permittees of standardized format(s) for all reports required under this Order (e.g., annual reports, monitoring reports, fiscal analysis reports, and program effectiveness reports, etc.). The standardized reporting format(s) shall be submitted to the SDRWQCB for review as part of the SWMP. The standardized format(s) shall be used by all Permittees and shall include protocols for electronic reporting.
2. Integrate individual Permittee documents and reports required under this Order into single unified documents and reports for submittal to the SDRWQCB as described below. If a reporting date falls on a non-working day or State holiday, then the report is to be submitted on the following working day.
  - a) SWMP – The Principal Permittee shall submit the SWMP in its entirety to the SDRWQCB within 365 days of the adoption of this Order. The Principal Permittee shall be responsible for preparing the Watershed SWMP and its Individual SWMP. The Principal Permittee shall also be responsible for collecting and assembling the Individual SWMPs describing the activities and programs to be implemented by each individual Permittee.
  - b) MRP - The Principal Permittee shall submit the SWMP Annual Reports and the Monitoring Program Annual Reports in accordance with MRP No. R9-2004-001. The Principal Permittee shall be responsible for producing the Watershed SWMP Annual Report as well as its Individual Annual Report, and for collecting and assembling the Individual SWMP Annual Reports covering the activities conducted by each Permittee. The Principal Permittee shall also be responsible for coordinating the implementation of and reporting on the Receiving Waters Monitoring Program, described in sections II.A and III.B of the MRP.
  - c) Interagency Agreement - The Principal Permittee shall submit a copy of the Interagency Agreement to the SDRWQCB, if and when the agreement is updated.

#### N. STANDARD PROVISIONS

1. Each Permittee shall comply with the standard provisions contained in **Attachment B** of this Order. This includes 24 hour/5day reporting requirements for any instance of non-compliance with this Order as described in Section 1.1.6 of **Attachment B**.
2. All documents submitted to the SDRWQCB pursuant to this Order, including but not limited to SWMP documents, annual reports, monitoring reports, and SUSMPs, shall include an executive summary, introduction, conclusion, recommendations, and signed certified statement.
3. All plans, reports and subsequent amendments submitted in compliance with this Order shall be implemented immediately (or as otherwise specified) and shall be an enforceable part of this Order upon submission to the SDRWQCB. All submittals by Permittees must be adequate to implement the requirements of this Order.

*I, John H. Robertus, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Diego Region, on July 14, 2004.*

  
John H. Robertus  
Executive Officer

## ATTACHMENT A

### BASIN PLAN PROHIBITIONS

California Water Code (CWC) section 13243 provides that a California Regional Water Quality Control Board (RWQCB), in a water quality control plan, may specify certain conditions or areas where the discharge of waste, or certain types of waste is not permitted. The following discharge prohibitions are applicable to any person, as defined by section 13050(c) of the CWC, who is a citizen, domiciliary, or political agency or entity of California whose activities in California could affect the quality of waters of the state within the boundaries of the SDRWQCB.

1. The discharge of waste to waters of the state in a manner causing, or threatening to cause a condition of pollution, contamination or nuisance as defined in CWC section 13050, is prohibited.
2. The discharge of waste to land, except as authorized by waste discharge requirements or the terms described in CWC section 13264 is prohibited.
3. The discharge of pollutants or dredged or fill material to waters of the United States except as authorized by an NPDES permit or a dredged or fill material permit (subject to the exemption described in CWC section 13376) is prohibited.
4. Discharges of recycled water to lakes or reservoirs used for municipal water supply or to inland surface water tributaries thereto are prohibited, unless the SDRWQCB issues a NPDES permit authorizing such a discharge; the proposed discharge has been approved by the State Department of Health Services and the operating agency of the impacted reservoir; and the discharger has an approved fail-safe long-term disposal alternative.
5. The discharge of waste to inland surface waters, except in cases where the quality of the discharge complies with applicable receiving water quality objectives, is prohibited. Allowances for dilution may be made at the discretion of the SDRWQCB. Consideration would include streamflow data, the degree of treatment provided and safety measures to ensure reliability of facility performance. As an example, discharge of secondary effluent would probably be permitted if streamflow provided 100:1 dilution capability.
6. The discharge of waste in a manner causing flow, ponding, or surfacing on lands not owned or under the control of the discharger is prohibited, unless the discharge is authorized by the RWQCB.
7. The dumping, deposition, or discharge of waste directly into waters of the state, or adjacent to such waters in any manner which may permit its being transported into the waters, is prohibited unless authorized by the SDRWQCB.
8. Any discharge to a MS4 that is not composed entirely of "*storm water*" is prohibited unless authorized by the SDRWQCB. [The federal regulations, 40 CFR 122.26 (b) (13), define storm water as storm water runoff, snow melt runoff, and surface runoff and drainage. 40 CFR 122.26 (b) (2) defines an illicit discharge as any discharge to a MS4 that is not composed entirely of storm water except discharges pursuant to a NPDES permit and discharges resulting from fire fighting activities. [40 CFR 122.26 amended at 56 FR 56553, November 5, 1991; 57 FR 11412, April 2, 1992].

9. The unauthorized discharge of treated or untreated sewage to waters of the state or to a MS4 is prohibited.
10. The discharge of industrial wastes to conventional septic tank/subsurface disposal systems, except as authorized by the terms described in CWC section 13264, is prohibited.
11. The discharge of radioactive wastes amenable to alternative methods of disposal into the waters of the state is prohibited.
12. The discharge of any radiological, chemical, or biological warfare agent into waters of the state is prohibited.
13. The discharge of waste into a natural or excavated site below historic water levels is prohibited unless the discharge is authorized by the SDRWQCB.
14. The discharge of sand, silt, clay, or other earthen materials from any activity, including land grading and construction, in quantities which cause deleterious bottom deposits, turbidity or discoloration in waters of the state or which unreasonably affect, or threaten to affect, beneficial uses of such waters is prohibited.

**ATTACHMENT B**  
**STANDARD PROVISIONS**

**1. FEDERAL NPDES STANDARD PROVISIONS [40 CFR 122.41]**

- (a) *Duty to comply* [40 CFR 122.41(a)]. The permittee must comply with effluent standards or prohibitions established under section 307(a) of the CWA for toxic pollutants and with standards for sewage sludge use or disposal established under section 405(d) of the CWA within the time provided in the regulations that establish these standards or prohibitions or standards for sewage sludge use or disposal, even if the Order has not yet been modified to incorporate the requirement.
- (1) The permittee shall comply with effluent standards or prohibitions established under section 307(a) of the CWA toxic pollutants and with standards for sewage sludge use or disposal established under section 405(d) of the CWA within the time provided in the regulations that establish these standards or prohibitions or standards for sewage sludge use or disposal, even if the Order has not yet been modified to incorporate the requirement.
- (2) The CWA provides that any person who violates section 301, 302, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any such sections in a permit issued under section 402, or any requirement imposed in a pretreatment program approved under sections 402(a)(3) or 402(b)(8) of the Act, is subject to a civil penalty not to exceed \$25,000 per day for each violation. The CWA provides that any person who negligently violates section 301, 302, 306, 307, 308, 318 or 405 of the Act, or any condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, or any requirement imposed in a pretreatment program approved under section 402(a)(3) or 402(b)(8) of the Act, is subject to criminal penalties of \$2,500 to \$25,000 per day of violation, or imprisonment of not more than 1 year, or both. In the case of a second or subsequent conviction for a negligent violation, a person shall be subject to criminal penalties of not more than \$50,000 per day of violation, or by imprisonment of not more than 2 years, or both. Any person who knowingly violates such sections, or such conditions or limitations is subject to criminal penalties of \$5,000 to \$50,000 per day of violation, or imprisonment for not more than 3 years, or both. In the case of a second or subsequent conviction for a knowing violation, a person shall be subject to criminal penalties of not more than \$100,000 per day of violation, or imprisonment of not more than 6 years, or both. Any person who knowingly violates section 301, 302, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, and who knows at that time that he thereby places another person in imminent danger of death or serious bodily injury, shall, upon conviction, be subject to a fine of not more than \$250,000 or imprisonment of not more than 15 years, or both. In the case of a second or subsequent conviction for a knowing endangerment violation, a person shall be subject to a fine of not more than \$500,000 or by imprisonment of not more than 30 years, or both. An organization, as defined in section 309(c)(3)(B)(iii) of the CWA, shall, upon conviction of violating the imminent danger provision, be subject to a fine of not more than \$1,000,000 and can be fined up to \$2,000,000 for second or subsequent convictions.
- (3) Any person may be assessed an administrative penalty by the Administrator for violating section 301, 302, 306, 307, 308, 318 or 405 of the CWA, or any permit condition or limitation implementing any of such sections in a permit issued under Section 402 of the CWA. Administrative penalties for Class I violations are not to exceed \$10,000 per violation, with the maximum amount of any Class I penalty assessed not to exceed \$25,000. Penalties for Class II violations are not to exceed \$10,000 per day for each day during which the violation continues, with the maximum amount of any Class II penalty not to exceed \$125,000.

- (b) *Duty to reapply* [40 CFR 122.41(b)]. If the permittee wishes to continue an activity regulated by this Order after the expiration date of this Order, the permittee must apply for and obtain a new order.
- (c) *Need to halt or reduce activity not a defense* [40 CFR 122.41(c)]. It shall not be a defense for the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this Order.
- (d) *Duty to mitigate* [40 CFR 122.41(d)]. The permittee shall take all reasonable steps to minimize or prevent any discharge or prevent any discharge or sludge use or disposal in violation of this Order which has a reasonable likelihood of adversely affecting human health or the environment.
- (e) *Proper operation and maintenance* [40 CFR 122.41(e)]. The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the discharger to achieve compliance with the conditions of this Order. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by the discharger only when the operation is necessary to achieve compliance with the conditions of this Order.
- (f) *Permit actions* [40 CFR 122.41(f)]. This Order may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.
- (g) *Property rights* [40 CFR 122.41(g)]. This Order does not convey any property rights of any sort or any exclusive privilege.
- (h) *Duty to provide information* [40 CFR 122.41(h)]. The permittee shall furnish to the Director, within a reasonable time, any information which the SDRWQCB may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Order or to determine compliance with this Order. The permittee shall also furnish to the SDRWQCB upon request, copies of records required to be kept by this Order.
- (i) *Inspection and entry* [40 CFR 122.41(i)]. The permittee shall allow the SDRWQCB, or an authorized representative (including an authorized contractor acting as a representative of the SDRWQCB or EPA), upon presentation of credentials and other documents as may be required by law, to:
  - (1) Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this Order;
  - (2) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Order;
  - (3) Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order; and
  - (4) Sample or monitor at reasonable times, for the purposes of assuring compliance with this Order or as otherwise authorized by the CWA , any substances or parameters at any location.
- (k) *Signatory requirement* [40 CFR 122.41(k)]
  - (1) All applications, reports, or information submitted to the SDRWQCB shall be signed and certified (see 40 CFR 122.22)

- (2) The CWA 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 Order, 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 6 months per violation, or by both.

(1) *Reporting requirements* [40 CFR 122.41(l)]

- (1) *Planned changes.* The permittee shall give notice to the SDRWQCB as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when:
- i) The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 CFR 122.29(b); or
  - ii) The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants, which are subject neither to effluent limitations in the permit, nor to notification requirements under 40 CFR 122.42(a)(1).
  - iii) The alteration or addition results in a significant change in the permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing Order, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan;
- (2) *Anticipated noncompliance.* The permittee shall give advance notice to the SDRWQCB of any planned changes in the permitted facility or activity, which may result in noncompliance with permit requirements.
- (3) *Transfers.* This permit is not transferable to any person except after notice to the SDRWQCB. The SDRWQCB may require modification or revocation and reissuance of the permit to change the name of the permittee and incorporate such other requirements as may be necessary under the CWA. (See 40 CFR 122.61; in some cases, modification or revocation and reissuance is mandatory.)
- (4) *Monitoring reports.* The applicable provisions from 40 CFR 122.41(l)(4) are contained in the Monitoring and Reporting Program for this Order.
- (5) *Compliance schedules.* Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than 14 days following each schedule date.
- (6) *Twenty-four hour reporting.*
- i) The permittee shall report any noncompliance, which may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the permittee becomes aware of the circumstances. A written submission shall also be provided within 5 days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.
  - ii) The following shall be included as information, which must be reported within 24 hours under this paragraph.

- (A) Any unanticipated bypass which exceeds any effluent limitation in the Order (See 40 CFR 122.41(g)).
  - (B) Any upset which exceeds any effluent limitation in the Order.
  - (C) Violation of a maximum daily discharge limitation for any of the pollutants listed by the SDRWQCB in the permit to be reported within 24 hours. (See 40 CFR 122.44(g)).
- iii) The SDRWQCB may waive the written report on a case-by-case basis for reports under paragraph (1)(6)(ii) of this section if the oral report has been received within 24 hours.
- (7) *Other noncompliance.* The permittee shall report all instances of noncompliance not reported under paragraphs (1)(4), (5), and (6) of this section, at the time monitoring reports are submitted. The reports shall contain the information listed in paragraph (1)(6) of this section.
- (8) *Other information.* Where the permittee becomes 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 SDRWQCB, it shall promptly submit such facts or information.

(m) *Bypass* [40 CFR 122.41(m)]

(1) Definitions

- i) "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility.
  - ii) "Severe property damage" means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.
- (2) Bypass not exceeding limitations. The permittee may allow any bypass to occur which does not cause effluent limitations of this Order or the concentrations of pollutants set forth in Ocean Plan Table A or Table B to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of paragraphs (m)(3) and (m)(4) of this provision.

(3) Notice

- i) Anticipated bypass. If the permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible, at least ten days before the date of the bypass.
- ii) Unanticipated bypass. The permittee shall submit notice of an unanticipated bypass as required in paragraph (1)(6) of this section (24-hour notice).

(4) Prohibition of Bypass

- i) Bypass is prohibited, and the SDRWQCB may take enforcement action against the permittee for bypass, unless:
  - (A) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;

- (B) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and
  - (C) The permittee submitted notices as required under paragraph (m)(3) of this section.
- ii) The SDRWQCB may approve an anticipated bypass, after considering its adverse effects, if the SDRWQCB determines that it will meet the three conditions listed above in paragraph (m)(4)(i) of this section.
- (n) *Upset* [40 CFR 122.41(n)]
- (1) Definition. "Upset" means an exceptional incident in which there is unintentional and temporary noncompliance with technology based effluent limitations because of factors beyond the reasonable control of the discharger. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.
  - (2) Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of paragraph (n)(3) of this section are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.
  - (3) Conditions necessary for a demonstration of upset. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:
    - i) An upset occurred and that the permittee can identify the cause(s) of the upset;
    - ii) The permitted facility was at the time being properly operated;
    - iii) The permittee submitted notice of the upset as required in section (1)(6)(ii)(B) of this section (24-hour notice); and
    - iv) The permittee complied with any remedial measures required under paragraph (d) of this section.
  - (4) Burden of Proof. In any enforcement proceeding the discharger seeking to establish the occurrence of an upset has the burden of proof.

## **2. SIGNATORY REQUIREMENTS [40 CFR 122.22]**

- (a) *Applications* [40 CFR 122.22(a)(3)]. All applications shall be signed by either a principal executive officer or ranking elected official.
- (b) *Reports* [40 CFR 122.22(b)]. All reports required by this Order, and other information requested by the SDRWQCB shall be signed by a person described in paragraph a. of this reporting requirement, or by a duly authorized representative of that person. A person is a duly authorized representative only if:

- (1) The authorization is made in writing by a person described in section (a) above;
  - (2) The authorization specifies 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,
  - (3) The written authorization is submitted to the SDRWQCB.
- (c) *Changes to authorization.* If an authorization under paragraph (b) of this reporting requirement is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of paragraph b. of this reporting requirement must be submitted to the SDRWQCB prior to or together with any reports, information, or applications to be signed by an authorized representative.
- (d) *Certification.* Any person signing a document under paragraph (a) or (b) of this section shall 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."

### 3. ADDITIONAL STANDARD PROVISIONS

- (a) *Municipal separate storm sewer systems* [40 CFR 122.42(c)]. The operator of a large or medium municipal separate storm sewer system or a municipal separate storm sewer that has been designated by the Director under 40 CFR 122.26(a)(1)(v) must submit an annual report by the anniversary of the date of the issuance of the permit for such system. The report shall include:
- (1) The status of implementing the components of the storm water management program that are established as permit conditions;
  - (2) Proposed changes to the storm water management programs that are established as permit conditions. Such proposed changes shall be consistent with 40 CFR 122.26(d)(2)(iii); and
  - (3) Revisions, if necessary, to the assessment of controls and the fiscal analysis reported in the permit application under 40 CFR 122.26(d)(2)(iv) and 40 CFR 122.26(d)(2)(v);
  - (4) A summary of data, including monitoring data, that is accumulated throughout the reporting year;
  - (5) Annual expenditures and budget for year following each annual report;
  - (6) A summary describing the number and nature of enforcement actions, inspections, and public education programs; and
  - (7) Identification of water quality improvements or degradation.
- (b) *Storm water discharges* [40 CFR 122.42(d)]. The initial permits for discharges composed entirely of storm water issued pursuant to 40 CFR 122.26(e)(7) shall require compliance with the conditions of

the permit as expeditiously as practicable, but in no event later than three years after the date of issuance of the permit.

- (c) *Discharge is a privilege* [CWC section 13263(g)]. No discharge of waste into the waters of the State, whether or not such discharge is made pursuant to waste discharge requirements, shall create a vested right to continue such discharge. All discharges of waste into waters of the State are privileges, not rights.
- (d) *Review and revision of Order* [CWC section 13263(e)]. Upon application by any affected person, or on its own motion, the SDRWQCB may review and revise this permit.
- (e) *Termination or modification of Order* [CWC section 13381]. This permit may be terminated or modified for causes, including, but not limited to, all of the following:
  - (8) Violation of any condition contained in this Order;
  - (9) Obtaining this Order by misrepresentation, or failure to disclose fully all relevant facts.
  - (10) A change in any condition that requires either a temporary or permanent reduction or elimination of the permitted discharge.
- (f) *Transfers*. When this Order is transferred to a new owner or operator, such requirements as may be necessary under the CWC may be incorporated into this Order.
- (g) *Conditions not stayed*. The filing of a request by the permittee for modification, revocation and reissuance, or termination of this Order, or a notification of planned change in or anticipated noncompliance with this Order does not stay any condition of this Order.
- (h) *Availability*. A copy of this Order shall be kept at a readily accessible location and shall be available to on-site personnel at all times.
- (i) *Duty to minimize or correct adverse impacts*. The permittees shall take all reasonable steps to minimize or correct any adverse impact on the environment resulting from noncompliance with this Order, including such accelerated or additional monitoring as may be necessary to determine the nature and impact of the noncompliance.
- (j) *Responsibilities, liabilities, legal action, penalties* [CWC sections 13385 and 13387]. The Porter-Cologne Water Quality Control Act provides for civil and criminal penalties comparable to, and in some cases greater than, those provided for under the CWA.

Nothing in this Order shall be construed to protect the discharger from its liabilities under federal, state, or local laws.

Except as provided for in 40CFR 122.41(m) and (n), nothing in this Order shall be construed to relieve the permittee from civil or criminal penalties for noncompliance.

Nothing in this Order shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the discharger is or may be subject to under Section 311 of the CWA.

Nothing in this Order shall be construed to preclude institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable state law or regulation under authority preserved by Section 510 of the CWA.

- (k) *Noncompliance.* Any noncompliance with this Order constitutes violation of the CWC and is grounds for denial of an application for modification of the Order (also see 40 CFR 122.41(a)).
- (l) *Director.* For purposes of this Order, the term "Director" used in parts of 40 CFR incorporated into this Order by reference and/or applicable to this Order shall have the same meaning as the term "SDRWQCB" used elsewhere in this Order, except that in 40 CFR 122.41(h) and (I), "Director" shall mean "SDRWQCB, SWRCB, and EPA."
- (m) The SDRWQCB has, in prior years, issued a limited number of individual NPDES permits for non-storm water discharges to MS4s. The SDRWQCB or SWRCB may in the future, upon prior notice to the Permittee(s), issue an NPDES permit for any non-storm water discharge (or class of non-storm water discharges) to a MS4. Permittees may prohibit any non-storm water discharge (or class of non-storm water discharges) to a MS4 that is authorized under such separate NPDES permits.
- (n) *Effective date.* This Order shall become effective on the date of its adoption provided the EPA has no objection. If the EPA objects to its issuance, this Order shall not become effective until such objection is withdrawn. This Order supersedes Order No. R9-98-02 upon the effective date of this Order.
- (o) *Expiration.* This Order expires on **July 14, 2009**.
- (p) *Continuation of expired order* [23 CCR 2235.4]. After this Order expires, the terms and conditions of this Order are automatically continued pending issuance of a new permit if all requirements of the federal NPDES regulations on the continuation of expired permits (40 CFR 122.6) are complied with.
- (q) *Applications.* Any application submitted by a permittee for reissuance or modification of this Order shall satisfy all applicable requirements specified in federal regulations as well as any additional requirements for submittal of a Report of Waste Discharge specified in the CWC and the CCR.
- (r) *Confidentiality.* Except as provided for in 40 CFR 122.7, no information or documents submitted in accordance with or in application for this Order will be considered confidential, and all such information and documents shall be available for review by the public at the SDRWQCB office.
- (s) *Severability.* The provisions of this Order are severable, and if any provision of this Order, or the application of any provisions of this Order to any circumstance, is held invalid, the application of such provision to other circumstances and the remainder of this Order shall not be affected thereby.
- (t) *Report submittal.* The discharger shall submit reports and provide notifications as required by this Order to the following:

NORTHERN WATERSHED PROTECTION UNIT  
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
SAN DIEGO REGION  
9174 SKY PARK COURT, SUITE 100  
SAN DIEGO CA 92123-4340  
Telephone: (858) 467-2952 Fax: (858) 571-6972

EUGENE BROMLEY  
US ENVIRONMENTAL PROTECTION AGENCY  
REGION IX  
PERMITS ISSUANCE SECTION (W-5-1)

75 HAWTHORNE STREET  
SAN FRANCISCO CA 94105

Unless otherwise directed, the discharger shall submit one hard copy for the official record and one electronic copy of each report required under this Order to the SDRWQCB and one hard copy to the EPA.

## ATTACHMENT C

### DEFINITIONS

**Anthropogenic Litter** – Trash generated from human activities, not including sediment.

**Basin Plan** – Water Quality Control Plan, San Diego Basin, Region 9, and amendments, developed by the SDRWQCB.

**BAT (Best Available Technology)** – 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, as determined in accordance with regulations issued by the EPA 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.

**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” of the waters of the State 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 waters of the State 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. [CWC section 13050(f)].

**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 trophic 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 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.

**(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.

**Clean Water Act Section 303(d) Impaired Water Body** - 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.

**Construction Site** – Any project requiring a local grading or building permit, including projects requiring coverage under the General Construction Permit, that involves soil disturbing activities. Soil disturbing activities include 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 State are affected.”

**CWA** – Federal Clean Water Act

**CWC** – California Water Code

**Designated Waste** - A “nonhazardous waste which consists of pollutants which, under ambient environmental conditions at the waste management unit, could be released at concentrations in excess of applicable water quality objectives, or which could cause degradation of waters of the State” [CCR Title 27, chapter 3, subchapter 2, article 2, section 20210; CWC section 13173].

**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; and land subdivision.

**Dry Season** – May 1 through September 30 of each year.

**Effluent Limitations** – any restriction imposed on quantities, discharge rates, and concentrations of pollutants, which are discharged from point sources into waters of the State.

**Erosion** – When land is diminished or worn away due to 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.

**ESA (Environmentally Sensitive Area)** – Areas “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 easily be disturbed or degraded by human activities and developments” (California Public Resources Code section 30107.5). ESAs subject to urban runoff requirements include but are not limited to all CWA section 303(d) impaired water bodies, areas designated as Areas of Special Biological Significance by the SWRCB (Basin Plan); water bodies designated with the RARE beneficial use by the SWRCB (Basin Plan); areas within the Western Riverside County Multi-Species Habitat Conservation Plan (MSHCP) plan area that contain rare or especially valuable plant or animal life or their habitat; and any other equivalent environmentally sensitive areas which the Permittees have identified.

**GIS – Geographic Information System**

**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 EPA in 40 CFR 116 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** - Hazardous waste is 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, Article 1].

**Household Hazardous Waste** – Paints, cleaning products, and other wastes generated during home improvement or maintenance activities.

**Illicit Connection** – Any connection to the MS4 that conveys an illicit discharge.

**Illicit Discharge** - Any discharge to the MS4 that is not composed entirely of storm water except discharges pursuant to a NPDES permit and discharges resulting from fire fighting activities [40 CFR 122.26(b)(2)].

**Inert Waste** - Material that “does not contain hazardous waste or soluble pollutants at concentrations in excess of applicable water quality objectives, and does not contain significant quantities of decomposable waste” [CCR Title 27, Chapter 3, Subchapter 2, Article 2, Section 20230].

**MEP (Maximum Extent Practicable)** – 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 SWMP. Their total collective and individual activities conducted pursuant to the SWMP 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 SDRWQCB, the SDRWQCB 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 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)** – A conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains): (i) Owned or operated by a State, city town, borough, county, parish, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, storm water, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or 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 or 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 122.26.

**NOI** – Notice of Intent

**Non-hazardous Solid Waste** - All putrescible and nonputrescible solid, semi-solid, and liquid wastes, including garbage, trash, refuse, paper, rubbish, ashes, industrial wastes, demolition and construction wastes, abandoned vehicles and parts thereof, discarded home and industrial appliances, manure, vegetable or animal solid and semi-solid wastes and other discarded solid or semi-solid waste; provided that such wastes do not contain wastes which must be managed as hazardous wastes, or wastes which contain soluble pollutants in concentration which exceed applicable water quality objectives or could cause degradation of waters of the state.” [CCR Title 27, Chapter 3, Subchapter 2, Article 2, Section 20220]

**Non-Storm Water** - All discharges to and from a MS4 that do not originate from precipitation events (i.e., all discharges from a MS4 other than storm water). Non-storm water includes illicit discharges, non-prohibited discharges, and NPDES permitted discharges.

**NPDES (National Pollution Discharge Elimination System)** - The national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits, and imposing and enforcing pretreatment requirements, under Sections 307, 318, 402, and 405 of the CWA.

**NPS (Nonpoint Source)** – 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.

**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.”

**Order** – Order No. R9-2004-001 (NPDES No. CAS0108766)

**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. 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.

**Pollution** - As defined in the Porter-Cologne Water Quality Control Act: “the alteration of the quality of the waters of the State by waste, to a degree that unreasonably affects the either of the following: 1) The waters for beneficial uses; or 2) Facilities that serve these beneficial uses.” Pollution may include contamination.

**Pollutants of Concern** – All pollutants for which water bodies are listed as impaired under CWA section 303(d), all pollutants associated with the land use type of a development, and all 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 Prevention** - Pollution prevention is defined as practices and processes that reduce or eliminate the generation of pollutants, in contrast to source control BMPs, treatment control BMPs, 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 developments.

**Principal Permittee** – Riverside County Flood Control and Water Conservation District

**Priority Development Projects** – New development and redevelopment projects listed in Requirement F.2.b.(1) of tentative Order No. R9-2004-001.

**Receiving Waters** – Waters of the U.S.

**RWLs (Receiving Water Limitations)** - Waste discharge requirements issued by the SDRWQCB 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.

**Shared Treatment BMP** - BMPs used by multiple developments to infiltrate, filter, or treat the required volume or flow prior to discharge to a receiving water. This could include, for example, a treatment BMP at the end of an enclosed storm drain that collects runoff from several commercial developments.

**Source Control BMP** – Land use or site planning practices, or structural or nonstructural measures that aim to prevent urban runoff pollution by reducing the potential for contamination at the source of pollution. Source control BMPs minimize the contact between pollutants and urban runoff.

**Storm Water** – Per 40 CFR 122.26(b)(13), means storm water runoff, snowmelt runoff and surface runoff and drainage.

**SUSMP (Standard Urban Storm Water Mitigation Plan)** – A plan developed to mitigate the impacts of urban runoff from Priority Development Projects in accordance with Requirement F.2.b. of tentative Order No. R9-2004-001.

**SWMP (Storm Water Management Plan)** – A written description of the specific urban runoff management measures and programs that each Permittee will implement to reduce the discharge of pollutants in urban runoff to the MEP and to comply with Order No. R9-2004-001.

**TMDL (Total Maximum Daily Load)** - 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). The water quality objectives

for toxicity provided in the Basin Plan state in part... *“All waters shall be free of toxic substances in concentrations that are toxic to, or that produce detrimental physiological responses in human, plant, animal, or aquatic life... The survival of aquatic life in surface waters subjected to a waste discharge or other controllable water quality factors, shall not be less than that for the same water body in areas unaffected by the waste discharge.”*

**Treatment Control BMP** – Any engineered system designed to remove pollutants by simple gravity settling of particulate pollutants, filtration, biological uptake, media absorption or any other physical, biological, or chemical process.

**Urban Runoff** - 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 CWC 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, 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, non-hazardous 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. [CWC section 13050 (h)]. California’s water quality objectives are established by the SWRCB and RWQCBs in the Water Quality Control Plans.

**Water Quality Standards** - 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 State** - Any water, surface or underground, including saline waters within the boundaries of the State [CWC section 13050 (e)]. The definition of the Waters of the State is broader than that for the Waters of the United States in that all water in the State is considered to be a Waters of the State regardless of circumstances or condition. Under this definition, a MS4 is always considered to be a Waters of the State.

**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 CWA, the final authority regarding CWA 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).

**WDRs** – Waste Discharge Requirements

**Wet Season** – October 1 through April 30 of each year.

## ATTACHMENT D

### INDIVIDUAL SWMP CONTENTS

Pursuant to Requirement E.1.a. of tentative Order No. R9-2004-001, each Permittee shall develop an Individual SWMP that describes their specific urban runoff management programs and activities that will be implemented to comply with the Order. An individual SWMP that addresses the items listed below would provide a complete description of the programs and activities the Permittee plans to implement to comply with the Order and to reduce pollutants in urban runoff to the MEP. In the event that a specific component is not applicable to a Permittee, the Permittee shall provide an explanation of non-applicable programs with the SWMP submittal and does not need to provide the information requested below in that particular section of their Individual SWMP.

#### 1. Administrative and Legal Procedures

- a) Identification of all departments within the jurisdiction that conduct urban runoff related activities, and their roles and responsibilities under the Order. Include an up-to-date organizational chart specifying these departments and key personnel;
- b) Citation of urban runoff related ordinances and the reasons they are enforceable;
- c) Identification of the local administrative and legal procedures available to mandate compliance with urban runoff related ordinances and therefore with the conditions of the Order;
- d) Description of how these ordinances are implemented and appealed; and
- e) Description of whether the Permittee can issue administrative orders and injunctions or if it must go through the court system for enforcement actions.

#### 2. Development Planning (Section F)

- a) A description of the water quality and watershed protection principles that have been or will be included in the Permittee's General plan, and a time schedule where modifications are planned, if applicable;
- b) A description of the development project approval process and how it ensures that urban runoff from new development and redevelopment will be reduced to the MEP, that post-development runoff volumes and velocities will be controlled, and that water quality objectives will not be violated throughout the life of the project;
- c) A final SUSMP document that meets the requirements specified in Section F.2.b. of the Order, and a copy of the ordinance (amended or new) that gives the Permittee the authority to implement and enforce the SUSMP. The SUSMP may be submitted under separate cover as an attachment to the SWMP;
- d) A description of the Permittee's current environmental review process and how it addresses impacts to water quality and appropriate mitigation measures. If the Permittee plans to modify the process during the permit term, a time schedule for modifications shall be included;
- e) A description of education efforts related to development and how they will be implemented; and
- f) A description of the measurable goals that will be used to assess the effectiveness of this program component.

#### 3. Construction Component (Section G)

- a) A description of which pollution prevention methods will be required for implementation, and the steps that will be taken to ensure implementation;
- b) Updated grading ordinances, including adequate enforcement mechanisms;
- c) A description of the modified construction and grading approval process;
- d) Updated construction and grading project requirements in local grading and construction permits;
- e) A completed inventory of all construction sites;
- f) A list and description of minimum BMPs that will be implemented, or required to be implemented;
- g) A description of the steps that will be taken to ensure the implementation of prescribed BMPs at all construction sites;
- h) A description of planned inspection frequencies;
- i) A description of inspection procedures;
- j) A description of enforcement mechanisms and steps that will be used;
- k) A description of the construction education program and how it will be implemented; and
- l) A description of the measurable goals that will be used to assess the effectiveness of this program component.

#### **4. Municipal Component (Section H.1)**

- a) A description of which pollution prevention methods will be required for implementation, and the steps taken to ensure implementation;
- b) A completed inventory of all municipal facilities and activities;
- c) A description of which BMPs will be implemented, or required to be implemented, for municipal facilities and activities;
- d) A description of steps that will be taken to ensure the implementation of prescribed BMPs at municipal facilities and activities;
- e) A description of municipal maintenance activities and schedules;
- f) A description of the management strategy for pesticides, herbicides, and fertilizer use;
- g) A description of inspection procedures;
- h) A description of enforcement mechanisms and how they will be used; and
- i) A description of the measurable goals that will be used to assess the effectiveness of this program component.

#### **5. Industrial/Commercial Facilities Component (Section H.2)**

- a) A description of which pollution prevention methods will be required for implementation, and the steps that will be taken to ensure implementation;
- b) A completed and prioritized inventory of all industrial/commercial facilities that could contribute a significant pollutant load to the MS4;
- c) A list of minimum BMPs that will be implemented, or required to be implemented, for each facility type or pollutant-generating activity;

- d) A description of the steps that will be taken to ensure the implementation of prescribed BMPs at industrial/commercial facilities, including notification procedures;
- e) A description of inspection procedures;
- f) A description of enforcement mechanisms and how they will be used;
- g) A description of training efforts; and
- h) A description of the measurable goals that will be used to assess the effectiveness of this program component.

#### **6. Residential Component (Section H.3)**

- a) A description of which pollution prevention methods will be encouraged for implementation, and the steps that will be taken to encourage implementation;
- b) A list of residential activities that have been identified as high priority;
- c) A list of minimum BMPs that will be implemented, or required to be implemented, for high priority residential activities;
- d) A description of the steps that will be taken to ensure the implementation of prescribed BMPs for high priority residential activities;
- e) A description of enforcement mechanisms and how they will be used; and
- f) A description of the measurable goals that will be used to assess the effectiveness of this program component.

#### **7. Education Component (Section I)**

- a) A description of the content, form, and frequency of education efforts for each target community; and
- b) A description of the measurable goals that will be used to assess the effectiveness of the public education program.

#### **8. Illicit Discharge Detection and Elimination Component (Section J)**

- a) A description of the program to actively seek and eliminate illicit discharges and illicit connections;
- b) An Illicit Discharge Monitoring Program, in accordance with the Monitoring and Reporting Program, to be conducted to detect illicit discharges and illicit connections;
- c) A description of investigation and inspection procedures to follow up on dry weather monitoring results or other information which indicate potential for illicit discharges and illicit connections;
- d) A description of procedures to promptly eliminate detected illicit discharges and illicit connections;
- e) A description of enforcement mechanisms and how they will be used;
- f) A description of the mechanism to receive notification of spills;
- g) A description of efforts to facilitate public reporting of illicit discharges and connections, including a public hotline;
- h) A description of efforts to facilitate proper disposal of used oil and other toxic materials; and

- i) A description of measurable goals that will be used to assess the effectiveness of this program component.

#### **9. Public Participation Component (Section E.3)**

A description of how public participation will be included in the development and implementation of each Permittee's Individual SWMP.

#### **10. Assessment of Individual SWMP Effectiveness Component**

As part of its Individual SWMP, each Permittee shall develop a long-term strategy for assessing the effectiveness of its Individual SWMP. The long-term assessment strategy shall, at a minimum, include the following:

- a) An assessment of the progress towards meeting the measurable goals identified in each program component;
- b) An assessment of Illicit Discharge and Receiving Water monitoring data; and
- c) An assessment of overall program effectiveness.

#### **11. Fiscal Analysis Component**

Each Permittee shall secure the resources necessary to meet the requirements of the Order. As part of its Individual SWMP, each Permittee shall describe and analyze the capital and operation and maintenance expenditures necessary to accomplish the activities required in the Order, and a description of the source of funds the Permittee proposes to use to meet those expenditures.

#### **12. Fire Fighting**

A description of a program to reduce pollutants from non-emergency fire fighting flows identified by the Permittee to be significant sources of pollutants.

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
SAN DIEGO REGION  
MONITORING AND REPORTING PROGRAM No. R9-2004-001  
NPDES PERMIT No. CAS0108766  
FOR THE DISCHARGES OF URBAN RUNOFF FROM THE  
MUNICIPAL SEPARATE STORM SEWER SYSTEMS (MS4s)  
DRAINING THE COUNTY OF RIVERSIDE, THE CITY OF MURRIETA, THE CITY  
OF TEMECULA AND THE RIVERSIDE COUNTY FLOOD CONTROL AND WATER  
CONSERVATION DISTRICT WITHIN THE SANTA MARGARITA WATERSHED  
IN THE SAN DIEGO REGION**

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## I. PURPOSE

This Monitoring and Reporting Program (MRP) is intended to meet the following goals:

1. Assess compliance with Order No. R9-2004-001;
2. Measure and improve the effectiveness of the SWMPs;
3. Assess the chemical, physical, and biological impacts of receiving waters resulting from urban runoff;
4. Characterize urban runoff discharges;
5. Identify sources of specific pollutants;
6. Prioritize drainage and sub-drainage areas that need management actions;
7. Detect and eliminate illicit discharges and illicit connections to the MS4; and
8. Assess the overall health of receiving waters.

## II. MONITORING PROGRAM

The Monitoring Program consists of the Receiving Waters Monitoring, Illicit Discharge Monitoring, Monitoring Provisions, and the program assessments required under Section III.B of this MRP. All monitoring program components shall be implemented no later than October 2004, unless otherwise specified herein.

### A. Receiving Waters Monitoring

The Receiving Waters Monitoring consists of: 1) **Core Monitoring** requirements to address on-going, site-specific needs, such as estimating pollutant loads and assessing trends; 2) **Regional Monitoring** to address watershed-wide issues; and 3) **Special Studies** to address specific research or management issues.

#### A.I Core Monitoring

In order to achieve the above goals, the triad<sup>1</sup> and tributary Core Monitoring requirements are intended to generate water quality data that will build upon existing data to begin answering the following management questions:

- Are conditions in receiving waters protective, or likely to be protective, of beneficial uses?
- What is the extent and magnitude of the current or potential receiving water problems?
- What is the relative urban runoff contribution to the receiving water problem(s)?
- What are the sources of urban runoff that contribute to receiving water problem(s)?
- Are conditions in receiving waters getting better or worse?

#### 1. Mass Loadings

- a) The Permittees shall monitor mass loadings from the following three triad stations. Alternative locations representative of urban/urbanizing drainage areas may be selected.
  - (1) Lower Temecula Creek;
  - (2) Lower Murrieta Creek @ USGS Weir; and
  - (3) A reference station representative of natural, undeveloped conditions. Permittees shall evaluate the reference station annually for suitability and select new reference stations as needed.

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<sup>1</sup> Triad means a station where chemical, toxicity, and bioassessment monitoring occur.

- b) At each triad station, the Permittees shall monitor the first storm event of each monitoring year<sup>2</sup> that produces sufficient flow to collect a composite sample, and a minimum of two additional storm events during each monitoring year.
- c) In the event that the required number of storm events are not sampled during one monitoring year at any given station, the Permittees shall submit, with the subsequent Annual Report, a written explanation for a lack of sampling data, including streamflow data from the nearest USGS gauging station.
- d) In addition to the storm events, the Permittees shall analyze a minimum of two dry weather samples from each triad station per monitoring year. If flow is insufficient to collect a sample, this shall be documented in the subsequent annual report.
- e) Sampling at triad stations shall begin no later than the first storm after October 2004 that produces sufficient flow to collect a composite sample.
- f) Mass loading sampling and analysis protocols shall be consistent with 40 CFR 122.21(g)(7)(ii) and with the EPA Storm Water Sampling Guidance Document (EPA 833-B-92-001). Storm water samples shall be flow-weighted composites<sup>3</sup>, collected during the first 3 hours of flow, or for the duration of the storm if it is less than 3 hours. A minimum of 3 sample aliquots, separated by a minimum of 15 minutes, shall be taken within each hour of discharge, unless the SDRWQCB Executive Officer approves an alternate protocol. Automatic samplers are recommended, but manual samples may be collected from mass loading stations where it is not feasible to install an automatic sampler. Grab samples<sup>4</sup> shall be taken for pathogen indicators and oil and grease. Grab samples are acceptable for dry weather sample collection.
- g) Permittees shall measure or estimate flow rates and volumes for each triad sampling event in order to determine mass loadings of pollutants. Data from nearby USGS gauging stations may be utilized, or flow rates may be estimated in accordance with the EPA Storm Water Sampling Guidance Document (EPA-833-B-92-001), Section 3.2.1.
- h) At triad stations, the first storm of every sampling year shall be analyzed for the full EPA priority pollutant list (40 CFR 122, Appendix D). For the remaining sampling events, analysis may be reduced to the constituents listed in Table below, unless data from the first storm indicate the need for additional constituents.

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<sup>2</sup> A monitoring year is from July 1 through June 30.

<sup>3</sup> A flow-weighted composite sample is a mixed or combined sample that is formed by combining a series of individual and discrete samples of specific volume in proportion to flow.

<sup>4</sup> A grab sample is a discrete, individual sample taken within a short period of time (usually less than 15 minutes).

<b>Table 1. Short List of Constituents</b>	
<b>Trace Metals</b>	<b>Pesticides</b>
Total Cadmium	Diazinon
Total Chromium	chlorpyrifos
Total Copper	Other OP pesticides
Total Nickel	
Total Lead	<b>Conventionals</b>
Total Zinc	Temperature
<b>Nutrients</b>	pH
Ammonia (NH <sub>3</sub> )	Hardness
Total Kjeldahl Nitrogen (TKN)	Specific conductance
Nitrate (NO <sub>3</sub> )	Dissolved oxygen
Total phosphorus	MBAS
<b>Bacteria</b>	<b>PAHs</b>
Total coliform	
Fecal coliform	<b>Volatiles</b> (dry weather only)
E. coli	
	<b>Total suspended solids</b>

## 2. Water Column Toxicity Testing

The Permittees shall conduct toxicity testing at triad stations to evaluate the extent and causes of toxicity in receiving waters.

- a) The Permittees shall analyze all storm samples (at least three annually) collected at the three triad stations for toxicity. The Permittees shall conduct toxicity testing using the following three species and EPA protocol for each sample:
  - *Ceriodaphnia dubia* (water flea) – EPA-821-R-02-012 or EPA-821-R-02-013;
  - *Hyalella azteca* (freshwater amphipod) – EPA-821-R-02-012; and
  - *Pseudokirchneriella subcapitata*, formally known as *Selenastrum capricornutum*, (unicellular algae) – EPA-821-R-02-013.
- b) The presence of acute toxicity shall be determined in accordance with EPA protocol (EPA-821-R-02-012). The presence of chronic toxicity shall be determined in accordance with EPA protocol (EPA-821-R-02-013).

## 3. Bioassessment

The Permittees shall conduct bioassessment monitoring at the three triad stations to evaluate the biological integrity of receiving waters, to detect biological responses to pollutants in urban runoff, and to identify probable causes of impairment not detected by chemical and toxicity monitoring. The program required in this section replaces the program currently being conducted by the Permittees under CWC section 13225 Directive for Assessing Water Quality Impacts of Urban Runoff in the Santa Margarita Watershed, issued by the SDRWQCB on March 6, 2003. Bioassessment monitoring shall include the following:

- a) Each bioassessment station shall be monitored twice annually, in May and October of each year. A minimum of three replicate samples shall be collected at each station during each sampling event.
  - b) Sampling, laboratory, quality assurance, and analysis procedures shall follow the standardized procedures set forth in the California Department of Fish and Game's California Stream Bioassessment Procedure (CSBP)<sup>5</sup>. Analysis procedures shall include comparison between station mean values for various biological metrics and the Preliminary San Diego Index of Biotic Integrity (IBI)<sup>6</sup>, or any subsequently developed applicable IBI. Sampling, laboratory, quality assurance, and analytical procedures shall follow the standardized "Non-Point Source Bioassessment Sampling Procedures" for professional bioassessment set forth in the CSBP. In the event that the CSBP "Point-Source Professional Bioassessment Procedure" is performed in place of the "Non Point Source Bioassessment Sampling Procedure," justification and documentation of the procedure shall be submitted with the annual monitoring report.
  - c) A professional environmental laboratory shall perform all sampling, laboratory, quality assurance, and analytical procedures. Permittee staff trained in CSBP methods may collect samples, but data collected by volunteer monitoring organizations shall not be submitted in place of professional assessments.
4. Follow-up Analysis and Actions Based on Triad Approach

When results from the chemistry, toxicity, and bioassessment monitoring described above indicate urban runoff-induced degradation, Permittees shall evaluate the extent and causes of urban runoff pollution in receiving waters and prioritize management actions to eliminate or reduce sources. Toxicity Identification Evaluations (TIEs) shall be used to determine the cause of toxicity, and Toxicity Reduction Evaluations (TRE) shall be used to identify sources and implement management actions to reduce pollutants in urban runoff causing toxicity. Permittees shall conduct TIE(s) and TRE(s) based on Table 2 below.

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<sup>5</sup> California Stream Bioassessment Procedure (Protocol Brief for Biological and Physical/Habitat Assessment in Wadeable Streams), California Department of Fish and Game – Aquatic Bioassessment Laboratory, May 1999.

<sup>6</sup> This document can be downloaded from <http://www.swrcb.ca.gov/rwqcb9/programs/bioassessment.html>

<b>Table 2. Triad Approach to Determining Follow-Up Actions</b>				
	<b>Chemistry</b>	<b>Toxicity</b>	<b>Bioassessment</b>	<b>Action</b>
1.	Persistent <sup>7</sup> exceedance of water quality objectives	Evidence of toxicity <sup>8</sup>	Indications of benthic alteration <sup>9</sup>	Conduct TIE to identify contaminants of concern, based on TIE metric, initiate TRE
2.	No persistent exceedances of water quality objectives	No evidence of toxicity	No indications of benthic alteration	No action necessary
3.	Persistent exceedance of water quality objectives	No evidence of toxicity	No indications of benthic alteration	Assess possible upstream sources causing exceedances
4.	No persistent exceedances of water quality objectives	Evidence of toxicity	No indications of benthic alteration	Conduct TIE to identify contaminants of concern, based on TIE metric, initiate TRE
5.	No persistent exceedances of water quality objectives	No evidence of toxicity	Indications of benthic alteration	No action necessary due to toxic chemicals Initiate TRE for physical sources of benthic alteration
6.	Persistent exceedance of water quality objective	Evidence of toxicity	No indications of benthic alteration	If chemical and toxicity tests indicate persistent degradation, conduct TIE to identify contaminants of concern, based on TIE metric, initiate TRE
7.	No persistent exceedances of water quality objectives	Evidence of toxicity	Indications of benthic alteration	Conduct TIE to identify contaminants of concern, based on TIE metric, initiate TRE
8.	Persistent exceedance of water quality objectives	No evidence of toxicity	Indications of benthic alteration	Initiate upstream source identification

<sup>7</sup> Persistent exceedance shall mean the exceedance of relevant Basin Plan or California Toxics Rule objectives by 20% for 3 sampling events.

<sup>8</sup> Evidence of toxicity shall mean a high score, in relation to other stations, on metric that combines magnitude and persistence of toxicity over an entire year.

<sup>9</sup> Indications of benthic alteration shall mean an IBI score of Fair, Poor, or Very Poor.

## a) Toxicity Identification Evaluations (TIE)

The goal of a TIE is to identify the pollutant(s) causing toxicity in the receiving waters.

- (1) Permittees shall conduct Phase I TIEs in accordance with Table 2 above. Permittees shall use EPA protocol described in *Methods for Aquatic Toxicity Identification Evaluations: Phase I Toxicity Characterization Procedures* (EPA/600/6-91/003) or subsequent editions.
- (2) If the Phase I TIE is not sufficient to identify the toxicant(s), a Phase II TIE may be required in order to identify or confirm the identity of the pollutants causing toxicity. Phase II TIEs shall be conducted in accordance with *Methods for Aquatic Toxicity Identification Evaluations: Phase II Toxicity Identification Procedures for Samples Exhibiting Acute and Chronic Toxicity* (EPA/600/R-92/080), or subsequent editions.
- (3) In the event that the pollutant causing toxicity has been sufficiently identified through previous TIEs or corresponding chemical monitoring data, a TIE may not need to be conducted.

## b) Toxicity Reduction Evaluations (TRE)

The purpose of a TRE is to investigate the cause of and to identify corrective actions to eliminate toxicity from urban runoff in receiving waters.

When a TIE identifies a pollutant(s) associated with urban runoff as a cause of toxicity, Permittees shall initiate a TRE immediately. The TRE shall include all reasonable steps to identify the source(s) of toxicity and propose appropriate BMPs to eliminate the causes of toxicity. Once the source of toxicity and appropriate BMPs are identified, the Permittees shall submit the TRE to the SDRWQCB for review. Within 30 days following the approval by the SDRWQCB, Permittees shall revise their SWMPs to incorporate the modified BMPs that will be implemented. At a minimum, a TRE shall include a discussion of the following items:

- (1) The potential sources of pollutant(s) causing toxicity;
- (2) A list of municipalities and other entities that may have jurisdiction over sources of pollutant(s) causing toxicity; and
- (3) Proposed actions that will be taken to reduce the pollutants causing toxicity and methods to measure the effectiveness of those actions.

## 5. Tributary Monitoring

- a) The Permittees shall collect a grab sample from the first storm event of each monitoring year, a minimum of one additional storm event, and two dry weather events during each monitoring year at the following four tributary stations to help identify sources of pollutants. Alternative locations representative of urban/urbanizing drainage areas may be selected.
  - (1) Warm Springs Creek, near the confluence with Murrieta Creek;
  - (2) Santa Gertrudis Creek, near the confluence with Murrieta Creek;
  - (3) Long Canyon Creek near the confluence with Murrieta Creek; and
  - (4) Redhawk Channel, near the confluence with Temecula Creek

- b) If flow is insufficient to collect a sample, this shall be documented in the subsequent annual report.
- c) Tributary samples shall be analyzed for constituents of concern. Constituents of concern shall be determined based on exceedances of water quality objectives at respective triad and dry weather monitoring stations, as well as land uses in the area.
- d) Sampling at tributary stations shall begin no later than the first storm after October 2004.

### **A.II Regional Monitoring**

The Permittees shall participate and coordinate with federal, state, and local agencies and other dischargers in the Santa Margarita Watershed in development and implementation of a regional watershed monitoring program as directed by the Executive Officer. The intent of a regional monitoring program is to maximize the efforts of all monitoring partners using a more cost-effective monitoring design and to best utilize the pooled resources of the watershed. During a coordinated watershed sampling effort, the Permittees' sampling and analytical effort may be reallocated to provide a regional assessment of the impact of discharges to the watershed.

### **A.III Special Studies**

Special studies are intended to address specific research or management issues that are not addressed by the routine core monitoring program. The Permittees' shall conduct special studies as directed by the Executive Officer, including the study described below.

#### **Numeric Criteria to Control Runoff from New Developments**

The Permittees shall develop and implement a study to determine numeric criteria for controlling the volume, velocity, duration, and peak discharge rate of runoff from new developments (required in section F.2.b(9) of Order No. 2004-001) to minimize erosion of natural stream channels and impacts to instream habitat. The Permittees shall propose numeric criteria and a time-schedule for implementation of the criteria on Priority Development Projects within 365 days of the identification of the criteria and no later than the fourth-year Annual Report, or the application for permit renewal. In each Annual Report, the Permittees shall describe the status of this special study, details of implementation, and progress towards the development of numeric criteria. Permittees may satisfy this requirement if they can demonstrate to the SDRWQCB that criteria developed in other areas of Southern California are applicable to and protective of the conditions in the Upper Santa Margarita Watershed. This should be accomplished through demonstrating similarities in areas monitored as part of studies outside of the Santa Margarita Watershed.

**B. Illicit Discharge Monitoring**

Each Permittee shall develop and implement an Illicit Discharge Monitoring program that meets or exceeds the requirements of this section within 365 days of the adoption of Order No. R9-2004-001. Each Permittees' program shall be designed to emphasize frequent, geographically widespread inspections, monitoring, and follow-up investigations to detect illicit discharges and connections. Each Permittees' Illicit Discharge Monitoring Program shall be described in the Individual SWMP.

**1. Station Location**

- a) Each Permittee shall select Illicit Discharge Monitoring stations within its jurisdiction. The number of stations shall be sufficient to represent the MS4 and detect illicit discharges that may occur throughout the system. Stations shall be accessible points in the MS4 (i.e., outfalls, manholes or open channels) located downstream of potential sources of illicit discharges (i.e., commercial, industrial, and residential areas). Permittees shall use the MS4 map, developed pursuant to section J.2 of Order No. R9-2004-001, to help locate dry weather monitoring stations and to determine the number necessary to adequately represent the entire MS4. Each identified station shall be inspected at least twice between May 1<sup>st</sup> and September 30<sup>th</sup> of each year, and more frequently if the Permittee determines necessary to comply with section J of Order No. R9-2004-001.
- b) In addition to the stations required in section B.1.a. above, each Permittee shall inspect all other dry weather flows that are observed or reported.

**2. Illicit Discharge Monitoring Methods**

- a) At each inspected site, Permittees shall record the following general information:
  - Time since last rain;
  - Quantity of last rain;
  - Site descriptions (i.e., conveyance type, dominant land uses in drainage area);
  - Flow estimation (i.e., width of surface, approximate depth of water, approximate flow velocity, flow rate); and
  - Visual observations (e.g., odor, color, clarity, floatables, deposits/stains, oil sheen, surface scum, vegetation condition, structural condition, and biology).
- b) If flow or ponded water is observed at a station and there has been at least seventy-two hours of dry weather, a field screening analysis using suitable methods to estimate the following constituents shall be conducted:
  - (1) Specific conductance (or calculate estimated Total Dissolved Solids);
  - (2) Turbidity;
  - (3) PH;
  - (4) Temperature; and
  - (5) Dissolved Oxygen.
- c) If field screening analysis or visual observations at a site indicate a potential illicit discharge, a sample shall be collected for laboratory analysis. At a minimum, samples shall be analyzed at a laboratory for the following constituents:
  - (1) Total hardness;

- (2) Oil and grease;
  - (3) Ammonia Nitrogen;
  - (4) Total phosphorus;
  - (5) Copper (total and dissolved);
  - (6) Surfactants (MBAS);
  - (7) Diazinon and Chlorpyrifos;
  - (8) Lead (dissolved);
  - (9) Nitrate Nitrogen;
  - (10) E. coli;
  - (11) Total coliform; and
  - (12) Fecal coliform.
3. As part of the Illicit Discharge Monitoring Program, the Permittees shall develop numeric criteria for field screening and analytical monitoring results that will trigger follow-up investigations to identify the source causing the exceedance of the criteria. In the event of an exceedance of the criteria, Permittees shall implement the follow-up investigation procedures developed pursuant to section J.4 of Order No. R9-2004-001.

### C. Monitoring Provisions

All monitoring activities shall meet the following requirements:

- a) Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity [40 CFR 122.41(j)(1)].
- b) The Permittees shall retain records of all monitoring information, including all calibration and maintenance of monitoring instrumentation, copies of all reports required by this Order, and records of all data used to complete the Report of Waste Discharge and application for this Order, for a period of at least five (5) years from the date of the sample, measurement, report, or application. This period may be extended by request of the SDRWQCB or EPA 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)]
- c) Records of monitoring information shall include [40 CFR 122.41(j)(3)]:
  - (1) The date, exact place, and time of sampling or measurements;
  - (2) The individual(s) who performed the sampling or measurements;
  - (3) The date(s) analyses were performed;
  - (4) The individual(s) who performed the analyses;
  - (5) The analytical techniques or methods used; and,
  - (6) The results of such analyses.
- d) All sampling, sample preservation, and analyses must be conducted according to test procedures approved under 40 CFR part 136, unless other test procedures have been specified in this MRP or approved by the Executive Officer [40 CFR 122.41(j)(4)].
- e) Where procedures are not otherwise specified in this MRP, sampling, analysis and quality assurance/quality control must be conducted in accordance with the Quality Assurance Program Plan (QAPP) for the State of California's Surface Water Ambient Monitoring Program, adopted

by the State Water Resources Control Board (SWRCB). The QAPP can be downloaded from the SWRCB web page at: [http://www.swrcb.ca.gov/swamp/docs/swamp\\_qapp.pdf](http://www.swrcb.ca.gov/swamp/docs/swamp_qapp.pdf).

- 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)]
- g) Calculations for all limitations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified in this MRP [40 CFR 122.41(l)(4)(iii)].
- h) All chemical, bacteriological, and toxicity analyses shall be conducted at a laboratory certified for such analyses by the California Department of Health Services or a laboratory approved by the Executive Officer.
- i) For priority toxic pollutants that are identified in the California Toxics Rule (CTR) (65 *Fed. Reg.* 31682), the Permittees shall instruct its laboratories to establish calibration standards that are equivalent to or lower than 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). If a 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 Permittee must submit documentation from the laboratory to the SDRWQCB for approval prior to raising the ML for any priority toxic pollutant.
- j) The SDRWQCB Executive Officer or the SDRWQCB may make revisions to this MRP at any time during the term of Order No R9-2004-001, and may include a reduction or increase in the number of parameters to be monitored, locations monitored, the frequency of monitoring, or the number and size of samples collected.

### III. REPORTING PROGRAM

#### A. SWMP Reporting Requirements

The Principal Permittee shall submit a SWMP Annual Report to the SDRWQCB on or before October 31 annually. The reporting period for these annual reports shall be the previous fiscal year. For example, the report submitted on or before October 31, 2005 shall cover the reporting period July 1, 2004 to June 30, 2005. The SWMP Annual Report shall contain the Watershed Annual Report, and the four Individual Annual Reports.

1. **Individual Annual Report** - Each Individual Annual Report shall be a documentation of the activities conducted by each Permittee during the previous annual reporting period. Each Permittee shall submit their Individual Annual Report to the Principal Permittee by a date determined by the Principal Permittee for inclusion in the SWMP Annual Report. Each Individual Annual Report shall, at a minimum, contain the following:
  - a) Comprehensive description of all activities conducted by the Permittee to meet all requirements of Order No. R9-2004-001, including, but not limited to, the following information:
    - (1) Development Planning (Section F):
      - (i) Description of any amendments to the General Plan or the development project approval process;
      - (ii) Number of grading permits issued;
      - (iii) Number of developments conditioned to meet SUSMP requirements\*;
      - (iv) Attach one example of a development project that was conditioned to meet SUSMP requirements and a description of the required BMPs;
      - (v) Description of any updates to the environmental review process;
      - (vi) Description and number of training efforts conducted during the reporting period (for staff, developers, contractors, etc.), including the number of staff trained; and
      - (vii) An assessment of program effectiveness based on the measurable goals established in the Permittee's Individual SWMP.\*
    - (2) Construction (Section G):
      - (i) Number of inspections conducted;
      - (ii) Number and type of enforcement actions related to construction sites;
      - (iii) Description of modifications made to the construction and grading approval process;
      - (iv) Description and number of training efforts conducted during the reporting period (for staff inspectors, contractors, and construction site operators); and
      - (v) An assessment of program effectiveness based on the measurable goals established in the Permittee's Individual SWMP.\*
    - (3) Municipal (Section H.1):
      - (i) Number of municipal inspections conducted;
      - (ii) Number and types of enforcement actions taken;
      - (iii) Number of catch basins and inlets that were inspected and the number that were cleaned;

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\* Items with an asterisk are not applicable to the first annual report.

- (iv) Assessment of the amount and type of debris removed from catch basins, streets, and open channels, including an identification of problem areas that generate the most pollutants;
  - (v) Assessment of effectiveness of BMPs that have been implemented for municipal facilities and activities;
  - (vi) Description and number of training efforts conducted over the last year (for municipal facility operators and/or inspectors); and
  - (vii) An assessment of program effectiveness based on the measurable goals established in each Permittee's Individual SWMP.\*
- (4) Industrial/Commercial (Section H.2):
- (i) Number of inspections conducted;
  - (ii) Number and type of enforcement actions taken; and
  - (iii) An assessment of overall program effectiveness based on the measurable goals established in the Permittee's Individual SWMP.\*
- (5) Residential (Section H.3):
- (i) A description of residential areas that were focused on during the past year;
  - (ii) Number and types of enforcement actions taken; and
  - (iii) Assessment of overall program effectiveness based on the measurable goals established in the Permittee's Individual SWMP.\*
- (6) Education (Section I):
- (i) Description of education efforts conducted by the Permittee (not collectively with other Permittees) during the previous year;
  - (ii) Assessment of overall program effectiveness based on the measurable goals established in the Permittee's Individual SWMP.\*
- (7) Illicit Discharge Detection and Elimination (Section J):
- (i) Number of illicit discharges, connections and spills reported and/or identified during the reporting period;
  - (ii) Number of illicit discharges or connections investigated during the reporting period and the outcome of the investigations;
  - (iii) Number and types of enforcement actions taken for illicit discharges or connections during the reporting period;
  - (iv) Number of times your agency's hotline was called during the reporting period, as compared to previous reporting periods;
  - (v) Number and location of dry weather monitoring sites that were monitored during the reporting period;
  - (vi) Summary of Illicit Discharge Monitoring Program results, including: 1) All inspection, field screening, and analytical monitoring results; 2) All follow-up and elimination activities; and 3) Any proposed changes to station locations and/or sampling frequencies; and
  - (vii) An assessment of overall program effectiveness based on the measurable goals established in the Permittee's Individual SWMP.\*

- (8) Public Participation – a description of efforts to include the public in urban runoff management programs during the reporting period (i.e., river clean-ups, volunteer monitoring, Permittee council meetings related to the SWMP, etc.).
- b) Assessment of Program Effectiveness - each Permittee shall include an assessment of the effectiveness of its Individual SWMP using the measurable goals and direct and indirect assessment measurements developed in the SWMP, in accordance with **Attachment D** of Order No. R9-2004-001.
- c) Fiscal Analysis Component - each Permittee shall include an annual fiscal analysis, for each fiscal year covered by Order No. R9-2004-001, in its Individual Annual Report. This analysis shall evaluate the expenditures (such as capital, operation and maintenance, education, and administrative expenditures) necessary to accomplish the activities of the Permittee's Individual SWMP. The analysis shall include the following:
- (1) A report of the previous reporting period's budget, and a budget for the upcoming reporting period. To the extent possible, the budgets should be broken down by the following programs:
- (i) Program management;
  - (ii) Construction Inspections;
  - (iii) Development plan review/SUSMP implementation;
  - (iv) Industrial/Commercial inspections;
  - (v) Illicit discharge and connection response and elimination;
  - (vi) Municipal activities (catch basin cleaning, BMP maintenance, etc.);
  - (vii) Education;
  - (viii) Monitoring; and
  - (ix) Other
- (2) A description of the source(s) of funds that were utilized during the previous fiscal year and the source(s) of funds proposed to meet the necessary expenditures for the subsequent year, including legal restrictions on the use of such funds.
- d) Non-Storm Water Discharges – Permittees shall report on any discharge category listed in Requirement B.2 of Order No. R9-2004-001 that was identified as a source of pollutants during the reporting period. For each identified category, the Permittee shall report whether it elected to prohibit the discharge or to require BMPs to reduce pollutants in the discharge to the MEP. If the discharge is not prohibited, the BMPs that will be implemented, or required to be implemented, shall be described in each Permittee's Individual SWMP Annual Report.
- e) Receiving Water Limitations – the report required pursuant to Requirement C.2.a. of Order No. R9-2004-001, if applicable.
- f) A summary of all urban runoff related data not included in the annual monitoring report (e.g., special investigations); and
- g) Proposed revisions to the Individual SWMP, including areas in need of improvement based on the assessment of effectiveness of each program component.
2. **Watershed Annual Report** – The Watershed Annual Report, to be produced by the Principal Permittee shall describe the area-wide and watershed-based programs and activities (as described in

the Watershed SWMP) conducted during the previous reporting period. At a minimum, the Watershed Annual Report shall contain the following information:

- a) A description of all area-wide and watershed-based activities conducted during the reporting period;
- b) A description of efforts to coordinate with other stakeholders in the Santa Margarita Watershed, such as San Diego County and the U.S. Marine Corps Base Camp Pendleton;
- c) An assessment of water quality in the Santa Margarita watershed area of Riverside County, this assessment shall include data from the previous monitoring report;
- d) Identification of water quality improvement or degradation;
- e) A prioritization of water quality problems and potential sources;
- f) A description of watershed-specific educational activities conducted during the reporting period;
- g) Recommended activities to be conducted jointly by the Permittees to address the identified water quality problems;
- h) An assessment of overall program effectiveness based on the measurable goals established in the Watershed SWMP; and
- i) Proposed revisions to the Watershed SWMP.

## **B. Receiving Waters Monitoring Reporting Requirements**

### **1. Monitoring Program Annual Report**

The Principal Permittee shall submit the Monitoring Program Annual Report (Monitoring Report) to the SDRWQCB on or before October 31 of each year. The Monitoring Report shall contain tabular and graphical summaries as well as discussions and interpretations of the receiving water monitoring data obtained during the previous monitoring year. At a minimum, each Monitoring Report shall include the following:

- a) Description of each receiving water monitoring station, including but not limited to:
  - (1) Station location (latitude and longitude, and a narrative description).
  - (2) Photographs of triad stations.
  - (3) Approximate size and land uses of the drainage area.
  - (4) Any other relevant information.
- b) A description of monitoring methods for each type of monitoring, including but not limited to:
  - (1) Monitoring equipment.
  - (2) Sampling procedures.
  - (3) Quality assurance/quality control (QA/QC) procedures (laboratory QA/QC documentation shall be submitted with the report).
  - (4) Laboratory analytical methods including the method detection limits (MDLs). Analytical data shall be reported with one of the following methods, as appropriate:
    - An actual numerical value for sample results greater than or equal to the MDL;
    - "Not-detected (ND)" for sample results less than the laboratory's MDL; or

- "Detected, but Not Quantified (DNQ)" if results are greater than or equal to the laboratory's MDL but less than the ML. The estimated chemical concentration of the sample shall also be reported. This is the concentration that results from the confirmed detection of the substance by the analytical method below the ML value.
- c) A description of monitoring results, including but not limited to:
- (1) Data and data products, including but not limited to:
    - Actual data.
    - Identification of exceedances of Basin Plan and CTR objectives.
    - Estimated annual mass loadings at each station.
    - Toxicity testing results in Toxic Units (TUs).
    - Bioassessment data (including electronic data formatted to California Department of Fish and Game Aquatic Bioassessment Laboratory specifications) and analysis using metrics in the CSBP and the San Diego IBI.
    - Graphical summaries of data.
  - (2) Methods used to evaluate data. Methods shall be appropriate to answer the management questions listed in Section II.A of this MRP and to assess the progress towards achieving the goals listed in Section I of this MRP. Examples of methods include, but are not limited to:
    - Site-by-site summaries and comparisons of results at triad and tributary stations for wet and dry weather, including graphs of concentrations and toxicity.
    - Rough estimates of the relative contribution of urban runoff to total pollutant loads.
    - Maps of potential sources of pollutants.
    - Any other appropriate analysis.
  - (3) Discussion of results and analyses of each Monitoring Program Component, including but not limited to:
    - Discussion of pollutants of concern and their potential sources.
    - Interpretation of bioassessment metric values.
    - Discussion of any TIEs that were conducted and the potential sources of toxic pollutants.
    - If applicable, a discussion of the development, implementation, and results of any TREs.
    - Discussion of any relevant information or conclusions from the Illicit Discharge Monitoring Program.
    - Discussion of the progress towards answering the management questions listed in Section II.A of this MRP and achieving the goals listed in Section I of this MRP.
    - Discussion of any other data analyses performed.
- d) In addition to the information required above, the fourth-year Monitoring Report due no later than October 31, 2008, shall include:
- A discussion of any long-term trends that can be detected from existing data (from all previous permit terms).
  - Recommendations for future monitoring based on the results of previous efforts and the progress towards answering the management questions listed in Section II.A of this MRP and achieving the goals listed in Section I of this MRP.
  - Recommended modifications to Individual or Watershed SWMPs to address identified source of pollutants in urban runoff.
- e) If the Permittees monitor any pollutant more frequently than required by this MRP using test procedures approved under 40 CFR part 136, unless otherwise specified in the Order, the results

of this monitoring shall be included in the calculation and reporting of the data submitted in the Monitoring Reports [40 CFR 122.41(I)(4)(ii)].

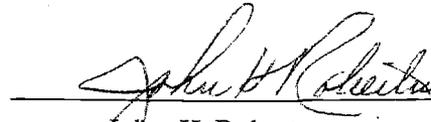
- f) All Monitoring Reports shall be submitted in both electronic and paper formats.

### C. Certified Perjury Statement

All reports submitted to the SDRWQCB shall include the following signed, certified perjury statement:

"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."

*I, John H. Robertus, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of a Monitoring and Reporting Program adopted by the California Regional Water Quality Control Board, San Diego Region, on July 14, 2004.*



John. H. Robertus  
Executive Officer

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
 SAN DIEGO REGION  
 ORDER NO. R9-2007-0001  
 NPDES NO. CAS0108758  
 WASTE DISCHARGE REQUIREMENTS  
 FOR DISCHARGES OF URBAN RUNOFF FROM  
 THE MUNICIPAL SEPARATE STORM SEWER SYSTEMS (MS4s)  
 DRAINING THE WATERSHEDS OF THE COUNTY OF SAN DIEGO,  
 THE INCORPORATED CITIES OF SAN DIEGO COUNTY,  
 THE SAN DIEGO UNIFIED PORT DISTRICT,  
 AND THE SAN DIEGO COUNTY REGIONAL AIRPORT AUTHORITY**

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Attachment A – Basin Plan Prohibitions

Attachment B – Standard Provisions, Reporting Requirements, and Notifications

Attachment C – Definitions

Attachment D – Scheduled Submittal Summary

RECEIVING WATERS AND URBAN RUNOFF MONITORING AND REPORTING  
 PROGRAM NO. R9-2007-0001

The California Regional Water Quality Control Board, San Diego Region (hereinafter Regional Board), finds that:

#### A. BASIS FOR THE ORDER

1. This Order is based on the federal Clean Water Act (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 (SWRCB), the Water Quality Control Plan for the San Diego Basin adopted by the Regional Board, the California Toxics Rule, and the California Toxics Rule Implementation Plan.
2. This Order renews National Pollutant Discharge Elimination System (NPDES) Permit No. CAS0108758, which was first issued on July 16, 1990 (Order No. 90-42), and then renewed on February 21, 2001 (Order No. 2001-01). On August 25, 2005, in accordance with Order No. 2001-01, the County of San Diego, as the Principal Permittee, submitted a Report of Waste Discharge (ROWD) for renewal of their MS4 Permit.

#### B. REGULATED PARTIES

1. Each of the persons in Table 1 below, hereinafter called Copermittees or dischargers, owns or operates a municipal separate storm sewer system (MS4), through which it discharges urban runoff into waters of the United States within the San Diego Region. These MS4s fall 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) a small MS4 that is "interrelated" to a medium or large MS4; or (3) an MS4 which contributes to a violation of a water quality standard; or (4) an MS4 which is a significant contributor of pollutants to waters of the United States.

Table 1. Municipal Copermittees

1. City of Carlsbad	12. City of Oceanside
2. City of Chula Vista	13. City of Poway
3. City of Coronado	14. City of San Diego
4. City of Del Mar	15. City of San Marcos
5. City of El Cajon	16. City of Santee
6. City of Encinitas	17. City of Solana Beach
7. City of Escondido	18. City of Vista
8. City of Imperial Beach	19. County of San Diego
9. City of La Mesa	20. San Diego Unified Port District
10. City of Lemon Grove	21. San Diego County Regional
11. City of National City	Airport Authority

#### C. DISCHARGE CHARACTERISTICS

1. Urban runoff contains waste, as defined in the California Water Code (CWC), and pollutants that adversely affect the quality of the waters of the State. The discharge of urban runoff from an MS4 is a "discharge of pollutants from a point source" into waters of the U.S. as defined in the CWA.
2. The most common categories of pollutants in urban runoff include total suspended solids, sediment (due to anthropogenic activities); 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 trash.

3. The discharge of pollutants and/or increased flows from MS4s may cause or threaten to cause the concentration of pollutants to exceed applicable receiving water quality objectives and impair or threaten to impair designated beneficial uses resulting in a condition of pollution (i.e., unreasonable impairment of water quality for designated beneficial uses), contamination, or nuisance.
4. Pollutants in urban runoff can threaten human health. Human illnesses have been clearly linked to recreating near storm drains flowing to coastal waters. Also, urban runoff pollutants in receiving waters can bioaccumulate in the tissues of invertebrates and fish, which may be eventually consumed by humans.
5. Urban runoff discharges from MS4s often contain pollutants that cause toxicity to aquatic organisms (i.e., adverse responses of organisms to chemicals or physical agents ranging from mortality to physiological responses such as impaired reproduction or growth anomalies). Toxic pollutants impact the overall quality of aquatic systems and beneficial uses of receiving waters.
6. The Copermittees discharge urban runoff into lakes, drinking water reservoirs, rivers, streams, creeks, bays, estuaries, coastal lagoons, the Pacific Ocean, and tributaries thereto within ten of the eleven hydrologic units (watersheds) comprising the San Diego Region as shown in Table 2 below. Some of the receiving water bodies have been designated as impaired by the Regional Board and the United States Environmental Protection Agency (USEPA) in 2002 pursuant to CWA section 303(d). Also shown below are the watershed management areas (WMAs) as defined in the Regional Board report, Watershed Management Approach, January 2002.

Table 2. Common Watersheds and CWA Section 303(d) Impaired Waters

REGIONAL BOARD WATERSHED MANAGEMENT AREA (WMA)	HYDROLOGIC UNIT(S)	MAJOR SURFACE WATER BODIES	303(d) POLLUTANT(S) OF CONCERN OR WATER QUALITY EFFECT <sup>1</sup>	COPERMITTEES
Santa Margarita River	Santa Margarita (902.00)	Santa Margarita River and Estuary, Pacific Ocean	1. Eutrophic 2. Nitrogen 3. Phosphorus 4. Total Dissolved Solids	1. County of San Diego
San Luis Rey River	San Luis Rey (903.00)	San Luis Rey River and Estuary, Pacific Ocean	1. Bacterial Indicators 2. Eutrophic 3. Chloride 4. Total Dissolved Solids	1. City of Escondido 2. City of Oceanside 3. City of Vista 4. County of San Diego
Carlsbad	Carlsbad (904.00)	Batiquitos Lagoon San Elijo Lagoon Agua Hedionda Lagoon Buena Vista Lagoon And Tributary Streams Pacific Ocean	1. Bacterial Indicators 2. Eutrophic 3. Sedimentation/Siltation 4. Nutrients 5. Total Dissolved Solids	1. City of Carlsbad 2. City of Encinitas 3. City of Escondido 4. City of Oceanside 5. City of San Marcos 6. City of Solana Beach 7. City of Vista 8. County of San Diego

<sup>1</sup> The listed 303(d) pollutant(s) of concern do not necessarily reflect impairment of the entire corresponding WMA or all corresponding major surface water bodies. The specific impaired portions of each WMA are listed in the State Water Resources Control Board's 2002 Section 303(d) List of Water Quality Limited Segments.

REGIONAL BOARD WATERSHED MANAGEMENT AREA (WMA)	HYDROLOGIC UNIT(S)	MAJOR SURFACE WATER BODIES	303(d) POLLUTANT(S) OF CONCERN OR WATER QUALITY EFFECT <sup>1</sup>	COPERMITTEES
San Dieguito River	San Dieguito (905.00)	San Dieguito River and Estuary, Pacific Ocean	1. Bacterial Indicators 2. Sulfate 3. Color 4. Nitrogen 5. Phosphorus 6. Total Dissolved Solids	1. City of Del Mar 2. City of Escondido 3. City of Poway 4. City of San Diego 5. City of Solana Beach 6. County of San Diego
Mission Bay	Peñasquitos (906.00)	Los Peñasquitos Lagoon Mission Bay, Pacific Ocean	1. Bacterial Indicators 2. Metals 3. Eutrophic 4. Sedimentation/Siltation 5. Toxicity	1. City of Del Mar 2. City of Poway 3. City of San Diego 4. County of San Diego
San Diego River	San Diego (907.00)	San Diego River, Pacific Ocean	1. Bacterial Indicators 2. Eutrophic 3. pH 4. Total Dissolved Solids 5. Oxygen (Dissolved)	1. City of El Cajon 2. City of La Mesa 3. City of Poway 4. City of San Diego 5. City of Santee 6. County of San Diego
San Diego Bay	Pueblo San Diego (908.00) Sweetwater (909.00) Otay (910.00)	San Diego Bay Sweetwater River Otay River Pacific Ocean	1. Bacterial Indicators 2. Metals 3. Sediment Toxicity 4. Benthic Community Degradation 5. Diazinon 6. Chlordane 7. Lindane 8. PAHs 9. PCBs	1. City of Chula Vista 2. City of Coronado 3. City of Imperial Beach 4. City of La Mesa 5. City of Lemon Grove 6. City of National City 7. City of San Diego 8. County of San Diego 9. San Diego Unified Port District 10. San Diego County Regional Airport Authority
Tijuana River	Tijuana (911.00)	Tijuana River and Estuary Pacific Ocean	1. Bacterial Indicators 2. Low Dissolved Oxygen 3. Metals 4. Eutrophic 5. Pesticides 6. Synthetic Organics 7. Trace Elements 8. Trash 9. Solids	1. City of Imperial Beach 2. City of San Diego 3. County of San Diego

7. The Copermittees' water quality monitoring data submitted to date documents persistent exceedances of Basin Plan water quality objectives for various urban runoff-related pollutants (diazinon, fecal coliform bacteria, total suspended solids, turbidity, metals, etc.) at various watershed monitoring stations. At some monitoring stations, such as Agua Hedionda, statistically significant upward trends in pollutant concentrations have been observed. Persistent toxicity has also been observed at some watershed monitoring stations. In addition, bioassessment data indicates that the majority of watersheds have Poor to Very Poor Index of Biotic Integrity ratings. In sum, the above findings indicate that urban runoff discharges are causing or contributing to water quality impairments, and are a leading cause of such impairments in San Diego County.
8. When natural vegetated pervious ground cover is converted to impervious surfaces such as paved highways, streets, rooftops, and parking lots, the natural absorption and infiltration abilities of the land are lost. Therefore, runoff leaving a developed urban area is significantly greater in runoff volume, velocity, and peak flow rate than pre-development runoff from the same area. Runoff durations can also increase as a result of flood control and other efforts to control peak flow rates. Increased volume, velocity, rate, and duration of runoff greatly accelerate the erosion of downstream natural channels. Significant declines in the biological integrity and physical habitat of streams and other receiving waters have been found to occur

with as little as a 10% conversion from natural to impervious surfaces. The increased runoff characteristics from new development must be controlled to protect against increased erosion of channel beds and banks, sediment pollutant generation, or other impacts to beneficial uses and stream habitat due to increased erosive force.

9. Urban development creates new pollution sources as human population density increases and brings with it proportionately higher levels of car emissions, car maintenance wastes, municipal sewage, pesticides, household hazardous wastes, pet wastes, trash, etc. which can either be washed or directly dumped into the MS4. As a result, the runoff leaving the developed urban area is significantly greater in pollutant load than the pre-development runoff from the same area. These increased pollutant loads must be controlled to protect downstream receiving water quality.
10. Development and urbanization especially threaten environmentally sensitive areas (ESAs), such as water bodies designated as supporting a RARE beneficial use (supporting rare, threatened or endangered species) and CWA 303(d) impaired water bodies. Such areas have a much lower capacity to withstand pollutant shocks than might be acceptable in the general circumstance. In essence, development that is ordinarily insignificant in its impact on the environment may become significant in a particular sensitive environment. Therefore, additional control to reduce pollutants from new and existing development may be necessary for areas adjacent to or discharging directly to an ESA.
11. Although dependent on several factors, the risks typically associated with properly managed infiltration of runoff (especially from residential land use areas) are not significant. The risks associated with infiltration can be managed by many techniques, including (1) designing landscape drainage features that promote infiltration of runoff, but do not “inject” runoff (injection bypasses the natural processes of filtering and transformation that occur in the soil); (2) taking reasonable steps to prevent the illegal disposal of wastes; (3) protecting footings and foundations; and (4) ensuring that each drainage feature is adequately maintained in perpetuity.

## **D. URBAN RUNOFF MANAGEMENT PROGRAMS**

### **1. General**

- a. This Order specifies requirements necessary for the Copermittees to reduce the discharge of pollutants in urban runoff to the maximum extent practicable (MEP). However, since MEP is a dynamic performance standard which evolves over time as urban runoff management knowledge increases, the Copermittees’ urban runoff management programs must continually be assessed and modified to incorporate improved programs, control measures, best management practices (BMPs), etc. in order to achieve the evolving MEP standard. Absent evidence to the contrary, this continual assessment, revision, and improvement of urban runoff management program implementation is expected to ultimately achieve compliance with water quality standards.
- b. Although the Copermittees have generally been implementing the jurisdictional urban runoff management programs required pursuant to Order No. 2001-01 since February 21, 2002, urban runoff discharges continue to cause or contribute to violations of water quality standards. This Order contains new or modified requirements that are necessary to improve Copermittees’ efforts to reduce the discharge of pollutants in urban runoff to the MEP and achieve water quality

standards. Some of the new or modified requirements, such as the expanded Watershed Urban Runoff Management Program section, are designed to specifically address these high priority water quality problems. Other new or modified requirements address program deficiencies that have been noted during audits, report reviews, and other Regional Board compliance assessment activities.

- c. Updated Jurisdictional Urban Runoff Management Plans (JURMPs) and Watershed Urban Runoff Management Plans (WURMPs), and a new Regional Urban Runoff Management Plan (RURMP), which describe the Copermittees' urban runoff management programs in their entirety, are needed to guide the Copermittees' urban runoff management efforts and aid the Copermittees in tracking urban runoff management program implementation. It is practicable for the Copermittees to update the JURMPs and WURMPs, and create the RURMP, within one year, since significant efforts to develop these programs have already occurred.
- d. Pollutants can be effectively reduced in urban runoff by the application of a combination of pollution prevention, source control, and treatment control BMPs. Pollution prevention is the reduction or elimination of pollutant generation at its source and is the best "first line of defense". Source control BMPs (both structural and non-structural) minimize the contact between pollutants and flows (e.g., rerouting run-on around pollutant sources or keeping pollutants on-site and out of receiving waters). Treatment control BMPs remove pollutants from urban runoff.
- e. Urban runoff needs to be addressed during the three major phases of development (planning, construction, and use) in order to reduce the discharge of pollutants to the MEP and protect receiving waters. Development which is not guided by water quality planning policies and principles can unnecessarily result in increased pollutant load discharges, flow rates, and flow durations which can impact receiving water beneficial uses. Construction sites without adequate BMP implementation result in sediment runoff rates which greatly exceed natural erosion rates of undisturbed lands, causing siltation and impairment of receiving waters. Existing development generates substantial pollutant loads which are discharged in urban runoff to receiving waters.
- f. Annual reporting requirements included in this Order are necessary to meet federal requirements and to evaluate the effectiveness and compliance of the Copermittees' programs.

## **2. Development Planning**

- a. The Standard Urban Storm Water Mitigation Plan (SUSMP) requirements contained in this Order are consistent with Order WQ-2000-11 adopted by the SWRCB on October 5, 2000. In the precedential order, the SWRCB found that the design standards, which essentially require that urban runoff generated by 85 percent of storm events from specific development categories be infiltrated or treated, reflect the MEP standard. The order also found that the SUSMP requirements are appropriately applied to the majority of the Priority Development Project categories contained in Section D.1 of this Order. The SWRCB also gave Regional Water Quality Control Boards the discretion to include additional categories and locations, such as retail gasoline outlets (RGOs), in future SUSMPs.

- b. Controlling urban runoff pollution by using a combination of onsite source control and Low Impact Development (LID) BMPs augmented with treatment control BMPs before the runoff enters the MS4 is important for the following reasons: (1) Many end-of-pipe BMPs (such as diversion to the sanitary sewer) are typically ineffective during significant storm events. Whereas, onsite source control BMPs can be applied during all runoff conditions; (2) End-of-pipe BMPs are often incapable of capturing and treating the wide range of pollutants which can be generated on a sub-watershed scale; (3) End-of-pipe BMPs are more effective when used as polishing BMPs, rather than the sole BMP to be implemented; (4) End-of-pipe BMPs do not protect the quality or beneficial uses of receiving waters between the source and the BMP; and (5) Offsite end-of-pipe BMPs do not aid in the effort to educate the public regarding sources of pollution and their prevention.
- c. Use of LID BMPs at new development projects can be an effective means for minimizing the impact of urban runoff discharges from the development projects on receiving waters. LID BMPs help preserve and restore the natural hydrologic cycle of the site, allowing for filtration and infiltration which can greatly reduce the volume, peak flow rate, velocity, and pollutant loads of urban runoff.
- d. Retail Gasoline Outlets (RGOs) are significant sources of pollutants in urban runoff. RGOs are points of convergence for motor vehicles for automotive related services such as repair, refueling, tire inflation, and radiator fill-up and consequently produce significantly higher loadings of hydrocarbons and trace metals (including copper and zinc) than other urban areas. To meet MEP, LID, source control, and treatment control BMPs are needed at RGOs that meet the following criteria: (a) 5,000 square feet or more, or (b) a projected Average Daily Traffic (ADT) of 100 or more vehicles per day. These are appropriate thresholds since vehicular development size and volume of traffic are good indicators of potential impacts of urban runoff from RGOs on receiving waters.
- e. Sites of heavy industry are significant sources of pollutants in urban runoff. Pollutant concentrations and loads in runoff from industrial sites are similar or exceed pollutant concentrations and loads in runoff from other land uses, such as commercial or residential land uses. As with other land uses, LID, source control, and treatment control BMPs are needed at sites of heavy industry in order to meet the MEP standard. These BMPs are necessary where the site of heavy industry is larger than one acre. The one acre threshold is appropriate, since it is consistent with requirements in the Phase II NPDES storm water regulations.
- f. If not properly designed or maintained, certain BMPs implemented or required by municipalities for urban runoff management may create a habitat for vectors (e.g. mosquitoes and rodents). However, proper BMP design and maintenance can prevent the creation of vector habitat. Nuisances and public health impacts resulting from vector breeding can be prevented with close collaboration and cooperative effort between municipalities and local vector control agencies and the State Department of Health Services during the development and implementation of urban runoff management programs.

### **3. Construction and Existing Development**

- a. In accordance with federal NPDES regulations and to ensure the most effective oversight of industrial and construction site discharges, discharges of runoff from

industrial and construction sites are subject to dual (state and local) storm water regulation. Under this dual system, the Regional Board is responsible for enforcing the General Construction Activities Storm Water Permit, SWRCB Order 99-08 DWQ, NPDES No. CAS000002 (General Construction Permit) and the General Industrial Activities Storm Water Permit, SWRCB Order 97-03 DWQ, NPDES No. CAS000001 (General Industrial Permit), and each municipal Copermittee is responsible for enforcing its local permits, plans, and ordinances, which may require the implementation of additional BMPs than required under the statewide general permits.

- b. Identification of sources of pollutants in urban runoff (such as municipal areas and activities, industrial and commercial sites/sources, construction sites, and residential areas), development and implementation of BMPs to address those sources, and updating ordinances and approval processes are necessary for the Copermittees to ensure that discharges of pollutants into and from its MS4 are reduced to the MEP. Inspections and other compliance verification methods are needed to ensure minimum BMPs are implemented. Inspections are especially important at high risk areas for pollutant discharges.
- c. Historic and current development makes 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.
- d. As operators of the MS4s, the Copermittees cannot passively receive and discharge pollutants from third parties. By providing free and open access to an MS4 that conveys discharges to waters of the U.S., the operator essentially accepts responsibility for discharges into the MS4 that it does not prohibit or control. These discharges may cause or contribute to a condition of contamination or a violation of water quality standards.
- e. Waste and pollutants which are deposited and accumulate in MS4 drainage structures will be discharged from these structures to waters of the U.S. unless they are removed or treated. These discharges may cause or contribute to, or threaten to cause or contribute to, a condition of pollution in receiving waters. For this reason, pollutant discharges into MS4s must be reduced to the MEP unless treatment within the MS4 occurs.
- f. Enforcement of local urban runoff related ordinances, permits, and plans is an essential component of every urban runoff management program and is specifically required in the federal storm water regulations and this Order. Each Copermittee is individually responsible for adoption and enforcement of ordinances and/or policies, implementation of identified control measures/BMPs needed to prevent or reduce pollutants in storm water runoff, and for the allocation of funds for the capital, operation and maintenance, administrative, and enforcement expenditures necessary to implement and enforce such control measures/BMPs under its jurisdiction.
- g. 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 staffs is especially critical to ensure that in-house staffs 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 impact receiving water quality and how these impacts can be minimized.

- h. Public participation during the development of urban runoff management programs is necessary to ensure that all stakeholder interests and a variety of creative solutions are considered.

#### **4. Watershed and Regional Urban Runoff Management**

- a. Since urban runoff does not recognize political boundaries, watershed-based urban runoff management can greatly enhance the protection of receiving waters within a watershed. Such management provides a means to focus on the most important water quality problems in each watershed. By focusing on the most important water quality problems, watershed efforts can maximize protection of beneficial use in an efficient manner. Effective watershed-based urban runoff management actively reduces pollutant discharges and abates pollutant sources causing or contributing to watershed water quality problems; watershed-based urban runoff management that does not actively reduce pollutant discharges and abate pollutant sources causing or contributing to watershed water quality problems can necessitate implementation of the iterative process outlined in section A.3 of the Order. Watershed management of urban runoff does not require Copermittees to expend resources outside of their jurisdictions. Watershed management requires the Copermittees within a watershed to develop a watershed-based management strategy, which can then be implemented on a jurisdictional basis.
- b. Some urban runoff issues, such as residential education, 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.
- c. Both regionally and on a watershed basis, it is important for the Copermittees to coordinate their water quality protection and land use planning activities to achieve the greatest protection of receiving water bodies. Copermittee coordination with other watershed stakeholders, especially Caltrans, the Department of Defense, and Native American Tribes, is also important. Establishment of a management structure, within which the Copermittees subject to this Order will fund and coordinate those aspects of their joint obligations, will help promote implementation of urban runoff management programs on a watershed and regional basis in a most cost effective manner.

#### **E. STATUTE AND REGULATORY CONSIDERATIONS**

1. The Receiving Water Limitations (RWL) language specified in this Order is consistent with language recommended by the USEPA and established in SWRCB Water Quality Order 99-05, adopted by the SWRCB on June 17, 1999. The RWL in this Order require compliance with water quality standards, which is to be achieved through an iterative approach requiring the implementation of improved and better-tailored BMPs over time. Compliance with receiving water limits based on applicable water quality standards is necessary to ensure that MS4 discharges will not cause or contribute to violations of water quality standards and the

creation of conditions of pollution.

2. The Water Quality Control Plan for the San Diego Basin (Basin Plan), identifies the following beneficial uses for surface waters in San Diego County: Municipal and Domestic Supply (MUN), Agricultural Supply (AGR), Industrial Process Supply (PROC), Industrial Service Supply (IND), Ground Water Recharge (GWR), Contact Water Recreation (REC1) Non-contact Water Recreation (REC2), Warm Freshwater Habitat (WARM), Cold Freshwater Habitat (COLD), Wildlife Habitat (WILD), Rare, Threatened, or Endangered Species (RARE), Freshwater Replenishment (FRSH), Hydropower Generation (POW), and Preservation of Biological Habitats of Special Significance (BIOL). The following additional beneficial uses are identified for coastal waters of San Diego County: Navigation (NAV), Commercial and Sport Fishing (COMM), Estuarine Habitat (EST), Marine Habitat (MAR), Aquaculture (AQUA), Migration of Aquatic Organisms (MIGR), Spawning, Reproduction, and/or Early Development (SPWN), and Shellfish Harvesting (SHELL).
3. This Order is in conformance with SWRCB Resolution No. 68-16 and the federal Antidegradation Policy described in 40 CFR 131.12.
4. Section 6217(g) of the Coastal Zone Act Reauthorization Amendments of 1990 (CZARA) requires coastal states with approved coastal zone management programs to address non-point pollution impacting or threatening coastal water quality. CZARA addresses five sources of non-point pollution: agriculture, silviculture, urban, marinas, and hydromodification. This NPDES permit addresses the management measures required for the urban category, with the exception of septic systems. The adoption and implementation of this NPDES permit relieves the Permittee from developing a non-point source plan, for the urban category, under CZARA. The Regional Board addresses septic systems through the administration of other programs.
5. Section 303(d)(1)(A) of the CWA requires that "Each state shall identify those waters within its boundaries for which the effluent limitations...are not stringent enough to implement any water quality standard (WQS) applicable to such waters." The CWA also requires states to establish a priority ranking of impaired waterbodies known as Water Quality Limited Segments and to establish Total Maximum Daily Loads (TMDLs) for such waters. This priority list of impaired waterbodies is called the Section 303(d) List. The current Section 303(d) List was approved by the SWRCB on February 4, 2003 and on July 25, 2003 by USEPA.
6. This Order fulfills a component of the TMDL Implementation Plan adopted by this Regional Board on August 14, 2002 for diazinon in Chollas Creek by establishing Water Quality Based Effluent Limits (WQBELs) for the Cities of San Diego, Lemon Grove, and La Mesa, the County of San Diego, and the San Diego Unified Port District; and by requiring: 1) legal authority, 2) implementation of a diazinon toxicity control plan and a diazinon public outreach/ education program, 3) achievement of the Compliance Schedule, and 4) a monitoring program. The establishment of WQBELs expressed as iterative BMPs to achieve the Waste Load Allocation (WLA) compliance schedule is appropriate and is expected to be sufficient to achieve the WLAs specified in the TMDL.
7. This Order fulfills a component of the TMDL Implementation Plan adopted by this Regional Board on February 9, 2005 for dissolved copper in Shelter Island Yacht Basin (SIYB) by establishing WQBELs expressed as BMPs to achieve the WLA of 30 kg copper / year for the City of San Diego and the San Diego Unified Port District. The establishment of WQBELs expressed as BMPs is appropriate and is expected to be sufficient to achieve the WLA

specified in the TMDL.

8. This Order establishes WQBELs and conditions consistent with the requirements and assumptions of the WLAs in the TMDLs as required by 40 CFR 122.44(d)(1)(vii)(B).
9. Requirements in this Order that are more explicit than the federal storm water regulations in 40 CFR 122.26 are prescribed in accordance with the CWA section 402(p)(3)(B)(iii) and are necessary to meet the MEP standard.
10. Urban runoff treatment and/or mitigation must occur prior to the discharge of urban runoff into a receiving water. Federal regulations at 40 CFR 131.10(a) state that in no case shall a state adopt waste transport or waste assimilation as a designated use for any waters of the U.S. Authorizing the construction of an urban runoff treatment facility within a water of the U.S., or using the water body itself as a treatment system or for conveyance to a treatment system, would be tantamount to accepting waste assimilation as an appropriate use for that water body. Furthermore, the construction, operation, and maintenance of a pollution control facility in a water body can negatively impact the physical, chemical, and biological integrity, as well as the beneficial uses, of the water body. This is consistent with USEPA guidance to avoid locating structural controls in natural wetlands.
11. The issuance of waste discharge requirements and an NPDES permit for the discharge of urban runoff from MS4s to waters of the U.S. is exempt from the requirement for preparation of environmental documents under the California Environmental Quality Act (CEQA) (Public Resources Code, Division 13, Chapter 3, section 21000 et seq.) in accordance with the CWC section 13389.

#### **F. PUBLIC PROCESS**

1. The Regional Board has notified the Copermittees, all known interested parties, and the public of its intent to consider adoption of an Order prescribing waste discharge requirements that would serve to renew an NPDES permit for the existing discharge of urban runoff.
2. The Regional Board has, at public meetings on (date), held public hearings and heard and considered all comments pertaining to the terms and conditions of this Order.

**IT IS HEREBY ORDERED** that the Copermittees, in order to meet the provisions contained in Division 7 of the California Water Code (CWC) and regulations adopted thereunder, and the provisions of the Clean Water Act (CWA) and regulations adopted thereunder, shall each comply with the following:

#### **A. PROHIBITIONS AND RECEIVING WATER LIMITATIONS**

1. Discharges into and from municipal separate storm sewer systems (MS4s) in a manner causing, or threatening to cause, a condition of pollution, contamination, or nuisance (as defined in CWC section 13050), in waters of the state are prohibited.
2. Discharges from MS4s containing pollutants which have not been reduced to the maximum extent practicable (MEP) are prohibited.<sup>2</sup>

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<sup>2</sup> This prohibition does not apply to MS4 discharges which receive subsequent treatment to reduce pollutants to the MEP prior to entering receiving waters (e.g., low flow diversions to the sanitary sewer).

3. Discharges from MS4s that cause or contribute to the violation of water quality standards (designated beneficial uses and water quality objectives developed to protect beneficial uses) are prohibited.
  - a. Each Copermittee shall comply with section A.3 and section A.4 as it applies to Prohibition 5 in Attachment A of this Order through timely implementation of control measures and other actions to reduce pollutants in urban runoff discharges in accordance with the Jurisdictional Urban Runoff Management Program and other requirements of this Order including any modifications. The Jurisdictional Urban Runoff Management Program shall be designed to achieve compliance with section A.3 and section A.4 as it applies to Prohibition 5 in Attachment A of this Order. If exceedance(s) of water quality standards persist notwithstanding implementation of the Jurisdictional Urban Runoff Management Program and other requirements of this Order, the Copermittee shall assure compliance with section A.3 and section A.4 as it applies to Prohibition 5 in Attachment A of this Order by complying with the following procedure:
    - (1) Upon a determination by either the Copermittee or the Regional Board that MS4 discharges are causing or contributing to an exceedance of an applicable water quality standard, the Copermittee shall promptly notify and thereafter submit a report to the Regional Board that describes best management practices (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 Jurisdictional Urban Runoff Management Program unless the Regional Board directs an earlier submittal. The report shall include an implementation schedule. The Regional Board may require modifications to the report;
    - (2) Submit any modifications to the report required by the Regional Board within 30 days of notification;
    - (3) Within 30 days following approval of the report described above by the Regional Board, the Copermittee shall revise its Jurisdictional Urban Runoff Management Program and monitoring program to incorporate the approved modified BMPs that have been and will be implemented, the implementation schedule, and any additional monitoring required;
    - (4) Implement the revised Jurisdictional Urban Runoff Management Program and monitoring program in accordance with the approved schedule.
  - b. So long as the Copermittee has complied with the procedures set forth above and is implementing the revised Jurisdictional Urban Runoff Management Program, the Copermittee does not have to repeat the same procedure for continuing or recurring exceedances of the same receiving water limitations unless directed by the Regional Board to do so.
  - c. Nothing in section A.3 shall prevent the Regional Board from enforcing any provision of this Order while the Copermittee prepares and implements the above report.

4. In addition to the above prohibitions, discharges from MS4s are subject to all Basin Plan prohibitions cited in Attachment A to this Order.

## **B. NON-STORM WATER DISCHARGES**

1. Each Copermittee shall effectively prohibit all types of non-storm water discharges into its MS4 unless such discharges are either authorized by a separate National Pollutant Discharge Elimination System (NPDES) permit; or not prohibited in accordance with sections B.2 and B.3 below.
2. The following categories of non-storm water discharges are not prohibited unless a Copermittee or the Regional Board identifies the discharge category as a significant source of pollutants to waters of the U.S. For such a discharge category, the Copermittee shall either prohibit the discharge category or develop and implement appropriate control measures to reduce the discharge of pollutants to the MEP and report to the Regional Board pursuant to section J.
  - a. Diverted stream flows;
  - b. Rising ground waters;
  - c. Uncontaminated ground water infiltration [as defined at 40 CFR 35.2005(20)] to MS4s;
  - d. Uncontaminated pumped ground water;
  - e. Foundation drains;
  - f. Springs;
  - g. Water from crawl space pumps;
  - h. Footing drains;
  - i. Air conditioning condensation;
  - j. Flows from riparian habitats and wetlands;
  - k. Water line flushing;
  - l. Landscape irrigation;
  - m. Discharges from potable water sources not subject to NPDES Permit No. CAG679001, other than water main breaks;
  - n. Irrigation water;
  - o. Lawn watering;
  - p. Individual residential car washing; and
  - q. Dechlorinated swimming pool discharges.
3. Emergency fire fighting flows (i.e., flows necessary for the protection of life or property) do not require BMPs and need not be prohibited. As part of the Jurisdictional Urban Runoff Management Plan (JURMP), each Copermittee shall develop and implement a program to reduce pollutants from non-emergency fire fighting flows (i.e., flows from controlled or practice blazes and maintenance activities) identified by the Copermittee to be significant sources of pollutants to waters of the United States.
4. Each Copermittee shall examine all dry weather field screening and analytical monitoring results collected in accordance with section D.4 of this Order and Receiving Waters Monitoring and Reporting Program No. R9-2007-0001 to identify water quality problems which may be the result of any non-prohibited discharge category(ies) identified above in section B.2. Follow-up investigations shall be conducted as necessary to identify and control any non-prohibited discharge category(ies) listed above.

**C. LEGAL AUTHORITY**

1. Each Copermittee shall establish, maintain, and enforce adequate legal authority to control pollutant discharges into and from its MS4 through ordinance, statute, permit, contract or similar means. This legal authority must, at a minimum, authorize the Copermittee to:
  - a. Control the contribution of pollutants in discharges of runoff associated with industrial and construction activity to its MS4 and control the quality of runoff from industrial and construction sites. This requirement applies both to industrial and construction sites which have coverage under the statewide general industrial or construction storm water permits, as well as to those sites which do not. Grading ordinances shall be upgraded and enforced as necessary to comply with this Order.
  - b. Prohibit all identified illicit discharges not otherwise allowed pursuant to section B.2 including but not limited to:
    - (1) Sewage;
    - (2) Discharges of wash water resulting from the hosing or cleaning of gas stations, auto repair garages, or other types of automotive services facilities;
    - (3) Discharges resulting from the cleaning, repair, or maintenance of any type of equipment, machinery, or facility including motor vehicles, cement-related equipment, and port-a-potty servicing, etc.;
    - (4) Discharges of wash water from mobile operations such as mobile automobile washing, steam cleaning, power washing, and carpet cleaning, etc.;
    - (5) Discharges of wash water from the cleaning or hosing of impervious surfaces in municipal, industrial, commercial, and residential areas including parking lots, streets, sidewalks, driveways, patios, plazas, work yards and outdoor eating or drinking areas, etc.;
    - (6) Discharges of runoff from material storage areas containing chemicals, fuels, grease, oil, or other hazardous materials;
    - (7) Discharges of pool or fountain water containing chlorine, biocides, or other chemicals; discharges of pool or fountain filter backwash water;
    - (8) Discharges of sediment, pet waste, vegetation clippings, or other landscape or construction-related wastes; and
    - (9) Discharges of food-related wastes (e.g., grease, fish processing, and restaurant kitchen mat and trash bin wash water, etc.).
  - c. Prohibit and eliminate illicit connections to the MS4;
  - d. Control the discharge of spills, dumping, or disposal of materials other than storm water to its MS4;
  - e. Require compliance with conditions in Copermittee ordinances, permits, contracts or orders (i.e., hold dischargers to its MS4 accountable for their contributions of pollutants and flows);
  - f. Utilize enforcement mechanisms to require compliance with Copermittee storm water ordinances, permits, contracts, or orders;
  - g. Control the contribution of pollutants from one portion of the shared MS4 to another portion of the MS4 through interagency agreements among Copermittees. Control of

the contribution of pollutants from one portion of the shared MS4 to another portion of the MS4 through interagency agreements with other owners of the MS4 such as Caltrans, the Department of Defense, or Native American Tribes is encouraged;

- h. Carry out all inspections, surveillance, and monitoring necessary to determine compliance and noncompliance with local ordinances and permits and with this Order, including the prohibition on illicit discharges to the MS4. This means the Copermittee must have authority to enter, monitor, inspect, take measurements, review and copy records, and require regular reports from industrial facilities discharging into its MS4, including construction sites;
  - i. Require the use of BMPs to prevent or reduce the discharge of pollutants into MS4s to the MEP; and
  - j. Require documentation on the effectiveness of BMPs implemented to reduce the discharge of pollutants to the MS4 to the MEP.
2. Each Permittee shall include as part of its JURMP a statement certified by its chief legal counsel that the Copermittee has taken the necessary steps to obtain and maintain full legal authority to implement and enforce each of the requirements contained in 40 CFR 122.26(d)(2)(i)(A-F) and this Order. This statement shall include:
- a. Identification of all departments within the jurisdiction that conduct urban runoff related activities, and their roles and responsibilities under this Order. Include an up to date organizational chart specifying these departments and key personnel.
  - b. Citation of urban runoff related ordinances and the reasons they are enforceable;
  - c. Identification of the local administrative and legal procedures available to mandate compliance with urban runoff related ordinances and therefore with the conditions of this Order;
  - d. A description of how urban runoff related ordinances are implemented and appealed; and
  - e. Description of whether the municipality can issue administrative orders and injunctions or if it must go through the court system for enforcement actions.

#### **D. JURISDICTIONAL URBAN RUNOFF MANAGEMENT PROGRAM**

Each Copermittee shall implement all requirements of section D of this Order no later than 365 days after adoption of the Order, unless otherwise specified in this Order. Prior to 365 days after adoption of the Order, each Copermittee shall at a minimum implement its Jurisdictional URMP document, as the document was developed and amended to comply with the requirements of Order No. 2001-01.

Each Copermittee shall develop and implement an updated Jurisdictional Urban Runoff Management Program for its jurisdiction. Each updated Jurisdictional Urban Runoff Management Program shall meet the requirements of section D of this Order, reduce the discharge of pollutants from the MS4 to the MEP, and prevent urban runoff discharges from the MS4 from causing or contributing to a violation of water quality standards.

## 1. Development Planning Component

Each Copermittee shall implement a program which meets the requirements of this section and (1) reduces Development Project discharges of pollutants from the MS4 to the MEP, (2) prevents Development Project discharges from the MS4 from causing or contributing to a violation of water quality standards, and (3) manages increases in runoff discharge rates and durations from Development Projects that are likely to cause increased erosion of stream beds and banks, silt pollutant generation, or other impacts to beneficial uses and stream habitat due to increased erosive force.

### a. GENERAL PLAN

Each Copermittee shall revise as needed its General Plan or equivalent plan (e.g., Comprehensive, Master, or Community Plan) for the purpose of providing effective water quality and watershed protection principles and policies that direct land-use decisions and require implementation of consistent water quality protection measures for Development Projects.

### b. ENVIRONMENTAL REVIEW PROCESS

Each Copermittee shall revise as needed their current environmental review processes to accurately evaluate water quality impacts and cumulative impacts and identify appropriate measures to avoid, minimize and mitigate those impacts for all Development Projects.

### c. APPROVAL PROCESS CRITERIA AND REQUIREMENTS FOR ALL DEVELOPMENT PROJECTS

For all proposed Development Projects, each Copermittee during the planning process and prior to project approval and issuance of local permits shall prescribe the necessary requirements so that Development Project discharges of pollutants from the MS4 will be reduced to the MEP, will not cause or contribute to a violation of water quality standards, and will comply with Copermittee's ordinances, permits, plans, and requirements, and with this Order. The requirements shall include, but not be limited to, implementation by the project proponent of the following:

- (1) Source control BMPs that reduce storm water pollutants of concern in urban runoff, including storm drain system stenciling and signage, properly designed outdoor material storage areas, properly designed trash storage areas, and implementation of efficient irrigation systems;
- (2) LID BMPs where feasible which maximize infiltration, provide retention, slow runoff, minimize impervious footprint, direct runoff from impervious areas into landscaping, and construct impervious surfaces to minimum widths necessary;
- (3) Buffer zones for natural water bodies, where feasible. Where buffer zones are infeasible, require project proponent to implement other buffers such as trees, access restrictions, etc., where feasible;
- (4) Measures necessary so that grading or other construction activities meet the provisions specified in section D.2 of this Order; and
- (5) Submittal of proof of a mechanism under which ongoing long-term maintenance of all structural post-construction BMPs will be conducted.

d. STANDARD URBAN STORM WATER MITIGATION PLANS (SUSMPs) – APPROVAL PROCESS CRITERIA AND REQUIREMENTS FOR PRIORITY DEVELOPMENT PROJECTS

Each Copermittee shall implement an updated local SUSMP which meets the requirements of section D.1.d of this Order and (1) reduces Priority Development Project discharges of pollutants from the MS4 to the MEP, (2) prevents Priority Development Project runoff discharges from the MS4 from causing or contributing to a violation of water quality standards, and (3) manages increases in runoff discharge rates and durations from Priority Development Projects that are likely to cause increased erosion of stream beds and banks, silt pollutant generation, or other impacts to beneficial uses and stream habitat due to increased erosive force.<sup>3</sup>

(1) Definition of Priority Development Project

- (a) Priority Development Projects are: a) all new Development Projects that fall under the project categories or locations listed in section D.1.d.(2), and b) those redevelopment projects that create, add or replace at least 5,000 square feet of impervious surfaces on an already developed site that falls under the project categories or locations listed in section D.1.d.(2). 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 SUSMP requirements, the numeric sizing criteria discussed in section D.1.d.(6)(c) applies only to the addition, and not to the entire development. Where redevelopment results in an increase of more than fifty percent of the impervious surfaces of a previously existing development, the numeric sizing criteria applies to the entire development. Where a new Development Project feature, such as a parking lot, falls into a Priority Development Project Category, the entire project footprint is subject to SUSMP requirements.
- (b) In addition to the Priority Development Project Categories identified in section D.1.d.(2), within three years of adoption of this Order Priority Development Projects shall also include all other pollutant generating Development Projects that result in the disturbance of one acre or more of land.<sup>4</sup> As an alternative to this one acre threshold, the Copermittees may collectively identify a different threshold, provided the Copermittees' threshold is at least as inclusive of Development Projects as the one acre threshold.

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<sup>3</sup> Updated SUSMP and hydromodification requirements shall apply to all priority projects or phases of priority projects which have not yet begun grading or construction activities at the time any updated SUSMP or hydromodification requirement commences. If a Copermittee determines that lawful prior approval of a project exists, whereby application of an updated SUSMP or hydromodification requirement to the project is infeasible, the updated SUSMP or hydromodification requirement need not apply to the project. Where feasible, the Copermittees shall utilize the SUSMP and hydromodification update periods to ensure that projects undergoing approval processes include application of the updated SUSMP and hydromodification requirements in their plans.

<sup>4</sup> Pollutant generating Development Projects are those projects that generate pollutants at levels greater than background levels.

(2) Priority Development Project Categories

- (a) Housing subdivisions of 10 or more dwelling units. This category includes single-family homes, multi-family homes, condominiums, and apartments.
- (b) Commercial developments greater than one acre. This category is defined as any development on private land that is not for heavy industrial or residential uses where the land area for development is greater than one acre. The category includes, but is not limited to: hospitals; laboratories and other medical facilities; educational institutions; recreational facilities; municipal facilities; commercial nurseries; multi-apartment buildings; car wash facilities; mini-malls and other business complexes; shopping malls; hotels; office buildings; public warehouses; automotive dealerships; airfields; and other light industrial facilities.
- (c) Developments of heavy industry greater than one acre. This category includes, but is not limited to, manufacturing plants, food processing plants, metal working facilities, printing plants, and fleet storage areas (bus, truck, etc.).
- (d) Automotive repair shops. This category is defined as a facility that is categorized in any one of the following Standard Industrial Classification (SIC) codes: 5013, 5014, 5541, 7532-7534, or 7536-7539.
- (e) Restaurants. This category is defined as a facility that sells prepared foods and drinks for consumption, including stationary lunch counters and refreshment stands selling prepared foods and drinks for immediate consumption (SIC code 5812), where the land area for development is greater than 5,000 square feet. Restaurants where land development is less than 5,000 square feet shall meet all SUSMP requirements except for structural treatment BMP and numeric sizing criteria requirement D.1.d.(6)(c) and hydromodification requirement D.1.g.
- (f) All hillside development greater than 5,000 square feet. This category is defined as any development which creates 5,000 square feet of impervious surface which is located in an area with known erosive soil conditions, where the development will grade on any natural slope that is twenty-five percent or greater.
- (g) Environmentally Sensitive Areas (ESAs). All development located within or directly adjacent to or discharging directly to an ESA (where discharges from the development or redevelopment will enter receiving waters within the ESA), which either creates 2,500 square feet of impervious surface on a proposed project site or increases the area of imperviousness of a proposed project site to 10% or more of its naturally occurring condition. "Directly adjacent" means situated within 200 feet of the ESA. "Discharging directly to" means outflow from a drainage conveyance system that is composed entirely of flows from the subject development or redevelopment site, and not commingled with flows from adjacent lands.
- (h) Parking lots 5,000 square feet or more or with 15 or more parking spaces and potentially exposed to urban runoff. Parking lot is defined as a land area or facility for the temporary parking or storage of motor vehicles used personally, for business, or for commerce.
- (i) Street, roads, highways, and freeways. This category includes any paved surface that is 5,000 square feet or greater used for the transportation of automobiles, trucks, motorcycles, and other vehicles.
- (j) Retail Gasoline Outlets (RGOs). This category includes RGOs that meet the following criteria: (a) 5,000 square feet or more or (b) a projected Average

Daily Traffic (ADT) of 100 or more vehicles per day.

(3) Pollutants of Concern

As part of its local SUSMP, each Copermittee shall develop and implement a procedure for pollutants of concern to be identified for each Priority Development Project. The procedure shall address, at a minimum: (1) Receiving water quality (including pollutants for which receiving waters are listed as impaired under CWA section 303(d)); (2) Land use type of the Development Project and pollutants associated with that land use type; and (3) Pollutants expected to be present on site.

(4) Low Impact Development (LID) BMP Requirements

Each Copermittee shall require each Priority Development Project to implement LID BMPs which will collectively minimize directly connected impervious areas and promote infiltration at Priority Development Projects:

- (a) The following LID site design BMPs shall be implemented at all Priority Development Projects as required below:
- i. For Priority Development Projects with landscaped or other pervious areas, drain a portion of impervious areas (rooftops, parking lots, sidewalks, walkways, patios, etc) into pervious areas prior to discharge to the MS4. The amount of runoff from impervious areas that is to drain to pervious areas shall correspond with the total capacity of the project's pervious areas to infiltrate or treat runoff, taking into consideration the pervious areas' soil conditions, slope, and other pertinent factors.
  - ii. For Priority Development Projects with landscaped or other pervious areas, properly design and construct the pervious areas to effectively receive and infiltrate or treat runoff from impervious areas, taking into consideration the pervious areas' soil conditions, slope, and other pertinent factors.
  - iii. For Priority Development Projects with low traffic areas and appropriate soil conditions, construct a portion of walkways, trails, overflow parking lots, alleys, or other low-traffic areas with permeable surfaces, such as pervious concrete, porous asphalt, unit pavers, and granular materials.
- (b) The following LID BMPs listed below shall be implemented at all Priority Development Projects where applicable and feasible.
- i. Conserve natural areas, including existing trees, other vegetation, and soils.
  - ii. Construct streets, sidewalks, or parking lot aisles to the minimum widths necessary, provided that public safety and a walkable environment for pedestrians are not compromised.
  - iii. Minimize the impervious footprint of the project.
  - iv. Minimize soil compaction.
  - v. Minimize disturbances to natural drainages (e.g., natural swales, topographic depressions, etc.)

(5) Source Control BMP Requirements

Each Copermittee shall require each Priority Development Project to implement source control BMPs. The source control BMPs to be required shall:

- (a) Minimize storm water pollutants of concern in urban runoff.
- (b) Include storm drain system stenciling or signage.
- (c) Include properly designed outdoor material storage areas.
- (d) Include properly designed trash storage areas.
- (e) Include efficient irrigation systems.
- (f) Include water quality requirements applicable to individual priority project categories.

(6) Treatment Control BMP Requirements<sup>5</sup>

Each Copermittee shall require each Priority Development Project to implement treatment control BMPs which meet the following treatment control BMP requirements:

- (a) Treatment control BMPs for all Priority Development Projects shall mitigate (infiltrate, filter, or treat) the required volume or flow of runoff (identified in section D.1.d.(6)(c)) from all developed portions of the project, including landscaped areas.
- (b) All treatment control BMPs shall be located so as to infiltrate, filter, or treat the required runoff volume or flow prior to its discharge to any waters of the U.S. Multiple Priority Development Projects may use shared treatment control BMPs as long as construction of any shared treatment control BMP is completed prior to the use or occupation of any Priority Development Project from which the treatment control BMP will receive runoff.
- (c) All treatment control BMPs for a single Priority Development Project shall collectively be sized to comply with the following numeric sizing criteria:
  - i. Volume-based treatment control BMPs shall be designed to mitigate (infiltrate, filter, or treat) the volume of runoff produced from a 24-hour 85th percentile storm event, as determined from the County of San Diego's 85th Percentile Precipitation Isopluvial Map; or
  - ii. Flow-based treatment control BMPs shall be designed to mitigate (infiltrate, filter, or treat) either: a) 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 b) the maximum flow rate of runoff produced by the 85th percentile hourly rainfall intensity (for each hour of a storm event), as determined from the local historical rainfall record, multiplied by a factor of two.

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<sup>5</sup> LID BMPs that are correctly designed to effectively infiltrate, filter, or treat runoff can be considered treatment control BMPs.

- (d) All treatment control BMPs for Priority Development Projects shall, at a minimum:
- i. Be ranked with a high or medium pollutant removal efficiency for the project's most significant pollutants of concern, as the pollutant removal efficiencies are identified in the Copermittees' Model SUSMP and the most current updates thereto. Treatment control BMPs with a low removal efficiency ranking shall only be approved by a Copermittee when a feasibility analysis has been conducted which exhibits that implementation of treatment control BMPs with high or medium removal efficiency rankings are infeasible for a Priority Development Project or portion of a Priority Development Project.
  - ii. Be correctly sized and designed so as to remove pollutants to the MEP.
  - iii. Target removal of pollutants of concern from urban runoff.
  - iv. Be implemented close to pollutant sources (where shared BMPs are not proposed), and prior to discharging into waters of the U.S.
  - v. Not be constructed within a receiving water.
  - vi. Include proof of a mechanism, to be provided by the project proponent or Copermittee, under which ongoing long-term maintenance will be conducted.

(7) Update of SUSMP BMP Requirements

The Copermittees shall collectively review and update the BMP requirements that are listed in their local SUSMPs. At a minimum, the update shall include removal of obsolete or ineffective BMPs, addition of LID and source control BMP requirements that meet or exceed the requirements of sections D.1.d.(4) and D.1.d.(5), and addition of LID BMPs that can be used for treatment, such as bioretention cells, bioretention swales, etc. The update shall also add appropriate LID BMPs to any tables or discussions in the local SUSMPs addressing pollutant removal efficiencies of treatment control BMPs. In addition, the update shall include review, and revision where necessary, of treatment control BMP pollutant removal efficiencies.

(8) Update of SUSMPs to Incorporate LID and Other BMP Requirements

- (a) In addition to the implementation of the BMP requirements of sections D.1.d.(4-7) within one year of adoption of this Order, the Copermittees shall also develop and submit an updated Model SUSMP that defines minimum LID and other BMP requirements to be incorporated into the Copermittees' local SUSMPs for application to Priority Development Projects. The purpose of the updated Model SUSMP shall be to establish minimum standards to maximize the use of LID practices and principles in local Copermittee programs as a means of reducing stormwater runoff. It shall meet the following minimum requirements:
- i. Establishment of LID BMP requirements that meet or exceed the minimum requirements listed in section D.1.d.(4) above.
  - ii. Establishment of source control BMP requirements that meet or exceed the minimum requirements listed in section D.1.d.(5) above.
  - iii. Establishment of treatment control BMP requirements that meet or exceed the minimum requirements listed in section D.1.d.(6) above.

- iv. Establishment of siting, design, and maintenance criteria for each LID and treatment control BMP listed in the Model SUSMP, so that implemented LID and treatment control BMPs are constructed correctly and are effective at pollutant removal and/or runoff control. LID techniques, such as soil amendments, shall be incorporated into the criteria for appropriate treatment control BMPs.
  - v. Establishment of criteria to aid in determining Priority Development Project conditions where implementation of each LID BMP listed in section D.1.d.(4)(b) is applicable and feasible.
  - vi. Establishment of a requirement for Priority Development Projects with low traffic areas and appropriate or amendable soil conditions to construct a portion of walkways, trails, overflow parking lots, alleys, or other low-traffic areas with permeable surfaces, such as pervious concrete, porous asphalt, unit pavers, and granular materials.
  - vii. Establishment of restrictions on infiltration of runoff from Priority Development Project categories or Priority Development Project areas that generate high levels of pollutants, if necessary.
- (b) The updated Model SUSMP shall be submitted within 18 months of adoption of this Order. If, within 60 days of submittal of the updated Model SUSMP, the Copermittees have not received in writing from the Regional Board either (1) a finding of adequacy of the updated Model SUSMP or (2) a modified schedule for its review and revision, the updated Model SUSMP shall be deemed adequate, and the Copermittees shall implement its provisions in accordance with section D.1.d.(8)(c) below.
- (c) Within 365 days of Regional Board acceptance of the updated Model SUSMP, each Copermittee shall update its local SUSMP to implement the requirements established pursuant to section D.1.d.(8)(a). In addition to the requirements of section D.1.d.(8)(a), each Copermittee's updated local SUSMP shall include the following:
- i. A requirement that each Priority Development Project use the criteria established pursuant to section D.1.d.(8)(a)v to demonstrate applicability and feasibility, or lack thereof, of implementation of the LID BMPs listed in section D.1.d.(4)(b).
  - ii. A review process which verifies that all BMPs to be implemented will meet the designated siting, design, and maintenance criteria, and that each Priority Development Project is in compliance with all applicable SUSMP requirements.

(9) Implementation Process

As part of its local SUSMP, each Copermittee shall implement a process to verify compliance with SUSMP requirements. The process shall identify at what point in the planning process Priority Development Projects will be required to meet SUSMP requirements. The process shall also include identification of the roles and responsibilities of various municipal departments in implementing the SUSMP requirements, as well as any other measures necessary for the implementation of SUSMP requirements.

(10) Downstream Erosion

As part of its local SUSMP, each Copermittee shall develop and apply criteria to Priority Development Projects so that runoff discharge rates, durations, and velocities from Priority Development Projects are controlled to maintain or reduce downstream erosion conditions and protect stream habitat. Upon adoption of the Hydromodification Management Plan (HMP) by the Regional Board (section D.1.g), individual Copermittee criteria for control of downstream erosion shall be superseded by criteria identified in the HMP.

(11) Waiver Provision

(a) A Copermittee may provide for a project to be waived from the requirement of meeting numeric sizing criteria (sections D.1.d.(6)(c) or D.1.d.(8)(a)iii) if infeasibility can be established. A waiver of infeasibility shall only be granted by a Copermittee when all available BMPs have been considered and rejected as infeasible. Copermittees shall notify the Regional Board within 5 days of each waiver issued and shall include the following information in the notification:

- i. Name of the person granting each waiver;
- ii. Name of developer receiving the waiver;
- iii. Site location;
- iv. Reason for waiver; and
- v. Description of BMPs required.

(b) The Copermittees may collectively or individually develop a program to require project proponents who have received waivers to transfer the savings in cost, as determined by the Copermittee(s), to a storm water mitigation fund. This program may be implemented by all Copermittees that issue waivers. Funds may be used on projects to improve urban runoff quality within the watershed of the waived project. The waiver mitigation program should, at a minimum, identify:

- i. The entity or entities that will manage the storm water mitigation fund (i.e., assume full responsibility for);
- ii. The range and types of acceptable projects for which mitigation funds may be expended;
- iii. The entity or entities that will assume full responsibility for each mitigation project including its successful completion; and
- iv. How the dollar amount of fund contributions will be determined.

(12) Infiltration and Groundwater Protection

To protect groundwater quality, each Copermittee shall apply restrictions to the use of treatment control BMPs that are designed to primarily function as centralized infiltration devices (such as large infiltration trenches and infiltration basins). Such restrictions shall be designed so that the use of such infiltration treatment control BMPs shall not cause or contribute to an exceedance of groundwater quality objectives. At a minimum, each treatment control BMP designed to primarily function as a centralized infiltration device shall meet the restrictions below, unless it is demonstrated that a restriction is not necessary to

protect groundwater quality. The Copermitees may collectively or individually develop alternative restrictions on the use of treatment control BMPs which are designed to primarily function as centralized infiltration devices. Alternative restrictions developed by the Copermitees can partially or wholly replace the restrictions listed below. The restrictions are not intended to be applied to small infiltration systems dispersed throughout a development project.

- (a) Urban runoff shall undergo pretreatment such as sedimentation or filtration prior to infiltration;
- (b) All dry weather flows containing significant pollutant loads shall be diverted from infiltration devices;
- (c) Pollution prevention and source control BMPs shall be implemented at a level appropriate to protect groundwater quality at sites where infiltration treatment control BMPs are to be used;
- (d) Infiltration treatment control BMPs shall be adequately maintained so that they remove pollutants to the MEP;
- (e) The vertical distance from the base of any infiltration treatment control BMP to the seasonal high groundwater mark shall be at least 10 feet. Where groundwater basins do not support beneficial uses, this vertical distance criteria may be reduced, provided groundwater quality is maintained;
- (f) The soil through which infiltration is to occur shall have physical and chemical characteristics (such as appropriate cation exchange capacity, organic content, clay content, and infiltration rate) which are adequate for proper infiltration durations and treatment of urban runoff for the protection of groundwater beneficial uses;
- (g) Infiltration treatment control BMPs shall not be used for areas of industrial or light industrial activity; areas subject to high vehicular traffic (25,000 or greater average daily traffic on main roadway or 15,000 or more average daily traffic on any intersecting roadway); automotive repair shops; car washes; fleet storage areas (bus, truck, etc.); nurseries<sup>6</sup>; and other high threat to water quality land uses and activities as designated by each Permittee; and
- (h) Infiltration treatment control BMPs shall be located a minimum of 100 feet horizontally from any water supply wells.

e. TREATMENT CONTROL BMP MAINTENANCE TRACKING

- (1) Each Copermittee shall develop and utilize a watershed-based database to track and inventory approved treatment control BMPs and treatment control BMP maintenance within its jurisdiction. At a minimum, the database shall include information on treatment control BMP type, location, watershed, date of construction, party responsible for maintenance, maintenance certifications or verifications, inspections, inspection findings, and corrective actions.
- (2) Each Copermittee shall develop and implement a program to verify that approved treatment control BMPs are operating effectively and have been adequately maintained. At a minimum, the program shall include the following:
  - (a) An annual inventory of all approved treatment control BMPs within the Copermittee's jurisdiction. The inventory shall also include all treatment control BMPs approved during the previous permit cycle.

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<sup>6</sup> Except with regard to treated nursery runoff or clean storm water runoff.

- (b) The prioritization of all projects with approved treatment control BMPs into high, medium, and low priority categories. At a minimum, projects with drainage insert treatment control BMPs shall be designated as at least a medium priority. Prioritization of other projects with treatment control BMPs shall include consideration of treatment control BMP size, recommended maintenance frequency, likelihood of operational and maintenance issues, location, receiving water quality, and other pertinent factors.
  - (c) 100% of projects with treatment control BMPs that are high priority shall be inspected by the Copermittee annually. 50% of projects with drainage insert treatment control BMPs shall be inspected by the Copermittee annually. Treatment control BMPs that are low priority shall be inspected as needed. All inspections shall verify effective operation and maintenance of the treatment control BMPs, as well as compliance with all ordinances, permits, and this Order. A minimum of 20% of the total number of projects with approved treatment control BMPs, and a maximum of 200% of the average number of projects with treatment control BMPs approved per year, shall be inspected annually.
  - (d) Requirement of annual verification of effective operation and maintenance of each approved treatment control BMP by the party responsible for the treatment control BMP maintenance.
- (3) Operation and maintenance verifications shall be required prior to each rainy season.
  - (4) Inspections of high priority treatment control BMPs shall be conducted prior to each rainy season.

f. **BMP VERIFICATION**

Prior to occupancy of each Priority Development Project subject to SUSMP requirements, each Copermittee shall inspect the constructed LID, source control, and treatment control BMPs to verify that they have been constructed in compliance with all specifications, plans, permits, ordinances, and this Order. This initial BMP verification inspection does not constitute an operation and maintenance inspection, as required above in section D.1.e.(2)(c).

g. **HYDROMODIFICATION - LIMITATIONS ON INCREASES OF RUNOFF DISCHARGE RATES AND DURATIONS<sup>7</sup>**

Each Copermittee shall collaborate with the other Copermittees to develop and implement a Hydromodification Management Plan (HMP) to manage increases in runoff discharge rates and durations from all Priority Development Projects, where such increased rates and durations are likely to cause increased erosion of channel

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<sup>7</sup> Updated SUSMP and hydromodification requirements shall apply to all priority projects or phases of priority projects which have not yet begun grading or construction activities at the time any updated SUSMP or hydromodification requirement commences. If a Copermittee determines that lawful prior approval of a project exists, whereby application of an updated SUSMP or hydromodification requirement to the project is infeasible, the updated SUSMP or hydromodification requirement need not apply to the project. Where feasible, the Copermittees shall utilize the SUSMP and hydromodification update periods to ensure that projects undergoing approval processes include application of the updated SUSMP and hydromodification requirements in their plans.

beds and banks, sediment pollutant generation, or other impacts to beneficial uses and stream habitat due to increased erosive force. The HMP, once approved by the Regional Board, shall be incorporated into the local SUSMP and implemented by each Copermittee so that post-project runoff discharge rates and durations shall not exceed estimated pre-project discharge rates and durations where the increased discharge rates and durations will result in increased potential for erosion or other significant adverse impacts to beneficial uses, attributable to changes in the discharge rates and durations.

(1) The HMP shall:

- (a) Identify a standard for channel segments which receive urban runoff discharges from Priority Development Projects. The channel standard shall maintain the pre-project erosion and deposition characteristics of channel segments receiving urban runoff discharges from Priority Development Projects as necessary to maintain or improve the channel segments' stability conditions.
- (b) Utilize continuous simulation of the entire rainfall record to identify a range of runoff flows<sup>8</sup> for which Priority Development Project post-project runoff flow rates and durations shall not exceed pre-project runoff flow rates and durations, where the increased flow rates and durations will result in increased potential for erosion or other significant adverse impacts to beneficial uses, attributable to changes in the flow rates and durations. The lower boundary of the range of runoff flows identified shall correspond with the critical channel flow that produces the critical shear stress that initiates channel bed movement or that erodes the toe of channel banks. The identified range of runoff flows may be different for specific watersheds, channels, or channel reaches.
- (c) Require Priority Development Projects to implement hydrologic control measures so that Priority Development Projects' post-project runoff flow rates and durations (1) do not exceed pre-project runoff flow rates and durations for the range of runoff flows identified under section D.1.g.(1)(b), where the increased flow rates and durations will result in increased potential for erosion or other significant adverse impacts to beneficial uses, attributable to changes in the flow rates and durations, and (2) do not result in channel conditions which do not meet the channel standard developed under section D.1.g.(1)(a) for channel segments downstream of Priority Development Project discharge points.
- (d) Include other performance criteria (numeric or otherwise) for Priority Development Projects as necessary to prevent urban runoff from the projects from increasing erosion of channel beds and banks, silt pollutant generation, or other impacts to beneficial uses and stream habitat due to increased erosive force.
- (e) Include a review of pertinent literature.
- (f) Include a protocol to evaluate potential hydrograph change impacts to downstream watercourses from Priority Development Projects.
- (g) Include a description of how the Copermittees will incorporate the HMP requirements into their local approval processes.

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<sup>8</sup> The identified range of runoff flows to be controlled should be expressed in terms of peak flow rates of rainfall events, such as "10% of the pre-project 2-year peak flow up to the pre-project 10-year peak flow."

- (h) Include criteria on selection and design of management practices and measures (such as detention, retention, and infiltration) to control flow rates and durations and address potential hydromodification impacts.
  - (i) Include technical information supporting any standards and criteria proposed.
  - (j) Include a description of inspections and maintenance to be conducted for management practices and measures to control flow rates and durations and address potential hydromodification impacts.
  - (k) Include a description of pre- and post-project monitoring and other program evaluations to be conducted to assess the effectiveness of implementation of the HMP.
  - (l) Include mechanisms for addressing cumulative impacts within a watershed on channel morphology.
  - (m) Include information on evaluation of channel form and condition, including slope, discharge, vegetation, underlying geology, and other information, as appropriate.
- (2) The HMP may include implementation of planning measures (e.g., buffers and restoration activities, including revegetation, use of less-impacting facilities at the point(s) of discharge, etc.) to allow expected changes in stream channel cross sections, vegetation, and discharge rates, velocities, and/or durations without adverse impacts to channel beneficial uses. Such measures shall not include utilization of non-naturally occurring hardscape materials such as concrete, riprap, gabions, etc.
- (3) Section D.1.g.(1)(c) does not apply to Development Projects where the project discharges stormwater runoff into channels or storm drains where the pre-existing channel or storm drain conditions result in minimal potential for erosion or other impacts to beneficial uses. Such situations may include discharges into channels that are concrete-lined or significantly hardened (e.g., with rip-rap, sackrete, etc.) downstream to their outfall in bays or the ocean; underground storm drains discharging to bays or the ocean; and construction of projects where the sub-watersheds below the projects' discharge points are highly impervious (e.g., >70%) and the potential for single-project and/or cumulative impacts is minimal. Specific criteria for identification of such situations shall be included as a part of the HMP. However, plans to restore a channel reach may re-introduce the applicability of HMP controls, and would need to be addressed in the HMP.

(4) HMP Reporting

The Copermittees shall collaborate to report on HMP development as required in section J.2.a of this Order.

(5) HMP Implementation

180 days after approval of the HMP by the Regional Board, each Copermittee shall incorporate into its local SUSMP and implement the HMP for all applicable Priority Development Projects. Prior to approval of the HMP by the Regional Board, the early implementation of measures likely to be included in the HMP shall be encouraged by the Copermittees.

(6) Interim Hydromodification Criteria for Projects Disturbing 50 Acres or More

Within 365 days of adoption of this Order, the Copermittees shall collectively identify an interim range of runoff flow rates for which Priority Development Project post-project runoff flow rates and durations shall not exceed pre-project runoff flow rates and durations (Interim Hydromodification Criteria), where the increased discharge flow rates and durations will result in increased potential for erosion or other significant adverse impacts to beneficial uses, attributable to changes in flow rates and durations. Development of the Interim Hydromodification Criteria shall include identification of methods to be used by Priority Development Projects to exhibit compliance with the criteria, including continuous simulation of the entire rainfall record. Starting 365 days after adoption of this Order and until the final Hydromodification Management Plan standard and criteria are implemented, each Copermittee shall require Priority Development Projects disturbing 50 acres or more to implement hydrologic controls to manage post-project runoff flow rates and durations as required by the Interim Hydromodification Criteria. Development Projects disturbing 50 acres or more are exempt from this requirement when:

- (a) The project would discharge into channels that are concrete-lined or significantly hardened (e.g., with rip-rap, sackcrete, etc.) downstream to their outfall in bays or the ocean;
- (b) The project would discharge into underground storm drains discharging directly to bays or the ocean; or
- (c) The project would discharge to a channel where the watershed areas below the project's discharge points are highly impervious (e.g. >70%).

## h. ENFORCEMENT OF DEVELOPMENT SITES

Each Copermittee shall enforce its storm water ordinance for all Development Projects and at all development sites as necessary to maintain compliance with this Order. Copermittee ordinances or other regulatory mechanisms shall include appropriate sanctions to achieve compliance. Sanctions shall include the following or their equivalent: Non-monetary penalties, fines, bonding requirements, and/or permit or occupancy denials for non-compliance.

**2. Construction Component**

Each Copermittee shall implement a construction program which meets the requirements of this section, reduces construction site discharges of pollutants from the MS4 to the MEP, and prevents construction site discharges from the MS4 from causing or contributing to a violation of water quality standards.

## a. ORDINANCE UPDATE AND APPROVAL PROCESS

- (1) Within 365 days of adoption of this Order, each Copermittee shall review and update its grading ordinances and other ordinances as necessary to achieve full compliance with this Order, including requirements for the implementation of all designated BMPs and other measures.
- (2) Prior to approval and issuance of local construction and grading permits, each Copermittee shall:

- (a) Require all individual proposed construction sites to implement designated BMPs and other measures so that pollutants discharged from the site will be reduced to the maximum extent practicable and will not cause or contribute to a violation of water quality standards.
- (b) Prior to permit issuance, require and review the project proponent's storm water management plan to verify compliance with their grading ordinance, other ordinances, and this Order.
- (c) Verify that project proponents subject to California's statewide General NPDES Permit for Storm Water Discharges Associated With Construction Activities, (hereinafter General Construction Permit), have existing coverage under the General Construction Permit.

b. SOURCE IDENTIFICATION

Each Copermittee shall maintain and update monthly a watershed based inventory of all construction sites within its jurisdiction. The use of an automated database system, such as Geographical Information System (GIS) is highly recommended.

c. BMP IMPLEMENTATION

- (1) Each Copermittee shall designate a minimum set of BMPs and other measures to be implemented at construction sites. The designated minimum set of BMPs shall include, at a minimum:

(a) General Site Management

- i. Pollution prevention, where appropriate.
- ii. Development and implementation of a storm water management plan.
- iii. Minimization of areas that are cleared and graded to only the portion of the site that is necessary for construction;
- iv. Minimization of exposure time of disturbed soil areas;
- v. Minimization of grading during the wet season and correlation of grading with seasonal dry weather periods to the extent feasible.
- vi. Limitation of grading to a maximum disturbed area as determined by each Copermittee before either temporary or permanent erosion controls are implemented to prevent storm water pollution. The Copermittee has the option of temporarily increasing the size of disturbed soil areas by a set amount beyond the maximum, if the individual site is in compliance with applicable storm water regulations and the site has adequate control practices implemented to prevent storm water pollution.
- vii. Temporary stabilization and reseeded of disturbed soil areas as rapidly as feasible;
- viii. Preservation of natural hydrologic features where feasible;
- ix. Preservation of riparian buffers and corridors where feasible;
- x. Maintenance of all BMPs, until removed; and
- xi. Retention, reduction, and proper management of all pollutant discharges on site to the MEP standard.

(b) Erosion and Sediment Controls

- i. Erosion prevention, to be used as the most important measure for keeping sediment on site during construction, but never as the single method;
- ii. Sediment controls, to be used as a supplement to erosion prevention for keeping sediment on-site during construction;
- iii. Slope stabilization on all inactive slopes during the rainy season and during rain events in the dry season;
- iv. Slope stabilization on all active slopes during rain events regardless of the season; and
- v. Permanent revegetation or landscaping as early as feasible.

(2) Each Copermittee shall require implementation of advanced treatment for sediment at construction sites that are determined by the Copermittee to be an exceptional threat to water quality. In evaluating the threat to water quality, the following factors shall be considered by the Copermittee:

- (a) Soil erosion potential or soil type;
- (b) The site's slopes;
- (c) Project size and type;
- (d) Sensitivity of receiving water bodies;
- (e) Proximity to receiving water bodies;
- (f) Non-storm water discharges;
- (g) Ineffectiveness of other BMPs; and
- (h) Any other relevant factors.

(3) Each Copermittee shall implement, or require the implementation of, the designated minimum BMPs and any additional measures necessary to comply with this Order at each construction site within its jurisdiction year round. However, BMP implementation requirements can vary based on wet and dry seasons. Dry season BMP implementation must plan for and address rain events that may occur during the dry season.

(4) Each Copermittee shall implement, or require implementation of, additional controls for construction sites tributary to CWA section 303(d) water body segments impaired for sediment as necessary to comply with this Order. Each Copermittee shall implement, or require implementation of, additional controls for construction sites within or adjacent to or discharging directly to coastal lagoons or other receiving waters within environmentally sensitive areas (as defined in section Attachment C of this Order) as necessary to comply with this Order.

d. INSPECTION OF CONSTRUCTION SITES

Each Copermittee shall conduct construction site inspections for compliance with its local ordinances (grading, storm water, etc.), permits (construction, grading, etc.), and this Order.

(1) During the wet season, each Copermittee shall inspect at least biweekly (every two weeks), all construction sites within its jurisdiction meeting the following

criteria:

- (a) All sites 50 acres or more in size and grading will occur during the wet season;
  - (b) All sites 1 acre or more, and tributary to a CWA section 303(d) water body segment impaired for sediment or within or directly adjacent to or discharging directly to a receiving water within an ESA; and
  - (c) Other sites determined by the Copermittees or the Regional Board as a significant threat to water quality. In evaluating threat to water quality, the following factors shall be considered:
    - i. soil erosion potential;
    - ii. site slope;
    - iii. project size and type;
    - iv. sensitivity of receiving water bodies;
    - v. proximity to receiving water bodies;
    - vi. non-storm water discharges;
    - vii. past record of non-compliance by the operators of the construction site; and
    - viii. any other relevant factors.
- (2) During the wet season, each Copermittee shall inspect at least monthly, all construction sites with one acre or more of soil disturbance not meeting the criteria specified above in section D.2.c.(1).
  - (3) During the wet season, each Copermittee shall inspect as needed, construction sites less than 1 acre in size.
  - (4) Each Copermittee shall inspect all construction sites as needed during the dry season.
  - (5) Based upon site inspection findings, each Copermittee shall implement all follow-up actions (i.e., reinspection, enforcement) necessary to comply with this Order.
  - (6) Inspections of construction sites shall include, but not be limited to:
    - (a) Check for coverage under the General Construction Permit (Notice of Intent (NOI) and/or Waste Discharge Identification No.) during initial inspections;
    - (b) Assessment of compliance with Permittee ordinances and permits related to urban runoff, including the implementation and maintenance of designated minimum BMPs;
    - (c) Assessment of BMP effectiveness;
    - (d) Visual observations for non-storm water discharges, potential illicit connections, and potential discharge of pollutants in storm water runoff;
    - (e) Education and outreach on storm water pollution prevention, as needed; and
    - (f) Creation of a written or electronic inspection report.
  - (7) The Copermittees shall track the number of inspections for the inventoried construction sites throughout the reporting period to verify that the sites are inspected at the minimum frequencies required.

e. ENFORCEMENT OF CONSTRUCTION SITES

Each Copermittee shall develop and implement an escalating enforcement process that achieves prompt corrective actions at construction sites for violations of the Copermittee's water quality protection permit requirements and ordinances. This enforcement process shall include authorizing the Copermittee's construction site inspectors to take immediate enforcement actions when appropriate and necessary. The enforcement process shall include appropriate sanctions such as stop work orders, non-monetary penalties, fines, bonding requirements, and/or permit denials for non-compliance.

f. REPORTING OF NON-COMPLIANT SITES

In addition to the notification requirements in section 5(e) of Attachment B, each Copermittee shall notify the Regional Board when the Copermittee issues a stop work order or other high level enforcement to a construction site in their jurisdiction as a result of storm water violations.

### 3. Existing Development Component

a. MUNICIPAL

Each Copermittee shall implement a municipal program which meets the requirements of this section, reduces municipal discharges of pollutants from the MS4 to the MEP, and prevents municipal discharges from the MS4 from causing or contributing to a violation of water quality standards.

(1) Source Identification

Each Copermittee shall annually update a watershed based inventory of municipal areas and activities. The inventory shall include the name, address (if applicable), and a description of the area/activity, which pollutants are potentially generated by the area/activity, and identification of whether the area/activity is tributary to a CWA section 303(d) water body segment and generates pollutants for which the water body segment is impaired. The use of an automated database system, such as Geographical Information System (GIS) is highly recommended when applicable, but not required.

(2) BMP Implementation

- (a) Each Copermittee shall implement pollution prevention methods in its municipal program and shall require their use by appropriate municipal departments and personnel, where appropriate.
- (b) Each Copermittee shall designate a minimum set of BMPs for all municipal areas and activities. The designated minimum BMPs for municipal areas and activities shall be area or activity specific as appropriate.
- (c) Each Copermittee shall implement, or require the implementation of, the designated minimum BMPs and any additional measures necessary to comply with this Order for each municipal area or activity within its

jurisdiction.

- (d) Each Copermittee shall evaluate existing flood control devices to determine if retrofitting the device to provide additional pollutant removal from urban runoff is feasible. When conducting flood control device retrofit projects, each Copermittee shall incorporate permanent pollutant removal measures into the projects, where feasible.
  - (e) Each Copermittee shall implement, or require implementation of, any additional controls for municipal areas and activities tributary to CWA section 303(d) impaired water body segments (where an area or activity generates pollutants for which the water body segment is impaired) as necessary to comply with this Order. Each Copermittee shall implement, or require implementation of, additional controls for municipal areas and activities within or directly adjacent to or discharging directly to coastal lagoons or other receiving waters within environmentally sensitive areas (as defined in Attachment C of this Order) as necessary to comply with this Order.
  - (f) Each Copermittee shall implement, or require implementation of, additional controls for special events within their jurisdiction that are expected to generate significant trash and litter. Controls to consider shall include:
    - i. Temporary screens on catch basins and storm drain inlets;
    - ii. Temporary fencing to prevent windblown trash from entering adjacent water bodies and MS4 channels;
    - iii. Proper management of trash and litter;
    - iv. Catch basin cleaning following the special event and prior to an anticipated rain event;
    - v. Street sweeping of roads, streets, highways and parking facilities following the special event; and
    - vi. Other equivalent controls.
- (3) Operation and Maintenance of Municipal Separate Storm Sewer System and Structural Controls
- (a) Each Copermittee shall implement a schedule of inspection and maintenance activities to verify proper operation of all municipal structural treatment controls designed to reduce pollutant discharges to or from its MS4s and related drainage structures.
  - (b) Each Copermittee shall implement a schedule of maintenance activities for the MS4 and MS4 facilities (catch basins, storm drain inlets, open channels, etc). The maintenance activities shall, at a minimum, include:
    - i. Inspection at least once a year between May 1 and September 30 of each year for all MS4 facilities that receive or collect high volumes of trash and debris. All other MS4 facilities shall be inspected at least annually throughout the year.
    - ii. Following two years of inspections, any MS4 facility that requires inspection and cleaning less than annually may be inspected as needed, but not less than every other year.

- iii. Any catch basin or storm drain inlet that has accumulated trash and debris greater than 33% of design capacity shall be cleaned in a timely manner. Any MS4 facility that is designed to be self cleaning shall be cleaned of any accumulated trash and debris immediately. Open channels shall be cleaned of observed anthropogenic litter in a timely manner.
- iv. Record keeping of the maintenance and cleaning activities including the overall quantity of waste removed.
- v. Proper disposal of waste removed pursuant to applicable laws.
- vi. Measures to eliminate waste discharges during MS4 maintenance and cleaning activities.

(4) Management of Pesticides, Herbicides, and Fertilizers

The Copermittees shall implement BMPs to reduce the contribution of pollutants associated with the application, storage, and disposal of pesticides, herbicides and fertilizers from municipal areas and activities to MS4s. Important municipal areas and activities include municipal facilities, public rights-of-way, parks, recreational facilities, golf courses, cemeteries, botanical or zoological gardens and exhibits, landscaped areas, etc.

Such BMPs shall include, at a minimum: (1) educational activities, permits, certifications and other measures for municipal applicators and distributors; (2) integrated pest management measures that rely on non-chemical solutions; (3) the use of native vegetation; (4) schedules for irrigation and chemical application; and (5) the collection and proper disposal of unused pesticides, herbicides, and fertilizers.

(5) Sweeping of Municipal Areas

Each Copermittee shall implement a program to sweep improved (possessing a curb and gutter) municipal roads, streets, highways, and parking facilities. The program shall include the following measures:

- (a) Roads, streets, highways, and parking facilities identified as consistently generating the highest volumes of trash and/or debris shall be swept at least two times per month.
- (b) Roads, streets, highways, and parking facilities identified as consistently generating moderate volumes of trash and/or debris shall be swept at least monthly.
- (c) Roads, streets, highways, and parking facilities identified as generating low volumes of trash and/or debris shall be swept as necessary, but no less than once per year.

(6) Infiltration From Sanitary Sewer to MS4/Provide Preventive Maintenance of Both

Each Copermittee shall implement controls and measures to prevent and eliminate infiltration of seepage from municipal sanitary sewers to MS4s through thorough, routine preventive maintenance of the MS4. Each Copermittee that

operates both a municipal sanitary sewer system and a MS4 shall implement controls and measures to prevent and eliminate infiltration of seepage from the municipal sanitary sewers to the MS4s that shall include overall sanitary sewer and MS4 surveys and thorough, routine preventive maintenance of both.

(7) Inspection of Municipal Areas and Activities

- (a) At a minimum, each Copermittee shall inspect the following high priority municipal areas and activities annually:
- i. Roads, Streets, Highways, and Parking Facilities.
  - ii. Flood Management Projects and Flood Control Devices.
  - iii. Areas and activities tributary to a C WA section 303(d) impaired water body segment, where an area or activity generates pollutants for which the water body segment is impaired. Areas and activities within or adjacent to or discharging directly to coastal lagoons or other receiving waters within environmentally sensitive areas (as defined in Attachment C of this Order).
  - iv. Municipal Facilities.
    - [1] Active or closed municipal landfills;
    - [2] Publicly owned treatment works (including water and wastewater treatment plants) and sanitary sewage collection systems;
    - [3] Solid waste transfer facilities;
    - [4] Land application sites;
    - [5] Corporate yards including maintenance and storage yards for materials, waste, equipment and vehicles; and
    - [6] Household hazardous waste collection facilities.
  - v. Municipal airfields.
  - vi. Parks and recreation facilities.
  - vii. Special event venues following special events (festivals, sporting events, etc.)
  - viii. Power washing.
  - ix. Other municipal areas and activities that the Copermittee determines may contribute a significant pollutant load to the MS4.
- (b) Other municipal areas and activities shall be inspected as needed.
- (c) Based upon site inspection findings, each Copermittee shall implement all follow-up actions necessary to comply with this Order.

(8) Enforcement of Municipal Areas and Activities

Each Copermittee shall enforce its storm water ordinance for all municipal areas and activities as necessary to maintain compliance with this Order.

b. INDUSTRIAL AND COMMERCIAL

Each Copermittee shall implement an industrial and commercial program which meets the requirements of this section, reduces industrial and commercial discharges of pollutants from the MS4 to the MEP, and prevents industrial and commercial discharges from the MS4 from causing or contributing to a violation of water quality standards.

(1) Source Identification

Each Copermittee shall annually update a watershed-based inventory of all industrial and commercial sites/sources within its jurisdiction (regardless of ownership) that could contribute a significant pollutant load to the MS4. The inventory shall include the following minimum information for each industrial and commercial site/source: name; address; pollutants potentially generated by the site/source (and identification of whether the site/source is tributary to a Clean Water Act section 303(d) water body segment and generates pollutants for which the water body segment is impaired); and a narrative description including SIC codes which best reflects the principal products or services provided by each facility. The use of an automated database system, such as Geographical Information System (GIS) is highly recommended.

At a minimum, the following sites/sources shall be included in the inventory:

(a) Commercial Sites/Sources:

- i. Automobile repair, maintenance, fueling, or cleaning;
- ii. Airplane repair, maintenance, fueling, or cleaning;
- iii. Boat repair, maintenance, fueling, or cleaning;
- iv. Equipment repair, maintenance, fueling, or cleaning;
- v. Automobile and other vehicle body repair or painting;
- vi. Mobile automobile or other vehicle washing;
- vii. Automobile (or other vehicle) parking lots and storage facilities;
- viii. Retail or wholesale fueling;
- ix. Pest control services;
- x. Eating or drinking establishments, including food markets;
- xi. Mobile carpet, drape or furniture cleaning;
- xii. Cement mixing or cutting;
- xiii. Masonry;
- xiv. Painting and coating;
- xv. Botanical or zoological gardens and exhibits;
- xvi. Landscaping;
- xvii. Nurseries and greenhouses;
- xviii. Golf courses, parks and other recreational areas/facilities;
- xix. Cemeteries;
- xx. Pool and fountain cleaning;
- xxi. Marinas;
- xxii. Portable sanitary services;
- xxiii. Building material retailers and storage;
- xxiv. Animal facilities; and
- xxv. Power washing services.

(b) Industrial Sites/Sources:

- i. Industrial Facilities, as defined at 40 CFR § 122.26(b)(14), including those subject to the General Industrial Permit or other individual NPDES permit;
- ii. Operating and closed landfills;
- iii. Facilities subject to SARA Title III; and

iv. Hazardous waste treatment, disposal, storage and recovery facilities.

- (c) All other commercial or industrial sites/sources tributary to a CWA Section 303(d) impaired water body segment, where the site/source generates pollutants for which the water body segment is impaired. All other commercial or industrial sites/sources within or directly adjacent to or discharging directly to coastal lagoons or other receiving waters within environmentally sensitive areas (as defined in Attachment C of this Order).
- (d) All other commercial or industrial sites/sources that the Copermittee determines may contribute a significant pollutant load to the MS4.

(2) BMP Implementation

- (a) Each Copermittee shall require the use of pollution prevention methods by industrial and commercial sites/sources, where appropriate.
- (b) Each Copermittee shall designate a minimum set of BMPs for all industrial and commercial sites/sources. The designated minimum BMPs shall be specific to facility types and pollutant generating activities, as appropriate.
- (c) Within the first three years of implementation of the updated Jurisdictional Urban Runoff Management Program, each Copermittee shall notify the owner/operator of each inventoried industrial and commercial site/source of the BMP requirements applicable to the site/source.
- (d) Each Copermittee shall implement, or require the implementation of, the designated minimum BMPs and any additional measures necessary to comply with this Order at each industrial and commercial site/source within its jurisdiction.
- (e) Each Copermittee shall implement, or require implementation of, additional controls for industrial and commercial sites/sources tributary to CWA section 303(d) impaired water body segments (where a site/source generates pollutants for which the water body segment is impaired) as necessary to comply with this Order. Each Copermittee shall implement, or require implementation of, additional controls for industrial and commercial sites/sources within or directly adjacent to or discharging directly to coastal lagoons or other receiving waters within environmentally sensitive areas (as defined in Attachment C of this Order) as necessary to comply with this Order.

(3) Inspection of Industrial and Commercial Sites/Sources

- (a) Each Copermittee shall conduct industrial and commercial site inspections for compliance with its ordinances, permits, and this Order. Inspections shall include but not be limited to:
- i. Review of BMP implementation plans, if the site uses or is required to use such a plan;
  - ii. Review of facility monitoring data, if the site monitors its runoff;

- iii. Check for coverage under the General Industrial Permit (Notice of Intent (NOI) and/or Waste Discharge Identification No.), if applicable;
  - iv. Assessment of compliance with Copermittee ordinances and permits related to urban runoff;
  - v. Assessment of BMP implementation, maintenance and effectiveness;
  - vi. Visual observations for non-storm water discharges, potential illicit connections, and potential discharge of pollutants in storm water runoff; and
  - vii. Education and training on storm water pollution prevention, as conditions warrant.
- (b) At a minimum, 50% of all sites (excluding mobile sources) determined to pose a high threat to water quality shall be inspected in the first year of implementation of the updated Jurisdictional Urban Runoff Management Program, regardless of whether this exceeds the number of inspections required in section D.3.b.(3)(c). This requirement shall increase to 100% of the sites in the second year, and 100% annually thereafter. In any year that the total number of required inspection per section D.3.b.(3)(c) exceeds the number of high threat to water quality sites, all high threat to water quality sites shall be inspected. In evaluating threat to water quality, each Copermittee shall address, at a minimum, the following:
- i. Type of activity (SIC code);
  - ii. Materials used at the facility;
  - iii. Wastes generated;
  - iv. Pollutant discharge potential;
  - v. Non-storm water discharges;
  - vi. Size of facility;
  - vii. Proximity to receiving water bodies;
  - viii. Sensitivity of receiving water bodies;
  - ix. Whether the facility is subject to the General Industrial Permit or an individual NPDES permit;
  - x. Whether the facility has filed a No Exposure Certification/Notice of Non-Applicability;
  - xi. Facility design;
  - xii. Total area of the site, area of the site where industrial or commercial activities occur, and area of the site exposed to rainfall and runoff;
  - xiii. The facility's compliance history; and
  - xiv. Any other relevant factors.
- (c) At a minimum, 20% of the sites inventoried as required in section D.3.b.(1) above (excluding mobile sources) shall be inspected in the first year of implementation of the updated Jurisdictional Urban Runoff Management Program. This requirement shall increase to 25% of the sites in the second year, and 25% annually thereafter.
- (d) Each Copermittee may develop and implement a third party inspection program for verifying industrial and commercial site/source compliance with its ordinances, permits, and this Order. The third party inspections can satisfy up to 30% of the inspection requirements in section D.3.b(3)(c), with the Copermittee having to fulfill the remaining required inspections. To the extent that third party inspections are conducted to fulfill the requirements of

section D.3.b(3)(c), the Copermittee will be responsible for the inspection of an additional site for every three sites inspected by a third party. The additional inspections may be conducted by the Copermittee or a third party inspector. The Copermittees third party inspection program must include the following:

- i. A description of facility types proposed to be inspected by third parties, including SIC codes;
- ii. A third party inspector certification program;
- iii. The inspection requirements described in section D.3.b.(3)(a);
- iv. Inspection form templates for third party inspector use;
- v. Photo documentation of potential storm water violations identified during the third party inspection;
- vi. An annual Copermittee audit of random, representative sites that were inspected by a third party;
- vii. An annual Copermittee audit of random, representative third party inspectors;
- viii. Reporting to the Copermittee of identified significant potential violations within 24 hours of the third party inspection;
- ix. Reporting to the Copermittee of all inspection findings within one week of the inspection being conducted; and
- x. Copermittee follow-up and/or enforcement actions for identified potential storm water violations within 2 business days of the inspection or potential violation report receipt.

(e) Based upon site inspection findings, each Copermittee shall implement all follow-up actions and enforcement necessary to comply with this Order.

(f) To the extent that the Regional Board has conducted an inspection of an industrial site during a particular year, the requirement for the responsible Copermittee to inspect this facility during the same year will be satisfied.

(g) The Copermittees shall track the number of inspections for the inventoried industrial and commercial sites/sources throughout the reporting period to verify that the sites/sources are inspected at the minimum frequencies listed in sections D.3.b.(3)(b) and D.3.b.(3)(c).

(4) Regulation of Mobile Businesses

(a) Each Copermittee shall develop and implement a program to reduce the discharge of pollutants from mobile businesses to the MEP. Each Copermittee shall keep as part of their inventory (section D.3.b.(1) above), a listing of mobile businesses known to operate within its jurisdiction. The program shall include:

- i. Development and implementation of minimum standards and BMPs to be required for each of the various types of mobile businesses.
- ii. Development and implementation of an enforcement strategy which specifically addresses the unique characteristics of mobile businesses.
- iii. Notification of those mobile businesses known to operate within the Copermittee's jurisdiction of the minimum standards and BMP requirements and local ordinances.

- iv. Development and implementation of an outreach and education strategy.
- v. Inspection of mobile businesses as needed.

- (b) If they choose to, the Copermittees may cooperate in developing and implementing their programs for mobile businesses, including sharing of mobile business inventories, BMP requirements, enforcement action information, and education.

(5) Enforcement of Industrial and Commercial Sites/Sources

Each Copermittee shall enforce its storm water ordinance for all industrial and commercial sites/sources as necessary to maintain compliance with this Order. Copermittee ordinances or other regulatory mechanisms shall include appropriate sanctions to achieve compliance. Sanctions shall include the following or their equivalent: Non-monetary penalties, fines, bonding requirements, and/or permit denials for non-compliance.

(6) Reporting of Industrial Non-Filers

As part of each Annual Report, each Copermittee shall report a list of industrial sites, including the name, address, and SIC code, that may require coverage under the General Industrial Permit for which a NOI has not been filed.

c. RESIDENTIAL

Each Copermittee shall implement a residential program which meets the requirements of this section, reduces residential discharges of pollutants from the MS4 to the MEP, and prevents residential discharges from the MS4 from causing or contributing to a violation of water quality standards.

(1) Threat to Water Quality Prioritization

Each Copermittee shall identify high threat to water quality residential areas and activities. At a minimum, these shall include:

- (a) Automobile repair, maintenance, washing, and parking;
- (b) Home and garden care activities and product use (pesticides, herbicides, and fertilizers);
- (c) Disposal of trash, pet waste, green waste, and household hazardous waste (e.g., paints, cleaning products);
- (d) Any other residential source that the Copermittee determines may contribute a significant pollutant load to the MS4;
- (e) Any residential areas tributary to a CWA section 303(d) impaired water body, where the residence generates pollutants for which the water body is impaired; and
- (f) Any residential areas within or directly adjacent to or discharging directly to a coastal lagoon or other receiving waters within an environmentally sensitive area (as defined in Attachment C of this Order).

(2) BMP Implementation

- (a) Each Copermittee shall designate minimum BMPs for high threat to water quality residential areas and activities. The designated minimum BMPs for high threat to water quality municipal areas and activities shall be area or activity specific.
- (b) Each Copermittee shall encourage the use of pollution prevention methods by residents, where appropriate.
- (c) Each Copermittee shall facilitate the proper management and disposal of used oil, toxic materials, and other household hazardous wastes. Such facilitation shall include educational activities, public information activities, and establishment of collection sites operated by the Copermittee or a private entity. Curbside collection of household hazardous wastes is encouraged.
- (d) Each Copermittee shall implement, or require implementation of, the designated minimum BMPs and any additional measures necessary to comply with this Order for high threat to water quality residential areas and activities.
- (e) Each Copermittee shall implement, or require implementation of, BMPs for residential areas and activities that have not been designated a high threat to water quality, as necessary.
- (f) Each Copermittee shall implement, or require implementation of, any additional controls for residential areas and activities tributary to CWA section 303(d) impaired water body segments (where a residential area or activity generates pollutants for which the water body segment is impaired) as necessary to comply with this Order. Each Copermittee shall implement, or require implementation of, additional controls for residential areas within or directly adjacent to or discharging directly to coastal lagoons or other receiving waters within environmentally sensitive areas (as defined in section Attachment C of this Order) as necessary to comply with this Order.

(3) Enforcement of Residential Areas and Activities

Each Copermittee shall enforce its storm water ordinance for all residential areas and activities as necessary to maintain compliance with this Order.

(4) Evaluation of Oversight of Residential Areas and Activities

The Copermittees are encouraged to individually or collectively evaluate their methods used for oversight of residential areas and activities, including assessment of inspections of residential areas and activities. The evaluation should consider various oversight and inspection approaches to identify an effective and appropriate oversight and inspection approach for residential areas and activities.

(5) Regional Residential Education Program

Each Copermittee shall collaborate with the other Copermittees to develop and implement the Regional Residential Education Program required in section F.1 of this Order.

#### 4. Illicit Discharge Detection and Elimination Component

Each Copermittee shall implement an Illicit Discharge Detection and Elimination program which meets the requirements of this section and actively seeks and eliminates illicit discharges and connections.

a. ILLICIT DISCHARGES AND CONNECTIONS

Each Copermittee shall implement a program to actively seek and eliminate illicit discharges and connections into its MS4. The program shall include utilization of appropriate municipal personnel to assist in identifying illicit discharges and connections during their daily activities. The program shall address all types of illicit discharges and connections excluding those non-storm water discharges not prohibited by the Copermittee in accordance with section B of this Order.

b. DEVELOP/MAINTAIN MS4 MAP

Each Copermittee shall develop and/or update its labeled map of its entire MS4 and the corresponding drainage areas within its jurisdiction. The use of a GIS is highly recommended. The accuracy of the MS4 map shall be confirmed during dry weather field screening and analytical monitoring and shall be updated at least annually.

c. DRY WEATHER FIELD SCREENING AND ANALYTICAL MONITORING

Each Copermittee shall conduct dry weather field screening and analytical monitoring of MS4 outfalls and other portions of its MS4 within its jurisdiction to detect illicit discharges and connections in accordance with Receiving Waters and Urban Runoff Monitoring and Reporting Program No. R9-2007-0001.

d. INVESTIGATION/INSPECTION AND FOLLOW-UP

(1) Each Copermittee shall investigate and inspect any portion of the MS4 that, based on visual observations, dry weather field screening and analytical monitoring results, or other appropriate information, indicates a reasonable potential for illicit discharges, illicit connections, or other sources of non-storm water (including non-prohibited discharge(s) identified in section B of this Order). Each Copermittee shall develop/update and utilize numeric criteria action levels (or other actions level criteria where appropriate) to determine when follow-up investigations will be performed.

(2) Within two business days of receiving dry weather field screening results that exceed action levels, the Copermittees shall either conduct an investigation to identify the source of the discharge or provide the rationale for why the discharge does not pose a threat to water quality and does not need further investigation. Within two business days, where applicable, of receiving analytical laboratory results that exceed action levels, the Copermittees shall either conduct an investigation to identify the source of the discharge or provide the rationale for why the discharge does not pose a threat to water quality and does not need further investigation. Obvious illicit discharges (i.e. color, odor, or significant exceedances of action levels) shall be investigated immediately.

e. ELIMINATION OF ILLICIT DISCHARGES AND CONNECTIONS

Each Copermittee shall take immediate action to eliminate all detected illicit discharges, illicit discharge sources, and illicit connections as soon as possible after detection. Elimination measures may include an escalating series of enforcement actions for those illicit discharges that are not a serious threat to public health or the environment. Illicit discharges that pose a serious threat to the public's health or the environment must be eliminated immediately.

f. ENFORCE ORDINANCES

Each Copermittee shall implement and enforce its ordinances, orders, or other legal authority to prevent illicit discharges and connections to its MS4. Each Copermittee shall also implement and enforce its ordinance, orders, or other legal authority to eliminate detected illicit discharges and connections to it MS4.

g. PREVENT AND RESPOND TO SEWAGE SPILLS (INCLUDING FROM PRIVATE LATERALS AND FAILING SEPTIC SYSTEMS) AND OTHER SPILLS

Each Copermittee shall prevent, respond to, contain and clean up all sewage and other spills that may discharge into its MS4 from any source (including private laterals and failing septic systems). Spill response teams shall prevent entry of spills into the MS4 and contamination of surface water, ground water and soil to the maximum extent practicable. Each Copermittee shall coordinate spill prevention, containment and response activities throughout all appropriate departments, programs and agencies so that maximum water quality protection is available at all times.

Each Copermittee shall develop and implement a mechanism whereby it is notified of all sewage spills from private laterals and failing septic systems into its MS4. Each Copermittee shall prevent, respond to, contain and clean up sewage from any such notification.

h. FACILITATE PUBLIC REPORTING OF ILLICIT DISCHARGES AND CONNECTIONS - PUBLIC HOTLINE

Each Copermittee shall promote, publicize and facilitate public reporting of illicit discharges or water quality impacts associated with discharges into or from MS4s. Each Copermittee shall facilitate public reporting through development and operation of a public hotline. Public hotlines can be Copermittee-specific or shared by Copermittees. All storm water hotlines shall be capable of receiving reports in both English and Spanish 24 hours per day / seven days per week. Copermittees shall respond to and resolve each reported incident in a timely manner. All reported incidents, and how each was resolved, shall be summarized in each Copermittee's individual JURMP Annual Report.

## 5. Education Component

Each Copermittee shall implement an education program using all media as appropriate to (1) measurably increase the knowledge of the target communities regarding MS4s, impacts of urban runoff on receiving waters, and potential BMP solutions for the target audience; and (2) to measurably change the behavior of target communities and thereby reduce pollutant releases to MS4s and the environment. At a minimum, the education

program shall meet the requirements of this section and address the following target communities:

- Municipal Departments and Personnel
- Construction Site Owners and Developers
- Industrial Owners and Operators
- Commercial Owners and Operators
- Residential Community, General Public, and School Children

a. GENERAL REQUIREMENTS

(1) Each Copermittee shall educate each target community on the following topics where appropriate:

Table 3. Education

<b>Laws, Regulations, Permits, &amp; Requirements</b>	<b>Best Management Practices</b>
<ul style="list-style-type: none"> <li>• Federal, state, and local water quality laws and regulations</li> <li>• Statewide General NPDES Permit for Storm Water Discharges Associated with Industrial Activities (Except Construction).</li> <li>• Statewide General NPDES Permit for Storm Water Discharges Associated with Construction Activities</li> <li>• Regional Board’s General NPDES Permit for Ground Water Dewatering</li> <li>• Regional Board’s 401 Water Quality Certification Program</li> <li>• Statewide General NPDES Utility Vault Permit</li> <li>• Requirements of local municipal permits and ordinances (e.g., storm water and grading ordinances and permits)</li> </ul>	<ul style="list-style-type: none"> <li>• Pollution prevention and safe alternatives</li> <li>• Good housekeeping (e.g., sweeping impervious surfaces instead of hosing)</li> <li>• Proper waste disposal (e.g., garbage, pet/animal waste, green waste, household hazardous materials, appliances, tires, furniture, vehicles, boat/recreational vehicle waste, catch basin/ MS4 cleanout waste)</li> <li>• Non-storm water disposal alternatives (e.g., all wash waters)</li> <li>• Methods to minimized the impact of land development and construction</li> <li>• Erosion prevention</li> <li>• Methods to reduce the impact of residential and charity car-washing</li> <li>• Preventive Maintenance</li> <li>• Equipment/vehicle maintenance and repair</li> <li>• Spill response, containment, and recovery</li> <li>• Recycling</li> <li>• BMP maintenance</li> </ul>
<b>General Urban Runoff Concepts</b>	<b>Other Topics</b>
<ul style="list-style-type: none"> <li>• Impacts of urban runoff on receiving waters</li> <li>• Distinction between MS4s and sanitary sewers</li> <li>• BMP types: facility or activity specific, LID, source control, and treatment control</li> <li>• Short- and long-term water quality impacts associated with urbanization (e.g., land-use decisions, development, construction)</li> <li>• Non-storm water discharge prohibitions</li> <li>• How to conduct a storm water inspections</li> </ul>	<ul style="list-style-type: none"> <li>• Public reporting mechanisms</li> <li>• Water quality awareness for Emergency/ First Responders</li> <li>• Illicit Discharge Detection and Elimination observations and follow-up during daily work activities</li> <li>• Potable water discharges to the MS4</li> <li>• Dechlorination techniques</li> <li>• Hydrostatic testing</li> <li>• Integrated pest management</li> <li>• Benefits of native vegetation</li> <li>• Water conservation</li> </ul>

	<ul style="list-style-type: none"> <li>• Alternative materials and designs to maintain peak runoff values</li> <li>• Traffic reduction, alternative fuel use</li> </ul>
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- (2) Copermittee educational programs shall emphasize underserved target audiences, high-risk behaviors, and “allowable” behaviors and discharges, including various ethnic and socioeconomic groups and mobile sources.

b. SPECIFIC REQUIREMENTS

(1) Municipal Departments and Personnel Education

- (a) Municipal Development Planning – Each Copermittee shall implement an education program so that its planning and development review staffs (and Planning Boards and Elected Officials, if applicable) have an understanding of:
- i. Federal, state, and local water quality laws and regulations applicable to Development Projects;
  - ii. The connection between land use decisions and short and long-term water quality impacts (i.e., impacts from land development and urbanization);
  - iii. How to integrate LID BMP requirements into the local regulatory program(s) and requirements; and
  - iv. Methods of minimizing impacts to receiving water quality resulting from development, including:
    - [1] Storm water management plan development and review;
    - [2] Methods to control downstream erosion impacts;
    - [3] Identification of pollutants of concern;
    - [4] LID BMP techniques;
    - [5] Source control BMPs; and
    - [6] Selection of the most effective treatment control BMPs for the pollutants of concern.
- (b) Municipal Construction Activities – Each Copermittee shall implement an education program that includes annual training prior to the rainy season so that its construction, building, code enforcement, and grading review staffs, inspectors, and other responsible construction staff have, at a minimum, an understanding of the following topics, as appropriate for the target audience:
- i. Federal, state, and local water quality laws and regulations applicable to construction and grading activities.
  - ii. The connection between construction activities and water quality impacts (i.e., impacts from land development and urbanization and impacts from construction material such as sediment).
  - iii. Proper implementation of erosion and sediment control and other BMPs to minimize the impacts to receiving water quality resulting from construction activities.
  - iv. The Copermittee’s inspection, plan review, and enforcement policies and procedures to verify consistent application.
  - v. Current advancements in BMP technologies.

vi. SUSMP Requirements including treatment options, LID BMPs, source control, and applicable tracking mechanisms.

(c) Municipal Industrial/Commercial Activities - Each Copermittee shall train staff responsible for conducting storm water compliance inspections and enforcement of industrial and commercial facilities at least once a year. Training shall cover inspection and enforcement procedures, BMP implementation, and reviewing monitoring data.

(d) Municipal Other Activities – Each Copermittee shall implement an education program so that municipal personnel and contractors performing activities which generate pollutants have an understanding of the activity specific BMPs for each activity to be performed.

(2) New Development and Construction Education

As early in the planning and development process as possible and all through the permitting and construction process, each Copermittee shall implement a program to educate project applicants, developers, contractors, property owners, community planning groups, and other responsible parties. The education program shall provide an understanding of the topics listed in Sections D.5.b.(1)(a) and D.5.b.(1)(b) above, as appropriate for the audience being educated. The education program shall also educate project applicants, developers, contractors, property owners, and other responsible parties on the importance of educating all construction workers in the field about stormwater issues and BMPs through formal or informal training.

(3) Residential, General Public, and School Children Education

Each Copermittee shall collaboratively conduct or participate in development and implementation of a plan to educate residential, general public, and school children target communities. The plan shall evaluate use of mass media, mailers, door hangers, booths at public events, classroom education, field trips, hands-on experiences, or other educational methods.

## **6. Public Participation Component**

Each Copermittee shall incorporate a mechanism for public participation in the updating, development, and implementation of the Jurisdictional Urban Runoff Management Program.

## **E. WATERSHED URBAN RUNOFF MANAGEMENT PROGRAM**

1. Each Copermittee shall implement all requirements of section E of this Order no later than 365 days after adoption of this Order, unless otherwise specified in this Order. Prior to 365 days after adoption of this Order, each Copermittee shall collaborate with the other Copermittees within its Watershed Management Area(s) (WMA) to at a minimum implement its Watershed URMP document, as the document was developed and amended to comply with the requirements of Order No. 2001-01.
2. Each Copermittee shall collaborate with other Copermittees within its WMA(s) as shown in Table 4 below to develop and implement an updated Watershed Urban Runoff

Management Program for each watershed. Each updated Watershed Urban Runoff Management Program shall meet the requirements of section E of this Order, reduce the discharge of pollutants from the MS4 to the MEP, and prevent urban runoff discharges from the MS4 from causing or contributing to a violation of water quality standards. At a minimum, each Watershed Urban Runoff Management Program shall include the elements described below:

a. Lead Watershed Permittee Identification

Watershed Copermittees shall identify the Lead Watershed Permittee for their WMA. In the event that a Lead Watershed Permittee is not selected and identified by the Watershed Copermittees, by default the Copermittee identified in Table 4 as the Lead Watershed Permittee for that WMA shall be responsible for implementing the requirements of the Lead Watershed Permittee in that WMA. The Lead Watershed Copermittees shall serve as liaisons between the Copermittees and Regional Board, where appropriate.

b. Watershed Map

Watershed Copermittees shall develop and periodically update a map of the WMA to facilitate planning, assessment, and collaborative decision-making. As determined appropriate, the map shall include features such as receiving waters (including the Pacific Ocean); Clean Water Act section 303(d) impaired receiving waters; land uses, MS4s; major highways; jurisdictional boundaries; and inventoried commercial, industrial, and municipal sites.

c. Watershed Water Quality Assessment

Watershed Copermittees shall annually assess the water quality of receiving waters in their WMA. This assessment shall use applicable water quality data, reports, and analysis generated in accordance with the requirements of the Receiving Waters Monitoring and Reporting Program, as well as applicable information available from other public and private organizations.

The assessment and analysis shall annually identify the WMA's water quality problems that are partially or fully attributable to MS4 discharges. Identified water quality problems shall include CWA section 303(d) listings, persistent violations of water quality standards, toxicity, impacts to beneficial uses, and other pertinent conditions. From the list of water quality problems, the high priority water quality problems of the WMA shall be identified, which shall include those water quality problems which most significantly exceed or impact water quality standards (water quality objectives and beneficial uses).

The assessment shall include annual identification of the likely sources of the WMA's high priority water quality problems.

d. Watershed-based Land Use Planning

The Watershed Copermittees shall develop, implement, and modify, as necessary, a program for encouraging collaborative, watershed-based, land use planning in their jurisdictional planning departments.

e. Watershed Strategy

Watershed Copermittees shall develop and implement a collective watershed strategy to abate the sources and reduce the discharge of pollutants causing the high priority water quality problems of the WMA. The strategy shall guide Watershed Copermittee selection and implementation of Watershed Activities, so that the Watershed Activities selected and implemented are appropriate for each Watershed Copermittee's contribution to the WMA's high priority water quality problems.

f. Watershed Activities

- (1) The Watershed Copermittees shall identify and implement Watershed Activities that address the high priority water quality problems in the WMA. Watershed Activities shall include both Watershed Water Quality Activities and Watershed Education Activities. These activities may be implemented individually or collectively, and may be implemented at the regional, watershed, or jurisdictional level.
  - (a) Watershed Water Quality Activities are activities other than education that address the high priority water quality problems in the WMA. A Watershed Water Quality Activity implemented on a jurisdictional basis must be organized and implemented to target a watershed's high priority water quality problems or must exceed the baseline jurisdictional requirements of section D of this Order.
  - (b) Watershed Education Activities are outreach and training activities that address high priority water quality problems in the WMA.
- (2) A Watershed Activities List shall be submitted with each updated WURMP and updated annually thereafter. The Watershed Activities List shall include both Watershed Water Quality Activities and Watershed Education Activities, along with a description of how each activity was selected, and how all of the activities on the list will collectively abate sources and reduce pollutant discharges causing the identified high priority water quality problems in the WMA.
- (3) Each activity on the Watershed Activities List shall include the following information:
  - (a) A description of the activity;
  - (b) A time schedule for implementation of the activity, including key milestones;
  - (c) An identification of the specific responsibilities of Watershed Copermittees in completing the activity;
  - (d) A description of how the activity will address the identified high priority water quality problem(s) of the watershed;
  - (e) A description of how the activity is consistent with the collective watershed strategy;
  - (f) A description of the expected benefits of implementing the activity; and
  - (g) A description of how implementation effectiveness will be measured.
- (4) Each Watershed Copermittee shall implement identified Watershed Activities pursuant to established schedules. For each Permit year, no less than two Watershed Water Quality Activities and two Watershed Education Activities shall be in an active implementation phase. A Watershed Water Quality Activity

is in an active implementation phase when significant pollutant load reductions, source abatement, or other quantifiable benefits to discharge or receiving water quality can reasonably be established in relation to the watershed’s high priority water quality problem(s). Watershed Water Quality Activities that are capital projects are in active implementation for the first year of implementation only. A Watershed Education Activity is in an active implementation phase when changes in attitudes, knowledge, awareness, or behavior can reasonably be established in target audiences.

g. Copermittee Collaboration

Watershed Copermittees shall collaborate to develop and implement the Watershed Urban Runoff Management Programs. Watershed Copermittee collaboration shall include frequent regularly scheduled meetings.

h. Public Participation

Watershed Copermittees shall implement a watershed-specific public participation mechanism within each watershed. The mechanism shall encourage participation from other organizations within the watershed (such as the Department of Defense, Caltrans, lagoon foundations, etc.)

i. WURMP Review and Updates

Each WURMP shall be reviewed annually to identify needed modifications and improvements. Pursuant to the requirements of Section I.2.b of this Order the Watershed Copermittees shall develop and implement a plan and schedule to address the identified modifications and improvements. All updates to the WURMP shall be documented in the Watershed Urban Runoff Management Program Annual Reports. Individual Watershed Copermittees shall also review and modify their jurisdictional activities and JURMPs as necessary so that they are consistent with the requirements of the WURMP.

Table 4. Watershed Management Areas and Watershed Copermittees

RESPONSIBLE WATERSHED COPERMITTEE(S)	WATERSHED MANAGEMENT AREA	HYDROLOGIC UNIT OR AREA	MAJOR RECEIVING WATER BODIES
1. County of San Diego	Santa Margarita River	Santa Margarita HU (902.00)	Santa Margarita River and Estuary, Pacific Ocean
2. City of Oceanside 3. City of Vista 4. County of San Diego	San Luis Rey River	San Luis Rey HU (903.00)	San Luis Rey River and Estuary, Pacific Ocean
1. City of Carlsbad 2. City of Encinitas 3. City of Escondido 4. City of Oceanside 5. City of San Marcos 6. City of Solana Beach 7. City of Vista 8. County of San Diego	Carlsbad	Carlsbad HU (904.00)	Batiquitos Lagoon San Elijo Lagoon Agua Hedionda Lagoon Buena Vista Lagoon and Tributary Streams Pacific Ocean
1. City of Del Mar 2. City of Escondido 3. City of Poway 4. City of San Diego 5. City of Solana Beach 6. County of San Diego	San Dieguito River	San Dieguito HU (905.00)	San Dieguito River and Estuary Pacific Ocean

<b>RESPONSIBLE WATERSHED COPERMITTEE(S)</b>	<b>WATERSHED MANAGEMENT AREA</b>	<b>HYDROLOGIC UNIT OR AREA</b>	<b>MAJOR RECEIVING WATER BODIES</b>
1. City of Del Mar 2. <b>City of Poway</b> 3. City of San Diego 4. County of San Diego	Peñasquitos	Miramar Reservoir HA (906.10) Poway HA (906.20)	Los Peñasquitos Creek Los Peñasquitos Lagoon Pacific Ocean
1. <b>City of San Diego</b>	Mission Bay	Scripps HA (906.30) Miramar HA(906.40) Tecolote HA (906.50)	Mission Bay Pacific Ocean
1. <b>City of El Cajon</b> 2. City of La Mesa 3. City of San Diego 4. City of Santee 5. County of San Diego	San Diego River	San Diego HU (907.00)	San Diego River Pacific Ocean
1. City of Chula Vista 2. City of Coronado 3. City of Imperial Beach 4. City of La Mesa 5. City of Lemon Grove 6. City of National City 7. City of San Diego 8. County of San Diego 9. <b>San Diego Unified Port District</b> 10. San Diego County Regional Airport Authority	San Diego Bay	Pueblo San Diego HU (908.00) Sweetwater HU (909.00) Otay HU (910.00)	San Diego Bay Sweetwater River Otay River Pacific Ocean
1. City of Imperial Beach 2. City of San Diego 3. <b>County of San Diego</b>	Tijuana River	Tijuana (911.00)	Tijuana River and Estuary Pacific Ocean

- The Lead Watershed Permittee for each watershed is highlighted

## **F. REGIONAL URBAN RUNOFF MANAGEMENT PROGRAM**

The Copermittees shall implement all requirements of section F of this Order no later than 365 days after adoption of this Order, unless otherwise specified in this Order.

Each Copermittee shall collaborate with the other Copermittees to develop, implement, and update as necessary a Regional Urban Runoff Management Program. The Regional Urban Runoff Management Program shall meet the requirements of section F of this Order, reduce the discharge of pollutants from the MS4 to the MEP, and prevent urban runoff discharges from the MS4 from causing or contributing to a violation of water quality standards. The Regional Urban Runoff Management Program shall, at a minimum:

1. Develop and implement a Regional Residential Education Program. The program shall include:
  - a. Pollutant specific education which focuses educational efforts on bacteria, nutrients, sediment, pesticides, and trash. If a different pollutant is determined to be more critical for the education program, the pollutant can be substituted for one of these pollutants.
  - b. Education efforts focused on the specific residential sources of the pollutants listed in section F.1.a.
2. Develop the standardized fiscal analysis method required in section G of this Order.
3. Facilitate the assessment of the effectiveness of jurisdictional, watershed, and regional programs.

As options, the Regional Urban Runoff Management Program may:

1. Develop and implement urban runoff management activities on a regional level, as determined to be necessary by the Copermittees.

2. Develop and implement a strategy to integrate management, implementation, and reporting of jurisdictional, watershed, and regional activities, as determined to be necessary by the Copermittees. Any such integration shall assure compliance with the jurisdictional requirements of section D and the watershed requirements of section E.
3. Facilitate TMDL management and implementation, as determined to be necessary by the Copermittees.
4. Facilitate development of strategies for implementation of activities on a watershed level, as determined to be necessary by the Copermittees.

#### **G. FISCAL ANALYSIS**

1. Each Copermittee shall secure the resources necessary to meet all requirements of this Order.
2. As part of the Regional Urban Runoff Management Program, the Copermittees shall collectively develop a standardized method and format for annually conducting and reporting fiscal analyses of their urban runoff management programs in their entirety (including jurisdictional, watershed, and regional activities). This standardized method shall:
  - a. Identify the various categories of expenditures attributable to the urban runoff management programs, including a description of the specific items to be accounted for in each category of expenditures.
  - b. Identify expenditures that contribute to multiple programs or were in existence prior to implementation of the urban runoff management program.
  - c. Identify a metric or metrics to be used to report program component and total program expenditures.
3. Each Copermittee shall conduct an annual fiscal analysis. Starting January 31, 2010, the annual fiscal analysis shall be conducted consistent with the standardized fiscal analysis method included in the January 31, 2009 Regional Urban Runoff Management Program Annual Report. The annual fiscal analysis shall be conducted and reported on as part of each Copermittee's Jurisdictional Urban Runoff Management Program Annual Reports. For convenience, the fiscal analysis included in the Jurisdictional Urban Runoff Management Program Annual Reports shall address the Copermittee's urban runoff management programs in their entirety, including jurisdictional, watershed, and regional activities. The fiscal analysis shall provide the Copermittee's urban runoff management program budget for the current reporting period. The fiscal analysis shall include a description of the source(s) of the funds that are proposed to be used to meet the necessary expenditures, including legal restrictions on the use of such funds.

#### **H. TOTAL MAXIMUM DAILY LOADS**

1. **Chollas Creek Diazinon TMDL Water Quality Based Effluent Limits (WQBELs)**
  - a. The Copermittees in the Chollas Creek watershed shall implement BMPs capable of achieving the interim and final diazinon Waste Load Allocation (WLA) concentration in the storm water discharge in Chollas Creek listed in Table 5.

Table 5. Chollas Creek Diazinon Schedule

Calendar Year	Year	Waste Load Allocation	Interim TMDL Numeric Target	% Reduction
2004	1	0.460 µg/L	0.5 µg/L	0
2005	2	0.460 µg/L	0.5 µg/L	0
2006	3	0.460 µg/L	0.5 µg/L	0
2007	4	0.414 µg/L	0.45 µg/L	10
2008	5	0.322 µg/L	0.35 µg/L	20
2009	6	0.184 µg/L	0.20 µg/L	30
2010	7	0.045 µg/L	0.05 µg/L	30

- b. The Copermitees in the Chollas Creek watershed shall not cause or contribute to the violation of the Interim TMDL Numeric Targets in Chollas Creek as listed in Table 5. If the Interim TMDL Numeric Target is violated in Chollas Creek in more than one sample in any three consecutive years, the Copermitees shall submit a report that either 1) documents compliance with the WLA through additional sampling of the urban runoff discharge or 2) demonstrates, using modeling or other technical or scientific basis, the effectiveness of additional BMPs that will be implemented to achieve the WLA. The report may be incorporated into the Watershed Urban Runoff Management Program Annual Report unless the Regional Board directs an earlier submittal. The report shall include an implementation schedule.
- c. The Copermitees in the Chollas Creek watershed shall implement the Diazinon Toxicity Control Plan and Diazinon Public Outreach/Education Program as described in the report titled, "Technical Report for Total Maximum Daily Load for Diazinon in Chollas Creek Watershed, San Diego County, August 14, 2002," including subsequent modifications, in order to achieve the WLA listed in Table 5.

## 2. Shelter Island Yacht Basin WQBELs

- a. The Copermitees in the Shelter Island Yacht Basin watershed shall implement BMPs to maintain a total annual copper discharge load of less than or equal to 30 kg copper / year.
- b. The Copermitees in the Shelter Island Yacht Basin watershed shall implement, at a minimum, the BMPs included in the Copermitees' Jurisdictional Urban Runoff Management Plan, including subsequent modifications, which address the discharge of copper to achieve the annual copper load in Section H.2.a above.

## I. PROGRAM EFFECTIVENESS ASSESSMENT

### 1. Jurisdictional

- a. As part of its Jurisdictional Urban Runoff Management Program, each Copermitee shall annually assess the effectiveness of its Jurisdictional Urban Runoff Management Program implementation. At a minimum, the annual effectiveness assessment shall:
- (1) Specifically assess the effectiveness of each of the following:

- (a) Each significant jurisdictional activity/BMP or type of jurisdictional activity/BMP implemented;
  - (b) Implementation of each major component of the Jurisdictional Urban Runoff Management Program (Development Planning, Construction, Municipal, Industrial/Commercial, Residential, Illicit Discharge Detection and Elimination, and Education); and
  - (c) Implementation of the Jurisdictional Urban Runoff Management Program as a whole.
- (2) Identify and utilize measurable targeted outcomes, assessment measures, and assessment methods for each of the items listed in section I.1.a.(1) above.
  - (3) Utilize outcome levels 1-6<sup>9</sup> to assess the effectiveness of each of the items listed in section I.1.a.(1) above, where applicable and feasible.
  - (4) Utilize monitoring data and analysis from the Receiving Waters Monitoring Program to assess the effectiveness each of the items listed in section I.1.a.(1) above, where applicable and feasible.
  - (5) Utilize Implementation Assessment, Water Quality Assessment, and Integrated Assessment, where applicable and feasible.<sup>10</sup>
- b. Based on the results of the effectiveness assessment, each Copermittee shall annually review its jurisdictional activities or BMPs to identify modifications and improvements needed to maximize Jurisdictional Urban Runoff Management Program effectiveness, as necessary to achieve compliance with section A of this Order. The Copermittees shall develop and implement a plan and schedule to address the identified modifications and improvements. Jurisdictional activities/BMPs that are ineffective or less effective than other comparable jurisdictional activities/BMPs shall be replaced or improved upon by implementation of more effective jurisdictional activities/BMPs. Where monitoring data exhibits persistent water quality problems that are caused or contributed to by MS4 discharges, jurisdictional activities or BMPs applicable to the water quality problems shall be modified and improved to correct the water quality problems.
  - c. As part of its Jurisdictional Urban Runoff Management Program Annual Reports, each Copermittee shall report on its Jurisdictional Urban Runoff Management Program effectiveness assessment as implemented under each of the requirements of sections I.1.a and I.1.b above.

## 2. Watershed

- a. As part of its Watershed Urban Runoff Management Program, each watershed group of Copermittees (as identified in Table 4) shall annually assess the effectiveness of its Watershed Urban Runoff Management Program implementation. At a minimum, the annual effectiveness assessment shall:
  - (1) Specifically assess the effectiveness of each of the following:

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<sup>9</sup> Effectiveness assessment outcome levels are defined in Attachment C of this Order.

<sup>10</sup> Implementation Assessment, Water Quality Assessment, and Integrated Assessment are defined in Attachment C of this Order.

- (a) Each Watershed Water Quality Activity implemented;
  - (b) Each Watershed Education Activity implemented; and
  - (c) Implementation of the Watershed Urban Runoff Management Program as a whole.
- (2) Identify and utilize measurable targeted outcomes, assessment measures, and assessment methods for each of the items listed in section I.2.a.(1) above.
  - (3) Utilize outcome levels 1-6 to assess the effectiveness of each of the items listed in sections I.2.a.(1)(a) and I.2.a.(1)(b) above, where applicable and feasible.
  - (4) Utilize outcome levels 1-4 to assess the effectiveness of implementation of the Watershed Urban Runoff Management Program as a whole, where applicable and feasible.
  - (5) Utilize outcome levels 5 and 6 to qualitatively assess the effectiveness of implementation of the Watershed Urban Runoff Management Program as a whole, focusing on the high priority water quality problem(s) of the watershed. These assessments shall attempt to exhibit the impact of Watershed Urban Runoff Management Program implementation on the high priority water quality problem(s) within the watershed.
  - (6) Utilize monitoring data and analysis from the Receiving Waters Monitoring Program to assess the effectiveness each of the items listed in section I.2.a.(1) above, where applicable and feasible.
  - (7) Utilize Implementation Assessment, Water Quality Assessment, and Integrated Assessment, where applicable and feasible.
- b. Based on the results of the effectiveness assessment, the watershed Copermittees shall annually review their Watershed Water Quality Activities, Watershed Education Activities, and other aspects of the Watershed Urban Runoff Management Program to identify modifications and improvements needed to maximize Watershed Urban Runoff Management Program effectiveness, as necessary to achieve compliance with section A of this Order. The Copermittees shall develop and implement a plan and schedule to address the identified modifications and improvements. Watershed Water Quality Activities/Watershed Education Activities that are ineffective or less effective than other comparable Watershed Water Quality Activities/Watershed Education Activities shall be replaced or improved upon by implementation of more effective Watershed Water Quality Activities/Watershed Education Activities. Where monitoring data exhibits persistent water quality problems that are caused or contributed to by MS4 discharges, Watershed Water Quality Activities and Watershed Education Activities applicable to the water quality problems shall be modified and improved to correct the water quality problems.
  - c. As part of its Watershed Urban Runoff Management Program Annual Reports, each watershed group of Copermittees (as identified in Table 4) shall report on its Watershed Urban Runoff Management Program effectiveness assessment as implemented under each of the requirements of section I.2.a and I.2.b above.

### 3. Regional

- a. As part of the Regional Urban Runoff Management Program, the Copermittees shall annually assess the effectiveness of Regional Urban Runoff Management Program implementation. At a minimum, the annual effectiveness assessment shall:
  - (1) Specifically assess the effectiveness of each of the following:
    - (a) Each regional activity/BMP or type of regional activity/BMP implemented, including regional residential education activities; and
    - (b) The Regional Urban Runoff Management Program as a whole.
  - (2) Identify and utilize measurable targeted outcomes, assessment measures, and assessment methods for each of the items listed in section I.3.a.(1) above.
  - (3) Utilize outcome levels 1-6 to assess the effectiveness of each of the items listed in sections I.3.a.(1) above, where applicable and feasible.
  - (4) Utilize monitoring data and analysis from the Receiving Waters Monitoring Program to assess the effectiveness each of the items listed in section I.3.a.(1) above, where applicable and feasible.
  - (5) Utilize Implementation Assessment, Water Quality Assessment, and Integrated Assessment, where applicable and feasible.
  - (6) Include evaluation of whether the Copermittees' jurisdictional, watershed, and regional effectiveness assessments are meeting the following objectives:
    - (a) Assessment of watershed health and identification of water quality issues and concerns.
    - (b) Evaluation of the degree to which existing source management priorities are properly targeted to, and effective in addressing, water quality issues and concerns.
    - (c) Evaluation of the need to address additional pollutant sources not already included in Copermittee programs.
    - (d) Assessment of progress in implementing Copermittee programs and activities.
    - (e) Assessment of the effectiveness of Copermittee activities in addressing priority constituents and sources.
    - (f) Assessment of changes in discharge and receiving water quality.
    - (g) Assessment of the relationship of program implementation to changes in pollutant loading, discharge quality, and receiving water quality.
    - (h) Identification of changes necessary to improve Copermittee programs, activities, and effectiveness assessment methods and strategies.
- b. Based on the results of the effectiveness assessment, the Copermittees shall annually review their regional activities and other aspects of the Regional Urban Runoff Management Program to identify modifications and improvements needed maximize Regional Urban Runoff Management Program effectiveness, as necessary to achieve compliance with section A of this Order. The Copermittees shall develop and implement a plan and schedule to address the identified modifications and improvements. Regional activities that are ineffective or less effective than other

comparable regional activities shall be replaced or improved upon by implementation of more effective regional activities. Where monitoring data exhibits persistent water quality problems that are caused or contributed to by MS4 discharges, regional activities applicable to the water quality problems shall be modified and improved to correct the water quality problems.

- c. Based on the results of the Copermittees' evaluation of their effectiveness assessments, the Copermittees shall modify their effectiveness assessment methods to improve their ability to accurately assess the effectiveness of their urban runoff management programs.
- d. As part of its Regional Urban Runoff Management Program Annual Reports, the Copermittees shall report on its Regional Urban Runoff Management Program effectiveness assessment as implemented under each of the requirements of sections I.3.a, I.3.b, and I.3.c above.

#### **4. TMDL BMP Implementation Plan**

- a. For each TMDL in a watershed, the Copermittees subject to the TMDL within the watershed shall annually assess the effectiveness of its TMDL BMP Implementation Plan or equivalent plan.<sup>11</sup> At a minimum, the annual effectiveness assessment shall:
  - (1) Specifically assess the effectiveness of each of the following:
    - (a) Each activity/BMP or type of activity/BMP implemented; and
    - (b) Implementation of the TMDL BMP Implementation Plan or equivalent plan as a whole.
  - (2) Identify and utilize measurable targeted outcomes, assessment measures, and assessment methods for each of the items listed in sections I.4.a.(1) above.
  - (3) Utilize outcome levels 1-6 to assess the effectiveness of each of the items listed in section I.4.a.(1)(a) above, where applicable and feasible.
  - (4) Utilize outcome levels 1-4 to assess the effectiveness of implementation of the TMDL BMP Implementation Plan or equivalent plan as a whole, where applicable and feasible.
  - (5) Utilize outcome levels 5 and 6 to qualitatively assess the effectiveness of the TMDL BMP Implementation Plan or equivalent plan as a whole. These assessments shall attempt to exhibit the effects of the TMDL BMP Implementation Plan or equivalent plan on the impairment that is targeted.
- b. Based on the results of the effectiveness assessment, the Copermittees subject to the TMDL shall modify their BMPs and other aspects of the TMDL BMP Implementation Plan or equivalent plan in order to maximize TMDL BMP Implementation Plan or equivalent plan effectiveness. BMPs that are ineffective or less effective than other comparable BMPs shall be replaced or improved upon by implementation of more effective BMPs. Where monitoring data exhibits persistent

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<sup>11</sup> This requirement applies to those TMDLs where a TMDL BMP Implementation Plan or equivalent plan has been developed and submitted to the Regional Board.

water quality problems that are caused or contributed to by MS4 discharges, BMPs applicable to the water quality problems shall be modified and improved to correct the water quality problems.

- c. As part of its Watershed Urban Runoff Management Program Annual Reports, each group of Copermittees subject to a TMDL shall report on any TMDL BMP Implementation Plan or equivalent plan effectiveness assessments as implemented under each of the requirements of sections I.4.a and I.4.b above.

## **5. Long-term Effectiveness Assessment**

- a. Each Copermittee shall collaborate with the other Copermittees to develop a Long-term Effectiveness Assessment (LTEA), which shall build on the results of the Copermittees' August 2005 Baseline LTEA. The LTEA shall be submitted by the Principal Permittee to the Regional Board no later than 210 days in advance of the expiration of this Order.
- b. The LTEA shall be designed to address each of the objectives listed in section I.3.a.(6) of this Order, and to serve as a basis for the Copermittees' Report of Waste Discharge for the next permit cycle.
- c. The LTEA shall address outcome levels 1-6, and shall specifically include an evaluation of program implementation to changes in water quality (outcome levels 5 and 6).
- d. The LTEA shall assess the effectiveness of the Receiving Waters Monitoring Program in meeting its objectives and its ability to answer the five core management questions. This shall include assessment of the frequency of monitoring conducted through the use of power analysis and other pertinent statistical methods. The power analysis shall identify the frequency and intensity of sampling needed to identify a 10% reduction in the concentration of constituents causing the high priority water quality problems within each watershed over the next permit term with 80% confidence.
- e. The LTEA shall address the jurisdictional, watershed, and regional programs, with an emphasis on watershed assessment.

## **J. REPORTING**

### **1. Urban Runoff Management Plans**

- a. JURISDICTIONAL URBAN RUNOFF MANAGEMENT PLANS
  - (1) Copermittees - The written account of the overall program to be conducted by each Copermittee to meet the jurisdictional requirements of section D of this Order is referred to as the Jurisdictional Urban Runoff Management Plan (JURMP). Each Copermittee shall revise and update its JURMP so that it describes all activities the Copermittee will undertake to implement the requirements of each component of Jurisdictional Urban Runoff Management Program section D of this Order. Each Copermittee shall submit its updated and revised JURMP to the Principal Permittee by the date specified by the Principal

Permittee.

- (2) Principal Permittee –The Principal Permittee shall be responsible for collecting and assembling the individual JURMPs which cover the activities conducted by each individual Copermittee. The Principal Permittee shall submit the JURMPs to the Regional Board 365 days after adoption of this Order.
- (3) At a minimum, each Copermittee’s JURMP shall be updated and revised to contain the following information:
  - (a) Non-Storm Water Discharges
    - i. Identification of non-storm water discharge categories identified as a source of pollutants to waters of the U.S.
    - ii. A description of whether non-storm water discharge categories identified under section (a)i above will be prohibited or required to implement appropriate control measures to reduce the discharge of pollutants to the MEP.
    - iii. Identification of any control measures to be required and implemented for non-storm water discharge categories identified under section (a)i above.
    - iv. A description of a program to reduce pollutants from non-emergency fire fighting flows identified by the Copermittee to be significant sources of pollutants.
  - (b) Administrative and Legal Procedures
    - i. Certified statement by the chief legal counsel that the Copermittee has adequate legal authority to implement and enforce each of the requirements contained in 40 CFR 122.26(d)(2)(i)(A-F) and this Order.
    - ii. Identification of all departments within the jurisdiction that conduct urban runoff related activities, and their roles and responsibilities under the Order. Include an up-to-date organizational chart specifying these departments and key personnel.
    - iii. Updated urban runoff related ordinances, with explanations of how they are enforceable.
    - iv. Identification of the local administrative and legal procedures available to mandate compliance with urban runoff related ordinances and therefore with the conditions of the Order.
    - v. Description of how urban runoff related ordinances are implemented and appealed.
    - vi. Description of whether the municipality can issue administrative orders and injunctions or if it must go through the court system for enforcement actions.
  - (c) Development Planning
    - i. A description of the water quality and watershed protection principles that have been or will be included in the Copermittee’s General Plan, and a time schedule for when modifications are planned, if applicable.
    - ii. A description of the Copermittee’s current environmental review process and how it addresses impacts to water quality and appropriate mitigation measures. If the Copermittee plans to modify the process during the permit term, a time schedule for modifications shall be included.

- iii. A description of the development project approval process and requirements.
  - iv. An updated SUSMP document that meets the applicable requirements specified in sections D.1.d and D.1.g(6), including a description of LID BMP requirements to be used prior to the Model SUSMP update. The updated SUSMP may be submitted under separate cover as an attachment to the JURMP.
  - v. A description of the database to be used to track and inventory approved treatment control BMPs and treatment control BMP maintenance.
  - vi. A completed watershed-based inventory of approved treatment control BMPs.
  - vii. A description of the program to be implemented to verify approved treatment control BMPs are operating effectively and have been adequately maintained, including information on treatment control BMP inventory, prioritization, inspection, and annual verification.
  - viii. A description of inspections that will be conducted to verify BMPs have been constructed according to requirements.
  - ix. A description of collaboration efforts to be conducted to develop the HMP.
  - x. A description of enforcement mechanisms and how they will be used.
- (d) Construction
- i. Updated grading and other applicable ordinances.
  - ii. A description of the construction and grading approval processes.
  - iii. Updated construction and grading project requirements.
  - iv. A completed watershed-based inventory of all construction sites.
  - v. A description of steps that will be taken to maintain and update monthly a watershed-based inventory of all construction sites.
  - vi. A list and description of the minimum BMPs that will be implemented, or required to be implemented, including pollution prevention.
  - vii. A description of the maximum disturbed area allowed for grading before either temporary or permanent erosion controls are implemented.
  - viii. A description of construction site conditions where advanced treatment will be required.
  - ix. A description of the steps that will be taken to require and verify the implementation of the designated BMPs at all construction sites.
  - x. A description of planned inspection frequencies.
  - xi. A description of inspection procedures.
  - xii. A description of steps that will be taken to track construction site inspections to verify that all construction sites are inspected at the minimum frequencies required.
  - xiii. A description of available enforcement mechanisms, under what conditions each will be used, and how they will escalate.
  - xiv. A description of notification procedures for non-compliant sites.
- (e) Municipal
- i. A completed inventory of all municipal facilities and activities.
  - ii. A description of which BMPs will be implemented, or required to be implemented, for municipal facilities and activities, including pollution prevention.
  - iii. A description of which BMPs will be implemented, or required to be implemented, for special events.

- iv. A description of steps that will be taken to require and verify the implementation of designated BMPs at municipal facilities and activities.
  - v. A description of MS4 and MS4 facility inspection and maintenance activities and schedules.
  - vi. A description of the management strategy and BMPs to be implemented for pesticides, herbicides, and fertilizer use.
  - vii. A description of street and parking facility sweeping activities and schedules.
  - viii. A description of controls and measures to be implemented to prevent and eliminate infiltration of seepage from sanitary sewers to MS4s.
  - ix. A description of inspection frequencies and procedures.
  - x. A description of enforcement mechanisms and how they will be used.
- (f) Industrial and Commercial
- i. A completed and prioritized inventory of all industrial and commercial sites/sources that could contribute a significant pollutant load to the MS4.
  - ii. A list of minimum BMPs that will be implemented, or required to be implemented, for each facility type or pollutant-generating activity, including pollution prevention.
  - iii. A description of the steps that will be taken to require and verify the implementation of designated BMPs, including notification efforts.
  - iv. Identification of high priority sites/sources and sites/sources to be inspected during the first year of implementation.
  - v. A description of the steps taken to identify sites/sources to be inspected during the first year of implementation, including rationale for their selection.
  - vi. A description of steps that will be taken to identify sites/sources to be inspected in subsequent years.
  - vii. A description of inspection procedures.
  - viii. A description of any third party inspection program to be implemented.
  - ix. A description of the program to be implemented to regulate mobile businesses, including notification of BMP requirements and local ordinances.
  - x. A description of enforcement mechanisms and how they will be used.
  - xi. A description of steps that will be taken to identify non-filers and notify the Regional Board of non-filers.
- (g) Residential
- i. A list of residential areas and activities that have been identified as high priority.
  - ii. A list of minimum BMPs that will be implemented, or required to be implemented, for high priority residential activities.
  - iii. A description of which pollution prevention methods will be encouraged for implementation, and the steps that will be taken to encourage implementation.
  - iv. A description of the steps that will be taken to require and verify the implementation of prescribed BMPs for high priority residential activities.
  - v. A description of efforts to facilitate proper disposal of used oil and other toxic materials.

- vi. A description of efforts to evaluate methods used for oversight of residential areas and activities.
  - vii. A description of enforcement mechanisms and how they will be used.
- (h) Illicit Discharge Detection and Elimination
- i. A description of the program to actively seek and eliminate illicit discharges and illicit connections.
  - ii. An updated MS4 map, including locations of the MS4, dry weather field screening and analytical monitoring sites, and watersheds.
  - iii. A description of dry weather field screening and analytical monitoring to be conducted (including procedures) which addresses all requirements included in sections B.1-4 of Receiving Waters Monitoring and Reporting Program No. R9-2006-0011.
  - iv. A description of investigation and inspection procedures to follow up on dry weather monitoring results or other information which indicate potential for illicit discharges and illicit connections.
  - v. A description of procedures to eliminate detected illicit discharges and illicit connections.
  - vi. A description of enforcement mechanisms and how they will be used.
  - vii. A description of the mechanism to receive notification of spills.
  - viii. A description of measures to prevent, respond to, contain, and clean up all sewage and other spills.
  - ix. A description of efforts to facilitate public reporting of illicit discharges and connections, including a public hotline.
- (i) Education
- i. A description of the content, form, and frequency of education efforts for each target community.
  - ii. A description of steps to be taken to educate underserved target audiences, high-risk behaviors, and “allowable” behaviors and discharges, including various ethnic and socioeconomic groups and mobile sources.
  - iii. A description of the content, form, and frequency of education efforts targeting municipal staff working on development planning, construction, municipal, industrial/commercial, and other aspects of the Jurisdictional Urban Runoff Management Program.
  - iv. A description of the content, form, and frequency of education efforts targeting new development and construction target communities.
  - v. A description of the content, form, and frequency of jurisdictional education efforts for the residential, general public, and school children target communities.
- (j) Public Participation
- i. A description of the steps that will be taken to include public participation in the development and implementation of each Copermittee’s Jurisdictional Urban Runoff Management Program.
- (k) Fiscal Analysis
- i. A description of the fiscal analysis to be conducted annually, as required by section G of this Order.

- (l) Program Effectiveness Assessment
  - i. A description of steps that will be taken to annually conduct program effectiveness assessments in compliance with section I.1 of the Order.
  - ii. Identify measurable targeted outcomes, assessment measures, and assessment methods to be used to assess the effectiveness of: (1) Each significant jurisdictional activity or BMP to be implemented; (2) Implementation of each major component of the Jurisdictional Urban Runoff Management Program; and (3) Implementation of the Jurisdictional Urban Runoff Management Program as a whole.
  - iii. Identify which of the outcome levels 1-6 will be utilized to assess the effectiveness of each of the items listed in sections J.1.a.(3)(l)ii(1-3). Where an outcome level is determined to not be applicable or feasible for an item listed in sections J.1.a.(3)(l)ii(1-3), the Copermittee shall provide a discussion exhibiting inapplicability or infeasibility.
  - iv. A description of the steps that will be taken to utilize monitoring data to assess the effectiveness of each of the items listed in sections J.1.a.(3)(l)ii(1-3).
  - v. A description of the steps that will be taken to improve the Copermittee's ability to assess program effectiveness using measurable targeted outcomes, assessment measures, assessment methods, and outcome levels 1-6. Include a time schedule for when improvement will occur.
  - vi. A description of the steps that will be taken to identify aspects of the Copermittee's Jurisdictional Urban Runoff Management Program that will be changed, based on the results of the effectiveness assessment.

(m) JURMP Modification

- i. Identification of the location in the JURMP of any changes made to the JURMP in order to meet the requirements of Order No. R9-2007-0001.

b. WATERSHED URBAN RUNOFF MANAGEMENT PLANS

- (1) Copermittees - The written account of the program conducted by each watershed group of Copermittees is referred to as the Watershed Urban Runoff Management Plan (WURMP). The Copermittees within each watershed shall be responsible for updating and revising each WURMP, as specified in Table 4 above. Each WURMP shall be updated and revised to describe all activities the watershed Copermittees will undertake to implement the Watershed Urban Runoff Management Program requirements of section E of this Order.
- (2) Lead Watershed Permittee - Each Lead Watershed Permittee shall be responsible for producing its respective WURMP, as well as for coordination and meetings amongst all member watershed Copermittees. Each Lead Watershed Permittee is further responsible for the submittal of the WURMP to the Principal Permittee by the date specified by the Principal Permittee.
- (3) Principal Permittee – The Principal Permittee shall assemble and submit the WURMPs to the Regional Board 365 days after adoption of this Order.
- (4) Each WURMP shall include:
  - (a) Identification of the Lead Watershed Permittee for the watershed.
  - (b) An updated watershed map.

- (c) Identification and description of all applicable water quality data, reports, analyses, and other information to be used to assess receiving water quality.
- (d) Assessment and analysis of the watershed's water quality data, reports, analyses, and other information, including identification and prioritization of the watershed's water quality problems. Water quality problems and high priority water quality problems shall be identified.
- (e) Identification of the likely sources, pollutant discharges, and/or other factors causing the high priority water quality problems within the watershed.
- (f) A description of the program to be implemented to encourage collaborative, watershed-based, land-use planning.
- (g) A description of the strategy to be used to guide Copermittee implementation of Watershed Water Quality Activities and Watershed Education Activities, including criteria for evaluating and identifying effective activities.
- (h) A list of potential Watershed Water Quality Activities, including a description of each activity and its location(s).
- (i) Identification and description of the Watershed Water Quality Activities to be implemented by each Copermittee for the first year of implementation, including justification for why the activities were chosen and a description of how the activities are expected to reduce discharged pollutant loads, abate pollutant sources, or result in other quantifiable benefits to discharge or receiving water quality, in relation to the watershed's high priority water quality problem(s). Plans for activity implementation beyond the first year of implementation should also be provided.
- (j) A list of potential Watershed Education Activities.
- (k) Identification and description of the Watershed Education Activities to be implemented by each Copermittee for the first year of implementation, including justification for why the activities were chosen and a description of how the activities are expected to directly target the sources and discharges of pollutants causing the watershed's high priority water quality problems. Plans for activity implementation beyond the first year of implementation should also be provided.
- (l) A description of the public participation mechanisms to be used and the parties anticipated to be involved.
- (m) A description of Copermittee collaboration to occur, including a schedule for WURMP meetings.
- (n) A description of any TMDL BMP Implementation Plan or equivalent plan to be implemented under section H of this Order.<sup>12</sup>
- (o) A detailed description of the effectiveness assessment to be conducted for the WURMP, including a description how each of the requirements in section I.2 of this Order will be met.

c. REGIONAL URBAN RUNOFF MANAGEMENT PLAN

- (1) Copermittees - The written account of the regional program to be conducted is referred to as the Regional Urban Runoff Management Plan (RURMP). Each Copermittee shall collaborate with the other Copermittees to develop the RURMP. The RURMP shall describe all activities the Copermittees will undertake to implement the requirements of each component of Regional Urban

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<sup>12</sup> For TMDLs not yet approved by the Office of Administrative Law at the time of adoption of this Order, TMDL BMP Implementation Plans shall be submitted separately 365 days following approval of the TMDL.

Runoff Management Program section F of this Order. At a minimum, the RURMP shall contain the following information:

- (a) A common activities section that describes the urban runoff management activities to be implemented on a regional level. For regional activities which are to be implemented in compliance with any jurisdictional requirements of section D or watershed requirements of section E, it shall be described how the regional activities achieve compliance with the subject jurisdictional and/or watershed requirements.
  - (b) A description of steps that will be taken to facilitate assessment of the effectiveness of jurisdictional, watershed, and regional programs.
  - (c) A description of the regional residential education program to be implemented.
  - (d) A description of the strategy for development of the standardized fiscal analysis method required by section G of this Order.
  - (e) A detailed description of the effectiveness assessment to be conducted for the Regional Urban Runoff Management Program, including a description how each of the requirements in section I.3 of this Order will be met.
- (2) The Principal Permittee shall be responsible for creating and submitting the RURMP. The Principal Permittee shall submit the RURMP to the Regional Board 365 days after adoption of this Order.

## **2. Other Required Reports and Plans**

### **a. HYDROMODIFICATION MANAGEMENT PLAN**

- (1) Copermittees - Each Copermittee shall collaborate with the other Copermittees to develop the HMP. The HMP shall be submitted for approval by the Regional Board.
- (2) Principal Permittee - The Principal Permittee shall be responsible for producing and submitting each document according to the schedule below.
  - (a) Within 180 days of adoption of the Order: Submit a detailed workplan and schedule for completion of the literature review, development of a protocol to identify an appropriate channel standard and limiting range of flow rates, development of guidance materials, and other required information;
  - (b) Within 18 months of adoption of the Order: Submit progress report on completion of requirements of the HMP;
  - (c) Within 2 years of adoption of the Order: Submit a draft HMP, including the analysis that identifies the appropriate limiting range of flow rates;
  - (d) Within 180 days of receiving comments from the Regional Board: Submit the HMP for Regional Board approval.

### **b. SUSMP UPDATES**

Each Copermittee shall collaborate with the other Copermittees to update the Model SUSMP. The Principal Permittee shall be responsible for producing and submitting the updated Model SUSMP in accordance with the requirements of section D.1.d.(8)(b). Each Copermittee shall submit its updated local SUSMP, consistent

with the updated Model SUSMP, in accordance with the requirements of section D.1.d.(8)(c).

c. LONG-TERM EFFECTIVENESS ASSESSMENT

In accordance with section I.5 of this Order, the Principal Permittee shall submit the LTEA to the Regional Board no later than 210 days in advance of the expiration of this Order.

d. REPORT OF WASTE DISCHARGE

The Principal Permittee shall submit to the Regional Board, no later than 210 days in advance of the expiration date of this Order, a Report of Waste Discharge (ROWD) as an application for issuance of new waste discharge requirements. At a minimum, the ROWD shall include the following: (1) Proposed changes to the Copermittees' urban runoff management programs; (2) Proposed changes to monitoring programs; (3) Justification for proposed changes; (4) Name and mailing addresses of the Copermittees; (5) Names and titles of primary contacts of the Copermittees; and (6) Any other information necessary for the reissuance of this Order.

**3. Annual Reports**

a. JURISDICTIONAL URBAN RUNOFF MANAGEMENT PROGRAM ANNUAL REPORTS

Each Jurisdictional Urban Runoff Management Program Annual Report shall contain a comprehensive description of all activities conducted by the Copermittee to meet all requirements of section D. The reporting period for these annual reports shall be the previous fiscal year. For example, the report submitted September 30, 2008 shall cover the reporting period July 1, 2007 to June 30, 2008.

- (1) Copermittees – Each Copermittee shall generate individual Jurisdictional Urban Runoff Management Program Annual Reports which cover implementation of its jurisdictional activities during the past annual reporting period. Each Copermittee shall submit to the Principal Permittee its individual Jurisdictional Urban Runoff Management Program Annual Report by the date specified by the Principal Permittee. Each individual Jurisdictional Urban Runoff Management Program Annual Report shall be a comprehensive description of all activities conducted by the Copermittees to meet all requirements of each component of section D of this Order.
- (2) Principal Permittee – The Principal Permittee shall submit Unified Jurisdictional Urban Runoff Management Program Annual Reports to the Regional Board by September 30 of each year, beginning on September 30, 2008. The Unified Jurisdictional Urban Runoff Management Program Annual Report shall contain the twenty-one individual Jurisdictional Urban Runoff Management Program Annual Reports.

The Principal Permittee shall also be responsible for collecting and assembling each Copermittees' individual Jurisdictional Urban Runoff Management Program Annual Report.

- (3) At a minimum, each Jurisdictional Urban Runoff Management Program Annual Report shall contain the following information:
- (a) Development Planning
- i. A description of any amendments to the General Plan, the environmental review process, development project approval processes, or development project requirements.
  - ii. Confirmation that all development projects were required to undergo the Copermittee's urban runoff approval process and meet the applicable project requirements, including a description of how this information was tracked.
  - iii. A listing of the development projects to which SUSMP requirements were applied.
  - iv. Confirmation that all applicable SUSMP BMP requirements were applied to all priority development projects, including a description of how this information was tracked.
  - v. At least one example of a priority development project that was conditioned to meet SUSMP requirements and a description of the required BMPs.
  - vi. A listing of the priority development projects which were allowed to implement treatment control BMPs with low removal efficiency rankings, including the feasibility analyses which were conducted to exhibit that more effective BMPs were infeasible.
  - vii. An updated treatment control BMP inventory.
  - viii. The number of treatment control BMPs inspected, including a summary of inspection results and findings.
  - ix. A description of the annual verification of operation and maintenance of treatment control BMPs, including a summary of verification results and findings.
  - x. Confirmation that BMP verification was conducted for all priority development projects prior to occupancy, including a description of how this information was tracked.
  - xi. A listing of any projects which received a SUSMP waiver.
  - xii. A description of implementation of any SUSMP waiver mitigation program.
  - xiii. A description of Hydromodification Management Plan (HMP) development collaboration and participation.
  - xiv. A listing of development projects required to meet HMP requirements, including a description of hydrologic control measures implemented.
  - xv. A listing of priority development projects not required to meet HMP requirements, including a description of why the projects were found to be exempt from the requirements.
  - xvi. A listing of development projects disturbing 50 acres or more, including information on whether Interim Hydromodification Criteria were met by each of the projects, together with a description of hydrologic control measures implemented for each applicable project.
  - xvii. The number of violations and enforcement actions (including types) taken for development projects, including information on any necessary follow-up actions taken. The discussion should exhibit that compliance has been achieved, or describe actions that are being taken to achieve compliance.

- xviii. A description of notable activities conducted to manage urban runoff from development projects.
- (b) Construction
- i. Confirmation that all construction sites were required to undergo the Copermittee's construction urban runoff approval process and meet the applicable construction requirements, including a description of how this information was tracked.
  - ii. Confirmation that a regularly updated construction site inventory was maintained, including a description of how the inventory was managed.
  - iii. A description of modifications made to the construction and grading ordinances and approval processes.
  - iv. Confirmation that the designated BMPs were implemented, or required to be implemented, for all construction sites.
  - v. Confirmation that a maximum disturbed area for grading was applied to all applicable construction sites.
  - vi. A listing of all construction sites with conditions requiring advanced treatment, together with confirmation that advanced treatment was required at such construction sites.
  - vii. For each construction site within each priority category (high, medium, and low), identification of the period of time (weeks) the site was active within the rainy season, the number of inspections conducted during the rainy season, and the number of inspections conducted during the dry season, and the total number of inspections conducted for all sites.
  - viii. A description of the general results of the inspections.
  - ix. Confirmation that the inspections conducted addressed all the required inspection steps to determine full compliance.
  - x. The number of violations and enforcement actions (including types) taken for construction sites, including information on any necessary follow-up actions taken. The discussion should exhibit that compliance has been achieved, or describe actions that are being taken to achieve compliance.
  - xi. A description of notable activities conducted to manage urban runoff from construction sites.
- (c) Municipal
- i. Any updates to the municipal inventory and prioritization.
  - ii. Confirmation that the designated BMPs were implemented, or required to be implemented, for municipal areas and activities, as well as special events.
  - iii. A description of inspections and maintenance conducted for municipal treatment controls.
  - iv. Identification of the total number of catch basins and inlets, the number of catch basins and inlets inspected, the number of catch basins and inlets found with accumulated waste exceeding cleaning criteria, and the number of catch basins and inlets cleaned.
  - v. Identification of the total distance (miles) of the MS4, the distance of the MS4 inspected, the distance of the MS4 found with accumulated waste exceeding cleaning criteria, and the distance of the MS4 cleaned.
  - vi. Identification of the total distance (miles) of open channels, the distance of open channels inspected, the distance of open channels found with anthropogenic litter, and the distance of open channels cleaned.

- vii. Amount of waste and litter (tons) removed from catch basins, inlets, the MS4, and open channels, by category.
  - viii. Identification of any MS4 facility found to require inspection less than annually following two years of inspection, including justification for the finding.
  - ix. Confirmation that the designated BMPs for pesticides, herbicides, and fertilizers were implemented, or required to be implemented, for municipal areas and activities.
  - x. Identification of the total distance of curb-miles of improved roads, streets, and highways identified as consistently generating the highest volumes of trash and/or debris, as well as the frequency of sweeping conducted for such roads, streets, and highways.
  - xi. Identification of the total distance of curb-miles of improved roads, streets, and highways identified as consistently generating moderate volumes of trash and/or debris, as well as the frequency of sweeping conducted for such roads, streets, and highways.
  - xii. Identification of the total distance of curb-miles of improved roads, streets, and highways identified as consistently generating low volumes of trash and/or debris, as well as the frequency of sweeping conducted for such roads, streets, and highways.
  - xiii. Identification of the total distance of curb-miles swept.
  - xiv. Identification of the number of municipal parking lots, the number of municipal parking lots swept, and the frequency of sweeping.
  - xv. Amount of material (tons) collected from street and parking lot sweeping.
  - xvi. A description of efforts implemented to prevent and eliminate infiltration from the sanitary sewer to the MS4
  - xvii. Identification of the number of sites requiring inspections, the number of sites inspected, and the frequency of the inspections.
  - xviii. A description of the general results of the inspections.
  - xix. Confirmation that the inspections conducted addressed all the required inspection steps to determine full compliance.
  - xx. The number of violations and enforcement actions (including types) taken for municipal areas and activities, including information on any necessary follow-up actions taken. The discussion should exhibit that compliance has been achieved, or describe actions that are being taken to achieve compliance.
  - xxi. A description of notable activities conducted to manage urban runoff from municipal areas and activities.
- (d) Industrial and Commercial
- i. Any updates to the industrial and commercial inventory.
  - ii. Confirmation that the designated BMPs were implemented, or required to be implemented, for industrial and commercial sites/sources.
  - iii. A description of efforts taken to notify owners/operators of industrial and commercial sites/sources of BMP requirements, including mobile businesses.
  - iv. Identification of the total number of industrial and commercial sites/sources inventoried and the total number inspected.
  - v. Justification and rationale for why the industrial and commercial sites/sources inspected were chosen for inspection.

- vi. Confirmation that all inspections conducted addressed all the required inspection steps to determine full compliance.
- vii. Identification of the number of third party inspections conducted.
- viii. Identification of efforts conducted to verify third party inspection effectiveness.
- ix. A description of efforts implemented to address mobile businesses.
- x. The number of violations and enforcement actions (including types) taken for industrial and commercial sites/sources, including information on any necessary follow-up actions taken. The discussion should exhibit that compliance has been achieved, or describe actions that are being taken to achieve compliance.
- xi. A description of steps taken to identify non-filers and a list of non-filers (under the General Industrial Permit) identified by the Copermittees.
- xii. A description of notable activities conducted to manage urban runoff from industrial and commercial sites/sources.

(e) Residential

- i. Identification of the high threat to water quality residential areas and activities that were focused on.
- ii. Confirmation that the designated BMPs were implemented, or required to be implemented, for residential areas and activities.
- iii. A description of efforts implemented to facilitate proper management and disposal of used oil and other household hazardous materials.
- iv. Types and amounts of household hazardous wastes collected, if applicable.
- v. A description of any evaluation of methods used for oversight of residential areas and activities, as well as any findings of the evaluation.
- vi. The number of violations and enforcement actions (including types) taken for residential areas and activities, including information on any necessary follow-up actions taken. The discussion should exhibit that compliance has been achieved, or describe actions that are being taken to achieve compliance.
- vii. A description of collaboration efforts taken to develop and implement the Regional Residential Education Program.
- viii. A description of notable activities conducted to manage urban runoff from residential areas and activities.

(f) Illicit Discharge Detection and Elimination

- i. Correction of any inaccuracies in either the MS4 map or the Dry Weather Field Screening and Analytical Stations Map.
- ii. Reporting of all dry weather field screening and analytical monitoring results. The data should be presented in tabular and graphical form. The reporting shall include station locations, all dry weather field screening and analytical monitoring results, identification of sites where results exceeded action levels, follow-up and elimination activities for potential illicit discharges and connections, the rationale for why follow-up investigations were not conducted at sites where action levels were exceeded, any Copermittee or consultant program recommendations/changes resulting from the monitoring, and documentation that these recommendations/changes have been implemented. Dry weather field screening and analytical monitoring reporting shall comply with all monitoring and standard reporting

- requirements in Attachment B of Order No. R9-2007-0001 and Receiving Waters Monitoring and Reporting Program No. R9-2007-0001.
- iii. Any dry weather field screening and analytical monitoring consultant reports generated, to be provided as an attachment to the annual report.
  - iv. A brief description of any other investigations and follow-up activities for illicit discharges and connections.
  - v. The number and brief description of illicit discharges and connections identified.
  - vi. The number of illicit discharges and connections eliminated.
  - vii. Identification and description of all spills to the MS4 and response to the spills.
  - viii. A description of activities implemented to prevent sewage and other spills from entering the MS4.
  - ix. A description of the mechanism whereby notification of sewage spills from private laterals and septic systems is received.
  - x. Number of times the hotline was called, as compared to previous reporting periods, and a summary of the calls.
  - xi. A description of efforts to publicize and facilitate public reporting of illicit discharges.
  - xii. The number of violations and enforcement actions (including types) taken for illicit discharges and connections, including information on any necessary follow-up actions taken. The discussion should exhibit that compliance has been achieved, or describe actions that are being taken to achieve compliance.
  - xiii. A description of notable activities conducted to manage illicit discharges and connections.
- (g) Education
- i. A description of education efforts conducted for each target community.
  - ii. A description of how education efforts targeted underserved target audiences, high-risk behaviors, and “allowable” behaviors and discharges.
  - iii. A description of education efforts conducted for municipal departments and personnel.
  - iv. A description of education efforts conducted for the new development and construction communities.
  - v. A description of jurisdictional education efforts conducted for residents, the general public, and school children.
- (h) Public Participation
- i. A description of public participation efforts conducted.
- (i) Program Effectiveness Assessment
- i. An assessment of the effectiveness of the Jurisdictional Urban Runoff Management Program which meets all requirements of section I.1 of this Order.
- (j) Fiscal Analysis
- i. A fiscal analysis of the Copermittee’s urban runoff management programs which meets all requirements of section G of this Order.

- (k) Special Investigations
    - i. A description of any special investigations conducted.
  - (l) Non-Emergency Fire Fighting
    - i. A description of any efforts conducted to reduce pollutant discharges from non-emergency fire fighting flows.
  - (m) JURMP Revisions
    - i. A description of any proposed revisions to the JURMP.
- b. WATERSHED URBAN RUNOFF MANAGEMENT PROGRAM ANNUAL REPORTS
- (1) Lead Watershed Permittee - Each Lead Watershed Permittee shall generate watershed specific Watershed Urban Runoff Management Program Annual Reports for their respective watershed(s), as they are outlined in Table 4 of Order No. R9-2007-0001. Copermittees within each watershed shall collaborate with the Lead Watershed Permittee to generate the Watershed Urban Runoff Management Program Annual Reports.
  - (2) Each Watershed Urban Runoff Management Program Annual Report shall be a comprehensive documentation of all activities conducted by the watershed Copermittees during the previous annual reporting period to meet all requirements of section E of Order No. R9-2007-0001. Each Watershed Urban Runoff Management Program Annual Report shall also serve as an update to the WURMP.<sup>13</sup> Each Watershed Urban Runoff Management Program Annual Report shall, at a minimum, contain the following for its reporting period:
    - (a) A comprehensive description of all activities conducted by the watershed Copermittees to meet all requirements of section E of Order No. R9-2007-0001.
    - (b) Any updates to the watershed map.
    - (c) An updated assessment and analysis of the watershed's current and past applicable water quality data, reports, analyses, and other information, including identification of the watershed's water quality problems and high priority water quality problem(s) during the reporting period. The annual report shall clearly state if the watershed's high priority water quality problem(s) changed from the previous reporting period, and provide justification for the change(s).
    - (d) Identification of the likely sources, pollutant discharges, and/or other factors causing the high priority water quality problems within the watershed. The annual report shall clearly describe any changes to the identified sources, pollutant discharges, and/or other factors that have occurred since the previous reporting period, and provide justification for the changes.

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<sup>13</sup> The first annual report to be submitted is not anticipated to be an update to the WURMP, since it will cover the reporting period which begins immediately after WURMP submittal.

- (e) An updated list of potential Watershed Water Quality Activities. The annual report shall clearly describe any changes to the list of Watershed Water Quality Activities that have occurred since the previous reporting period, and provide justification for the changes.
- (f) Identification and description of the Watershed Water Quality Activities implemented by each Copermittee during the reporting period, including information on the activities' location(s), as well as information exhibiting that the activities in active implementation phase reduced discharged pollutant loads, abated pollutant sources, or resulted in other quantifiable benefits to discharge or receiving water quality, in relation to the watershed's high priority water quality problem(s). The annual report shall clearly describe any changes to Watershed Water Quality Activities implementation that have occurred since the previous reporting period, and provide justification for the changes.
- (g) An updated list of potential Watershed Education Activities. The annual report shall clearly describe any changes to the list of Watershed Education Activities that have occurred since the previous reporting period, and provide justification for the changes.
- (h) Identification and description of the Watershed Education Activities implemented by each Copermittee for the reporting period, including information exhibiting that the activities directly targeted the sources and discharges of pollutants causing the watershed's high priority water quality problems, and that activities in active implementation phase changed target audience attitudes, knowledge, awareness, or behavior. The annual report shall clearly describe any changes to Watershed Education Activities implementation that have occurred since the previous reporting period, and provide justification for the changes.
- (i) A description of the public participation mechanisms used during the reporting period and the parties that were involved.
- (j) A description of Copermittee collaboration efforts.
- (k) A description of efforts implemented to encourage collaborative, watershed-based, land-use planning.
- (l) A description of all TMDL activities implemented (including BMP Implementation Plan or equivalent plan activities) for each approved TMDL in the watershed. The description shall include:
  - i. Any additional source identification information;
  - ii. The number, type, location, and other relevant information about BMP implementation, including any expanded or better tailored BMPs necessary to meet the WLAs;
  - iii. Updates in the BMP implementation prioritization and schedule;
  - iv. An assessment of the effectiveness of the BMP Implementation Plan, which meets the requirements of section I.4 Order No. R9-2007-0001; and

- v. A discussion of the progress to date in meeting the TMDL Numeric Targets and WLAs, which incorporates the results of the effectiveness assessment, compliance monitoring, and an evaluation of additional efforts needed to date.
  - (m) An assessment of the effectiveness of the WURMP, which meets the requirements of section I.2 of Order No. R9-2007-0001. The effectiveness assessment shall attempt to qualitatively or quantitatively exhibit the impact that implementation of the Watershed Water Quality Activities and the Watershed Education Activities had on the high priority water quality problem(s) within the watershed. This information shall document changes in pollutant load discharges, urban runoff and discharge quality, and receiving water quality, where applicable and feasible.
  - (3) Principal Permittee – The Unified Watershed Urban Runoff Management Program Annual Report shall contain the nine separate Watershed Urban Runoff Management Program Annual Reports. Each Lead Watershed Copermittee shall submit to the Principal Permittee a Watershed Urban Runoff Management Program Annual Report by the date specified by the Principal Permittee. The Principal Permittee shall assemble and submit the Unified Watershed Urban Runoff Management Program Annual Report to the Regional Board by January 31, 2009 and every January 31 thereafter. The reporting period for these annual reports shall be the previous fiscal year. For example, the report submitted January 31, 2009 shall cover the reporting period July 1, 2007 to June 30, 2008.
- c. REGIONAL URBAN RUNOFF MANAGEMENT PROGRAM ANNUAL REPORTS

The Principal Permittee shall generate the Regional Urban Runoff Management Program Annual Reports. All Copermittees shall collaborate with the Principal Permittee to generate the Regional Urban Runoff Management Program Annual Reports. Each Regional Urban Runoff Management Program Annual Report shall be a comprehensive documentation of all regional activities conducted by the Copermittees during the previous annual reporting period to meet all requirements of section F of Order No. R9-2007-0001.

The Principal Permittee shall submit the Regional Urban Runoff Management Program Annual Report to the Regional Board by January 31, 2009 and every January 31 thereafter. The reporting period for these annual reports shall be the previous fiscal year. For example, the report submitted January 31, 2009 shall cover the reporting period July 1, 2007 to June 30, 2008.

Each Regional Urban Runoff Management Program Annual Report shall, at a minimum, contain the following:

- (1) A common activities section that describes the urban runoff management activities or BMPs implemented on a regional level, including information on how the activities complied with jurisdictional or watershed requirements, if applicable.
- (2) A description of steps taken to facilitate assessment of the effectiveness of jurisdictional, watershed, and regional programs.

- (3) A description of the regional residential education activities implemented as part of the regional residential education program.
- (4) A description of steps taken to develop and implement the standardized fiscal analysis method.
- (5) An assessment of the effectiveness of the Regional Urban Runoff Management Program which meets the requirements of section I.3 of Order No. R9-2007-0001.

**4. Interim Reporting Requirements** - For the July 2006–June 2007 reporting period, Jurisdictional URMP and Watershed URMP Annual Reports shall be submitted on January 31, 2008. Each Jurisdictional URMP and Watershed URMP Annual Report submitted for this reporting period shall at a minimum be comprehensive descriptions of all activities conducted to fully implement the Copermittees' Jurisdictional URMP and Watershed URMP documents, as those documents were developed to comply with the requirements of Order No. 2001-01. The Principal Permittee shall be responsible for submitting these documents in a unified manner, consistent with the unified reporting requirements of Order No. 2001-01.

#### **5. Annual Report Integration**

- a. The Copermittees are encouraged to submit, for Regional Board review and approval, an annual reporting format which integrates the information submitted in the JURMP, WURMP, and RURMP Annual Reports and Monitoring Reports. This document shall be called the "Integrated Annual Report Format." The Integrated Annual Report Format should:
  - (1) Exhibit compliance with all requirements of JURMP, WURMP, and RURMP sections D, E, and F of Order No. R9-2007-0001.
  - (2) Report all information required in section J.3 of Order No. R9-2007-0001.
  - (3) Report all information required in the Monitoring and Reporting program.
  - (4) Provide consistent and comparable reporting of jurisdictional and watershed information by all Copermittees and watershed groups.
  - (5) Specifically identify all types of information that will be reported (e.g., amount of debris collected during street sweeping), including reporting criteria for each type of information (e.g., reported in tons).
  - (6) Describe quality assurance/quality control methods to be used to assess accuracy of jurisdictional and watershed information conveyed.
  - (7) Describe each Copermittee's reporting responsibilities under the format.
  - (8) Improve the Copermittees' ability to assess JURMP and WURMP effectiveness in terms of water quality.
  - (9) Include a separate section for reporting on each Copermittee's activities.
  - (10) Include a separate section for reporting on each watershed's activities.
- b. Upon approval of the Integrated Annual Report Format by the Regional Board, an Integrated Annual Report shall be submitted annually, which may substitute for the JURMP Annual Reports, WURMP Annual Reports, RURMP Annual Report, and/or Monitoring Reports, as approved by the Regional Board. The Principal Permittee shall be responsible for the generation and submittal of the Integrated Annual Reports. Each Copermittee shall be responsible for the information in the Integrated Annual Report pertaining to its jurisdictional, watershed, regional, and monitoring responsibilities. The Integrated Annual Report shall be submitted the first January 31 following approval of the reporting format by the Regional Board, and every January

31 thereafter. The reporting period for Integrated Annual Reports shall be the previous fiscal year. For example, a report submitted January 31, 2010 shall cover the reporting period July 1, 2008 to June 30, 2009.

- c. The format and information provided in Integrated Annual Reports shall match and be consistent with the format and information described in the Integrated Annual Report Format.

## **6. Universal Reporting Requirements**

All submittals shall include an executive summary, introduction, conclusion, recommendations, and signed certified statement. Each Copermittee shall submit a signed certified statement covering its responsibilities for each applicable submittal. The Principal Permittee shall submit a signed certified statement covering its responsibilities for each applicable submittal and the sections of the submittals for which it is responsible.

## **K. MODIFICATION OF PROGRAMS**

Modifications of Jurisdictional Urban Runoff Management Programs, Watershed Urban Runoff Management Programs, and/or the Regional Urban Runoff Management Program may be initiated by the Executive Officer or by the Copermittees. Requests by Copermittees shall be made to the Executive Officer, and shall be submitted during the annual review process. Requests for modifications should be incorporated, as appropriate, into the Annual Reports or other deliverables required or allowed under this Order.

1. Minor Modifications – Minor modifications to Jurisdictional Urban Runoff Management Programs, Watershed Urban Runoff Management Programs, and/or the Regional Urban Runoff Management Program may be accepted by the Executive Officer where the Executive Officer finds the proposed modification complies with all discharge prohibitions, receiving water limitations, and other requirements of this Order.
2. Modifications Requiring an Amendment to this Order – Proposed modifications that are not minor shall require amendment of this Order in accordance with this Order's rules, policies, and procedures.

## **L. ALL COPERMITTEE COLLABORATION**

1. Each Copermittee collaborate with all other Copermittees regulated under this Order to address common issues, promote consistency among Jurisdictional Urban Runoff Management Programs and Watershed Urban Runoff Management Programs, and to plan and coordinate activities required under this Order.
  - a. Management Structure - All Copermittees shall jointly execute and submit to the Regional Board no later than 180 days after adoption of this Order, a Memorandum of Understanding, Joint Powers Authority, or other instrument of formal agreement which at a minimum:
    - (1) Identifies and defines the responsibilities of the Principal Permittee and Lead Watershed Permittees;
    - (2) Identifies Copermittees and defines their individual and joint responsibilities, including watershed responsibilities;

- (3) Establishes a management structure to promote consistency and develop and implement regional activities;
- (4) Establishes standards for conducting meetings, decision-making, and cost-sharing;
- (5) Provides guidelines for committee and workgroup structure and responsibilities;
- (6) Lays out a process for addressing Copermittee non-compliance with the formal agreement; and
- (7) Includes any and all other collaborative arrangements for compliance with this Order.

#### **M. PRINCIPAL PERMITTEE RESPONSIBILITIES**

Within 180 days of adoption of this Order, the Copermittees shall designate the Principal Permittee and notify the Regional Board of the name of the Principal Permittee. The Principal Permittee shall, at a minimum:

1. Serve as liaison between the Copermittees and the Regional Board on general permit issues, and when necessary and appropriate, represent the Copermittees before the Regional Board.
2. Coordinate permit activities among the Copermittees and facilitate collaboration on the development and implementation of programs required under this Order.
3. Integrate individual Copermittee documents and reports into single unified documents and reports for submittal to the Regional Board as required under this Order.
4. Produce and submit documents and reports as required by section J of this Order and Receiving Waters and Urban Runoff Monitoring and Reporting Program No. R9-2007-0001.
5. Submit to the Regional Board, within 180 days of adoption of this Order, a formal agreement between the Copermittees which provides a management structure for meeting the requirements of this Order (as described in section L).
6. Coordinate joint development by all of the Copermittees of standardized format(s) for all documents and reports required under this Order (e.g., JURMPs, WURMPs, annual reports, monitoring reports, etc.). The standardized reporting format(s) shall be used by all Copermittees. The Principal Permittee shall submit the standardized format(s) to the Regional Board for review no later than 180 days after adoption of this Order.

#### **N. RECEIVING WATERS MONITORING AND REPORTING PROGRAM**

Pursuant to CWC section 13267, the Copermittees shall comply with all the requirements contained in Receiving Waters and Urban Runoff Monitoring and Reporting Program No. R9-2007-0001.

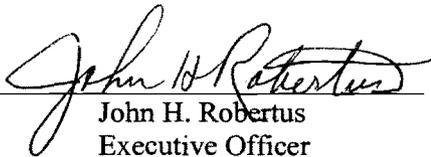
#### **O. STANDARD PROVISIONS, REPORTING REQUIREMENTS, AND NOTIFICATIONS**

1. Each Copermittee shall comply with Standard Provisions, Reporting Requirements, and Notifications contained in Attachment B of this Order. This includes 24 hour/5day reporting requirements for any instance of non-compliance with this Order as described

in section 5.e of Attachment B.

2. All plans, reports and subsequent amendments submitted in compliance with this Order shall be implemented immediately (or as otherwise specified). All submittals by Copermittees must be adequate to implement the requirements of this Order.

*I, John H. Robertus, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Diego Region, on January 24, 2007.*

  
John H. Robertus  
Executive Officer

**ATTACHMENT A****BASIN PLAN PROHIBITIONS**

California Water Code Section 13243 provides that a Regional Board, in a water quality control plan, may specify certain conditions or areas where the discharge of waste, or certain types of waste is not permitted. The following discharge prohibitions are applicable to any person, as defined by Section 13050(c) of the California Water Code, who is a citizen, domiciliary, or political agency or entity of California whose activities in California could affect the quality of waters of the state within the boundaries of the San Diego Region.

1. The discharge of waste to waters of the state in a manner causing, or threatening to cause a condition of pollution, contamination or nuisance as defined in California Water Code Section 13050, is prohibited.
2. The discharge of waste to land, except as authorized by waste discharge requirements or the terms described in California Water Code Section 13264 is prohibited.
3. The discharge of pollutants or dredged or fill material to waters of the United States except as authorized by a NPDES permit or a dredged or fill material permit (subject to the exemption described in California Water Code Section 13376) is prohibited.
4. Discharges of recycled water to lakes or reservoirs used for municipal water supply or to inland surface water tributaries thereto are prohibited, unless this Regional Board issues a NPDES permit authorizing such a discharge; the proposed discharge has been approved by the State Department of Health Services and the operating agency of the impacted reservoir; and the discharger has an approved fail-safe long-term disposal alternative.
5. The discharge of waste to inland surface waters, except in cases where the quality of the discharge complies with applicable receiving water quality objectives, is prohibited. Allowances for dilution may be made at the discretion of the Regional Board. Consideration would include streamflow data, the degree of treatment provided and safety measures to ensure reliability of facility performance. As an example, discharge of secondary effluent would probably be permitted if streamflow provided 100:1 dilution capability.
6. The discharge of waste in a manner causing flow, ponding, or surfacing on lands not owned or under the control of the discharger is prohibited, unless the discharge is authorized by the Regional Board.
7. The dumping, deposition, or discharge of waste directly into waters of the state, or adjacent to such waters in any manner which may permit its being transported into the waters, is prohibited unless authorized by the Regional Board.
8. Any discharge to a storm water conveyance system that is not composed entirely of "storm water" is prohibited unless authorized by the Regional Board. [The federal regulations, 40 CFR 122.26(b)(13), define storm water as storm water runoff, snow melt runoff, and surface runoff and drainage. 40 CFR 122.26(b)(2) defines an illicit discharge as any discharge to a storm water conveyance system that is not composed entirely of storm water except discharges pursuant to a NPDES permit and discharges resulting from

fire fighting activities. [§122.26 amended at 56 FR 56553, November 5, 1991; 57 FR 11412, April 2, 1992].

9. The unauthorized discharge of treated or untreated sewage to waters of the state or to a storm water conveyance system is prohibited.
10. The discharge of industrial wastes to conventional septic tank/subsurface disposal systems, except as authorized by the terms described in California Water Code Section 13264, is prohibited.
11. The discharge of radioactive wastes amenable to alternative methods of disposal into the waters of the state is prohibited.
12. The discharge of any radiological, chemical, or biological warfare agent into waters of the state is prohibited.
13. The discharge of waste into a natural or excavated site below historic water levels is prohibited unless the discharge is authorized by the Regional Board.
14. The discharge of sand, silt, clay, or other earthen materials from any activity, including land grading and construction, in quantities which cause deleterious bottom deposits, turbidity or discoloration in waters of the state or which unreasonably affect, or threaten to affect, beneficial uses of such waters is prohibited.
15. The discharge of treated or untreated sewage from vessels to Mission Bay, Oceanside Harbor, Dana Point Harbor, or other small boat harbors is prohibited.
16. The discharge of untreated sewage from vessels to San Diego Bay is prohibited.
17. The discharge of treated sewage from vessels to portions of San Diego Bay that are less than 30 feet deep at mean lower low water (MLLW) is prohibited.
18. The discharge of treated sewage from vessels, which do not have a properly functioning US Coast Guard certified Type I or Type II marine sanitation device, to portions of San Diego Bay that are greater than 30 feet deep at mean lower low water (MLLW) is prohibited.

**ATTACHMENT B****STANDARD PROVISIONS, REPORTING REQUIREMENTS, AND NOTIFICATIONS****1. STANDARD PROVISIONS – PERMIT COMPLIANCE [40 CFR 122.41]**

- (a) *Duty to comply* [40 CFR 122.41(a)].
- (1) The Copermitttee must comply with all of the conditions of this Order. Any noncompliance constitutes a violation of the Clean Water Act (CWA) and the California Water Code (CWC) and is grounds for enforcement action, for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application.
  - (2) The Copermitttee shall comply with effluent standards or prohibitions established under section 307(a) of the CWA toxic pollutants and with standards for sewage sludge use or disposal established under section 405(d) of the CWA within the time provided in the regulations that establish these standards or prohibitions or standards for sewage sludge use or disposal, even if the Order has not yet been modified to incorporate the requirement.
- (b) *Need to halt or reduce activity not a defense* [40 CFR 122.41(c)]. It shall not be a defense for the Copermitttee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this Order.
- (c) *Duty to mitigate* [40 CFR 122.41(d)]. The Copermitttee shall take all reasonable steps to minimize or prevent any discharge or prevent any discharge or sludge use or disposal in violation of this Order that has a reasonable likelihood of adversely affecting human health or the environment.
- (d) *Proper operation and maintenance* [40 CFR 122.41(e)]. The Copermitttee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Copermitttee to achieve compliance with the conditions of this Order. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems that are installed by the Copermitttee only when necessary to achieve compliance with the conditions of this Order.
- (e) *Property rights* [40 CFR 122.41(g)].
- (1) This Order does not convey any property rights of any sort or any exclusive privilege.
  - (2) 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.
- (f) *Inspection and entry* [40 CFR 122.41(i)]. The Copermitttee shall allow the Regional Water Quality Control Board, San Diego Region (Regional Board), State Water Resources Control Board (SWRCB), United States Environmental Protection Agency (USEPA), and/or their authorized representatives (including an authorized contractor acting as their representative), upon presentation of credentials and other documents as may be required by law, to:

- (1) Enter upon the Copermittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this Order;
- (2) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Order;
- (3) Inspect and photograph, at reasonable times, any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order; and
- (4) Sample or monitor, at reasonable times, for the purpose of assuring Order compliance or as otherwise authorized by the CWA or the CWC, any substances or parameters at any location.

(g) *Bypass* [40 CFR 122.41(m)]

(1) Definitions:

- i) "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility.
- ii) "Severe property damage" means substantial physical damage to property, damage to the treatment facilities, which causes them to become inoperable, or substantial and permanent loss of natural resources that can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

(2) Bypass not exceeding limitations - The Copermittee may allow any bypass to occur which does not cause exceedances of effluent limitations, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions listed in Standard Provisions – Permit Compliance (g)(3), (g)(4) and (g)(5) below.

(3) Prohibition of Bypass - Bypass is prohibited, and the Regional Board may take enforcement action against a Copermittee for bypass, unless:

- i) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
- ii) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and
- iii) The Copermittee submitted notice as required under Standard Provisions – Permit Compliance (g)(3) above.

(4) Notice

- i) Anticipated bypass. If the Copermittee knows in advance of the need for a bypass, it shall submit a notice, if possible at least ten days before the date of the bypass.
- ii) Unanticipated bypass. The Copermittee shall submit notice of an unanticipated bypass as required in Standard Provisions 5(e) below (24-hour notice).

- (h) *Upset* [40 CFR 122.41(n)] Upset means an exceptional incident in which there is unintentional and temporary noncompliance with technology based effluent limitations because of factors beyond the reasonable control of the Copermittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.
- (1) Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of Standard Provisions – Permit Compliance (h)(2) below are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.
- (2) Conditions necessary for a demonstration of upset. A Copermittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:
- i) An upset occurred and that the Copermittee can identify the cause(s) of the upset;
  - ii) The permitted facility was at the time being properly operated;
  - iii) The Copermittee submitted notice of the upset as required in Standard Provisions – Permit Compliance (5)(e)(ii)(B) below (24-hour notice); and
  - iv) The Copermittee complied with any remedial measures required under Standard Provisions – Permit Compliance 1(c) above.
- (3) Burden of Proof. In any enforcement proceeding, the Copermittee seeking to establish the occurrence of an upset has the burden of proof.

## **2. STANDARD PROVISIONS – PERMIT ACTION**

- (a) *General* [40 CFR 122.41(f)] This Order may be modified, revoked and reissued, or terminated for cause. The filing of a request by the Copermittee for modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any Order condition.
- (b) *Duty to reapply* [40 CFR 122.41(b)]. If the Copermittee wishes to continue an activity regulated by this Order after the expiration date of this Order, the Copermittee must apply for and obtain new permit.
- (c) *Transfers*. This Order is not transferable to any person except after notice to the Regional Board. The Regional Board may require modification or revocation and reissuance of the Order to change the name of the Copermittee and incorporate such other requirements as may be necessary under the CWA and the CWC.

## **3. STANDARD PROVISIONS – MONITORING**

- (a) Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. [40 CFR Section 122.41 (j) (1)]
- (b) Monitoring results must be conducted according to test procedures under 40 CFR Part 136, or in the case of sludge use or disposal, approved under 40 CFR Part 136 unless otherwise

specified in 40 CFR Part 503 unless other test procedures have been specified in this Order [40 CFR Section 122.41(j)(4)][40 CFR Section 122.44(i)(1)(iv)].

#### 4. STANDARD PROVISIONS – RECORDS

- (a) Except for records of monitoring information required by this Order related to the Copermittee's sewage sludge use and disposal activities, which shall be retained for a period of at least five years (or longer as required by 40 CFR Part 503), the Copermittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this Order, and records of all data used to complete the application for this Order, for a period of at least three (3) years from the date of the sample, measurement, report or application. This period may be extended by request of the Regional Water Board Executive Officer at any time [40 CFR Section 122.41(j)(2)].
- (b) *Records of monitoring information* [40 CFR 122.41(j) (3)] shall include:
- (1) The date, exact place, and time of sampling or measurements;
  - (2) The individual(s) who performed the sampling or measurements;
  - (3) The date(s) analyses were performed;
  - (4) The individual(s) who performed the analyses;
  - (5) The analytical techniques or methods used; and
  - (6) The results of such analyses.
- (c) *Claims of confidentiality* [40 CFR Section 122.7(b)] of the following information will be denied:
- (1) The name and address of any permit applicant or Copermittee; and
  - (2) Permit applications and attachments, permits and effluent data.

#### 5. STANDARD PROVISIONS – REPORTING

- (a) *Duty to provide information* [40 CFR 122.41(h)]. The Copermittee shall furnish to the Regional Board, SWRCB, or USEPA within a reasonable time, any information which the Regional Board, SWRCB, or USEPA may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Order or to determine compliance with this Order. Upon request, the Copermittee shall also furnish to the Regional Board, SWRCB, or USEPA, copies of records required to be kept by this Order.
- (b) *Signatory and Certification Requirements* [40 CFR 122.41(k)]
- (1) All applications, reports, or information submitted to the Regional Board, SWRCB, or USEPA shall be signed and certified in accordance with Standard Provisions – Reporting 5(b)ii), 5(b)iii), 5(b)iv), and 5(b) (see 40 CFR 122.22)
  - (2) *Applications* [40 CFR 122.22(a)(3)] All permit applications shall be signed by either a principal executive officer or ranking elected official.
  - (3) *Reports* [40 CFR 122.22(b)]. All reports required by this Order, and other information requested by the Regional Board, SWRCB, or USEPA shall be signed by a person described in Standard Provisions – Reporting 5(b)(2) above, or by a duly authorized

representative of that person. A person is a duly authorized representative only if:

- i) The authorization is made in writing by a person described in Standard Provisions-Reporting 5(b)(2) above;
  - ii) The authorization specifies 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,
  - iii) The written authorization is submitted to the Regional Water Board and State Water Board.
- (4) *Changes to authorization* [40 CFR Section 122.22(c)] If an authorization under Standard Provisions – Reporting 5(b)(3) of this reporting requirement is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of Standard Provisions – Reporting 5(b)(3) above must be submitted to the Regional Water Board and State Water Board prior to or together with any reports, information, or applications to be signed by an authorized representative.
- (5) *Certification* [40 CFR Section 122.22(d)] Any person signing a document under Standard Provisions – Reporting 5(b)(2), or 5(b)(3) above shall 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.”

(c) *Monitoring reports.* [40 CFR 122.41(l)(4)]

- (1) Monitoring results shall be reported at the intervals specified in the Receiving Waters and Urban Runoff Monitoring and Reporting Program No. R9-2007-0001.
- (2) Monitoring results must be reported on a Discharge Monitoring Report (DMR) form or forms provided or specified by the Regional Board or SWRCB for reporting results of mentoring of sludge use or disposal practices.
- (3) If the Copermittee monitors any pollutant more frequently than required by this Order using test procedures approved under 40 CFR Part 136 or, in the case of sludge use or disposal, approved under 40 CFR Part 136 unless otherwise specified in 40 CFR Part 503, or as specified in this Order, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR or sludge reporting form specified by the Regional Board.

- (4) Calculations for all limitations, which require averaging of measurements, shall utilize an arithmetic mean unless otherwise specified in this Order.
- (d) *Compliance schedules.* [40 CFR Section 122.41(l)(5)] Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this Order shall be submitted no later than 14 days following each schedule date.
- (e) *Twenty-four hour reporting* [40 CFR Section 122.41(l)(6)]
- (1) The Copermittee shall report any noncompliance that may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the Copermittee becomes aware of the circumstances. A written submission shall also be provided within five (5) days of the time the Copermittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.
  - (2) The following shall be included as information, which must be reported within 24 hours under this paragraph:
    - i) Any unanticipated bypass that exceeds any effluent limitation in the Order (See 40 CFR 122.41(g)).
    - ii) Any upset which exceeds any effluent limitation in this Order.
  - (3) The Regional Board may waive the above-required written report under this provision on a case-by-case basis if the oral report has been received within 24 hours.
- (f) *Planned changes.* [40 CFR Section 122.41(l)(1)] The Copermittee shall give notice to the Regional Board as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required under this provision only when:
- (1) The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 CFR 122.29(b); or
  - (2) The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants, which are not subject to effluent limitations in this Order.
  - (3) The alteration or addition results in a significant change in the Copermittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing Order, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan.
- (g) *Anticipated noncompliance.* [40 CFR Section 122.41(l)(7)] The Copermittee shall give advance notice to the Regional Board or SWRCB of any planned changes in the permitted facility or activity, which may result in noncompliance with Order requirements.

- (h) *Other noncompliance* [40 CFR Section 122.41(1) 7)] The Copermittee shall report all instances of noncompliance not reported under Standard Provisions 5(c), 5(d), and 5(e) above, at the time monitoring reports are submitted. The reports shall contain the information listed in Standard Provision – Reporting 5(e) above.
- (i) *Other information* [40 CFR Section 122.41(1)(8)] When the Copermittee becomes 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 Board, SWRCB, or USEPA, the Copermittee shall promptly submit such facts or information.

## 6. STANDARD PROVISIONS – ENFORCEMENT

- (a) 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.

## 7. ADDITIONAL STANDARD PROVISIONS

- (a) *Municipal separate storm sewer systems* [40 CFR 122.42(c)]. The operator of a large or medium municipal separate storm sewer system or a municipal separate storm sewer that has been designated by the Director under 40 CFR 122.26(a)(1)(v) must submit an annual report by the anniversary of the date of the issuance of the permit for such system. The report shall include:
- (1) The status of implementing the components of the storm water management program that are established as permit conditions;
  - (2) Proposed changes to the storm water management programs that are established as permit conditions. Such proposed changes shall be consistent with 40 CFR 122.26(d)(2)(iii); and
  - (3) Revisions, if necessary, to the assessment of controls and the fiscal analysis reported in the permit application under 40 CFR 122.26(d)(2)(iv) and 40 CFR 122.26(d)(2)(v);
  - (4) A summary of data, including monitoring data, that is accumulated throughout the reporting year;
  - (5) Annual expenditures and budget for year following each annual report;
  - (6) A summary describing the number and nature of enforcement actions, inspections, and public education programs; and
  - (7) Identification of water quality improvements or degradation.
- (b) *Storm water discharges* [40 CFR 122.42(d)]. The initial permits for discharges composed entirely of storm water issued pursuant to 40 CFR 122.26(e)(7) shall require compliance with the conditions of the permit as expeditiously as practicable, but in no event later than three years after the date of issuance of the permit.
- (c) *Other Effluent Limitations and Standards* [40 CFR 122.44(b)(1)]. If any toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is promulgated under Section 307(a) of the CWA for a toxic pollutant which is present in the discharge and that standard or prohibition is more stringent than any limitation on the pollutant in this Order, the Regional Board may institute

proceedings under these regulations to modify or revoke and reissue the Order to conform to the toxic effluent standard or prohibition.

- (d) *Discharge is a privilege* [CWC section 13263(g)]. No discharge of waste into the waters of the State, whether or not such discharge is made pursuant to waste discharge requirements, shall create a vested right to continue such discharge. All discharges of waste into waters of the State are privileges, not rights.
- (e) *Review and revision of Order* [CWC section 13263(e)]. Upon application by any affected person, or on its own motion, the Regional Board may review and revise this permit.
- (f) *Termination or modification of Order* [CWC section 13381]. This permit may be terminated or modified for causes, including, but not limited to, all of the following:
  - (1) Violation of any condition contained in this Order;
  - (2) Obtaining this Order by misrepresentation, or failure to disclose fully all relevant facts.
  - (3) A change in any condition that requires either a temporary or permanent reduction or elimination of the permitted discharge.
- (g) *Transfers*. When this Order is transferred to a new owner or operator, such requirements as may be necessary under the CWC may be incorporated into this Order.
- (h) *Conditions not stayed*. The filing of a request by the Copermittee for modification, revocation and reissuance, or termination of this Order, or a notification of planned change in or anticipated noncompliance with this Order does not stay any condition of this Order.
- (i) *Availability*. A copy of this Order shall be kept at a readily accessible location and shall be available to on-site personnel at all times.
- (j) *Duty to minimize or correct adverse impacts*. The Copermittees shall take all reasonable steps to minimize or correct any adverse impact on the environment resulting from noncompliance with this Order, including such accelerated or additional monitoring as may be necessary to determine the nature and impact of the noncompliance.
- (k) *Interim Effluent Limitations*. The Copermittee shall comply with any interim effluent limitations as established by addendum, enforcement action, or revised waste discharge requirements which have been, or may be, adopted by this Regional Board.
- (l) *Responsibilities, liabilities, legal action, penalties* [CWC sections 13385 and 13387]. The Porter-Cologne Water Quality Control Act provides for civil and criminal penalties comparable to, and in some cases greater than, those provided for under the CWA.

Nothing in this Order shall be construed to protect the Copermittee from its liabilities under federal, state, or local laws.

Except as provided for in 40CFR 122.41(m) and (n), nothing in this Order shall be construed to relieve the Copermittee from civil or criminal penalties for noncompliance.

Nothing in this Order shall be construed to preclude the institution of any legal action or relieve the Copermittee from any responsibilities, liabilities, or penalties to which the Copermittee is or may be subject to under Section 311 of the CWA.

Nothing in this Order shall be construed to preclude institution of any legal action or relieve the Copermittee from any responsibilities, liabilities, or penalties established pursuant to any applicable state law or regulation under authoring preserved by Section 510 of the CWA.

- (m) *Noncompliance.* Any noncompliance with this Order constitutes violation of the CWC and is grounds for denial of an application for modification of the Order (also see 40 CFR 122.41(a)).
- (n) *Director.* For purposes of this Order, the term “Director” used in parts of 40 CFR incorporated into this Order by reference and/or applicable to this Order shall have the same meaning as the term “Regional Board” used elsewhere in this Order, except that in 40 CFR 122.41(h) and (I), “Director” shall mean “Regional Board, SWRCB, and USEPA.”
- (o) The Regional Board has, in prior years, issued a limited number of individual NPDES permits for non-storm water discharges to MS4s. The Regional Board or SWRCB may in the future, upon prior notice to the Copermittee(s), issue an NPDES permit for any non-storm water discharge (or class of non-storm water discharges) to a MS4. Copermittees may prohibit any non-storm water discharge (or class of non-storm water discharges) to a MS4 that is authorized under such separate NPDES permits.
- (p) *Effective date.* This Order shall become effective on the date of its adoption provided the USEPA has no objection. If the USEPA objects to its issuance, this Order shall not become effective until such objection is withdrawn. This Order supersedes Order No. 2001-01 upon the effective date of this Order.
- (q) *Expiration.* This Order expires five years after adoption.
- (r) *Continuation of expired order* [23 CCR 2235.4]. After this Order expires, the terms and conditions of this Order are automatically continued pending issuance of a new permit if all requirements of the federal NPDES regulations on the continuation of expired permits (40 CFR 122.6) are complied with.
- (s) *Applications.* Any application submitted by a Copermittee for reissuance or modification of this Order shall satisfy all applicable requirements specified in federal regulations as well as any additional requirements for submittal of a Report of Waste Discharge specified in the CWC and the California Code of Regulations.
- (t) *Confidentiality.* Except as provided for in 40 CFR 122.7, no information or documents submitted in accordance with or in application for this Order will be considered confidential, and all such information and documents shall be available for review by the public at the Regional Board office.
- (u) *Severability.* The provisions of this Order are severable, and if any provision of this Order, or the application of any provisions of this Order to any circumstance, is held invalid, the application of such provision to other circumstances and the remainder of this Order shall not be affected thereby.
- (v) *Report submittal.* The Copermittee shall submit reports and provide notifications as required by this Order to the following:

SOUTHERN WATERSHED PROTECTION UNIT  
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
SAN DIEGO REGION  
9174 SKY PARK COURT, SUITE 100  
SAN DIEGO CA 92123-4340  
Telephone: (858) 467-2952 Fax: (858) 571-6972

EUGENE BROMLEY  
US ENVIRONMENTAL PROTECTION AGENCY  
REGION IX  
PERMITS ISSUANCE SECTION (W-5-1)  
75 HAWTHORNE STREET  
SAN FRANCISCO CA 94105

Unless otherwise directed, the Copermitee shall submit one hard copy for the official record and one electronic copy of each report required under this Order to the Regional Board and one electronic copy to the EPA.

**ATTACHMENT C****DEFINITIONS**

**Advanced Treatment**- Using mechanical or chemical means to flocculate and remove suspended sediment from runoff from construction sites prior to discharge.

**Anthropogenic Litter** – Trash generated from human activities, not including sediment.

**Basin Plan** – Water Quality Control Plan, San Diego Basin, Region 9, and amendments, developed by the Regional Board.

**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 tangible and intangible economic, social, and environmental goals. “Beneficial Uses” of the waters of the State 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 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 Management Practices (BMPs)** - 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.

**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.

**Biocriteria** - Under the CWA, numerical values or narrative expressions that define a desired biological condition for a water body that are legally enforceable. The USEPA defines biocriteria as: “numerical values or narrative expressions that describe the reference biological integrity of aquatic communities inhabiting waters of a given designated aquatic life use...(that)...describe the characteristics of water body segments least impaired by human activities.”

**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)]** - The federal statute requiring municipal and industrial dischargers to obtain NPDES permits for their discharges of storm water.

**Clean Water Act Section 303(d) Water Body** - 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 Copermitttees 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 State are affected.”

**Critical Channel Flow (Qc)** – The channel flow that produces the critical shear stress that initiates bed movement or that erodes the toe of channel banks. When measuring Qc, it should be based on the weakest boundary material – either bed or bank.

**CWA** – Federal Clean Water Act

**CWC** – California Water Code

**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** – May 1 through September 30 of each year.

**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** – Any restriction imposed on quantities, discharge rates, and concentrations of pollutants, which are discharged from point sources into waters of the State. 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 limits are typically numeric (e.g., 10 mg/l), but can also be narrative (e.g., no toxics in toxic amounts).

**Erosion** – When land is diminished or worn away due to 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.

**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 San Diego 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 San Diego Basin (1994) and amendments); areas designated as preserves or their equivalent under the Multi Species Conservation Program within the Cities and County of San Diego; and any other equivalent environmentally sensitive areas which have been identified by the Copermittees.

**Feasibility Analysis** – Detailed description of the selection process for the treatment control BMPs for a Priority Development Project, including justification of why one BMP is selected over another. For a Priority Development Project where a treatment control BMP with a low removal efficiency ranking (as identified by the Model SUSMP) is proposed, the analysis shall include a detailed and adequate justification exhibiting the reasons implementation of a treatment control BMP with a higher removal efficiency is infeasible for the Priority Development Project or portion of the Priority Development Project.

**Flow Duration** – The long-term period of time that flows occur above a threshold that causes significant sediment transport and may cause excessive erosion damage to creeks and streams (not a single storm event duration). The simplest way to visualize this is to consider a histogram of pre- and post-project flows using long-term records of hourly data. To maintain pre-project flow duration means that the total number of hours (counts) within each range of flows in a flow-duration histogram cannot increase between the pre- and post-project condition. Flow duration within the range of geomorphologically significant flows is important for managing erosion.

**GIS** – Geographic Information System

**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 USEPA in 40 CFR 116 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** - Hazardous waste is 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, Article 1].

**Household Hazardous Waste** – Paints, cleaning products, and other wastes generated during home improvement or maintenance activities.

**Hydromodification** – 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 result in increased stream flows and sediment transport. In addition, alteration of stream and river channels, installation of dams and water impoundments, and excessive streambank and shoreline erosion are also considered hydromodification, due to their disruption of natural watershed hydrologic processes.

**Illicit Connection** – Any connection to the MS4 that conveys an illicit discharge.

**Illicit Discharge** - Any discharge to the MS4 that is not composed entirely of storm water except discharges pursuant to a NPDES permit and discharges resulting from fire fighting activities [40 CFR 122.26(b)(2)].

**Implementation Assessment** – Assessment conducted to determine the effectiveness of Copermittee programs and activities in achieving measurable targeted outcomes, and in determining whether priority sources of water quality problems are being effectively addressed.

**Inactive Slopes** – Slopes on which no grading or other soil disturbing activities are conducted for 10 or more days.

**Integrated Assessment** – Assessment to be conducted to evaluate whether program implementation is properly targeted to and resulting in the protection and improvement of water quality.

**Jurisdictional Urban Runoff Management Plan (JURMP)** – A written description of the specific jurisdictional urban runoff management measures and programs that each Copermittee will implement to comply with this Order and ensure that pollutant discharges in urban runoff are reduced to the MEP and do not cause or contribute to a violation of water quality standards.

**Low Impact Development (LID)** – A storm water management and land development strategy that emphasizes conservation and the use of on-site natural features integrated with engineered, small-scale hydrologic controls to more closely reflect pre-development hydrologic functions.

**Maximum Extent Practicable (MEP)** – 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.

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.”*

**Municipal Separate Storm Sewer System (MS4)** – A conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains): (i) Owned or operated by a State, city town, borough, county, parish, district, association, or other public body (created by or pursuant to State law) 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 or 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 122.26.

**National Pollutant Discharge Elimination System (NPDES)** - The national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits, and imposing and enforcing pretreatment requirements, under Sections 307, 318, 402, and 405 of the CWA.

**NOI** – Notice of Intent

**Non-Storm Water** - All discharges to and from a MS4 that do not originate from precipitation events (i.e., all discharges from a MS4 other than storm water). Non-storm water includes illicit discharges, non-prohibited discharges, and NPDES permitted discharges.

**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.”

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**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. 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.

**Pollution** - As defined in the Porter-Cologne Water Quality Control Act: “the alteration of the quality of the waters of the State by waste, to a degree that unreasonably affects the either of the following: 1) The waters for beneficial uses; or 2) Facilities that serve these beneficial uses.” Pollution may include contamination.

**Pollutants of Concern** – 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 Prevention** - Pollution prevention is defined as practices and processes that reduce or eliminate the generation of pollutants, in contrast to source control BMPs, treatment control BMPs, 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 developments.

**Pre-Project or Pre-Development Runoff Conditions (Discharge Rates, Durations, Etc.)** – Runoff conditions that exist onsite immediately before the planned development activities occur. This definition is not intended to be interpreted as that period before any human-induced land activities occurred. This definition pertains to redevelopment as well as initial development.

**Principal Permittee** – County of San Diego

**Priority Development Projects** - New development and redevelopment project categories listed in Section D.1.d(2) of Order No. R9-2007-0001.

**Receiving Waters** – Waters of the U.S.

**Receiving Water Limitations (RWLs)** - Waste discharge requirements issued by the Regional Board 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 bikelane on existing roads; and routine replacement of damaged pavement, such as pothole repair.

**Regional Urban Runoff Management Plan (RURMP)** – A written description of the specific regional urban runoff management measures and programs that the Copermitttees will collectively implement to comply with this Order and ensure that pollutant discharges in urban runoff are reduced to the MEP and do not cause or contribute to a violation of 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.

**Shared Treatment Control BMP** - BMPs used by multiple developments to infiltrate, filter, or treat the required volume or flow prior to discharge to a receiving water. This could include, for example, a treatment BMP at the end of an enclosed storm drain that collects runoff from several commercial developments.

**Source Control BMP** – Land use or site planning practices, or structural or nonstructural measures that aim to prevent urban runoff pollution by reducing the potential for contamination at the source of pollution. Source control BMPs minimize the contact between pollutants and urban runoff.

**Storm Water** – Per 40 CFR 122.26(b)(13), means storm water runoff, snowmelt runoff and surface runoff and drainage.

**Standard Urban Storm Water Mitigation Plan (SUSMP)** – A plan developed to mitigate the impacts of urban runoff from Priority Development Projects.

**Third Party Inspectors** - Industrial and commercial facility inspectors who are not contracted or employed by a regulatory agency or group of regulatory agencies, such as the Regional Board or Copermittees. The third party inspector is not a regular facility employee self-inspecting their own facility. The third party inspector could be a contractor or consultant employed by a facility or group of businesses to conduct inspections.

**Total Maximum Daily Load (TMDL)** - 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). The water quality objectives for toxicity provided in the Water Quality Control Plan, San Diego Basin, Region 9, (Basin Plan), state in part...“All waters shall be free of toxic substances in concentrations that are toxic to, or that produce detrimental physiological responses in human, plant, animal, or aquatic life....The survival of aquatic life in surface waters subjected to a waste discharge or other controllable water quality factors, shall not be less than that for the same water body in areas unaffected by the waste discharge”.

**Treatment Control BMP** – Any engineered system designed to remove pollutants by simple gravity settling of particulate pollutants, filtration, biological uptake, media absorption or any other physical, biological, or chemical process.

**Urban Runoff** - 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 CWC 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, 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, non-hazardous solid waste, and inert waste.

**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 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 and Regional Water Boards in the Water Quality Control Plans.

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 CWA.)

**Water Quality Standards** - 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 State** - Any water, surface or underground, including saline waters within the boundaries of the State [CWC section 13050 (e)]. The definition of the Waters of the State is broader than that for the Waters of the United States in that all water in the State is considered to be a Waters of the State regardless of circumstances or condition. Under this definition, a MS4 is always considered to be a Waters of the State.

**Waters of the United States** - As defined in the 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).

**Watershed Urban Runoff Management Plan (WURMP)** – A written description of the specific watershed urban runoff management measures and programs that each watershed group of Copermittees will implement to comply with this Order and ensure that pollutant discharges in urban runoff are reduced to the MEP and do not cause or contribute to a violation of water quality standards.

**WDRs** – Waste Discharge Requirements

**Wet Season** – October 1 through April 30 of each year.

**ATTACHMENT D****SCHEDULED SUBMITTALS SUMMARY**

<b>Submittal</b>	<b>Permit Section</b>	<b>Completion Date</b>	<b>Frequency</b>
Submit identification of discharges not to be prohibited and BMPs required for treatment of discharges not prohibited	B.2	365 days after adoption of the Order	One Time
Submit Certified Statement of Adequate Legal Authority	C.2	365 days after adoption of the Order	One Time
Long-Term Effectiveness Assessment	I.5 and J.2.b	210 days prior to Order expiration	One Time
Submit to Principal Permittee(s) individual JURMPs	J.1.a.(1)	Prior to 365 days after adoption of the Order (Principal Permittee specifies date of submittal)	One Time
Principal Permittee submits JURMPs to Regional Board	J.1.a.(2)	365 days after adoption of the Order	One Time
Lead Watershed Permittees submit WURMPs to Principal Permittee	J..1.b.(2)	Prior to 365 days after adoption of the Order (Principal Permittee specifies date of submittal)	One Time
Principal Permittee submits WURMPs to Regional Board	J.1.b.(3)	365 days after adoption of the Order	One Time
Principal Permittee submits RURMP to Regional Board	J.1.c.(2)	365 days after adoption of the Order	One Time
Principal Permittee submits Hydromodification Management Plan workplan	J.2.a.(2)(a)	180 days after adoption of the Order	One Time
Principal Permittee submits Hydromodification Management Plan progress report	J.2.a.(2)(b)	18 months after adoption of the Order	One Time
Principal Permittee submits draft Hydromodification Management Plan	J.2.a.(2)(c)	2 years after adoption of the Order	One Time
Principal Permittee submits final Hydromodification Management Plan	J.2.a.(2)(d)	180 days after receiving comments from Regional Board	One Time
Principal Permittee submits Model SUSMP update	J.2.b	18 months after adoption of the Order	One Time
Copermittees submit local SUSMP updates	J.2.b	365 days after acceptance of updated Model SUSMP	One Time
Principal Permittee submits Report of Waste Discharge and Long-Term Effectiveness Assessment	J.2.c-d	210 days prior to Order expiration	One Time
Principal Permittee submits Notification of Principal Permittee	M	180 days after adoption of the Order	One Time
Principal Permittee submits formal agreement between Copermittees which provides management structure for meeting Order requirements	M.5	180 days after adoption of Order	One Time
Submit to Principal Permittee individual Jurisdictional Urban Runoff Management Program Annual Reports	J.3.a.(1)	Prior to September 30, 2008, and annually thereafter (Principal Permittee specifies date of submittal)	Annually
Principal Permittee submits unified Jurisdictional Urban Runoff Management Program Annual Report to Regional Board	J.3.a.(2)	September 30, 2008, and annually thereafter	Annually
Lead Watershed Permittees submit to Principal Permittee Watershed Urban Runoff Management Program Annual Reports	J.3.b.(3)	Prior to January 31, 2009 and annually thereafter (Principal Permittee specifies date of submittal)	Annually
Principal Permittee submits unified Watershed Urban Runoff Management Program Annual Report to Regional Board	J.3.b.(3)	January 31, 2009 and annually thereafter	Annually
Principal Permittee submits Regional Urban Runoff	J.3.c	January 31, 2009 and	Annually

<b>Submittal</b>	<b>Permit Section</b>	<b>Completion Date</b>	<b>Frequency</b>
Management Program Annual Report to Regional Board		annually thereafter	
Principal Permittee submits description of Receiving Waters Monitoring Program	Monitoring and Reporting Program, III.A.1	September 1, 2007 and annually thereafter	Annually
Principal Permittee submits description of various monitoring program components	Monitoring and Reporting Program, III.A.3	July 1, 2007 and July 1, 2008	Twice
Principal Permittee submits Receiving Waters Monitoring Program Annual Report	Monitoring and Reporting Program, III.A.2	January 31, 2009 and annually thereafter	Annually
Principal Permittee submits interim Receiving Waters Monitoring Program Annual Report	Monitoring and Reporting Program, III.B	January 31, 2007 and January 31, 2008	Twice
Principal Permittee submits unified interim Jurisdictional URMP and Watershed URMP Annual Reports	J.4	January 31, 2007 and January 31, 2008	Twice
Principal Permittee(s) shall submit standardized formats for all reports required under this Order	M.6	180 days after adoption of Order	One Time

**RECEIVING WATERS AND URBAN RUNOFF MONITORING AND REPORTING  
PROGRAM NO. R9-2007-0001**

**I. PURPOSE**

- A. This Receiving Waters and Urban Runoff Monitoring and Reporting Program is intended to meet the following goals:
1. Assess compliance with Order No. R9-2007-0001;
  2. Measure and improve the effectiveness of the Copermittees' urban runoff management programs;
  3. Assess the chemical, physical, and biological impacts to receiving waters resulting from urban runoff discharges;
  4. Characterize urban runoff discharges;
  5. Identify sources of specific pollutants;
  6. Prioritize drainage and sub-drainage areas that need management actions;
  7. Detect and eliminate illicit discharges and illicit connections to the MS4; and
  8. Assess the overall health of receiving waters.
- B. In addition, this Receiving Waters and Urban Runoff Monitoring and Reporting Program is designed to answer the following core management questions:
1. Are conditions in receiving waters protective, or likely to be protective, of beneficial uses?
  2. What is the extent and magnitude of the current or potential receiving water problems?
  3. What is the relative urban runoff contribution to the receiving water problem(s)?
  4. What are the sources of urban runoff that contribute to receiving water problem(s)?
  5. Are conditions in receiving waters getting better or worse?

**II. MONITORING PROGRAM**

**A. Receiving Waters Monitoring Program**

Each Copermittee shall collaborate with the other Copermittees to develop, conduct, and report on a year round watershed based Receiving Waters Monitoring Program. The monitoring program design, implementation, analysis, assessment, and reporting shall be conducted on a watershed basis for each of the hydrologic units. The monitoring program shall be designed to meet the goals and answer the questions listed in section I above. The monitoring program shall include the following components:

1. MASS LOADING STATION (MLS) MONITORING
  - a. The following existing mass loading stations shall continue to be monitored: Santa Margarita River,<sup>1</sup> San Luis Rey River, Agua Hedionda Creek, Escondido Creek, San Dieguito River, Penasquitos, Tecolote Creek, San Diego River,

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<sup>1</sup> For the Santa Margarita River mass loading station, if Camp Pendleton will not conduct the required monitoring or prevents access for the Copermittees to conduct the required monitoring, the mass loading station location shall be moved to where the County of San Diego has land-use jurisdiction.

Chollas Creek, Sweetwater River, and Tijuana River. The mass loading stations shall be monitored at the frequency identified in Table 1.

Table 1. Monitoring Rotation and Number of Stations in Watersheds

Watershed Management Area	Watershed	Permit Year 1 2007-2008				Permit Year 2 2008-2009				Permit Year 3 2009-2010				Permit Year 4 2010-2011				Permit Year 5 2011-2012								
		MLS	TWAS	ABLM	BA	MLS	TWAS	ABLM	BA	MLS	TWAS	ABLM	BA	MLS	TWAS	ABLM	BA	MLS	TWAS	ABLM	BA					
Santa Margarita	Santa Margarita River	1			4	1							1				4									
San Luis Rey	San Luis Rey River	1	2		3	1							1	2			3									
Carlsbad	Buena Vista Creek		1		1									1			1									
	Agua Hedionda Creek	1	1		2	1							1	1			2									
	Escondido Creek	1	1		2	1							1	1			2									
San Dieguito	San Dieguito River	1	2	Implement refined program based on assessment	3	1	Bight '08			Implement refined program based on assessment			1	2	Implement refined program based on assessment		3			Implement refined program based on assessment						
Penasquitos	Penasquitos	1	2		3	1						1	2			3										
Mission Bay	Rose Creek											1	1										1	1		1
	Tecolote Creek							1				1	1				2						1	1		2
San Diego River	San Diego River							1				1	3				4						1	3		4
San Diego Bay	Chollas Creek	1				1		1				1					1	1				1	1			1
	Sweetwater River							1				1	1				2						1	1		2
	Otay River												1				1							1		1
Tijuana	Tijuana River							1				1	2				3						1	1		2

- b. Each mass loading station to be monitored in a given year shall be monitored twice during wet weather events and twice during dry weather flow events. The exception is the 2008-2009 monitoring year, which shall include monitoring of all mass loading stations for one wet weather flow event only if the Copermittees participate in Bight '08.

- c. Each mass loading station shall be monitored for the first wet weather event of the season which meets the USEPA's criteria as described in 40 CFR 122.21(g)(7). Monitoring of the second wet weather event shall be conducted after February 1. Dry weather mass loading monitoring events shall be sampled in September or October prior to the start of the wet weather season and in May or June after the end of the wet weather season. If flows are not evident in September or October, then sampling shall be conducted during non-rain events in the wet weather season.
- d. Mass loading sampling and analysis protocols shall be consistent with 40 CFR 122.21(g)(7)(ii) and with the USEPA Storm Water Sampling Guidance Document (EPA 833-B-92-001). If practicable, the protocols for mass loading sampling and analysis should be SWAMP comparable. If the mass loading sampling and analysis are determined to be impracticable with the SWAMP standards, the Copermittees should provide explanation and discussion to this effect in the Receiving Waters and Urban Runoff Monitoring Annual Report. Wet weather samples shall be flow-weighted composites, collected for the duration of the entire runoff event, where practical. Where such monitoring is not practical, such as for large watersheds with significant groundwater recharge flows, composites shall be collected at a minimum during the first 3 hours of flow. Dry weather event samples shall be flow-weighted composites, collected for a time duration adequate to be representative of changes in pollutant concentrations and runoff flows which may occur over a typical 24 hour period. A minimum of 3 sample aliquots, separated by a minimum of 15 minutes, shall be taken for each hour of monitoring, unless the Regional Board Executive Officer approves an alternate protocol. Automatic samplers shall be used to collect samples from mass loading stations. Grab samples shall be taken for temperature, pH, specific conductance, biochemical oxygen demand, oil and grease, total coliform, fecal coliform, and enterococcus.
- e. Copermittees shall measure or estimate flow rates and volumes for each mass loading station sampling event in order to determine mass loadings of pollutants. Data from nearby USGS gauging stations may be utilized, or flow rates may be estimated in accordance with the USEPA Storm Water Sampling Guidance Document (EPA-833-B-92-001), Section 3.2.1.
- f. In the event that the required number of events are not sampled during one monitoring year at any given station, the Copermittees shall submit, with the subsequent Receiving Waters Monitoring Annual Report, a written explanation for a lack of sampling data, including streamflow data from the nearest USGS gauging station.
- g. The following constituents shall be analyzed for each monitoring event at each station:

Table 2. Analytical Testing for Mass Loading and Temporary Watershed Assessment Stations

Conventional, Nutrients, Hydrocarbons	Pesticides	Metals (Total and Dissolved)	Bacteriological
Total Dissolved Solids Total Suspended Solids Turbidity Total Hardness pH Specific Conductance Temperature Dissolved Phosphorus Nitrite Nitrate Total Kjeldahl Nitrogen Ammonia Biological Oxygen Demand, 5-day Chemical Oxygen Demand Total Organic Carbon Dissolved Organic Carbon Methylene Blue Active Substances Oil and Grease	Diazinon Chlorpyrifos Malathion	Antimony Arsenic Cadmium Chromium Copper Lead Nickel Selenium Zinc	Total Coliform Fecal Coliform Enterococcus

- h. In addition to the constituents listed in Table 2 above, monitoring stations in the Chollas Creek watershed shall also analyze samples for polychlorinated biphenyls (PCBs), Chlordane, and polycyclic aromatic hydrocarbons (PAHs) for each monitoring event.
- i. The following toxicity testing shall be conducted for each monitoring event at each station as follows:
- (1) 7-day chronic test with the cladoceran *Ceriodaphnia dubia* (USEPA protocol EPA-821-R-02-013).
  - (2) Chronic test with the freshwater algae *Selenastrum capricornutum* (USEPA protocol EPA-821-R-02-013).
  - (3) Acute survival test with amphipod *Hyaella azteca* (USEPA protocol EPA-821-R-02-012).
- j. The presence of acute toxicity shall be determined in accordance with USEPA protocol (EPA-821-R-02-012). The presence of chronic toxicity shall be determined in accordance with USEPA protocol (EPA-821-R-02-013).
- k. The Copermittees shall collaborate to develop and implement a program to assess the presence of trash (anthropogenic litter) in receiving waters. The program shall collect and evaluate trash data in conjunction with collection and evaluation of analytical data. This monitoring program shall be implemented within each watershed and shall begin no later than the 2007-2008 monitoring year.
2. TEMPORARY WATERSHED ASSESSMENT STATION (TWAS) MONITORING
- a. The minimum number of temporary watershed assessment stations to be monitored in a given monitoring year is identified in Table 1. The number of stations located within each watershed may change from the number identified in Table 1, provided the total number of stations monitored in a given year is not reduced below the minimum number of stations identified in Table 1. The

temporary watershed assessment stations shall be monitored and located according to a systematic plan which:

- (1) Ensures that the Copermittees' Receiving Waters Monitoring Program most effectively answers questions 1-5 of section I.B above.
  - (2) Provides statistically useful information.
  - (3) Identifies the extent and magnitude of receiving water problems within each watershed.
  - (4) Provides spatial coverage of each watershed.
  - (5) Monitors previously un-assessed sub-watershed areas.
  - (6) Focuses on specific areas of concern and high priority areas.
  - (7) Provides adequate information to assess the effectiveness of implemented programs and control measures in reducing discharged pollutant loads and improving urban runoff and receiving water quality.
- b. For each temporary watershed assessment station identified to be monitored in a given year, the station shall be monitored twice during wet weather events and twice during dry weather flow events.
  - c. Temporary watershed assessment stations shall be monitored in the same manner as the mass loading stations in accordance with the monitoring protocols and requirements outlined in sections II.A.1.c-k above.
3. BIOASSESSMENT (BA) MONITORING
- a. The minimum number of bioassessment stations to be monitored in each watershed in a given monitoring year is identified in Table 1. Bioassessment stations shall include an adequate number of reference stations, with locations of reference stations identified according to protocols outlined in "A Quantitative Tool for Assessing the Integrity of Southern Coastal California Streams," by Ode, et al. 2005.<sup>2</sup>
  - b. Bioassessment stations shall be collocated with both mass loading stations and temporary watershed assessment stations where feasible.
  - c. Bioassessment stations to be monitored in a given monitoring year shall be monitored in May or June (to represent the influence of wet weather on the communities) and September or October (to represent the influence of dry weather flows on the communities). The timing of monitoring of bioassessment stations shall coincide with dry weather monitoring of mass loading and temporary watershed assessment stations.
  - d. Monitoring of bioassessment stations shall utilize the targeted riffle composite approach, as specified in the Surface Water Ambient Monitoring Program (SWAMP) Quality Assurance Management Plan (QAMP), as amended.

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<sup>2</sup> Ode, et al. 2005. "A Quantitative Tool for Assessing the Integrity of Southern Coastal California Streams." Environmental Management. Vol. 35, No. 1, pp. 1-13.

- e. Monitoring of bioassessment stations shall incorporate assessment of periphyton in addition to macroinvertebrates, using the USEPA's 1999 Rapid Bioassessment Protocols for Use in Wadeable Streams and Rivers.<sup>3</sup>
- f. Bioassessment analysis procedures shall include calculation of the Index of Biotic Integrity (IBI) for benthic macroinvertebrates for all bioassessment stations, as outlined in "A Quantitative Tool for Assessing the Integrity of Southern Coastal California Streams," by Ode, et al. 2005.
- g. A professional environmental laboratory shall perform all sampling, laboratory, quality assurance, and analytical procedures.

#### 4. FOLLOW-UP ANALYSIS AND ACTIONS

When results from the chemistry, toxicity, and bioassessment monitoring described above indicate urban runoff-induced degradation at a mass loading or temporary watershed assessment station, Copermittees within the watershed shall evaluate the extent and causes of urban runoff pollution in receiving waters and prioritize and implement management actions to eliminate or reduce sources. Toxicity Identification Evaluations (TIEs) shall be conducted to determine the cause of toxicity as outlined in Table 3 below. Other follow-up activities which shall be conducted by the Copermittees are also identified in Table 3. Once the cause of toxicity has been identified by a TIE, the Copermittees shall perform source identification projects as needed and implement the measures necessary to reduce the pollutant discharges and abate the sources causing the toxicity.

Table 3. Triad Approach to Determining Follow-Up Actions

	<b>Chemistry<sup>4</sup></b>	<b>Toxicity<sup>5</sup></b>	<b>Bioassessment<sup>6</sup></b>	<b>Action</b>
1.	Persistent exceedance of water quality objectives (high frequency constituent of concern identified)	Evidence of persistent toxicity	Indications of alteration	Conduct TIE to identify contaminants of concern, based on TIE metric.  Address upstream sources as a high priority.
2.	No persistent exceedances of water quality objectives	No evidence of persistent toxicity	No indications of alteration	No action necessary.

<sup>3</sup> USEPA, 1999. Rapid Bioassessment Protocols for Use in Wadeable Streams and Rivers. EPA-841-B-99-002.

<sup>4</sup> Persistent exceedance shall mean exceedances of established water quality objectives, benchmarks, or action levels by a pollutant known to cause toxicity for two wet weather and/or two dry weather samples in a given year.

<sup>5</sup> Toxicity shall mean when the Lowest Observed Effect Concentration (LOEC) (for chronic toxicity tests) or median lethal concentration (LC<sub>50</sub>) (for acute toxicity tests) for any given species is less than or equal to 100% of the test sample and observed effects are significantly different from the control. Evidence of persistent toxicity shall mean toxicity to a specific test organism in more than 50% of the samples taken for a given location during a given monitoring year. When a monitoring event has the potential to indicate evidence of persistent toxicity (e.g. the third event of four monitoring events), sufficient samples shall be collected in order to conduct any TIEs that may be required. When a sample collected in order to conduct a TIE does not result in mortality or exhibit a toxic effect in at least 50% of the applicable test organisms in the 100% storm water sample, the TIE may be conducted with a sample collected during the next monitoring event.

<sup>6</sup> Indications of alteration shall mean an IBI score of Poor or Very Poor.

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	<b>Chemistry<sup>4</sup></b>	<b>Toxicity<sup>5</sup></b>	<b>Bioassessment<sup>6</sup></b>	<b>Action</b>
3.	Persistent exceedance of water quality objectives (high frequency constituent of concern identified)	No evidence of persistent toxicity	No indications of alteration	Address upstream sources as a low priority.
4.	No persistent exceedances of water quality objectives	Evidence of persistent toxicity	No indications of alteration	Conduct TIE to identify contaminants of concern, based on TIE metric.  Address upstream sources as medium priority.
5.	No persistent exceedances of water quality objectives	No evidence of persistent toxicity	Indications of alteration	No action necessary to address toxic chemicals.  Address potential role of urban runoff in causing physical habitat disturbance.
6.	Persistent exceedance of water quality objective (high frequency constituent of concern identified)	Evidence of persistent toxicity	No indications of alteration	If chemical and toxicity tests indicate persistent degradation, conduct TIE to identify contaminants of concern, based on TIE metric and address upstream source as a medium priority.
7.	No persistent exceedances of water quality objectives	Evidence of persistent toxicity	Indications of alteration	Conduct TIE to identify contaminants of concern, based on TIE metric.  Address upstream sources as a high priority.  Address potential role of urban runoff causing physical habitat disturbance.
8.	Persistent exceedance of water quality objectives objective (high frequency constituent of concern identified)	No evidence of persistent toxicity	Indications of alteration	Address upstream source as a high priority.

#### 5. AMBIENT BAY AND LAGOON MONITORING (ABLM)

- a. Ambient Bay and Lagoon Monitoring shall be conducted according to the schedule identified in Table 1.
- b. If results of the Ambient Bay and Lagoon Monitoring assessment indicate a general relationship and/or linkage between conditions in bays/lagoons/estuaries with conditions at mass loading stations, then monitoring shall be conducted at the following locations: Santa Margarita River Estuary, Oceanside Harbor, San Luis Rey Estuary, Buena Vista Lagoon, Agua Hedionda Lagoon, Batiquitos Lagoon, San Elijo Lagoon, San Dieguito Lagoon, Los Penasquitos Lagoon, Mission Bay, Sweetwater River Estuary, and Tijuana River Estuary. This monitoring shall be designed to most effectively answer each of questions 1-5 of section I.B above as they pertain to bays/lagoons/estuaries.

- c. If results of the Ambient Bay and Lagoon Monitoring assessment do not indicate a relationship and/or linkage between conditions in bays/lagoons/estuaries with conditions at mass loading stations, then monitoring shall be conducted for special investigations of the bays/lagoons/estuaries. These special investigations shall be designed to most effectively answer each of questions 1-5 of section I.B above as they pertain to bays/lagoons/estuaries, with an emphasis on answering question 4.
  - d. Ambient Bay and Lagoon Monitoring shall utilize the triad approach, analyzing chemistry, toxicity, and benthic infauna data.
  - e. Ambient Bay and Lagoon Monitoring shall include a water column monitoring component as necessary to supply information needed for the development, implementation, and assessment of Total Maximum Daily Loads (TMDLs).
6. COASTAL STORM DRAIN MONITORING

The Copermittees shall collaborate to develop and implement a coastal storm drain monitoring program. The monitoring program shall include:

- a. Identification of coastal storm drains which discharge to coastal waters.
- b. Monthly sampling of all flowing coastal storm drains identified in section II.A.6.a for total coliform, fecal coliform, and enterococcus.<sup>7</sup> Where flowing coastal storm drains are discharging to coastal waters, paired samples from the storm drain discharge and coastal water (25 yards down current of the discharge) shall be collected. If flowing coastal storm drains are not discharging to coastal waters, only the storm drain discharge needs to be sampled.
  - (1) Frequency of sampling of coastal storm drains may be reduced to every other month if the paired coastal storm drain data:
    - (a) Exhibits three consecutive storm drain samples with all bacterial indicators below the Copermittees' sampling frequency reduction criteria, as the sampling frequency reduction criteria was developed under Order No. 2001-01.
    - (b) Exhibits that the three consecutive samples discussed in (a) above are paired with receiving water samples that do not exceed Assembly Bill (AB) 411 or Basin Plan standards.
    - (c) Exhibits that less than 20% of the storm drain samples were above any of the sampling frequency reduction criteria during the previous year.
  - (2) The Copermittees shall notify the Regional Board of any coastal storm drains eligible for sampling frequency reduction prior to October 1 of each year. Sampling frequency reduction shall not occur prior to Regional Board

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<sup>7</sup> Coastal storm drains where sampler safety, habitat impacts from sampling, or inaccessibility are issues need not be sampled. Such coastal storm drains shall be added to the Copermittee's dry weather field screening and analytical monitoring program where feasible.

notification.

- (3) Re-sampling shall be implemented within one business day of receipt of analytical results for coastal storm drains where:
  - (a) Both storm drain and receiving water samples exceed AB 411 or Basin Plan standards for any bacterial indicator.
  - (b) The storm drain sample exceeds 95<sup>th</sup> percentile observations of the previous year's data for any bacterial indicator.
- (4) If re-sampling conducted under section (3) above exhibits continued exceedances of a AB 411 or Basin Plan standards in either the storm drain or receiving water, investigations of sources of bacterial contamination shall commence within one business day of receipt of analytical results.
- (5) Investigations of sources of bacterial contamination shall occur immediately if evidence of abnormally high flows, sewage releases, restaurant discharges, and/or similar evidence is observed during sampling.
- (6) Exceedances of public health standards for bacterial indicators shall be reported to the County Department of Environmental Health as soon as possible.

#### 7. PYRETHROIDS MONITORING

The Copermittees shall collaborate to develop and implement a monitoring program to measure and assess the presence of pyrethroids in receiving waters. This monitoring program shall be implemented within each watershed and shall begin no later than the 2007-2008 monitoring year.

### **B. Urban Runoff Monitoring**

Each Copermittee shall collaborate with the other Copermittees to develop, conduct, and report on a year round watershed based Urban Runoff Monitoring Program. The monitoring program design, implementation, analysis, assessment, and reporting shall be conducted on a watershed basis for each of the hydrologic units. The monitoring program shall be designed to meet the goals and answer the questions listed in section I above. The monitoring program shall include the following components

#### 1. MS4 OUTFALL MONITORING

The Copermittees shall collaborate to develop and implement a monitoring program to characterize pollutant discharges from MS4 outfalls in each watershed during wet and dry weather. The program shall include rationale and criteria for selection of outfalls to be monitored. The program shall at a minimum include collection of samples for those pollutants causing or contributing to violations of water quality standards within the watershed. This monitoring program shall be implemented within each watershed and shall begin within the 2007-2008 monitoring year.

## 2. SOURCE IDENTIFICATION MONITORING

The Copermittees shall collaborate to develop and implement a monitoring program to identify sources of discharges of pollutants causing the priority water quality problems within each watershed. The monitoring program shall include focused monitoring which moves upstream into each watershed as necessary to identify sources. The monitoring program shall use source inventories and "Threat to Water Quality" analysis to guide monitoring efforts. This monitoring program shall be implemented within each watershed and shall begin no later than the 2008-2009 monitoring year.

## 3. DRY WEATHER FIELD SCREENING AND ANALYTICAL MONITORING

As part of its Jurisdictional Urban Runoff Management Program, each Copermittee shall update as necessary its dry weather field screening and analytical monitoring program to meet or exceed the requirements of this section. Dry weather analytical and field screening monitoring consists of (1) field observations; (2) field screening monitoring; and (3) analytical monitoring at selected stations. The Dry Weather Field Screening and Analytical Monitoring program is not required to be SWAMP comparable. Each Copermittee's program shall be designed to detect and eliminate illicit connections and illegal discharges to the MS4 using frequent, geographically widespread dry weather discharge monitoring and follow-up investigations. Each Copermittee shall conduct the following dry weather field screening and analytical monitoring tasks:

### a. Select Dry Weather Field Screening and Analytical Monitoring Stations

Based upon a review of its past Dry Weather Monitoring Program, each Copermittee shall select dry weather field screening and analytical monitoring stations within its jurisdiction. No more than 500 dry weather field screening and analytical monitoring stations (excluding alternate stations) need to be selected by any individual Copermittee for any given year. Stations shall be selected according to one of the following methods:

- (1) Stations shall be either major outfalls or other outfall points (or any other point of access such as manholes) randomly located throughout the MS4 by placing a grid over a drainage system map and identifying those cells of the grid which contain a segment of the MS4 or major outfall. This random selection has to use the following guidelines and criteria:
  - (a) A grid system consisting of perpendicular north-south and east-west lines spaced  $\frac{1}{4}$  mile apart shall be overlaid on a map of the MS4, creating a series of cells;
  - (b) All cells that contain a segment of the MS4 shall be identified and one dry weather analytical monitoring station shall be selected in each cell.
  - (c) Each Copermittee shall determine alternate stations to be sampled in place of selected stations that do not have flow.
- (2) Stations may be selected non-randomly provided adequate coverage of the entire MS4 system is ensured and that the selection of stations meets,

exceeds, or provides equivalent coverage to the requirements given above. The dry weather analytical and field screening monitoring stations shall be established using the following guidelines and criteria:

- (a) Stations should be located downstream of any sources of suspected illegal or illicit activity;
- (b) Stations shall be located to the degree practicable at the farthest manhole or other accessible location downstream in the system within each cell;
- (c) Hydrological conditions, total drainage area of the site, traffic density, age of the structures or buildings in the area, history of the area, and land use types shall be considered in locating stations;
- (d) Each Copermittee shall determine alternate stations to be sampled in place of selected stations that do not have flow.

b. Complete MS4 Map

Each Copermittee shall clearly identify each dry weather field screening and analytical monitoring station on its MS4 Map as either a separate GIS layer or a map overlay hereafter referred to as a Dry Weather Field Screening and Analytical Stations Map. Each Copermittee shall confirm that each drainage area within its jurisdiction contains at least one station.

c. Develop Dry Weather Field Screening and Analytical Monitoring Procedures

Each Copermittee shall develop and/or update written procedures for dry weather field screening and analytical monitoring (for analytical monitoring only, these procedures must be consistent with 40 CFR part 136), including field observations, monitoring, and analyses to be conducted. At a minimum, the procedures must meet the following guidelines and criteria:

- (1) Determining Sampling Frequency: Dry weather field screening and analytical monitoring shall be conducted at each identified station at least once between May 1st and September 30th of each year or as often as the Copermittee determines is necessary to comply with the requirements of section D.4 of Order No. R9-2007-0001.
- (2) If flow or ponded runoff is observed at a dry weather field screening or analytical monitoring station and there has been at least seventy-two (72) hours of dry weather, make observations and collect at least one (1) grab sample. Record general information such as time since last rain, quantity of last rain, site descriptions (i.e., conveyance type, dominant watershed land uses), flow estimation (i.e., width of water surface, approximate depth of water, approximate flow velocity, flow rate), and visual observations (i.e., odor, color, clarity, floatables, deposits/stains, vegetation condition, structural condition, and biology).
- (3) At a minimum, collect samples for analytical laboratory analysis of the following constituents for at least twenty five percent (25%) of the dry weather monitoring stations where water is present:

- (a) Total Hardness
  - (b) Oil and Grease
  - (c) Diazinon and Chlorpyrifos
  - (d) Cadmium (Dissolved)
  - (e) Lead (Dissolved)
  - (f) Zinc (Dissolved)
  - (g) Copper (Dissolved)
  - (h) Enterococcus bacteria<sup>8</sup>
  - (i) Total Coliform bacteria<sup>8</sup>
  - (j) Fecal Coliform bacteria<sup>8</sup>
- (4) At a minimum, conduct field screening analysis of the following constituents at all dry weather monitoring stations where water is present:
- (a) Specific conductance (calculate estimated Total Dissolved Solids).
  - (b) Turbidity
  - (c) pH
  - (d) Reactive Phosphorous
  - (e) Nitrate Nitrogen
  - (f) Ammonia Nitrogen
  - (g) Surfactants (MBAS)
- (5) If the station is dry (no flowing or ponded runoff), make and record all applicable observations and select another station from the list of alternate stations for monitoring.
- (6) Develop and/or update criteria for dry weather field screening and analytical monitoring results whereby exceedance of the criteria will require follow-up investigations to be conducted to identify and eliminate the source causing the exceedance of the criteria.
- (7) Assess the presence of trash in receiving waters and urban runoff at each dry weather field screening or analytical monitoring station. Assessments of trash shall provide information on the spatial extent and amount of trash present, as well as the nature of the types of trash present.
- (8) Dry weather field screening and analytical monitoring stations identified to exceed dry weather monitoring criteria for any constituents shall continue to be screened in subsequent years.
- (9) Develop and/or update procedures for source identification follow up investigations in the event of exceedance of dry weather field screening and analytical monitoring result criteria. These procedures shall be consistent with procedures required in section D.4.d of Order No. R9-2007-0001.
- (10) Develop and/or update procedures to eliminate detected illicit discharges and connections. These procedures shall be consistent with each Copermittes

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<sup>8</sup> Colilert and Enterolert may be used as alternative methods with Fecal Coliform determined by calculations.

Illicit Discharge and Elimination component of its Jurisdictional Urban Runoff Management Plan as discussed in section D.4 of Order No. R9-2007-0001.

d. Conduct Dry Weather Field Screening and Analytical Monitoring

The Copermittees shall commence implementation of dry weather field screening and analytical monitoring under the requirements of this Order by May 1, 2008. Each Copermittee shall conduct dry weather analytical and field screening monitoring in accordance with its storm water conveyance system map and dry weather analytical and field screening monitoring procedures as described in section II.B.3 above. If monitoring indicates an illicit connection or illegal discharge, conduct the follow-up investigation and elimination activities as described in submitted dry weather field screening and analytical monitoring procedures and sections D.4.d and D.4.e of Order No. R9-2007-0001. Until the dry weather field screening and analytical monitoring program is implemented under the requirements of this Order, each Copermittee shall continue to implement dry weather field screening and analytical monitoring as it was most recently implemented pursuant to Order No. 2001-01.

**C. Regional Monitoring Program**

1. The Copermittees shall participate and coordinate with federal, state, and local agencies and other dischargers in development and implementation of a regional watershed monitoring program as directed by the Executive Officer.
2. Bight '08
  - a. During the 2008-2009 monitoring year (Permit Year 2), the Copermittees may participate in the Bight '08 study. The Copermittees shall ensure that such participation results in collection and analysis of data useful in addressing the goals and management questions of the Receiving Waters Monitoring Program. Any participation shall include the contribution of all funds not otherwise spent on full implementation of mass loading station, temporary watershed assessment station, ambient bay and lagoon, and bioassessment monitoring. All other monitoring shall continue during the 2008-2009 monitoring year (Permit Year 2) as required.
  - b. If the Copermittees do not participate in Bight '08, mass loading station, temporary watershed assessment station, ambient bay and lagoon, and bioassessment monitoring shall be conducted as follows:
    - (1) Permit Year 3 (2009-2010) monitoring shall be conducted in Permit Year 2 (2008-2009) (see Table 1).
    - (2) Permit Year 4 (2010-2011) monitoring shall be conducted in Permit Year 3 (2009-2010) (see Table 1).
    - (3) Permit Year 5 (2011-2012) monitoring shall be conducted in Permit Year 4 (2010-2011).

(4) Permit Year 1 (2007-2008) monitoring shall be conducted in Permit Year 5 (2011-2012).

- c. If the Copermittees partially participate in Bight '08, monitoring shall be conducted as described in section II.C.2.b above, with the exception of any monitoring offset by the contribution of funds to Bight '08.

#### **D. Special Studies**

##### 1. TMDL MONITORING

- a. All monitoring shall be conducted as required in Investigation Order No. R9-2004-0277 for Chollas Creek.

##### 2. REGIONAL HARBOR MONITORING

- a. The Copermittees which discharge to harbors shall participate in the development and implementation of the Regional Harbor Monitoring Program.

3. The Copermittees shall conduct special studies, including any monitoring required for TMDL development and implementation, as directed by the Executive Officer.

#### **E. Monitoring Provisions**

All monitoring activities shall meet the following requirements:

1. Where procedures are not otherwise specified in this Receiving Waters Monitoring and Reporting Program (e.g., Dry Weather Field Screening and Analytical Monitoring), sampling, analysis and quality assurance/quality control must be conducted in accordance with the Quality Assurance Management Plan (QAMP) for the State of California's Surface Water Ambient Monitoring Program (SWAMP), adopted by the State Water Resources Control Board (SWRCB).
2. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity [40 CFR 122.41(j)(1)].
3. The Copermittees shall retain records of all monitoring information, including all calibration and maintenance of monitoring instrumentation, copies of all reports required by this Order, and records of all data used to complete the Report of Waste Discharge and application for this Order, for a period of at least five (5) 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)]
4. 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.
5. All sampling, sample preservation, and analyses must be conducted according to test procedures approved under 40 CFR part 136, unless other test procedures have been specified in this Receiving Waters Monitoring and Reporting Program or approved by the Executive Officer [40 CFR 122.41(j)(4)].
  6. 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)]
  7. Calculations for all limitations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified in this Receiving Waters Monitoring and Reporting Program. [40 CFR 122.41(l)(4)(iii)]
  8. All chemical, bacteriological, and toxicity analyses shall be conducted at a laboratory certified for such analyses by the California Department of Health Services or a laboratory approved by the Executive Officer.
  9. For priority toxic pollutants that are identified in the California Toxics Rule (CTR) (65 Fed. Reg. 31682), the Copermittees shall instruct its laboratories to establish calibration standards that are equivalent to or lower than 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). If a Copermittee 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 Copermittee must submit documentation from the laboratory to the Regional Board for approval prior to raising the ML for any priority toxic pollutant.
  10. The Regional Board Executive Officer or the Regional Board may make revisions to this Receiving Waters and Urban Runoff Monitoring and Reporting Program at any time during the term of Order No. R9-2007-0001, and may include a reduction or increase in the number of parameters to be monitored, locations monitored, the frequency of monitoring, or the number and size of samples collected.
  11. 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)]

12. Monitoring shall be conducted according the USEPA test procedures approved under 40 CFR 136, "Guidelines Establishing Test Procedures for Analysis of Pollutants under the Clean Water Act" as amended, unless other test procedures have been specified in this Receiving Waters and Urban Runoff Monitoring and Reporting Program, in Order No. R9-2007-0001, or by the Executive Officer.
13. If the discharger monitors any pollutant more frequently than required by the permit using test procedures approved under 40 CFR part 136, unless otherwise specified in the Order, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the reports requested by the Regional Board. [40 CFR 122.41(l)(4)(ii)]

### **III. REPORTING PROGRAM**

#### **A. Monitoring Reporting**

1. The Principal Permittee shall submit a description of the Receiving Waters and Urban Runoff Monitoring Program to be implemented for every monitoring year. The submittals shall begin on September 1, 2007, and continue every year thereafter. The submittals shall describe all monitoring to be conducted during the upcoming monitoring year. For example, the September 1, 2007 submittal shall describe the monitoring to be conducted from October 1, 2007 through September 30, 2008.

If the Copermittees participate in Bight '08, their submittal for the 2008-2009 monitoring year shall describe the monitoring to be conducted for Bight '08 and exhibit how the monitoring will result in collection and analysis of data useful in addressing the goals and management questions of the Receiving Waters and Urban Runoff Monitoring Program.

2. The Principal Permittee shall submit the Receiving Waters and Urban Runoff Monitoring Annual Report to the Regional Board on January 31 of each year, beginning on January 31, 2009. Receiving Waters and Urban Runoff Monitoring Annual Reports shall meet the following requirements:
  - a. Annual monitoring reports shall include the data/results, methods of evaluating the data, graphical summaries of the data, and an explanation/discussion of the data for each monitoring program component.
  - b. Annual monitoring reports shall include a watershed-based analysis of the findings of each monitoring program component. Each watershed-based analysis shall include:
    - (1) Identification and prioritization of water quality problems within each watershed.
    - (2) Identification and description of the nature and magnitude of potential sources of the water quality problems within each watershed.
    - (3) Exhibition of pollutant load and concentration increases or decreases at each mass loading and temporary watershed assessment station.

Receiving Waters and Urban  
Runoff Monitoring and Reporting Program  
No. R9-2007-0001

- (4) Evaluation of pollutant loads and concentrations at mass loading and temporary watershed assessment stations with respect to land use, population, sources, and other characteristics of watersheds using tools such as multiple linear regression, factor analysis, and cluster analysis.
  - (5) Identification of links between source activities/conditions and observed receiving water impacts.
  - (6) Identification of recommended future monitoring to identify and address sources of water quality problems.
  - (7) Results and discussion of any TIE conducted, together with actions that will be implemented to reduce the discharge of pollutants and abate the sources causing the toxicity.
- c. Annual monitoring reports shall include a detailed description of all monitoring conducted under Investigation Order No. R9-2004-0277 for Chollas Creek. Annual monitoring reports shall also include all information required by Investigation Order No. R9-2004-0277.
  - d. Annual monitoring reports shall include discussions for each watershed which answer each of the management questions listed in section I.B of this Receiving Waters Monitoring and Reporting Program.
  - e. Annual monitoring reports shall identify how each of the goals listed in section I.A of this Receiving Waters Monitoring and Reporting Program has been addressed by the Copermittees' monitoring.
  - f. Annual monitoring reports shall include identification and analysis of any long-term trends in storm water or receiving water quality. Trend analysis shall use nonparametric approaches, such as the Mann-Kendall test, including exogenous variables in a multiple regression model, and/or using a seasonal nonparametric trend model, where applicable.
  - g. Annual monitoring reports shall provide an estimation of total pollutant loads (wet weather loads plus dry weather loads) due to urban runoff for each of the watersheds specified in Table 4 of Order No. R9-2007-0001.
  - h. Annual monitoring reports shall for each monitoring program component listed above, include an assessment of compliance with applicable water quality standards.
  - i. Annual monitoring reports shall describe monitoring station locations by latitude and longitude coordinates, frequency of sampling, quality assurance/quality control procedures, and sampling and analysis protocols.
  - j. Annual monitoring reports shall use a standard report format and shall include the following:
    - (1) A stand alone comprehensive executive summary addressing all sections of the monitoring report;
    - (2) Comprehensive interpretations and conclusions; and

- (3) Recommendations for future actions.
- k. All monitoring reports submitted to the Principal Permittee or the Regional Board shall contain the certified perjury statement described in Attachment B of Order No. R9-2007-0001.
  - l. Annual monitoring reports shall be reviewed prior to submittal to the Regional Board by a committee (consisting of no less than three members). All review comments shall also be submitted to the Regional Board.
  - m. Annual monitoring reports shall be submitted in both electronic and paper formats.
3. The Principal Permittee shall submit by July 1, 2007 a detailed description of the monitoring programs to be implemented under requirements II.A.1.k, II.A.7, and II.B.3.c.(7) of Receiving Waters and Urban Runoff Monitoring and Reporting Program No. R9-2007-0001. The Principal Permittee shall submit by July 1, 2008, a detailed description of the monitoring programs to be implemented under requirement II.B.1 and II.B.2 of Receiving Waters and Urban Runoff Monitoring and Reporting Program No. R9-2007-0001. The description shall identify and provide the rationale for the constituents monitored, locations of monitoring, frequency of monitoring, and analyses to be conducted with the data generated.
  4. By January 31, 2010, the City of San Diego shall submit a report which evaluates the data and assumptions used to estimate the WLA to Shelter Island Yacht Basin of 30 kg Cu/year. The report shall evaluate if any changes have occurred in the watershed which could cause or contribute to a higher copper urban runoff discharge and any actions necessary to address these changes. The report shall be an attachment to the Watershed Urban Runoff Management Program Annual Report for the San Diego Bay watershed.
  5. Monitoring programs and reports shall comply with section II.E of Receiving Waters and Urban Runoff Monitoring and Reporting Program No. R9-2007-0001 and Attachment B of Order No. R9-2007-0001.
  6. Following completion of an annual cycle of monitoring in October, the Copermittees shall make the monitoring data and results available to the Regional Board at the Regional Board's request.

## **B. Interim Reporting Requirements**

For the October 2005-October 2006 and October 2006-October 2007 monitoring periods, the Principal Permittee shall submit the Receiving Waters Monitoring Annual Reports on January 31, 2007 and January 31, 2008, respectively. The Receiving Waters Monitoring Annual Report shall address the monitoring conducted to comply with the requirements of Order No. 2001-01.

**FACT SHEET/TECHNICAL REPORT**

**FOR**

**ORDER NO. R9-2007-0001**

**NPDES NO. CAS0108758**

**WASTE DISCHARGE REQUIREMENTS**

**FOR**

**DISCHARGES OF URBAN RUNOFF FROM**

**THE MUNICIPAL SEPARATE STORM SEWER SYSTEMS (MS4s)**

**DRAINING THE WATERSHEDS OF THE COUNTY OF SAN DIEGO,**

**THE INCORPORATED CITIES OF SAN DIEGO COUNTY,**

**THE SAN DIEGO UNIFIED PORT DISTRICT, AND THE SAN DIEGO COUNTY**

**REGIONAL AIRPORT AUTHORITY**

**JANUARY 24, 2007**

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Attachment A – Revised Tentative Order No. R9-2006-0011 dated August 30, 2006

Attachment B – Responses to Comments dated August 30, 2006

Attachment C – Revised Tentative Order No. R9-2006-0011 dated December 13, 2006

Attachment D – Responses to Comments II dated December 13, 2006

Attachment E – Revised Tentative Order No. R9-2007-0001 dated January 24, 2007

Attachment F – Responses to Comments III dated January 24, 2007

## **I. LIST OF ACRONYMS AND ABBREVIATIONS**

ADT - Average Daily Traffic  
BAT - Best Available Technology  
BIA - Building Industry Association of San Diego County  
BMP - Best Management Practice  
Basin Plan - Water Quality Control Plan for the San Diego Basin  
CASQA - California Stormwater Quality Association  
CCC - California Coastal Commission  
CDFG - California Department of Fish and Game  
CEQA - California Environmental Quality Act  
CFR - Code of Federal Regulations  
Copermittees - County of San Diego, the 18 incorporated cities within the County of San Diego, the San Diego Unified Port District, and the San Diego County Regional Airport Authority  
CWA - Clean Water Act  
CWC - California Water Code  
CZARA - Coastal Zone Act Reauthorization Amendments of 1990  
ESAs - Environmentally Sensitive Areas  
FR - Federal Register  
GIS - Geographic Information System  
IC/ID - Illicit Connections and Illicit Discharges  
JURMP - Jurisdictional Urban Runoff Management Plan  
LARWQCB - Los Angeles Regional Water Quality Control Board  
MEP - Maximum Extent Practicable  
MRP - Receiving Waters Monitoring and Reporting Program  
MS4 - Municipal Separate Storm Sewer System  
NOI - Notice of Intent  
NPDES - National Pollutant Discharge Elimination System  
NRDC - Natural Resources Defense Council  
NURP - Nationwide Urban Runoff Program  
Regional Board - San Diego Regional Water Quality Control Board  
RGOs - Retail Gasoline Outlets  
ROWD - San Diego County Copermittees' Report of Waste Discharge  
RURMP - Regional Urban Runoff Management Plan  
RWLs - Receiving Water Limitations  
SANDAG - San Diego Association of Governments  
SIC - Standard Industrial Classification Code  
SUSMP - Standard Urban Storm Water Mitigation Plan  
SWMP - Storm Water Management Plan  
SWRCB - State Water Resources Control Board  
SWPPP - Storm Water Pollution Prevention Plan  
TAC - State Water Resources Control Board Urban Runoff Technical Advisory Committee  
TIE - Toxicity Identification Evaluation  
TMDL - Total Maximum Daily Load  
USEPA - United States Environmental Protection Agency  
WDRs - Waste Discharge Requirements  
WLAs - Waste Load Allocation  
WQC - Water Quality Criteria

WQBELs - Water Quality Based Effluent Limits  
WSPA - Western States Petroleum Association  
WURMP - Watershed Urban Runoff Management Plan

## **II. FACT SHEET FORMAT**

This Fact Sheet briefly sets forth the principle facts and the significant factual, legal, methodological, and policy questions that the California Regional Water Quality Control Board, San Diego Region (Regional Board) considered in preparing Order No. R9-2007-0001. In accordance with the Code of Federal Regulations (CFR) title 40 parts 124.8 and 124.56, this Fact Sheet includes, but is not limited to, the following information:

- Contact information
- Public process and notification procedures
- Background information
- Permitting approach discussion
- Economic issues discussion
- Legal authority discussion
- Findings discussions
- Directives discussions

The main body of the Fact Sheet (sections IX and X) reflects the findings and requirements of the Order as they were originally proposed in Tentative Order No. R9-2006-0011, dated March 10, 2006. Through the subsequent public participation process, the findings and requirements of the Tentative Order evolved and were modified in response to comments received. These modifications, as well as discussions providing the rationale for the modifications, are provided in the Attachments to the Fact Sheet.

The Regional Board's files applicable to the issuance of Order No. R9-2007-0001 are incorporated into the administrative record in support of the findings and requirements of Order No. R9-2007-0001.

## **III. CONTACT INFORMATION**

### **Regional Board**

Dave Gibson, Senior Environmental Scientist  
Phil Hammer, Environmental Scientist C  
9174 Sky Park Court, Suite 100  
San Diego, CA 92123  
858-627-3988  
858-571-6972 (fax)  
email: phammer@waterboards.ca.gov

The Order and other related documents can be downloaded from the Regional Board website at:  
[http://www.waterboards.ca.gov/sandiego/programs/sd\\_stormwater.html](http://www.waterboards.ca.gov/sandiego/programs/sd_stormwater.html)

All documents referenced in this Fact Sheet and in Order No. R9-2007-0001 are available for public review at the Regional Board office, located at the address listed above. Public records are available for inspection during regular business hours, from 8:00 am to 5:00 pm Monday through

Friday. To schedule an appointment to inspect public records, contact Sylvia Wellnitz at 858-637-5593, or DiAnne Broussard at 858-492-1763.

### Copermittees

County of San Diego Department of Public Works Jon Van Rhyn 9325 Hazard Way San Diego, CA 92123 (858) 495-5133	City of El Cajon John Phillips 200 East Main St., Floor 4 El Cajon, CA 92020 (619) 441-5580	City of Oceanside Water Utilities Department Mo Lahsaie 300 N. Coast Highway Oceanside, CA 92057 (760) 435-5803
Unified Port of San Diego Karen Helyer P.O. Box 120488 San Diego, CA 92112-0488 (619) 725-6073	City of Encinitas Kathy Weldon 505 S. Vulcan Avenue Encinitas, CA 92024 (760) 633-2632	City of Poway Development Services Danis Bechter P.O. Box 789 Poway, CA 92074 (858) 668-4630
San Diego County Regional Airport Authority Paul Manasjan P.O. Box 82776 San Diego, CA 92138-2776 (619) 400-2783	City of Escondido Patrick Thomas 201 N. Broadway Escondido, CA 92025 (760) 839-6315	City of San Diego Stormwater Pollution Prevention Program Chris Zirkle 1970 B Street San Diego, CA 92101 (619) 525-8647
City of Carlsbad Elaine Lukey 1635 Faraday Avenue Carlsbad, CA 92008 (760) 602-7580	City of Imperial Beach Hank Levien 825 Imperial Beach Blvd. Imperial Beach, CA 91932 (619) 628-1370	City of San Marcos Public Works Jasen Boyens 201 Mata Way San Marcos, CA 92069 (760) 752-7550X3333
City of Chula Vista Khosro Aminpour 1800 Maxwell Road Chula Vista, CA 91911 (619) 397-6111	City of La Mesa Malik Tamimi 8130 Allison Avenue La Mesa, CA 91941 (619) 667-1153	City of Santee Cary Stewart 10601 Magnolia Avenue Santee, CA 92071 (619) 258-4100
City of Coronado Public Services Scott Huth 101 B Avenue Coronado, CA 92118 (619) 522-7312	City of Lemon Grove Cora Long 3232 Main Street Lemon Grove, CA 91945 (619) 825-3800X3925	City Of Solana Beach Danny King 635 South Highway 101 Solana Beach, CA 92075 (858) 720-2477
City of Del Mar Rosanna Lacarra 9275 Sky Park Court, Suite 200 San Diego, CA 92123 (858) 874-1810	City of National City Din Daneshfar 1243 National City Blvd. National City, CA 91950 (619) 336-4387	City of Vista Engineering Linda Isakson 1165 East Taylor Street Vista, Ca 92084 (760) 726-1340

#### IV. PUBLIC PROCESS AND NOTIFICATION PROCEDURES

The Regional Board followed the schedule listed below for the preparation of Order No. R9-2007-0001:

- In July 2004, the Regional Board issued the San Diego County Municipal Storm Water Permit Reissuance Analysis Summary, which considered various permitting options such as watershed-based permits and identified the Regional Board's preferred permitting approach for this permit cycle. The Regional Board solicited and received public comments on the document.

- From October 2004 to July 2005, the Regional Board met with the County of San Diego, the 18 incorporated cities within the County of San Diego, and the San Diego Unified Port District (hereinafter Copermittees) representatives on six occasions to discuss the Copermittees' Report of Waste Discharge (ROWD) and potential changes to the permit.
- The Regional Board received the ROWD on August 25, 2005.
- On September 14, 2005, the Regional Board held a public workshop to inform Regional Board members of the principal issues facing permit re-issuance and allow interested parties to address the Regional Board on permit issues.
- On December 14, 2005, the Regional Board held a workshop on the requirements for fiscal assurances in municipal separate storm sewer system (MS4) permits in the San Diego Region.
- On March 10, 2006, the Regional Board released the Tentative Order and supporting Fact Sheet, beginning the public comment period.
- On April 26, 2006, the Regional Board held a workshop on the requirements of the Tentative Order.
- On May 24, 2006, the Regional Board held a workshop on the requirements of the Tentative Order.
- On June 21, 2006, the Regional Board held a public hearing on the requirements of the Tentative Order.
- On August 30, 2006, the Regional Board released a revised Tentative Order and supporting Fact Sheet, as well as a Responses to Comments document.
- Until October 30, 2006, the Regional Board accepted written comments on the revised Tentative Order.
- On December 4, 2006, the Regional Board released a second revised Tentative Order and supporting Fact Sheet, as well as a Responses to Comments II document (all dated December 13, 2006). Starting December 15, 2006, the Regional Board accepted comments on revisions made in the second revised Tentative Order.
- On January 15, 2007, the Regional Board released a third revised Tentative Order and supporting Fact Sheet, as well as a Responses to Comments III document (all dated January 24, 2007).
- On January 24, 2007, the Regional Board accepted oral comments on all revisions made to the Tentative Order following the June 21, 2006 public hearing.
- On January 24, 2007, the Regional Board adopted Order No. R9-2007-0001.

## V. BACKGROUND

The federal Clean Water Act (CWA) was amended in 1987 to address urban runoff. One requirement of the amendment was that many municipalities throughout the United States were obligated for the first time to obtain National Pollutant Discharge Elimination System (NPDES) permits for discharges of urban runoff from their MS4s. In response to the CWA amendment (and the pending federal NPDES regulations which would implement the amendment), the Regional Board issued a municipal storm water permit, Order No. 90-42, in July 1990 to the Copermittees for their urban runoff discharges.<sup>1</sup>

Five years after adoption, Order No. 90-42 was due for renewal in July 1995, but was administratively extended pursuant to federal law because of limited Regional Board resources. Two formal drafts of the renewal permit were released to the public (in 1995 and 1998

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<sup>1</sup> The San Diego County Regional Airport Authority was not added as a Copermittee until 2003, at the time when it separated from the San Diego Unified Port District.

respectively) and substantial written public comments on the drafts were considered by the Regional Board. In addition, the Regional Board convened a working group of Copermittees and stakeholders in 1997 and 1998 to advise the Regional Board on permit renewal issues. Despite the efforts by the public, the stakeholder group, and Regional Board, and in part due to the concurrent issuance and appeal of three other municipal storm water permits, Order No. 90-42 was not reissued by the Regional Board until February 21, 2001 as Order No. 2001-01.

The regulatory approach incorporated into Order No. 2001-01 was a significant departure from the regulatory approach of Order No. 90-42. Where Order No. 90-42 included broad nonspecific requirements in order to provide the Copermittees with the maximum amount of flexibility in implementing their programs, Order No. 2001-01 utilized detailed specific requirements which outlined the minimum level of implementation required for the Copermittees' programs. The shift in permitting approaches from Order No. 90-42 to Order No. 2001-01 resulted from the Regional Board's conclusion that the lack of specificity in Order No. 90-42 resulted in frequently unenforceable permit requirements, which in turn allowed some Copermittees to only make limited progress in implementing their programs.

Partially due to this shift in regulatory approaches, as well as new categories of permit requirements, the adoption process for Order No. 2001-01 generated extensive interest. Over 1,500 public comments were received on the Order, though many were duplicative. In addition, five public workshops were held covering various aspects of the Order. Following this extensive public participation process, the Regional Board adopted Order No. 2001-01 on February 21, 2001.

Subsequently, Order No. 2001-01 was administratively appealed to the State Water Resources Control Board (SWRCB) in March 2001 by the Building Industry Association of San Diego County (BIA) and the Western States Petroleum Association (WSPA). BIA utilized an across-the-board approach to its appeal, challenging a wide range of requirements included in the Order, while WSPA challenged the Order's legality in requiring treatment of runoff from retail gasoline outlets. In Order No. 2001-15, the SWRCB upheld the vast majority of the Order's requirements challenged by BIA, making insignificant alterations for clarification purposes to three of the Order's requirements. The SWRCB ruled in favor of WSPA, however, determining that the Regional Board had not adequately supported its position regarding retail gasoline outlets in the order's findings and fact sheet.

BIA continued its challenge of the Order in the Superior Court of the State of California, San Diego County in 2002. At that time, BIA was joined by several building industry and other groups, as well as the City of Santee and the City of San Marcos. The Court ruled in favor of the Regional Board on all counts, with all requirements of the Order being upheld. In particular, the Court found that the Order's requirements had not been shown to be impracticable or unreasonable, including provisions requiring compliance with receiving water quality standards. The Court also found that the Regional Board is exempt from California Environmental Quality Act (CEQA) review when adopting municipal storm water permits.

Following the Superior Court decision, BIA, several building industry and other groups, and the City of San Marcos appealed to the State of California Court of Appeal, Fourth Appellate District. Again the Order was upheld on all counts, with the court making the primary finding that the Regional Board has the authority to require compliance with state water quality standards in storm water permits. BIA's final appeal was to the State of California Supreme Court, which declined to hear the issue in March 2005.

Since adoption of Order No. 2001-01, and despite the subsequent legal actions, the Copermittees' storm water programs have expanded dramatically. Audits of the Copermittees' programs exhibit that the Copermittees' jurisdictional programs are largely in compliance with the Order. Some of the efforts currently being conducted on a regular basis by the Copermittees, which were not conducted on a widespread basis prior to adoption of Order No. 2001-01, include: construction site storm water inspections, industrial and commercial facility storm water inspections, municipal facility storm water inspections, management of storm water quality from new development, development of best management practice requirements for existing development, and assessment of storm water program effectiveness.

However, when viewed relative to the magnitude of the urban runoff problem, enormous challenges remain, particularly regarding the management of urban runoff on a watershed level. Today, urban runoff continues to be the leading cause of water quality impairment in the San Diego Region. The Copermittees' monitoring data exhibits persistent exceedances of water quality objectives in most watersheds. Many watersheds also have urban runoff conditions that are frequently toxic to aquatic life. Bioassessment data from the watersheds further reflects these conditions, finding that macroinvertebrate communities in creeks have widespread Poor to Very Poor Index of Biotic Integrity ratings. Finally, the now too familiar "health advisory or beach closure" signs, which often result from high levels of bacteria in urban runoff, exhibit the continued threat to public health by urban runoff.

## **VI. PERMITTING APPROACH (PROGRAM INTEGRATION, FLEXIBILITY, AND DETAIL)**

The Order contains an increased emphasis on urban runoff management on a watershed basis. This shift towards increased watershed urban runoff management is consistent with earlier planning efforts conducted by the Regional Board regarding reissuance of Order No. 2001-01.<sup>2</sup> It is also consistent with the Copermittees' ROWD.<sup>3</sup> There are several reasons for this shift in emphasis. First, it has been found that the Copermittees are generally doing an effective job at implementing their jurisdictional programs, while on the other hand, it has been found that the Copermittees' watershed programs need improvement. In addition, an emphasis on watersheds is necessary to shift the focus of the Copermittees from program implementation to water quality results. After over 15 years of Copermittee program implementation, it is critical that the Copermittees link their efforts with positive impacts on water quality. Addressing urban runoff management on a watershed scale focuses on water quality results by emphasizing the receiving waters within the watershed. The conditions of the receiving waters drive management actions, which in turn focus on the water quality problems of the receiving waters in each watershed.

Focusing on watershed implementation does not mean that the Copermittees must expend funds outside of their jurisdictions, however. Rather, the Copermittees within each watershed are expected to collaborate to develop a watershed strategy to address the high priority water quality problems within each watershed. They then have the option of implementing the strategy in the manner they find to be most effective. Each Copermittee can implement the strategy individually within its jurisdiction, or the Copermittees can group together to implement the strategy throughout the watershed as a group.

While the Order includes a new emphasis on addressing urban runoff on a watershed basis, the Order includes recognition of the importance of continued program implementation on

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<sup>2</sup> Regional Board, 2004. San Diego County Municipal Storm Water Permit Reissuance Summary. P. 7.

<sup>3</sup> San Diego County Copermittees, 2005. Report of Waste Discharge. P. C-12.

jurisdictional and regional levels. The Order also acknowledges that jurisdictional, watershed, and regional efforts are not always mutually exclusive. For this reason, an attempt has been made to allow for the Copermittees' jurisdictional, watershed, and regional programs to integrate. In the Order, the watershed requirements serve as the mechanism for this program integration. Since jurisdictional and regional activities can also serve watershed purposes, such activities can be integrated into the Copermittees' watershed programs, provided the activities meet certain criteria. In this manner, the Copermittees' activities do not always need to distinguish between jurisdictional, watershed, and regional levels of implementation. Instead, they can be integrated on multiple levels.

Such opportunities for program integration inherently provide flexibility to the Copermittees in implementing their programs. Program integration can be expanded or minimized as the Copermittees see fit. For example, there is flexibility provided in determining the activities to be integrated and implemented in the watershed programs – watershed-based efforts, regional efforts, enhanced jurisdictional efforts, or a mixture of the three. Significant flexibility is also provided throughout other portions of the Order. Copermittees can choose the best management practices (BMPs) to be implemented, or required to be implemented, for development, construction, and existing development areas. Flexibility to determine which industrial or commercial sites are to be inspected is also provided to the Copermittees. Educational approaches are also to be determined by the Copermittees under the Order. Implementation of efforts on a regional basis is largely optional for the Copermittees as well. Significant leeway is also provided to the Copermittees in utilizing methods to assess the effectiveness of their various urban runoff management programs. This flexibility is further extended to the monitoring program requirements, which allow the Copermittees to develop monitoring approaches to several aspects of the monitoring program.

The challenge in drafting the Order is to provide the flexibility described above while ensuring that the Order is still enforceable. To achieve this, the Order frequently prescribes minimum measurable outcomes, while providing the Copermittees with flexibility in the approaches they use to meet those outcomes. Enforceability has been found to be a critical aspect of the Order. For example, the watershed requirements of Order No. 2001-01 were some of the most flexible requirements found in that Order. This lack of specificity in the watershed requirements resulted in disagreement about the adequacy of the Copermittees' watershed compliance efforts. On one hand, the Regional Board considered the Copermittees' watershed efforts to be inadequate because they would not result in a significant reduction in pollutant discharges. On the other hand, the Copermittees contended their watershed programs were adequate and in compliance with Order No. 2001-01, even after being notified by the Regional Board of needed improvements on multiple occasions spanning several years. This situation reflects a common outcome of flexible permit language. Such language can be unclear and unenforceable, and lead to implementation of inadequate programs.

To avoid these types of situations, a balance between flexibility and enforceability has been crafted into the Order. Minimum measurable outcomes are utilized to ensure the Order is enforceable, while the Copermittees are provided flexibility in deciding how they will implement their programs to meet the minimum measurable outcomes.

## **VII. ECONOMIC ISSUES**

Economic discussions of urban runoff management programs tend to focus on costs incurred by municipalities in developing and implementing the programs. Understandably so, since these costs are significant. However, when considering the cost of implementing the urban runoff

programs, it is also important to consider the alternative costs incurred by not fully implementing the programs, as well as the benefits which result from program implementation.

It is very difficult to ascertain the true cost of implementation of the Copermittees' urban runoff management programs because of inconsistencies in reporting by the Copermittees. Reported costs of compliance for the same program element can vary widely from city to city, often by a very wide margin that is not easily explained.<sup>4</sup> Despite these problems, efforts have been made to identify urban runoff management program costs, which can be helpful in understanding the costs of program implementation.

In 1999, United States Environmental Protection Agency (USEPA) reported on multiple studies it conducted to determine the cost of urban runoff management programs. A study of Phase II municipalities determined that the annual cost of the Phase II program was expected to be \$9.16 per household. USEPA also studied 35 Phase I municipalities, finding costs to be similar to those anticipated for Phase II municipalities, at \$9.08 per household annually.<sup>5</sup> The USEPA cost estimate for Phase I municipalities is valuable because it considers municipalities (including Orange County and cities) that are implementing programs similar to those required in San Diego.

A study on program cost was also conducted by the Los Angeles Regional Water Quality Control Board (LARWQCB), where program costs reported in the municipalities' annual reports were assessed. The LARWQCB estimated that average per household cost to implement the MS4 program in Los Angeles County was \$12.50. Since the Los Angeles County permit is very similar to Order No. 2001-01, this estimate is useful in assessing general program costs in San Diego County.

The SWRCB also recently commissioned a study by the California State University, Sacramento to assess costs of the Phase I MS4 program. This study is current and includes an assessment of costs incurred by the City of Encinitas in implementing their program. Annual cost per household in the study ranged from \$18-46, with the City of Encinitas representing the upper end of the range.<sup>6</sup> The cost of the City of Encinitas' program is understandable, given the city's coastal location, reliance on tourism, and consent decree with environmental groups regarding its program. For these reasons, as well as the general recognition the City of Encinitas receives for implementing a superior program, the city's program cost can be considered as the high end of the spectrum for Copermittee urban runoff management program costs.

It is important to note that reported program costs are not all attributable to compliance with MS4 permits. Many program components, and their associated costs, existed before any MS4 permits were ever issued. For example, street sweeping and trash collection costs cannot be solely or even principally attributable to MS4 permit compliance, since these practices have long been implemented by municipalities. Therefore, true program cost resulting from MS4 permit requirements is some fraction of reported costs. The California State University, Sacramento study found that only 38% of program costs are new costs fully attributable to MS4 permits. The remainder of the program costs were either pre-existing or resulted from enhancement of pre-existing programs.<sup>7</sup> The County of Orange found that even lesser amounts of program costs are solely attributable to MS4 permit compliance, reporting that the amount attributable to implement

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<sup>4</sup> LARWQCB, 2003. Review and Analysis of Budget Data Submitted by the Permittees for Fiscal Years 2000-2003. P. 2.

<sup>5</sup> Federal Register / Vol. 64, No. 235 / Wednesday, December 8, 1999 / Rules and Regulations. P. 68791-68792.

<sup>6</sup> SWRCB, 2005. NPDES Stormwater Cost Survey. P. ii.

<sup>7</sup> Ibid. P. 58.

the Drainage Area Management Plan, which is similar to the Jurisdictional Urban Runoff Management Program in the San Diego County MS4 permit, is less than 20% of the total budget. The remaining 80% is attributable to pre-existing programs.<sup>8</sup>

It is also important to acknowledge that the vast majority of costs that will be incurred as a result of implementing Order No. R9-2007-0001 are not new. Urban runoff management programs have been in place in San Diego County for over 15 years. Any increase in cost to the Copermittees will be incremental in nature. Moreover, since Order No. R9-2007-0001 “fine tunes” the requirements of Order No. 2001-01, these cost increases are expected to be modest.

Urban runoff management programs cannot be considered in terms of their costs only. The programs must also be viewed in terms of their value to the public. For example, household willingness to pay for improvements in fresh water quality for fishing and boating has been estimated by USEPA to be \$158-210.<sup>9</sup> This estimate can be considered conservative, since it does not include important considerations such as marine waters benefits, wildlife benefits, or flood control benefits. The California State University, Sacramento study corroborates USEPA’s estimates, reporting annual household willingness to pay for statewide clean water to be \$180.<sup>10</sup> When viewed in comparison to household costs of existing urban runoff management programs, these household willingness to pay estimates exhibit that per household costs incurred by Copermittees to implement their urban runoff management programs remain reasonable.

Another important way to consider urban runoff management program costs is to consider the implementation cost in terms of costs incurred by not improving the programs. Urban runoff in southern California has been found to cause illness in people bathing near storm drains.<sup>11</sup> A study of south Huntington Beach and north Newport Beach found that an illness rate of about 0.8% among bathers at those beaches resulted in about \$3 million annually in health-related expenses.<sup>12</sup> Extrapolation of such numbers to the wide range of beaches of San Diego County could result in huge expenses to the public.

Urban runoff and its impact on receiving waters also places a cost on tourism. In past years, San Diego was featured in the national press for its water quality problems.<sup>13</sup> Such news can have a negative impact on San Diego tourism, since polluted beaches are generally not attractive to tourists. According to a 1996 San Diego Association of Governments (SANDAG) Memorandum, the California Division of Tourism has estimated that each out-of-state visitor spends \$101.00 a day. The memo goes on to state that based on projections from the California Department of Boating and Waterways, nearly \$1.2 billion in direct revenue and \$1.2 billion in indirect revenue is pumped into the San Diego area economy each year by out-of-state visitors.<sup>14</sup> The experience of Huntington Beach provides an example of the potential economic impact of poor water quality. Approximately 8 miles of Huntington Beach were closed for two months in the middle of summer of 1999, impacting beach visitation and the local economy.

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<sup>8</sup> County of Orange, 2000. A NPDES Annual Progress Report. P. 60. More current data from the County of Orange is not used in this discussion because the County of Orange no longer reports such information.

<sup>9</sup> Federal Register / Vol. 64, No. 235 / Wednesday, December 8, 1999 / Rules and Regulations. P. 68793.

<sup>10</sup> SWRCB, 2005. NPDES Stormwater Cost Survey. P. iv.

<sup>11</sup> Haile, R.W., et al, 1996. An Epidemiological Study of Possible Adverse Health Effects of Swimming in Santa Monica Bay. Santa Monica Bay Restoration Project.

<sup>12</sup> Los Angeles Times, May 2, 2005. Here’s What Ocean Germs Cost You: A UC Irvine Study Tallies the Cost of Treatment and Lost Wages for Beachgoers Who Get Sick.

<sup>13</sup> Regional Board, 2001. Fact Sheet/Technical Report for SDRWQCB Order No. 2001-01. P. 8.

<sup>14</sup> San Diego Association of Governments, 1996. Memorandum: California Department of Boating and Waterways: Unpublished Survey Information Regarding Beach Use. Written to the Shoreline Erosion Committee.

Finally, it is important to consider the benefits of urban runoff management programs in conjunction with their costs. A recent study conducted by USC/UCLA assessed the costs and benefits of implementing various approaches for achieving compliance with the MS4 permits in the Los Angeles Region. The study found that non-structural systems would cost \$2.8 billion but provide \$5.6 billion in benefit. If structural systems were determined to be needed, the study found that total costs would be \$5.7 to \$7.4 billion, while benefits could reach \$18 billion.<sup>15</sup> Costs are anticipated to be borne over many years – probably ten years at least. As can be seen, the benefits of the programs are expected to considerably exceed their costs. Such findings are corroborated by USEPA, which found that the benefits of implementation of its Phase II storm water rule would also outweigh the costs.<sup>16</sup>

Additional discussion of economic issues can be found at section 3 of the Fact Sheet/Technical Report for SDRWQCB Order No. 2001-01, available at:

[http://www.waterboards.ca.gov/sandiego/programs/sd\\_stormwater.html](http://www.waterboards.ca.gov/sandiego/programs/sd_stormwater.html).

## VIII. LEGAL AUTHORITY

The following statutes, regulations, and Water Quality Control Plans provide the basis for the requirements of Order No. R9-2007-0001: CWA, California Water Code (CWC), 40 CFR Parts 122, 123, 124 (National Pollutant Discharge Elimination System Permit Application Regulations for Storm Water Discharges, Final Rule), Part II of 40 CFR Parts 9, 122, 123, and 124 (National Pollutant Discharge Elimination System – Regulations for Revision of the Water Pollution Control Program Addressing Storm Water Discharges; Final Rule), Water Quality Control Plan – Ocean Waters of California (California Ocean Plan), Water Quality Control Plan for the San Diego Basin (Basin Plan), 40 CFR 131 Water Quality Standards; Establishment of Numeric Criteria for Priority Toxic Pollutants for the State of California; Rule (California Toxics Rule), and the California Toxics Rule Implementation Plan.

The legal authority citations below generally apply to directives in Order No. R9-2007-0001, and provide the Regional Board with ample underlying authority to require each of the directives of Order No. R9-2007-0001. Legal authority citations are also provided with each permit section discussion in section X of this Fact Sheet/Technical Report.

CWA 402(p)(3)(B)(ii) – The CWA requires in section 402(p)(3)(B)(ii) that permits for discharges from municipal storm sewers “shall include a requirement to effectively prohibit non-stormwater discharges into the storm sewers.”

CWA 402(p)(3)(B)(iii) – The CWA requires in section 402(p)(3)(B)(iii) that permits for discharges from municipal storm sewers “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.”

40 CFR 122.26(d)(2)(i)(B,C,E, and F) – Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(B,C,E, and F) provide that each Copermittee’s permit application “shall consist of: (i) Adequate legal authority. A demonstration that the applicant can operate pursuant to legal authority established by statute, ordinance or series of contracts which authorizes or enables the

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<sup>15</sup> LARWQCB, 2004. Alternative Approaches to Stormwater Control.

<sup>16</sup> Federal Register / Vol. 64, No. 235 / Wednesday, December 8, 1999 / Rules and Regulations. P. 68791.

applicant at a minimum to: [...] (B) Prohibit through ordinance, order or similar means, illicit discharges to the municipal separate storm sewer; (C) Control through ordinance, order or similar means the discharge to a municipal separate storm sewer of spills, dumping or disposal of materials other than storm water; [...] (E) Require compliance with condition in ordinances, permits, contracts or orders; and (F) Carry out all inspection, surveillance and monitoring procedures necessary to determine compliance and noncompliance with permit conditions including the prohibition on illicit discharges to the municipal separate storm sewer.”

40 CFR 122.26(d)(2)(iv) – Federal NPDES regulation 40 CFR 122.26(d)(2)(iv) provides that the Copermittee shall develop and implement a proposed management program which “shall include a comprehensive planning process which involves public participation and where necessary intergovernmental coordination, to reduce the discharge of pollutants to the maximum extent practicable using management practices, control techniques and system, design and engineering methods, and such other provisions which are appropriate. The program shall also include a description of staff and equipment available to implement the program. [...] Proposed programs may impose controls on a system wide basis, a watershed basis, a jurisdiction basis, or on individual outfalls. [...] Proposed management programs shall describe priorities for implementing controls.”

40 CFR 122.26(d)(2)(iv)(A - D) – Federal NPDES regulations 40 CFR 122.26(d)(2)(iv)(A - D) require municipalities to implement controls to reduce pollutants in urban runoff from new development and significant redevelopment, construction, and commercial, residential, industrial, and municipal land uses or activities. Control of illicit discharges is also required.

CWC 13377 – CWC section 13377 provides that “Notwithstanding any other provision of this division, the state board or the regional boards shall, as required or authorized by the CWA, as amended, issue waste discharge requirements and dredged or fill material permits which apply and ensure compliance with all applicable provisions of the act and acts amendatory thereof or supplementary, thereto, together with anymore stringent effluent standards or limitation necessary to implement water quality control plans, or for the protection of beneficial uses, or to prevent nuisance.”

Order No. R9-2007-0001 is an essential mechanism for achieving the water quality objectives that have been established for protecting the beneficial uses of the water resources in the San Diego Region portion of San Diego County. Federal NPDES regulation 40 CFR 122.44(d)(1) requires MS4 permits to include any requirements necessary to “achieve water quality standards established under CWA section 303, including State narrative criteria for water quality.” The term “water quality standards” in this context refers to a water body’s beneficial uses and the water quality objectives necessary to protect those beneficial uses, as established in the Basin Plan.

## **IX. FINDINGS DISCUSSION**

The findings of the Order have been modified to reduce repetition in their discussions and address new requirements. Each finding of the Order is provided and discussed below. Additional discussion relative to the findings can be found in section X of the Fact Sheet, which provides discussions of the Order’s directives.

## A. Basis For The Order

**Finding A.1:** This Order is based on the federal CWA, the Porter-Cologne Water Quality Control Act (Division 7 of the CWC, commencing with Section 13000), applicable state and federal regulations, all applicable provisions of statewide Water Quality Control Plans and Policies adopted by the SWRCB, the Basin Plan, the California Toxics Rule, and the California Toxics Rule Implementation Plan.

**Discussion:** In 1987, Congress established CWA Amendments to create requirements for storm water discharges under the NPDES program, which provides for permit systems to regulate the discharge of pollutants. Under the Porter-Cologne Water Quality Control Act, the SWRCB and Regional Water Quality Control Boards (Regional Boards) have primary responsibility for the coordination and control of water quality, including the authority to implement the CWA. Porter-Cologne (section 13240) directs the Regional Boards to set water quality objectives via adoption of Basin Plans that conform to all state policies for water quality control. As a means for achieving those water quality objectives, Porter-Cologne (section 13243) further authorizes the Regional Boards to establish waste discharge requirements (WDRs) to prohibit waste discharges in certain conditions or areas. Since 1990, the Regional Board has issued area-wide MS4 NPDES permits. The Order will renew Order No. 2001-01 to comply with the CWA and attain water quality objectives in the Basin Plan by limiting the contributions of pollutants conveyed by urban runoff. Further discussions of the legal authority associated with the prohibitions and directives of the Order are provided in section VIII this document.

**Finding A.2:** This Order renews NPDES Permit No. CAS0108758, which was first issued on July 16, 1990 (Order No. 90-42), and then renewed on February 21, 2001 (Order No. 2001-01). On August 25, 2005, in accordance with Order No. 2001-01, the County of San Diego, as the Principal Permittee, submitted a ROWD for renewal of their MS4 Permit.

**Discussion:** Supporting information discussing the topic of this finding can be found in section V of this document.

## B. Regulated Parties

**Finding No. B.1:** Each of the Copermittees listed in Table 1 of the Order owns or operates a MS4, through which it discharges urban runoff into waters of the United States within the San Diego Region. These MS4s fall 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) a small MS4 that is "interrelated" to a medium or large MS4; or (3) an MS4 which contributes to a violation of a water quality standard; or (4) an MS4 which is a significant contributor of pollutants to waters of the United States.

**Discussion:** Section 402 of the CWA prohibits the discharge of any pollutant to waters of the United States from a point source, unless that discharge is authorized by a NPDES permit. Though urban runoff comes from a diffuse source, it is discharged through MS4s, which are point sources under the CWA. Federal NPDES regulation 40 CFR 122.26(a) (iii) and (iv) provide that discharges from MS4s, which service medium or large populations greater than 100,000 or 250,000 respectively, shall be required to obtain a NPDES permit. Federal NPDES regulation 40 CFR 122.26(a)(v) also provides that a NPDES permit is required for "A [storm water] discharge which the Director, or in States with approved NPDES programs, either the Director or the USEPA Regional Administrator, determines to contribute to a violation of a water quality standard or is a significant contributor of pollutants to waters of the United States." Such sources

are then designated into the program. Please see Attachment 1 of the Fact Sheet/Technical Report for Regional Board Order No. 2001-01 for an explanation on NPDES municipal storm water permit coverage for each municipality.<sup>17</sup> The San Diego County Regional Airport Authority, designated a Copermittee in 2003, was previously a part of the San Diego Unified Port District and has an MS4 interrelated to other Copermittee MS4s.

Other small MS4s, such as those serving universities and military installations, also exist within the watersheds of San Diego County. While these MS4s are not subject to this Order, they are subject to the Phase II NPDES storm water regulations. Over time, these MS4s will be designated for coverage under the SWRCB's statewide general storm water permit for small MS4s.

### C. Discharge Characteristics

**Finding No. C.1:** Urban runoff contains waste, as defined in the CWC, and pollutants that adversely affect the quality of waters of the State. The discharge of urban runoff from an MS4 is a "discharge of pollutants from a point source" into waters of the United States as defined in the CWA.

**Discussion:** Section 13050(d) of the CWC defines "waste" as "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." 40 CFR 122.2 defines "point source" as "any discernable, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel or other floating craft from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture or agricultural storm water runoff." 40 CFR 122.2 defines "discharge of a pollutant" as "Any addition of any pollutant or combination of pollutants to waters of the U.S. from any point source." Also, the justification for control of pollution into waters of the state can be found at CWC section 13260(a)(1). SWRCB Order WQ 2001-15 verifies that urban runoff contains waste.<sup>18</sup>

**Finding C.2:** The most common categories of pollutants in urban runoff include total suspended solids, sediment (due to anthropogenic activities); 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 trash.

**Discussion:** The National Urban Runoff Program (NURP) study showed that heavy metals, organics, coliform bacteria, nutrients, oxygen demanding substances (e.g., decaying vegetation), and total suspended solids are found at relatively high levels in urban runoff.<sup>19</sup> It also found that MS4 discharges draining residential, commercial, and light industrial areas contain significant loadings of total suspended solids and other pollutants. The Basin Plan goes on to identify urban

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<sup>17</sup> Regional Board, 2001. Fact Sheet/Technical Report for SDRWQCB Order No. 2001-01. Attachment 1.

<sup>18</sup> SWRCB, 2001. Order WQ 2001-15. In the Matter of Petitions of Building Industry Association of San Diego County and Western States Petroleum Association: For Review of Waster Discharge Requirements Order No. 2001-01 for Urban Runoff from San Diego County [NPDES No. CAS0108758] Issued by the Regional Board.

<sup>19</sup> Ibid.

runoff pollutants to include lawn and garden chemicals, household and automotive care products dumped or drained on streets, and sediment that erodes from construction sites.<sup>20</sup> In addition, the SWRCB Urban Runoff Technical Advisory Committee (TAC) finds that urban runoff pollutants include sediments, nutrients, oxygen-demanding substances, heavy metals, petroleum hydrocarbons, pathogenic bacteria, viruses, and pesticides.<sup>21</sup> Runoff that flows over streets, parking lots, construction sites, and industrial, commercial, residential, and municipal areas carries these untreated pollutants through storm drain networks directly to the receiving waters of the San Diego Region.

**Finding No. C.3:** The discharge of pollutants and/or increased flows from MS4s may cause or threaten to cause the concentration of pollutants to exceed applicable receiving water quality objectives and impair or threaten to impair designated beneficial uses resulting in a condition of pollution (i.e., unreasonable impairment of water quality for designated beneficial uses), contamination, or nuisance.

**Discussion:** The 1992, 1994, and 1996 National Water Quality Inventory Reports to Congress prepared by USEPA showed a trend of impairment in the nation's waters from contaminated storm water and urban runoff.<sup>22</sup> The 1998 National Water Quality Inventory Report showed that urban runoff discharges affect 11% of rivers, 12% of lakes, and 28% of estuaries. The report states that ocean shoreline impairment due to urban runoff increased from 55% in 1996 to 63% in 1998. The report notes that urban runoff discharges are the leading source of pollution and the main factor in the degradation of surface water quality in California's coastal waters, rivers, and streams. Furthermore, the NURP study found that pollutant levels from illicit discharges were high enough to significantly degrade receiving water quality, and threaten aquatic life, wildlife, and human health.<sup>23</sup>

In addition, the Region's CWA section 303(d) list, which identifies water bodies with impaired beneficial uses within the region, also indicates that the impacts of urban runoff on receiving waters are significant. Many of the impaired water bodies on the 303(d) list are impaired by constituents which have been found at high levels within urban runoff by the regional storm water monitoring program.<sup>24</sup> Examples of constituents frequently responsible for beneficial use impairment include total and fecal coliform, heavy metals, and sediment; these constituents have been found at high levels in urban runoff both regionally and nationwide.<sup>25,26</sup>

**Finding No. C.4:** Pollutants in urban runoff can threaten human health. Human illnesses have been clearly linked to recreating near storm drains flowing to coastal waters. Also, urban runoff pollutants in receiving waters can bioaccumulate in the tissues of invertebrates and fish, which may be eventually consumed by humans.

**Discussion:** A landmark study, conducted by the Santa Monica Bay Restoration Project, found that there was an increased occurrence of illness in people that swam in proximity to a flowing

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<sup>20</sup> Regional Board, 1994. Water Quality Control Plan, San Diego Basin, Region 9. San Diego.

<sup>21</sup> SWRCB, 1994. Urban Runoff Technical Advisory Committee Report and Recommendations. Nonpoint Source Management Program.

<sup>22</sup> USEPA, 2000. Quality of Our Nation's Waters: Summary of the National Water Quality Inventory 1998 Report to Congress – USEPA 841-S-00-001; Water Quality Conditions in the United States: Profile from the 1998 National Water Quality Inventory Report to Congress – USEPA 841-F-00-006.

<sup>23</sup> USEPA, 1993. Results of the Nationwide Urban Runoff Program, Volume 1 – Final Report.

<sup>24</sup> County of San Diego, 2005. San Diego County Municipal Copermittees 2004-2005 Urban Runoff Monitoring.

<sup>25</sup> Ibid.

<sup>26</sup> USEPA, 1983. Results of the Nationwide Urban Runoff Program, Volume 1 – Final Report.

storm drain.<sup>27</sup> Furthermore, urban runoff pollutants in receiving waters can bioaccumulate in the tissues of invertebrates and fish, which may eventually be consumed by humans. Pollutants such as heavy metals and pesticides, which are commonly found in urban runoff, have been found to bioaccumulate and biomagnify in long-lived organisms at the higher trophic levels.<sup>28</sup> Since many aquatic species are utilized for human consumption, toxic substances accumulated in species' tissues can pose a significant threat to public health. USEPA supports this finding when it states, "As runoff flows over areas altered by development, it picks up harmful sediment and chemicals such as oil and grease, pesticides, heavy metals, and nutrients (e.g., nitrogen and phosphorus). These pollutants often become suspended in runoff and are carried to receiving waters, such as lakes, ponds, and streams. Once deposited, these pollutants can enter the food chain through small aquatic life, eventually entering the tissues of fish and humans."<sup>29</sup>

**Finding No. C.5:** Urban runoff discharges from MS4s often contain pollutants that cause toxicity to aquatic organisms (i.e., adverse responses of organisms to chemicals or physical agents ranging from mortality to physiological responses such as impaired reproduction or growth anomalies). Toxic pollutants impact the overall quality of aquatic systems and beneficial uses of receiving waters.

**Discussion:** The Copermittees' monitoring data exhibits frequent toxic conditions in urban runoff during storm events. For example, persistent toxicity has been observed at the Chollas Creek mass loading station and the Tijuana River mass loading station. The Chollas Creek and Sweetwater River mass loading stations were also identified as potential Toxicity Identification Evaluation (TIE) candidate sites based on toxicity to *Hyalella* and *Selenastrum*, respectively.<sup>30</sup> Moreover, a study of urban runoff samples from Chollas Creek, revealed toxic concentrations of organophosphate pesticides and metals.<sup>31</sup> Also, a water quality data assessment conducted in Aliso Creek in Orange County showed that storm events caused varying degrees of mortality to test organisms.<sup>32</sup>

**Finding No. C.6:** The Copermittees discharge urban runoff into lakes, drinking water reservoirs, rivers, streams, creeks, bays, estuaries, coastal lagoons, the Pacific Ocean, and tributaries thereto within ten of the eleven hydrologic units (watersheds) comprising the San Diego Region. Some of the receiving water bodies have been designated as impaired by the Regional Board and the USEPA in 2002 pursuant to CWA section 303(d).

**Discussion:** This finding identifies the Copermittees responsible for MS4 discharges in each watershed management area. The list is identical to Order No. 2001-01, with the addition of the San Diego County Regional Airport Authority added to the San Diego Bay Watershed Management Area.

The CWA Section 303(d) List of Impaired Waters, 2002 Update has been approved by the Regional Board, SWRCB, and USEPA. This 303(d) list identifies waters that do not meet water quality standards after applying certain required technology-based effluent limits ("impaired" water bodies). As part of this listing process, states are required to prioritize waters/watersheds

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<sup>27</sup> Haile, R.W., et al., 1996. An Epidemiological Study of Possible Adverse Health Effects of Swimming in Santa Monica Bay. Santa Monica Bay Restoration Project.

<sup>28</sup> Abel, P.D, 1996. Water Pollution Biology.

<sup>29</sup> USEPA, 2000. Storm Water Phase II Compliance Assistance Guide. Washington D.C. EPA 833-R-00-002.

<sup>30</sup> Ibid., P. ES-16.

<sup>31</sup> Bay, Steven M., et al., 2001. Characterization of Stormwater Toxicants from an Urban Watershed to Freshwater and Marine Organisms. Southern California Coastal Water Research Project. Annual Report 1999-2000.

<sup>32</sup> Regional Board, 2002. Fact Sheet/Technical Report for Regional Board Order No. R9-2002-0001.

for future development of Total Maximum Daily Loads (TMDLs). The 303(d) Pollutants of Concern or Water Quality Effect in Table 2 of the Order have been summarized from the 2002 303(d) list which can be found in full on our website at:

<http://www.waterboards.ca.gov/sandiego/programs/303dlist.html>.

**Finding No. C.7:** The Copermittees' water quality monitoring data submitted to date documents persistent exceedances of Basin Plan water quality objectives for various urban runoff-related pollutants (diazinon, fecal coliform bacteria, total suspended solids, turbidity, metals, etc.) at various watershed monitoring stations. At some monitoring stations, such as Agua Hedionda, statistically significant upward trends in pollutant concentrations have been observed. Persistent toxicity has also been observed at some watershed monitoring stations. In addition, bioassessment data indicates that the majority of watersheds have Poor to Very Poor Index of Biotic Integrity ratings. In sum, the above findings indicate that urban runoff discharges are causing or contributing to water quality impairments, and are a leading cause of such impairments in San Diego County.

**Discussion:** The Copermittees have submitted information indicating persistent wet weather constituents of concern in various waterbodies of fecal coliform, total suspended solids, turbidity, total dissolved solids, diazinon, copper, zinc, toxicity, ammonia, biochemical oxygen demand, chemical oxygen demand, phosphorus, chlorpyrifos, and malathion.<sup>33</sup> The Agua Hedionda mass loading station shows statistically significant trends of increasing chemical oxygen demand, total kjeldahl nitrogen, total phosphorus, total suspended solids, and turbidity.<sup>34</sup> Statistically significant increasing trends have also been observed in Tecolote Creek (arsenic) and Chollas Creek (nitrate and lead).<sup>35</sup> Persistent toxicity has been observed at the Chollas Creek mass loading station and the Tijuana River mass loading station. The Chollas Creek and Sweetwater River mass loading stations were identified as potential Toxicity Identification Evaluation (TIE) candidate sites based on toxicity to *Hyalella* and *Selenastrum*, respectively.<sup>36</sup> However, the toxicity was not consistent among events and relatively slight. Bioassessment data collected during the 2004-2005 year indicates that the majority of the watersheds have Poor to Very Poor Index of Biotic Integrity ratings.<sup>37</sup> The three sites that received Good and Very Good ratings were at reference sites in the Santa Margarita Watershed<sup>38</sup> and San Luis Rey Watershed.<sup>39</sup> In most of these watersheds, there are no other NPDES permits discharging to the creeks. The few NPDES permits in the watersheds are mainly for recycled water which only discharges occasionally during the rainy season. Because the water quality monitoring indicates exceedances of water quality standards and urban runoff is the main source of pollutants in the watersheds, it can be inferred that the urban runoff discharges are causing or contributing to water quality impairments, and are a leading cause of such impairments in San Diego County.

**Finding No. C.8:** When natural vegetated pervious ground cover is converted to impervious surfaces such as paved highways, streets, rooftops, and parking lots, the natural absorption and

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<sup>33</sup> San Diego County Copermittees, 2005. Baseline Long-Term Effectiveness Assessment, San Diego Copermittees Jurisdictional Urban Runoff Management Program, Final Report. P. 2-24, Table 2-5.

<sup>34</sup> Ibid.

<sup>35</sup> Ibid.

<sup>36</sup> County of San Diego, 2005. San Diego County Municipal Copermittees 2004-2005 Urban Runoff Monitoring. P. ES-16.

<sup>37</sup> Ibid., P. ES-4 – ES-19.

<sup>38</sup> Ibid., P. 4-11.

<sup>39</sup> Ibid., P. ES-7.

infiltration abilities of the land are lost. Therefore, runoff leaving a developed urban area is significantly greater in runoff volume, velocity, peak flow rate, and duration than pre-development runoff from the same area. The increased volume, velocity, rate, and duration of runoff greatly accelerate the erosion of downstream natural channels. Significant declines in the biological integrity and physical habitat of streams and other receiving waters have been found to occur with as little as a 10% conversion from natural to impervious surfaces. The increased runoff characteristics from new development must be controlled to protect against increased erosion of channel beds and banks, sediment pollutant generation, or other impacts to beneficial uses and stream habitat due to increased erosive force.

**Finding No. C.9:** Urban development creates new pollution sources as human population density increases and brings with it proportionately higher levels of car emissions, car maintenance wastes, municipal sewage, pesticides, household hazardous wastes, pet wastes, trash, etc. which can either be washed or directly dumped into the MS4. As a result, the runoff leaving the developed urban area is significantly greater in pollutant load than the pre-development runoff from the same area. These increased pollutant loads must be controlled to protect downstream receiving water quality.

**Discussion (C.8 and C.9):** The Natural Resources Defense Council (NRDC) 1999 Report, “Stormwater Strategies, Community Responses to Runoff Pollution” identifies two main causes of the storm water pollution problem in urban areas. Both causes are directly related to development in urban and urbanizing areas:

1. Increased volume and velocity of surface runoff. There are three types of human-made impervious covers that increase the volume and velocity of runoff: (i) rooftop, (ii) transportation imperviousness, and (iii) non-porous (impervious) surfaces. As these impervious surfaces increase, infiltration will decrease, forcing more water to run off the surface, picking up speed and pollutants.
2. The concentration of pollutants in the runoff. Certain industrial, commercial, residential and construction activities are large contributors of pollutant concentrations in urban runoff. As human population density increases, it brings with it proportionately higher levels of car emissions, car maintenance wastes, municipal sewage, pesticides, household hazardous wastes, pet wastes, trash, etc.

As a result of these two causes, runoff leaving developed urban areas is significantly greater in volume, velocity, and pollutant load than pre-development runoff from the same area.

Studies have shown that the level of imperviousness in an area strongly correlates with the quality of nearby receiving waters.<sup>40</sup> One comprehensive study, which looked at numerous areas, variables, and methods, revealed that stream degradation occurs at levels of imperviousness as low as 10 – 20%.<sup>41</sup> Stream degradation is a decline in the biological integrity and physical habitat conditions that are necessary to support natural biological diversity. For instance, few urban streams can support diverse benthic communities with imperviousness greater than or equal to

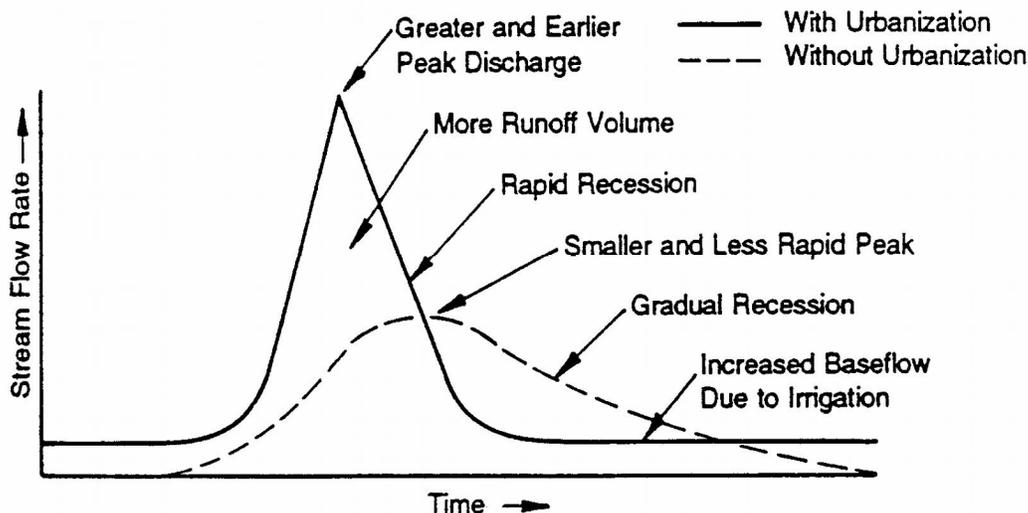
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<sup>40</sup> USEPA, 1999. Part II. 40 CFR Parts 9, 122, 123, and 124. National Pollutant Discharge Elimination System – Regulations for Revision of the Water Pollution Control Program Addressing Storm Water Discharges; Final Rule. Federal Register.

<sup>41</sup> Ibid.

25%.<sup>42</sup> To provide some perspective, a medium density, single-family home area can be from 25% to 60% impervious (variation due to street and parking design).<sup>43</sup>

To demonstrate the principle of increased volume and velocity of runoff from urbanization, the following figure shows the flow rate of an urban vs. a natural stream. What the figure demonstrates is that urban stream flows have greater peaks and volumes, as well as shorter retention times than natural stream flows. The greater peak flows and volumes result in stream degradation through increased erosion of stream banks and damage to aquatic habitat. The shorter retention times result in less time for sediments and other pollutants to settle before being carried out to the ocean. This sediment, and the associated pollutants it carries, can be a significant cause of water quality degradation.



Source: Adapted from Schueler, 1997<sup>44</sup>

Increased volume and velocity of runoff adversely impacts receiving waters and their beneficial uses in many ways. According to the TAC report,<sup>45</sup> increases in population density and imperviousness result in changes to stream hydrology including:

1. Increased peak discharges compared to pre-development levels;
  2. Increased volume of storm water runoff with each storm compared to pre-development levels;
  3. Decreased travel time to reach receiving water; increased frequency and severity of floods;
  4. Reduced stream flow during prolonged periods of dry weather due to reduced levels of infiltration;
  5. Increased runoff velocity during storms due to a combination of effects of higher discharge peaks, rapid time of concentration, and smoother hydraulic surfaces from channelization;
- and

<sup>42</sup> Ibid.

<sup>43</sup> Schueler, T.R., 1994. The Importance of Imperviousness. Watershed Protection Techniques. As cited in 64 Fed. Reg. 68725.

<sup>44</sup> Schueler, T.R., 1987. Controlling Urban Runoff: A Practical Manual for Planning and Designing Urban BMPs. Metropolitan Washington Council of Governments.

<sup>45</sup> SWRCB, 1994. Urban Runoff Technical Advisory Committee Report and Recommendations. Nonpoint Source Management Program.

6. Decreased infiltration and diminished ground water recharge.

Even though the rainfall depths in arid watersheds are lower, watershed development can greatly increase peak discharge rates during rare flood events.<sup>46</sup> A study conducted in arid watersheds around Riverside, CA showed that, over two decades, impervious cover increased from 9% to 22%, which resulted in an increase of more than 100% in the peak flow rate for the two-year storm event. The study also showed that the average annual storm water runoff volume had increased by 115% to 130% over the same time span.<sup>47</sup>

Regarding the impact of urban development on urban runoff pollutant loads, the Regional Board's Basin Plan states:

Nonpoint source pollution is primarily the result of man's uses of land such as urbanization, roads and highways, vehicles, agriculture, construction, industry, mineral extraction, physical habitat alteration (dredging/filling), hydromodification (diversion, impoundment, channelization), silviculture (logging), and other activities which disturb land.<sup>48</sup> As a result, when rain falls on and drains through urban freeways, industries, construction sites, and neighborhoods it picks up a multitude of pollutants. The pollutants can be dissolved in the runoff and quickly transported by gravity flow through a vast network of concrete channels and underground pipes referred to as storm water conveyance systems. Such systems ultimately discharge the polluted runoff, without treatment, into the nation's creeks, rivers, estuaries, bays, and oceans.<sup>49</sup>

According to the Center for Watershed Protection, the quality of both surface and ground water in urbanizing areas of arid and semi-arid regions of the southwest is strongly shaped by urbanization. Since rain events are so rare, pollutants have more time to build up on impervious surfaces compared to humid regions. Therefore, the pollutant concentrations of storm water runoff from arid watersheds tends to be higher than that of humid watersheds.<sup>50</sup>

**Finding No. C.10:** Development and urbanization especially threaten environmentally sensitive areas (ESAs), such as water bodies designated as supporting a RARE beneficial use (supporting rare, threatened or endangered species) and CWA 303(d) impaired water bodies. Such areas have a much lower capacity to withstand pollutant shocks than might be acceptable in the general circumstance. In essence, development that is ordinarily insignificant in its impact on the environment may become significant in a particular sensitive environment. Therefore, additional control to reduce pollutants from new and existing development may be necessary for areas adjacent to or discharging directly to an ESA.

**Discussion:** ESAs are defined in the Order as "Areas that include but are not limited to all CWA Section 303(d) impaired water bodies; areas designated as Areas of Special Biological Significance by the Basin Plan ; water bodies designated with the RARE beneficial use by the Basin Plan; areas designated as preserves or their equivalent under the Multi Species Conservation Program within the Cities and County of San Diego; and any other equivalent environmentally sensitive areas which have been identified by the Copermittees." Areas that

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<sup>46</sup> Schueler and Holland, 2000. Storm Water Strategies for Arid and Semi-Arid Watersheds (Article 66). The Practice of Watershed Protection. P. 695-706.

<sup>47</sup> Ibid.

<sup>48</sup> Regional Board, 1994. Water Quality Control Plan for the San Diego Basin. P. 4-66.

<sup>49</sup> Ibid. P. 4-69 - 4-70.

<sup>50</sup> Schueler and Holland, 2000. Storm Water Strategies for Arid and Semi-Arid Watersheds (Article 66). The Practice of Watershed Protection. P. 695-706.

meet this definition are inherently sensitive habitats containing unique, rare, threatened, or endangered species, or are not achieving their designated beneficial uses. As discussed above, urban runoff is known to contain a wide range of pollutants and have demonstrated toxicity to plants and animals. Therefore, it is necessary to apply additional controls for developments within, adjacent to, or directly discharging to ESAs. This need for additional controls is addressed within each component of the Order. USEPA supports the requirement for additional controls, stating “For construction sites that discharge to receiving waters that do not support their designated use or other waters of special concern, additional construction site controls are probably warranted and should be strongly considered.”<sup>51</sup> Further support for requiring additional controls to reduce pollutants in discharges to ESAs can be found in *Mitigation of Storm Water Impacts From New Developments in Environmentally Sensitive Areas*, a technical report written by the LARWQCB.<sup>52</sup>

**Finding No. C.11:** Although dependent on several factors, the risks typically associated with properly managed infiltration of runoff (especially from residential land use areas) are not significant. The risks associated with infiltration can be managed by many techniques, including (1) designing landscape drainage features that promote infiltration of runoff, but do not “inject” runoff (injection bypasses the natural processes of filtering and transformation that occur in the soil); (2) taking reasonable steps to prevent the illegal disposal of wastes; (3) protecting footings and foundations; and (4) ensuring that each drainage feature is adequately maintained in perpetuity.

**Discussion:** Infiltration is an effective means for managing urban runoff. However, measures must be taken to protect groundwater quality when infiltration of urban runoff is implemented. USEPA supports urban runoff infiltration and provides guidance for protection of groundwater: “With a reasonable degree of site-specific design considerations to compensate for soil characteristics, infiltration may be very effective in controlling both urban runoff quality and quantity problems. This strategy encourages infiltration of urban runoff to replace the natural infiltration capacity lost through urbanization and to use the natural filtering and sorption capacity of soils to remove pollutants; however, the potential for some types of urban runoff to contaminate groundwater through infiltration requires some restrictions.”<sup>53</sup> The restrictions placed on urban runoff infiltration in this Order are based on recommendations provided by the USEPA Risk Reduction Engineering Laboratory. The SWRCB found in Order WQ 2000-11 on the appeal of the LARWQCB’s Standard Urban Storm Water Mitigation Plan (SUSMP) requirements that the guidance provided in the above referenced document by the USEPA Risk Reduction Engineering Laboratory is sufficient for the protection of groundwater quality from urban runoff infiltration. To further protect groundwater quality, the Order also includes guidance from the LARWQCB,<sup>54</sup> the State of Washington,<sup>55</sup> and the State of Maryland.<sup>56</sup>

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<sup>51</sup> USEPA, 1992. Guidance Manual for the Preparation of Part II of the NPDES Permit Applications for Discharges from Municipal Separate Storm Sewer Systems. Washington D.C. EPA/833-B-92-002.

<sup>52</sup> LARWQCB, 2001. *Mitigation of Storm Water Impacts From New Developments In Environmentally Sensitive Areas*.

<sup>53</sup> USEPA, 1994. *Potential Groundwater Contamination from Intentional and Nonintentional Stormwater Infiltration*. EPA 600 SR-94 051.

<sup>54</sup> LARWQCB, 2000. *Standard Urban Storm Water Mitigation Plan for Los Angeles County and Cities in Los Angeles County*.

<sup>55</sup> Washington State Department of Ecology, 1999. *Draft Stormwater Management in Washington State. Volume V – Runoff Treatment BMPs*. Pub. No. 99-15.

<sup>56</sup> Maryland Department of the Environment, 1999. *2000 Maryland Stormwater Design Manual. Volume I*.

#### D. Urban Runoff Management Programs

**Finding D.1.a:** This Order specifies requirements necessary for the Copermittees to reduce the discharge of pollutants in urban runoff to the maximum extent practicable (MEP). However, since MEP is a dynamic performance standard which evolves over time as urban runoff management knowledge increases, the Copermittees' urban runoff management programs must continually be assessed and modified to incorporate improved programs, control measures, best management practices, etc. Absent evidence to the contrary, this continual assessment, revision, and improvement of urban runoff management program implementation is expected to ultimately achieve compliance with water quality standards.

**Discussion:** Under CWA section 402(p), municipalities are required to reduce the discharge of pollutants from their MS4s to the maximum extent practicable (MEP). MEP is the critical technology-based performance standard that municipalities must attain. The MEP standard is an ever-evolving, flexible, and advancing concept, which considers technical and economic feasibility. As knowledge about controlling urban runoff continues to evolve, so does that which constitutes MEP. Reducing the discharge of storm water pollutants to the MEP requires Copermittees to assess each program component and revise activities, control measures, best management practices (BMPs), and measurable goals, as necessary to meet MEP.

To achieve the MEP standard, municipalities must employ whatever 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:

1. Effectiveness: Will the BMPs address a pollutant (or pollutant source) of concern?
2. Regulatory Compliance: Is the BMP in compliance with storm water regulations as well as other environmental regulations?
3. Public Acceptance: Does the BMP have public support?
4. Cost: Will the cost of implementing the BMP have a reasonable relationship to the pollution control benefits to be achieved?
5. Technical Feasibility: Is the BMP technically feasible considering soils, geography, water resources, etc?

If a municipality reviews a lengthy menu of BMPs and chooses to select only a few of the least expensive BMPs, 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 is prohibitive, 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.<sup>57</sup>

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<sup>57</sup> SWRCB, 1993. Memo Entitled Definition of Maximum Extent Practicable.

A definition of MEP is not provided in either the federal statute or in the federal regulations. The final determination regarding whether a municipality has reduced pollutants to the MEP can only be made by the Regional Board or the SWRCB, and not by the municipal discharger. While the Regional Board or the SWRCB ultimately define MEP, it is the responsibility of the Copermittees to initially propose actions that implement BMPs to reduce pollution to the MEP. In other words, the Copermittees' urban runoff management programs to be developed under the Order are the Copermittees' proposals of MEP. Their total collective and individual activities conducted pursuant to their urban runoff management programs become their proposal for MEP as it applies both to their overall effort, as well as to specific activities. The Order provides a minimum framework to guide the Copermittees in meeting the MEP standard.

It is the Regional Board's responsibility to evaluate the proposed programs and specific BMPs to determine what constitutes MEP, using the above guidance and the court's 1994 decision in *NRDC v. California Department of Transportation*, Federal District Court, Central District of California. The federal court stated that a Copermittee must evaluate and implement BMPs except where (1) other effective BMPs will achieve greater or substantially similar pollution control benefits; (2) the BMP is not technically feasible; or (3) the cost of BMP implementation greatly outweighs the pollution control benefits. In the absence of a proposal acceptable to the Regional Board, the Regional Board will define MEP by requiring implementation of additional measures by the Copermittees.

The Copermittees' continual evolution in meeting the MEP standard is expected to achieve compliance with water quality standards. USEPA has consistently supported this expectation. In its Interim Permitting Approach for Water Quality-Based Effluent Limitations (WQBELs) in Storm Water Permits, USEPA states "the interim permitting approach uses best management practices (BMPs) in first-round storm water permits, and expanded or better-tailored BMPs in subsequent permits, where necessary, to provide for attainment of water quality standards."<sup>58</sup> USEPA reiterated its position in 1999, when it stated regarding the Phase II municipal storm water regulations that "successive iterations of the mix of BMPs and measurable goals will be driven by the objective of assuring maintenance of water quality standards" and "EPA anticipates that a permit for a regulated small MS4 operator implementing BMPs to satisfy the six minimum control measures will be sufficiently stringent to protect water quality, including water quality standards [...]."<sup>59</sup>

**Finding D.1.b:** Although the Copermittees have generally been implementing the jurisdictional urban runoff management programs required pursuant to Order No. 2001-01 since February 21, 2002, urban runoff discharges continue to cause or contribute to violations of water quality standards. This Order contains new or modified requirements that are necessary to improve Copermittees' efforts to reduce the discharge of pollutants in urban runoff to the MEP and achieve water quality standards. Some of the new or modified requirements, such as the expanded Watershed Urban Runoff Management Program section, are designed to specifically address these high priority water quality problems. Other new or modified requirements address program deficiencies that have been noted during audits, report reviews, and other Regional Board compliance assessment activities.

**Discussion:** The Copermittees are required to update and expand their urban runoff management programs on jurisdictional, watershed, and regional levels in order to improve their efforts to reduce the contribution of pollutants in urban runoff to the MEP and meet water quality

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<sup>58</sup> Federal Register / Vol. 61, No. 166 / August 26, 1996 / P. 43761.

<sup>59</sup> Federal Register / Vol. 64, No. 235 / Wednesday, December 8, 1999 / Rules and Regulations. P. 68753-68754.

standards. Changes to Order No. 2001-01's requirements have been made to help ensure these two standards are achieved by the Copermittees.

The jurisdictional requirements of the Order have been changed based on findings by the Regional Board during typical compliance assurance activities. The Regional Board performed full jurisdictional program audits of 20 of the 21 Copermittees during the Order No. 2001-01 permit term; it also performed detailed audits on 10 of the Copermittees' SUSMP programs. Where the audits found common implementation problems, requirements have been altered to better ensure compliance. In addition, the Regional Board conducted detailed reviews of every jurisdictional annual report submitted by the Copermittees, including provision of specific comments to the Copermittees where improvements were found to be needed. Again, where common reporting issues were found, the Order's requirements have been changed to rectify the issues. Other changes to jurisdictional requirements were based on Regional Board inspection findings or receipt of complaints.<sup>60</sup>

To better focus on attainment of water quality standards, the Order's watershed requirements have been improved. Addressing urban runoff management on a watershed scale focuses on water quality results by emphasizing the receiving waters within the watershed. The conditions of the receiving waters drive management actions, which in turn focus on the water quality problems of the receiving waters each watershed. Improvements to watershed requirements were also made to facilitate better understanding of the requirements between the Regional Board and Copermittees.

Finally, many of the required updates to the Copermittees' programs are based on recommendations found in the Copermittees' ROWD.<sup>61</sup>

**Finding D.1.c:** Updated Jurisdictional Urban Runoff Management Plans (JURMPs) and Watershed Urban Runoff Management Plans (WURMPs), and a new Regional Urban Runoff Management Plan (RURMP), which describe the Copermittees' urban runoff management programs in their entirety, are needed to guide the Copermittees' urban runoff management efforts and aid the Copermittees in tracking urban runoff management program implementation. It is practicable for the Copermittees to update the JURMPs and WURMPs, and create the RURMP, within one year, since significant efforts to develop these programs have already occurred.

**Discussion:** While development and submittal of urban runoff management plans are not necessary to ensure compliance of the Copermittees' urban runoff management programs with the Order, the plans do serve as useful correspondence between the Copermittees and the Regional Board. The plans help organize the Copermittees' programs and guide their implementation, while also providing the Regional Board with a means to track Copermittee implementation.

Urban runoff management plans are not necessary for ensuring compliance with the Order because the Order itself contains sufficient detailed requirements to ensure that compliance with discharge prohibitions, receiving water limits, and the narrative standard of MEP are achieved. Implementation by the Copermittees of programs in compliance with the Order's requirements, prohibitions, and receiving water limits is the pertinent compliance standard to be used under the

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<sup>60</sup> Audit reports, report reviews, and inspection reports are available for review at the Regional Board office.

<sup>61</sup> All significant changes made to the Order's requirements are described and explained in detail in Fact Sheet section X.

Order, as opposed to assessing compliance by reviewing the Copermittees' implementation of their plans alone.

Rather than being substantive components of the Order itself, the Copermittees' urban runoff management plans are simply descriptions of their urban runoff management programs required under the Order. These plans serve as procedural correspondence which guides program implementation and aids the Copermittees and Regional Board in tracking implementation of the programs. In this manner, the plans are not functional equivalents of the Order. For these reasons, the Copermittees' urban runoff management plans need not be an enforceable part of the Order.

The Copermittees' plans and programs can be updated within one year because much of their plans and programs are already in existence. In fact, many parts of their plans and programs have been in place for 15 years.<sup>62</sup> Moreover, the adoption of Order No. 2001-01 required a larger scale reorganization of the Copermittees' programs than Order No. R9-2007-0001, but also allowed one year for program updates. The Copermittees were able to meet the time schedule required under Order No. 2001-01.

**Finding D.1.d:** Pollutants can be effectively reduced in urban runoff by the application of a combination of pollution prevention, source control, and treatment control BMPs. Pollution prevention is the reduction or elimination of pollutant generation at its source and is the best "first line of defense". Source control BMPs (both structural and non-structural) minimize the contact between pollutants and flows (e.g., rerouting run-on around pollutant sources or keeping pollutants on-site and out of receiving waters). Treatment control BMPs remove pollutants from urban runoff.

**Discussion:** The SWRCB finds in its Order WQ 98-01 that BMPs are effective in reducing pollutants in urban runoff, stating that "implementation of BMPs [is] generally the most appropriate form of effluent limitations when designed to satisfy technology requirements, including reduction of pollutants to the maximum extent practicable." A SWRCB TAC further supports this finding by recommending "that nonpoint source pollution control can be accomplished most effectively by giving priority to [BMPs] in the following order:

1. Pollution Prevention – implementation of practices that use or promote pollution free alternatives;
2. Source Control – implementation of control measures that focus on preventing or minimizing urban runoff from contacting pollution sources;
3. Treatment Control – implementation of practices that require treatment of polluted runoff either onsite or offsite."<sup>63</sup>

Pollution prevention, the reduction or elimination of pollutant generation at its source, is an essential aspect of BMP implementation. By limiting the generation of pollutants by urban activities, less pollutants are available to be washed from urban areas, resulting in reduced pollutant loads in storm water discharges from these areas. In addition, there is no need to control or treat pollutants that are not initially generated. Furthermore, pollution prevention BMPs are

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<sup>62</sup> Regional Board, 2000. Comparison Between the Requirements of Tentative Order 2001-01, the Federal NPDES Storm Water Regulations, the Existing San Diego Municipal Storm Water Permit (Order 90-42), and Previous Drafts of the San Diego Municipal Storm Water Permit.

<sup>63</sup> SWRCB, 1994. Urban Runoff Technical Advisory Committee Report and Recommendations. Nonpoint Source Management Program.

generally more cost effective than removal of pollutants by treatment facilities or cleanup of contaminated media.<sup>64</sup>

In the Pollution Prevention Act of 1990, Congress established a national policy that emphasizes pollution prevention over control and treatment. CWC section 13263.3(a) also supports pollution prevention, stating “The Legislature finds and declares that pollution prevention should be the first step in a hierarchy for reducing pollution and managing wastes, and to achieve environmental stewardship for society. The Legislature also finds and declares that pollution prevention is necessary to support the federal goal of zero discharge of pollutants into navigable waters.” Finally, the Basin Plan also supports this finding by stating “To eliminate pollutants in storm water, one can either clean it up by removing pollutants or prevent it from becoming polluted in the first place. Because of the overwhelming volume of storm water and the enormous costs associated with pollutant removal, pollution prevention is the only approach that makes sense.”<sup>65</sup>

USEPA also supports the utilization of a combination of BMPs to address pollutants in urban runoff. For example, USEPA has found there has been success in addressing illicit discharge related problems through BMP initiatives like storm drain stenciling and recycling programs, including household hazardous waste special collection days.<sup>66</sup> Structural BMP performance data has also been compiled and summarized by USEPA.<sup>67</sup> This data indicates that structural BMPs can be effective in reducing pollutants in urban runoff discharges. The summary provides the performance ranges of various types of structural BMPs for removing suspended solids, nutrients, pathogens, and metals from storm water flows. These pollutants are in general pollutants of concern in storm water in the San Diego Region. For suspended solids, the least effective structural BMP type was found to remove 30-65% of the pollutant load, while the most effective was found to remove 65-100% of the pollutant load. For nutrients, the least effective structural BMP type was found to remove 15-45% of the pollutant load, while the most effective was found to remove 65-100% of the pollutant load. For pathogens, the least effective structural BMP type was found to remove <30% of the pollutant load, while the most effective was found to remove 65-100% of the pollutant load. For metals, the least effective structural BMP type was found to remove 15-45% of the pollutant load, while the most effective was found to remove 65-100% of the pollutant load.

**Finding D.1.e:** Urban runoff needs to be addressed during the three major phases of development (planning, construction, and use) in order to reduce the discharge of pollutants to the MEP and protect receiving waters. Development which is not guided by water quality planning policies and principles can unnecessarily result in increased pollutant load discharges, flow rates, and flow durations which can impact receiving water beneficial uses. Construction sites without adequate BMP implementation result in sediment runoff rates which greatly exceed natural erosion rates of undisturbed lands, causing siltation and impairment of receiving waters. Existing development generates substantial pollutant loads which are discharged in urban runoff to receiving waters.

**Discussion:** MS4 permits are issued to municipalities because of their land use authority. The ultimate responsibility for the pollutant discharges, increased runoff, and inevitable long-term

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<sup>64</sup> Schueler, T.R., 2000. Center for Watershed Protection. Assessing the Potential for Urban Watershed Restoration, Article 142.

<sup>65</sup> Regional Board, 1994. Water Quality Control Plan, San Diego Basin, Region 9.

<sup>66</sup> USEPA, 1999. 40 CFR Parts 9, 122, 123, and 124 National Pollutant Discharge Elimination System-Regulations for Revision of the Water Pollution Control Program Addressing Storm Water Discharges. 64 FR 68728.

<sup>67</sup> USEPA, 1999. Preliminary Data Summary of Urban Storm Water Best Management Practices. EPA 821-R-99-012.

water quality degradation that results from urbanization lies with local governments. This responsibility is based on the fact that it is the local governments that have authorized the urbanization (i.e., conversion of natural pervious ground cover to impervious urban surfaces) and the land uses that generate the pollutants and runoff. Furthermore, the MS4 through which the pollutants and increased flows are conveyed, and ultimately discharged into natural receiving waters, are owned and operated by the same local governments. In summary, the Copermittees under the Order are responsible for discharges into and out of their MS4s because (1) they own and operate the MS4; and (2) they have the legal authority that authorizes the very development and land uses with generate the pollutants and increased flows in the first place.

For example, since grading cannot commence prior to the issuance of a local grading permit, the Copermittees have a built-in mechanism to ensure that all grading activities are protective of receiving water quality. The Copermittee has the authority to withhold issuance of the grading permit until the project proponent has demonstrated to the satisfaction of the Copermittee that the project will not violate their ordinances or cause the Copermittee to be in violation of its MS4 permit. Since the Copermittee will ultimately be held responsible for any discharges from the grading project by the Regional Board, the Copermittee will want to use its own permitting authority to ensure that whatever measures the Copermittee deems necessary to protect discharges into its MS4 are in fact taken by the project proponent.

The Order holds the local government accountable for this direct link between its land use decisions and water quality degradation. The Order recognizes that each of the three major stages in the urbanization process (development planning, construction, and the use or operational stage) are controlled by and must be authorized by the local government. Accordingly, this permit requires the local government to implement, or require others to implement, appropriate best management practices to reduce pollutant discharges and increased flow during each of the three stages of urbanization.

Including plans for BMP implementation during the design phase of new development and redevelopment offers the most cost effective strategy to reduce urban runoff pollutant loads to surface waters.<sup>68</sup> The Phase II regulations for small municipalities reflect the necessity of addressing urban runoff during the early planning phase. Due to the greater water quality concerns generally experienced by larger municipalities, Phase II requirements for small municipalities are also applicable to larger municipalities such as the Copermittees. The Phase II regulations direct municipalities to develop, implement, and enforce a program to address storm water runoff from new development and redevelopment projects that disturb greater than or equal to one acre, including projects less than one acre that are part of a larger common plan of development or sale. The program must ensure that controls are in place that would prevent or minimize water quality impacts. This includes developing and implementing strategies which include a combination of structural and/or non-structural BMPs appropriate to the locality. The program must also ensure the adequate long-term operation and maintenance of BMPs.<sup>69</sup> USEPA expands on the Phase II regulations for urban development when it recommends that Copermittees:

“Adopt a planning process that identifies the municipality’s program goals (e.g., minimize water quality impacts resulting from post-construction runoff from new development and redevelopment), implementation strategies (e.g., adopt a combination of structural and/or non-structural BMPs), operation and maintenance policies and procedures, and enforcement

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<sup>68</sup> USEPA, 2000. Storm Water Phase II Compliance Assistance Guide. EPA 833-R-00-002.

<sup>69</sup> USEPA, 1999. 40 CFR Parts 9, 122, 123, and 124 National Pollutant Discharge Elimination System-Regulations for Revision of the Water Pollution Control Program Addressing Storm Water Discharges; Final Rule. 64 FR 68845.

procedures. In developing your program, you should consider assessing existing ordinances, policies, programs and studies that address storm water runoff quality.”

Management of urban runoff during the construction phase is also essential. USEPA explains in the preamble to the Phase II regulations that storm water discharges generated during construction activities can cause an array of physical, chemical, and biological water quality impacts. Specifically, the biological, chemical and physical integrity of the waters may become severely compromised due to runoff from construction sites. Fine sediment from construction sites can adversely affect aquatic ecosystems by reducing light penetration, impeding sight-feeding, smothering benthic organisms, abrading gills and other sensitive structures, reducing habitat by clogging interstitial spaces within the streambed, and reducing intergravel dissolved oxygen by reducing the permeability of the bed material. Water quality impairment also results, in part, because a number of pollutants are preferentially absorbed onto mineral or organic particles found in fine sediment. The interconnected process of erosion (detachment of the soil particles), sediment transport, and delivery is the primary pathway for introducing key pollutants, such as nutrients, metals, and organic compounds into aquatic systems.<sup>70</sup>

Finally, urban runoff from existing development must be addressed. The Copermittees’ monitoring data exhibits that significant water quality problems exist in receiving waters which receive urban runoff from areas with extensive existing development, such as Chollas Creek.<sup>71</sup> Source identification, BMP requirements, inspections, and enforcement are all important measures which can be implemented to address urban runoff from existing development. USEPA supports inspections and enforcement by municipalities when it states “Effective inspection and enforcement requires [...] penalties to deter infractions and intervention by the municipal authority to correct violations. Enforcement mechanisms [...] also must be described.”<sup>72</sup>

**Finding D.1.f:** Annual reporting requirements included in this Order are necessary to meet federal requirements and to evaluate the effectiveness and compliance of the Copermittees’ programs.

**Discussion:** The annual reporting requirements are consistent with federal NPDES regulation 40 CFR 122.41, which states:

“The operator of a large or medium municipal separate storm sewer system of a municipal separate storm sewer system that has been designated by the Director under section 122.26(a)(1)(v) of this part must submit an annual report by the anniversary of the date of the issuance of the permit for such a system. The report shall include: (1) The status of implementing the components of the storm water management program that are established as permit conditions; (2) Proposed changes to the storm water management program that are established as permit condition, Such proposed changes shall be consistent with § 122.26(d)(2)iii) of this part; (3) Revisions, if necessary, to the assessment of controls and the fiscal analysis reported in the permit application under § 122.26(d)(2)iv) and (d)(2)(v) of this part; (4) A summary of data, including monitoring data, that is accumulated throughout the reporting year; (5) Annual expenditures and budget for year following each annual report; (6) A summary describing the number and nature of enforcement actions,. Inspections, and

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<sup>70</sup> Ibid., 64 FR 68728.

<sup>71</sup> County of San Diego, 2005. San Diego County Municipal Copermittees 2004-2005 Urban Runoff Monitoring. Table 11-7.

<sup>72</sup> USEPA, 1992. Guidance Manual for the Preparation of Part II of the NPDES Permit Applications for Discharges from Municipal Separate Storm Sewer Systems. EPA 833-B-92-002.

public education programs; and (7) Identification of water quality improvements or degradation.”

CWC section 13267 provides that “the regional board may require that any person who has discharged [...] shall furnish, under penalty of perjury, technical or monitoring reports which the regional board requires.”

The Regional Board must assess the reports to ensure that the Copermittees’ programs are adequate to assess and address water quality. The reporting requirements can also be useful tools for the Copermittees to review, update, or revise their programs. Areas or issues which have received insufficient efforts can also be identified and improved upon.

**Finding D.2.a:** The SUSMP requirements contained in this Order are consistent with Order WQ-2000-11 adopted by the SWRCB on October 5, 2000. In the precedential order, the SWRCB found that the design standards, which essentially require that urban runoff generated by 85 percent of storm events from specific development categories be infiltrated or treated, reflect the MEP standard. The order also found that the SUSMP requirements are appropriately applied to the majority of the Priority Development Project categories contained in Section D.1 of this Order. The SWRCB also gave Regional Water Quality Control Boards the discretion to include additional categories and locations, such as retail gasoline outlets (RGOs), in future SUSMPs.

**Discussion:** The post-construction requirements and design standards contained in the SUSMP section of Order No. R9-2007-0001 constitute MEP and are consistent SWRCB guidance, court decisions, and Regional Board requirements. The SWRCB and Regional Boards have made several recent decisions in regards to inclusion of SUSMP requirements in MS4 permits. In a precedential decision, SWRCB WQ Order No. 2000-11, the SWRCB found that the SUSMP provisions constitute MEP for addressing pollutant discharges resulting from Priority Development Projects. The provisions of the SUSMP section of the Order are also consistent with those previously issued by the Regional Board for Orange County (Order No. R9-2002-0001) and San Diego County (Order No. 2001-01), as well as requirements in the Los Angeles County MS4 permit (Order No. R4-2001-182). In SWRCB Order WQ 2001-15, the SWRCB reaffirmed that SUSMP requirements constitute MEP. Moreover, the SUSMP requirements of the San Diego County MS4 permit (Order No. 2001-01) were upheld when the California State Supreme Court declined to hear the matter on appeal.

**Finding D.2.b:** Controlling urban runoff pollution before it enters the MS4 through the use of a combination of onsite source control BMPs augmented with treatment control BMPs is important for the following reasons: (1) Many end-of-pipe BMPs (such as diversion to the sanitary sewer) are typically ineffective during significant storm events. Whereas, onsite source control BMPs can be applied during all runoff conditions; (2) End-of-pipe BMPs are often incapable of capturing and treating the wide range of pollutants which can be generated on a sub-watershed scale; (3) End-of-pipe BMPs are more effective when used as polishing BMPs, rather than the sole BMP to be implemented; (4) End-of-pipe BMPs do not protect the quality or beneficial uses of receiving waters between the source and the BMP; and (5) Offsite end-of-pipe BMPs do not aid in the effort to educate the public regarding sources of pollution and their prevention.

**Discussion:** Many end-of-pipe BMPs are designed for low flow conditions because their end-of-pipe location prevents them from being designed for large storm events. This results in the end-of-pipe BMPs being overwhelmed, bypassed, or ineffective during larger storm events more frequently than onsite BMPs designed for larger storms. BMPs are also frequently most effective for a particular type of pollutant (such as sediment). Such BMPs may be appropriate for small

sites with a limited suite of pollutants generated; however, end-of-pipe BMPs must typically be able to address a wide range of pollutants generated by a sub-watershed, limiting their effectiveness. Moreover, the location of some end-of-pipe BMPs allow for untreated pollutants to be discharged to and degrade receiving waters prior to their reaching the BMPs. This fails to protect receiving waters, which is the purpose of BMP implementation. Moreover, opportunities to educate the public regarding urban runoff pollution can be lost when end-of-pipe BMPs are located away from pollutant sources and out of sight. Onsite BMPs can lead to a better understanding of urban runoff issues since they demonstrate urban runoff processes.

**Finding D.2.c:** Use of site design BMPs at new development projects can be an effective means for minimizing the impact of urban runoff discharges from the development projects on receiving waters. Site design BMPs help preserve and restore the natural hydrologic cycle of the site, allowing for filtration and infiltration which can greatly reduce the volume, peak flow rate, velocity, and pollutant loads of urban runoff.

**Discussion:** The use of site design BMPs helps reduce the amount of impervious area associated with urbanization and allows storm water to infiltrate into the soil. Natural vegetation and soil filters urban runoff and reduces the volume and pollutant loads of storm water. Studies have revealed that the level of imperviousness resulting from urbanization is strongly correlated with the water quality impairment of nearby receiving waters.<sup>73</sup> In many cases the impacts on receiving waters due to changes in hydrology can be more significant than those attributable to the contaminants found in storm water discharges.<sup>74</sup> These impacts include stream bank erosion (increased sediment load and subsequent deposition), benthic habitat degradation, and decreased diversity of macroinvertebrates.

The Order include requirements for developments to include site design BMPs that mimic or replicate the natural hydrologic cycle. Open space designs which maximize pervious surfaces and retention of “natural” drainages have been found to reduce both the costs of development and pollutant export.<sup>75</sup> Moreover, USEPA finds including plans for a “natural” site design and BMP implementation during the design phase of new development and redevelopment offers the most cost effective strategy to reduce pollutant loads to surface waters.<sup>76</sup> In a review of the Copermittees’ SUSMP programs, Tetra Tech found that many SUSMP projects were not including this effective BMP in their plans.<sup>77</sup>

**Finding D.2.d:** RGOs are significant sources of pollutants in urban runoff. RGOs are points of convergence for motor vehicles for automotive related services such as repair, refueling, tire inflation, and radiator fill-up and consequently produce significantly higher loadings of hydrocarbons and trace metals (including copper and zinc) than other urban areas. To meet MEP, source control and treatment control BMPs are needed at RGOs that meet the following criteria: (a) 5,000 square feet or more, or (b) a projected Average Daily Traffic (ADT) of 100 or more vehicles per day. These are appropriate thresholds since vehicular development size and volume of traffic are good indicators of potential impacts of urban runoff from RGOs on receiving waters.

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<sup>73</sup> USEPA, 1999. 40 CFR Parts 9, 122, 123, and 124 National Pollutant Discharge Elimination System – Regulations for Revision of the Water Pollution Control Program Addressing Storm Water Discharges; Final Rule.

<sup>74</sup> Ibid.

<sup>75</sup> Center for Watershed Protection, 2000. “The Benefits of Better Site Design in Residential Subdivisions.” Watershed Protection Techniques. Vol. 3. No. 2.

<sup>76</sup> USEPA, 1999. 40 CFR Parts 9, 122, 123, and 124 National Pollutant Discharge Elimination System – Regulations for Revision of the Water Pollution Control Program Addressing Storm Water Discharges; Final Rule.

<sup>77</sup> Tetra Tech, 2005. San Diego Urban Storm Water Mitigation Plan Program Evaluation Report. Pages 4-5.

**Discussion:** RGOs are included in the Order as a Priority Development Project category because RGOs are points of confluence for motor vehicles for automotive related services such as repair, refueling, tire inflation, and radiator fill-up. RGOs consequently produce significantly greater loadings of hydrocarbons and trace metals (including copper and zinc) than other urban areas. To meet MEP, source control and structural treatment BMPs are needed at RGOs that meet the following criteria: (a) 5,000 square feet or more or (b) a ADT of 100 or more vehicles per day. These are appropriate thresholds since vehicular development size and volume of traffic are good indicators of potential impacts of urban runoff from RGOs on receiving waters.

This finding has been added to satisfy SWRCB WQ Order No. 2000-11's requirements for including RGOs as a Priority Development Category. Order No. 2000-11 acknowledged that a threshold (size, average daily traffic, etc.) appropriate to trigger SUSMP requirements should be developed for RGOs and that specific findings regarding RGOs should be included in MS4 permits to justify the requirement.<sup>78</sup> Additional detail to support the inclusion of RGOs can be found in Fact Sheet Section VIII.F.

**Finding D.2.f:** If not properly designed or maintained, certain BMPs implemented or required by municipalities for urban runoff management may create a habitat for vectors (e.g. mosquitoes and rodents). However, proper BMP design which avoids standing water can prevent the creation of vector habitat. Nuisances and public health impacts resulting from vector breeding can be prevented with close collaboration and cooperative effort between municipalities, local vector control agencies, and the State Department of Health Services during the development and implementation of urban runoff management programs.

**Discussion:** The implementation of certain structural BMPs or other urban runoff treatment systems can result in significant vector problems in the form of increased breeding or harborage habitat for mosquitoes, rodents or other potentially disease transmitting organisms. The implementation of BMPs that retain water may provide breeding habitat for a variety of mosquito species, some of which have the potential to transmit diseases such as Western Equine Encephalitis, St. Louis Encephalomyelitis, and malaria. Recent BMP implementation studies by Caltrans<sup>79</sup> in District 7 and District 11 have demonstrated mosquito breeding associated with some types of BMPs. The Caltrans BMP Retrofit Pilot study cited lack of maintenance and improper design as factors contributing to mosquito production. However, a Watershed Protection Techniques article<sup>80</sup> describes management techniques for selecting, designing, and maintaining structural treatment BMPs to minimize mosquito production. State and local urban runoff management programs that include structural BMPs with the potential to retain water have been implemented in Florida and the Chesapeake Bay region without resulting in significant public health threats from mosquitoes or other vectors.<sup>81</sup>

**Finding D.3.a:** In accordance with federal NPDES regulations, and to ensure the most effective oversight of industrial and construction site discharges, discharges of runoff from industrial and construction sites are subject to dual (state and local) storm water regulation. Under this dual system, the Regional Board is responsible for enforcing the General Construction Activities Storm Water Permit, SWRCB Order 97-03 DWQ, NPDES No. CAS000001 (General Construction Permit) and the General Industrial Activities Storm Water Permit, SWRCB Order

<sup>78</sup> SWRCB, 2000. Order WQ 2000-11.

<sup>79</sup> Caltrans, 2000. BMP Retrofit Pilot Studies: A Preliminary Assessment of Vector Production.

<sup>80</sup> Watershed Protection Techniques, 1995. Mosquitoes in Constructed Wetlands: A Management Bugaboo? 1(4):203-207.

<sup>81</sup> Shaver, E. and R. Baldwin, 1995. Sand Filter Design for Water Quality Treatment in Herricks, E., Ed. Stormwater Runoff and Receiving Systems: Impact, Monitoring, and Assessment, CRC Lewis Publishers, New York, NY.

99-08 DWQ, NPDES No. CAS000002 (General Industrial Permit), and each municipal Copermittee is responsible for enforcing its local permits, plans, and ordinances, which may require the implementation of additional BMPs than required under the statewide general permits.

**Discussion:** USEPA finds the control of pollutant discharges from industry and construction so important to receiving water quality that it has established a double system of regulation over industrial and construction sites. This double system of regulation consists of two parallel regulatory systems with the same common objective: to keep pollutants from industrial and construction sites out of the MS4. In this double system of regulation for runoff from industrial and construction sites, local governments must enforce their legal authorities (i.e., local ordinances and permits) while the Regional Board must enforce its legal authority (i.e., statewide general industrial and construction storm water permits). These two regulatory systems are designed to complement and support each other. Municipalities are not required to enforce Regional Board and SWRCB permits; however, they are required to enforce their ordinances and permits. The Federal regulations are clear that municipalities have responsibility to address runoff from industrial and construction sites which enters their MS4s.

Municipalities have this responsibility because they have the authority to issue land use and development permits. Since municipalities are the lead permitting authority for industrial land use and construction activities, they are also the lead for enforcement regarding runoff discharges from these sites. For sites where the municipality is the lead permitting authority, the Regional Board will work with the municipality and provide support where needed. The Regional Board will assist municipalities in enforcement against non-compliant sites after the municipality has exhibited a good faith effort to bring the site into compliance.

According to USEPA, the storm water regulations envision that NPDES permitting authorities and municipal operators will cooperate to develop programs to monitor and control pollutants in storm water discharges from industrial facilities.<sup>82</sup> USEPA discusses the “dual regulation” of construction sites in its Storm Water Phase II Compliance Assistance Guide,<sup>83</sup> which states “Even though all construction sites that disturb more than one acre are covered nationally by an NPDES storm water permit, the construction site runoff control minimum measure [...] is needed to induce more localized site regulation and enforcement efforts, and to enable operators [...] to more effectively control construction site discharges into their MS4s.” While the Storm Water Phase II Compliance Assistance Guide applies to small municipalities, it is applicable to the Copermittees, because they are similar in size and have the potential to discharge similar pollutant types as Phase II municipalities.

**Finding D.3.b:** Identification of sources of pollutants in urban runoff (such as municipal areas and activities, industrial and commercial sites/sources, construction sites, and residential areas), development and implementation of BMPs to address those sources, and updating ordinances and approval processes are necessary for the Copermittees to ensure that discharges of pollutants into and from its MS4 are reduced to the MEP. Inspections and other compliance verification methods are needed to ensure minimum BMPs are implemented. Inspections are especially important at high risk areas for pollutant discharges.

**Discussion:** Source identification is necessary to characterize the nature and extent of pollutants in discharges and to develop appropriate BMPs. It is the first step in a targeted approach to urban

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<sup>82</sup> USEPA, 1992. Guidance Manual for the Preparation of Part II of the NPDES Permit Applications for Discharges from Municipal Separate Storm Sewer Systems. EPA 833-B-92-002.

<sup>83</sup> USEPA, 2000. Storm Water Phase II Compliance Assistance Guide. EPA 833-R-00-002.

runoff management. Source identification helps identify the location of potential sources of pollutants in urban runoff. Pollutants found to be present in receiving waters can then be traced to the sites which frequently generate such pollutants. In this manner an inventories of sources can help in targeting inspections, monitoring, and potential enforcement. This allows for limited inspection, monitoring, and enforcement time to be most effective. USEPA supports source identification as a concept when it recommends construction, municipal, and industrial source identification in guidance and the federal regulations.<sup>8485</sup>

The development of BMPs for identified sources will help ensure that appropriate, consistent controls are implemented at all types of urban development and areas. Copermittees must reduce the discharge of pollutants in urban runoff to the maximum extent practicable. To achieve this level of pollutant reduction, BMPs must be implemented. Designation of minimum BMPs helps ensure that appropriate BMPs are implemented for various sources. These minimum BMPs also serve as guidance as to the level of water quality protection required. USEPA requires development and implementation of BMPs for construction, municipal, commercial, industrial, and residential sources at 40 CFR 122.26(d)(2)(iv)(A-D).

Updating ordinances and approval processes is necessary in order for the Copermittees to control discharges to their MS4s. USEPA supports updating ordinances and approval processes when it states “A crucial requirement of the NPDES storm water regulation is that a municipality must demonstrate that it has adequate legal authority to control the contribution of pollutants in storm water discharged to its MS4. [...] In order to have an effective municipal storm water management program, a municipality must have adequate legal authority to control the contribution of pollutants to the MS4. [...] ‘Control,’ in this context, means not only to require disclosure of information, but also to limit, discourage, or terminate a storm water discharge to the MS4.”<sup>86</sup>

Inspections provide a necessary means for the Copermittees to evaluate compliance of pollutant sources with their municipal ordinances and minimum BMP requirements. USEPA supports inspections when it recommends inspections of construction, municipal, and industrial sources.<sup>87</sup> Inspection of high risk sources are especially important because of the ability of frequent inspections to help ensure compliance, thereby reducing the risk associated with such sources. USEPA suggests that inspections can improve compliance when it states “Effective inspection and enforcement requires [...] penalties to deter infractions and intervention by the municipal authority to correct violations.”<sup>88</sup>

**Finding D.3.c:** Historic and current development makes 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 receiving water.

**Discussion:** A MS4 is defined in the federal regulations as a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs,

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<sup>84</sup> USEPA, 1992. Guidance Manual for the Preparation of Part II of the NPDES Permit Applications for Discharges from Municipal Separate Storm Sewer Systems. EPA 833-B-92-002.

<sup>85</sup> 40 CFR 122.26(d)(2)(ii)

<sup>86</sup> USEPA, 1992. Guidance Manual for the Preparation of Part II of the NPDES Permit Applications for Discharges from Municipal Separate Storm Sewer Systems. EPA 833-B-92-002.

<sup>87</sup> Ibid.

<sup>88</sup> USEPA, 1992. Guidance Manual for the Preparation of Part II of the NPDES Permit Applications for Discharges from Municipal Separate Storm Sewer Systems. EPA 833-B-92-002.

gutters, ditches, man-made channels, or storm drains), owned or operated by a Copermittee, and designed or used for collecting or conveying urban runoff.<sup>89</sup> Natural drainage patterns and urban streams are frequently used by municipalities to collect and convey urban runoff away from development within their jurisdiction. Therefore, the Regional Board considers natural drainages that are used for conveyances of urban runoff, regardless of whether or not they've been altered by the municipality, as both part of the MS4s and as receiving waters. To clarify, an unaltered natural drainage, which receives runoff from a point source (channeled by a Copermittee to drain an area within their jurisdiction), which then conveys the runoff to an altered natural drainage or a man-made MS4, is both an MS4 and a receiving water.<sup>90</sup>

**Finding D.3.d:** As operators of the MS4s, the Copermittees cannot passively receive and discharge pollutants from third parties. By providing free and open access to an MS4 that conveys discharges to waters of the U.S., the operator essentially accepts responsibility for discharges into the MS4 that it does not prohibit or control. These discharges may cause or contribute to a condition of contamination or a violation of water quality standards.

**Discussion:** CWA section 402(p) requires operators of MS4s to prohibit non-storm water discharges into their MS4s. This is necessary because pollutants which enter the MS4 generally are conveyed through the MS4 to be eventually discharged into receiving waters. If a municipality does not prohibit non-storm water discharges, it is providing the pathway (its MS4) which enables pollutants to reach receiving waters. Since the municipality's storm water management service can result in pollutant discharges to receiving waters, the municipality must accept responsibility for the water quality consequences resulting from this service. Furthermore, third party discharges can cause a municipality to be out of compliance with its permit. Since pollutants from third parties which enter the MS4 will eventually be discharged from the MS4 to receiving waters, the third party discharges can result in a situation of municipality non-compliance if the discharges lead to an exceedance of water quality standards. For these reasons, each Copermittee must prohibit and/or control discharges from third parties to its MS4. USEPA supports this concept when it states "the operators of regulated small MS4s cannot passively receive and discharge pollutants from third parties" and "the operator of a small MS4 that does not prohibit and/or control discharges into its system essentially accepts 'title' for those discharges. At a minimum, by providing free and open access to the MS4s that convey discharges to the waters of the United States, the municipal storm sewer system enables water quality impairment by third parties."<sup>91</sup>

**Finding D.3.e:** Waste and pollutants which are deposited and accumulate in the MS4 drainage structures will be discharged from these structures to waters of the U.S. unless they are removed or treated. These discharges may cause or contribute to, or threaten to cause or contribute to, a condition of pollution in receiving waters. For this reason, pollutant discharges into the MS4s must be reduced to the MEP unless treatment within the MS4 occurs.

**Discussion:** When rain falls and drains urban freeways, industries, construction sites, and neighborhoods it picks up a multitude of pollutants. Gravity flow transports the pollutants to the MS4. Illicit discharges and connections also contribute a significant amount of pollutants to MS4s. MS4s are commonly designed to convey their contents as quickly as possible. Due to the

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<sup>89</sup> USEPA, 2000. EPA Administered Permit Programs: The National Pollutant Discharge Elimination System. Code of Federal Regulations, Vol. 40, Part 122.

<sup>90</sup> Regional Board, 2001. Response in Opposition to Petitions for Review of California Regional Water Quality Control Board San Diego Region Order No. 2001-01 – NPDES Permit No. CAS0108758 (San Diego Municipal Storm Water Permit).

<sup>91</sup> Federal Register / Vol. 64, No. 235 / Wednesday, December 8, 1999 / Rules and Regulations. P. 68765-68766.

resulting typically high flow rates within the concrete conveyance systems of MS4s, pollutants which enter or are deposited in the MS4 and not removed are generally flushed unimpeded through the MS4 to waters of the United States. Since treatment generally does not occur within the MS4, in such cases reduction of pollutants to the MEP must occur prior to discharges entering the MS4.

The importance of this concept is supported by the tons of wastes/pollutants that have been removed from the Copermittees' MS4s as reported in their ROWD.<sup>92</sup> Moreover, these pollutants will be discharged into receiving waters unless an effective MS4 and structural treatment BMP maintenance program is implemented by the Copermittees. The requirement for Copermittees to conduct a MS4 maintenance program is specifically directed in both the Phase I and Phase II storm water regulations. Regarding MS4 cleaning, USEPA states "The removal of sediment, decaying debris, and highly polluted water from catch basins has aesthetic and water quality benefits, including reducing foul odors, reducing suspended solids, and reducing the load of oxygen-demanding substances that reach receiving waters."<sup>93</sup> It goes on to say, "Catch basin cleaning is an efficient and cost-effective method for preventing the transport of sediment and pollutants to receiving water bodies." USEPA also finds that "Lack of maintenance often limits the effectiveness of storm water structural controls such as detention/retention basins and infiltration devices. [...] The proposed program should provide for maintenance logs and identify specific maintenance activities for each class of control, such as removing sediment from retention ponds every five years, cleaning catch basins annually, and removing litter from channels twice a year."<sup>94</sup>

**Finding D.3.f:** Enforcement of local urban runoff related ordinances, permits, and plans is an essential component of every urban runoff management program and is specifically required in the federal storm water regulations and this Order. Each Copermittee is individually responsible for adoption and enforcement of ordinances and/or policies, implementation of identified control measures/BMPs needed to prevent or reduce pollutants in storm water runoff, and for the allocation of funds for the capital, operation and maintenance, administrative, and enforcement expenditures necessary to implement and enforce such control measures/BMPs under its jurisdiction.

**Discussion:** The Federal NPDES regulations 40 CFR 122.26(d)(2)(iv)(A – D) are clear in placing responsibility on municipalities for control of urban runoff from third party activities and land uses to their MS4.<sup>95</sup> In order for municipalities to assume this responsibility, they must implement ordinances, permits, and plans addressing urban runoff from third parties. Assessments for compliance with their ordinances, permits, and plans are essential for a municipality to ensure that third parties are not causing the municipality to be in violation of its municipal storm water permit. When conditions of non-compliance are determined, enforcement is necessary to ensure that violations of municipality ordinances and permits are corrected. When the Copermittees determine a violation of its storm water ordinance, it must pursue correction of the violation. Without enforcement, third parties do not have incentive to correct violations. USEPA supports enforcement by municipalities when it states "Effective inspection and

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<sup>92</sup> San Diego County Copermittees, 2005. Report of Waste Discharge. Pages 32-33.

<sup>93</sup> USEPA, 1999. Storm Water O&M Fact Sheet, Catch Basin Cleaning. EPA 832-F-99-011.

<sup>94</sup> USEPA, 1992. Guidance Manual for the Preparation of Part II of the NPDES Permit Applications for Discharges from Municipal Separate Storm Sewer Systems. EPA 833-B-92-002.

<sup>95</sup> USEPA, 2000. EPA Administered Permit Programs: The National Pollutant Discharge Elimination System. Code of Federal Regulations, Vol. 40, Part 122.

enforcement requires [...] penalties to deter infractions and intervention by the municipal authority to correct violations. Enforcement mechanisms [...] also must be described.”<sup>96</sup>

**Finding D.3.g:** 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 staffs is especially critical to ensure that in-house staffs 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 impact receiving water quality and how these impacts can be minimized.

**Discussion:** Education is a critical BMP and an important aspect of the urban runoff management programs. USEPA finds that “An informed and knowledgeable community is critical to the success of a storm water management program since it helps ensure the following: Greater support for the program as the public gains a greater understanding of the reasons why it is necessary and important [and] greater compliance with the program as the public becomes aware of the personal responsibilities expected of them and others in the community, including the individual actions they can take to protect or improve the quality of area waters.”<sup>97</sup>

Regarding target audiences, USEPA also states “The public education program should use a mix of appropriate local strategies to address the viewpoints and concerns of a variety of audiences and communities, including minority and disadvantaged communities, as well as children.”

**Finding D.3.h:** Public participation during the development of urban runoff management programs is necessary to ensure that all stakeholder interests and a variety of creative solutions are considered.

**Discussion:** This finding is supported by the Phase II Storm Water Regulations, which state “early and frequent public involvement can shorten implementation schedules and broaden public support for a program.” USEPA goes on to explain, “public participation is likely to ensure a more successful storm water program by providing valuable expertise and a conduit to other programs and governments.”<sup>98</sup>

**Finding D.4.a:** Since urban runoff does not recognize political boundaries, watershed-based urban runoff management can greatly enhance the protection of receiving waters within a watershed. Such management provides a means to focus on the most important water quality problems in each watershed. By focusing on the most important water quality problems, watershed efforts can maximize protection of beneficial use in an efficient manner. Watershed management of urban runoff does not require Copermittees to expend resources outside of their jurisdictions. Watershed management requires the Copermittees within a watershed to develop a watershed-based management strategy, which can then be implemented on a jurisdictional basis.

**Discussion:** In recent years, addressing water quality issues from a watershed perspective has increasingly gained attention. Regarding watershed-based permitting, the USEPA *Watershed-Based NPDES Permitting Policy Statement* issued on Jan. 7, 2004 states the following:

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<sup>96</sup> USEPA, 1992. Guidance Manual for the Preparation of Part II of the NPDES Permit Applications for Discharges from Municipal Separate Storm Sewer Systems. EPA/833-B-92-002.

<sup>97</sup> USEPA, 2000. Storm Water Phase II Compliance Assistance Guide. EPA 833-R-00-002.

<sup>98</sup> Federal Register / Vol. 64, No. 235 / Wednesday, December 8, 1999 / Rules and Regulations. P. 68755.

USEPA continues to support a holistic watershed approach to water quality management. The process for developing and issuing NPDES permits on a watershed basis is an important tool in water quality management. USEPA believes that developing and issuing NPDES permits on a watershed basis can benefit all watershed stakeholders, from the NPDES permitting authority to local community members. A watershed-based approach to point source permitting under the NPDES program may serve as one innovative tool for achieving new efficiencies and environmental results. USEPA believes that watershed-based permitting can:

- lead to more environmentally effective results;
- emphasize measuring the effectiveness of targeted actions on improvements in water quality;
- provide greater opportunities for trading and other market based approaches;
- reduce the cost of improving the quality of the nation's waters;
- foster more effective implementation of watershed plans, including total maximum daily loads (TMDLs); and
- realize other ancillary benefits beyond those that have been achieved under the CWA (e.g., facilitate program integration including integration of Clean Water Act and Safe Drinking Water Act programs).

Watershed-based permitting is a process that ultimately produces NPDES permits that are issued to point sources on a geographic or watershed basis. In establishing point source controls in a watershed-based permit, the permitting authority may focus on watershed goals, and consider multiple pollutant sources and stressors, including the level of nonpoint source control that is practicable. In general, there are numerous permitting mechanisms that may be used to develop and issue permits within a watershed approach.

This USEPA guidance is in line with SWRCB and Regional Board watershed management goals. For example, the SWRCB's TAC recommends watershed-based water quality protection, stating "Municipal permits should have watershed specific components." The TAC further recommends that "All NPDES permits and Waste Discharge Requirements should be considered for reissuance on a watershed basis."

In addition, the Basin Plan states that "public agencies and private organizations concerned with water resources have come to recognize that a comprehensive evaluation of pollutant contributions on a watershed scale is the only way to realistically assess cumulative impacts and formulate workable strategies to truly protect our water resources. Both water pollution and habitat degradation problems can best be solved by following a basin-wide approach."

In light of USEPA's policy statement and the SWRCB's and Regional Board's watershed management goals, the Regional Board seeks to expand watershed management in the regulation of urban runoff. Watershed-based MS4 permits can provide for more effective receiving water quality protection by focusing on specific water quality problems. The entire watershed for the receiving water can be assessed, allowing for critical areas and practices to be targeted for corrective actions. Known sources of pollutants of concern can be investigated for potential water quality impacts. Problem areas can then be addressed, leading to eventual improvements in receiving water quality. Management of urban runoff on a watershed basis allows for specific water quality problems to be targeted so that efforts result in maximized water quality improvements.<sup>99</sup>

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<sup>99</sup> Regional Board, 2004. San Diego County Municipal Storm Water Permit Reissuance Analysis Summary. P. 1.

**Finding D.4.b:** Some urban runoff issues, such as residential education, 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.

**Discussion:** Regional activities are generally directed at developing consistency between watershed and jurisdictional programs (e.g., through standards development), and collaborating on program activities such as education and monitoring to ease implementation and make the most of economies of scale. The Copermittees report having come to an understanding that jurisdictional, watershed, and regional programs cannot be effectively developed and implemented in isolation. In addition, the Copermittees, through WURMP implementation efforts, have learned that many watershed activities can be more effectively implemented (e.g., achieve more water quality benefits) at the regional level due to economies of scale and agree watershed protection should be increasingly emphasized as a focal point of Copermittee efforts under the re-issued Permit.<sup>100</sup>

**Finding D.4.c:** Both regionally and on a watershed basis, it is important for the Copermittees to coordinate their water quality protection and land use planning activities to achieve the greatest protection of receiving water bodies. Copermittee coordination with other watershed stakeholders, especially Caltrans, the Department of Defense, and Native American Tribes, is also important. Establishment of a management structure, within which the Copermittees subject to this Order will fund and coordinate those aspects of their joint obligations, will help promote implementation of urban runoff management programs on a watershed and regional basis in a most cost effective manner.

**Discussion:** Conventional planning and zoning can be limited in their ability to protect the environmental quality of creeks, rivers, and other waterbodies. Watershed-based planning is often ignored, despite the fact that receiving waters unite land by collecting runoff from throughout the watershed. Since watersheds unite land, they can be used as an effective basis for planning. Watershed-based planning enables local and regional areas to realize economic, social, and other benefits associated with growth, while conserving the resources needed to sustain such growth, including water quality. This type of planning can involve four steps: (1) Identify the watersheds shared by the participating jurisdictions; (2) Identify, assess, and prioritize the natural, social, and other resources in the watersheds; (3) Prioritize areas for growth, protection, and conservation, based on prioritized resources; and (4) Develop plans and regulations to guide growth and protect resources. Local governments have started with simple, yet effective, steps toward watershed planning, such as adopting a watershed-based planning approach, articulating the basic strategy in their General Plans, and beginning to pursue the basic strategy in collaboration with neighboring local governments who share the watersheds. Examples of new mechanisms created to facilitate watershed-based planning and zoning include the San Francisquito Creek Watershed Coordinated Resource Management Process and the Santa Clara Basin Watershed Management Initiative.<sup>101</sup>

## **E. Statute and Regulatory Considerations**

**Finding E.1:** The Receiving Water Limitations (RWL) language specified in this Order is consistent with language recommended by USEPA and established in SWRCB Water Quality Order 99-05, adopted by the SWRCB on June 17, 1999. The RWL in this Order require

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<sup>100</sup> San Diego County Copermittees, 2005. Report Of Waste Discharge. P. C.14.

<sup>101</sup> BASMAA, 1999. Start at the Source. Forbes Custom Publishing.

compliance with water quality standards through an iterative approach requiring the implementation of improved and better-tailored BMPs over time. Compliance with receiving water limits based on applicable water quality standards is necessary to ensure that MS4 discharges will not cause or contribute to violations of water quality standards and the creation of conditions of pollution.

**Discussion:** The RWLs in the Order require compliance with water quality standards through an iterative approach for implementing improved and better-tailored BMPs over time. The iterative BMP process requires the implementation of increasingly stringent BMPs until receiving water standards are achieved. This is necessary because implementation of BMPs alone cannot ensure attainment of receiving water quality standards. For example, a BMP that is effective in one situation may not be applicable in another. An iterative process of BMP development, implementation, and assessment is needed to promote consistent compliance with receiving water quality objectives. If assessment of a given BMP confirms that the BMP is ineffective, the iterative process should be restarted, with redevelopment of a new BMP that is anticipated to result in compliance with receiving water quality objectives.

The issue of whether storm water discharges from MS4s must meet water quality standards has been intensely debated in past years. The argument arises because CWA section 402(p) fails to clearly state that municipal dischargers of storm water must meet water quality standards. On the issue of industrial discharges of storm water, the statute clearly indicates that industrial dischargers must meet both (1) the technology-based standard of “best available technology economically achievable (BAT)” and (2) applicable water quality standards. On the issue of municipal discharges however, the statute states that municipal dischargers must meet (1) the technology-based standard of MEP” and (2) “such other provisions that the Administrator or the State determines appropriate for the control of such pollutants.” The statute fails, however, to specifically state that municipal dischargers must meet water quality standards.

As a result, the municipal storm water dischargers have argued that they do not have to meet water quality standards; and that they only are required to meet MEP. Environmental interest groups maintain that not only do MS4 discharges have to meet water quality standards, but that MS4 permits must also comply with numeric effluent limitations for the purpose of meeting water quality standards. On the issue of water quality standards, USEPA, the SWRCB, and the Regional Board have consistently maintained that MS4s must indeed comply with water quality standards. On the issue of whether water quality standards must be met by numeric effluent limits, USEPA, the SWRCB (in Orders WQ 91-03 and WQ 91-04), and the Regional Board have maintained that MS4 permits can, at this time, contain narrative requirements for the implementation of BMPs in place of numeric effluent limits.

In addition to relying on USEPA’s legal opinion concluding that MS4s must meet MEP and water quality standards, the SWRCB also relied on the CWA’s explicit authority for States to require “such other provisions that the Administrator or the State determines appropriate for the control of such pollutants” in addition to the technology-based standard of MEP. To further support its conclusions that MS4 permit dischargers must meet water quality standards, the SWRCB relied on provisions of the CWC that specify that all waste discharge requirements must implement applicable Basin Plans and take into consideration the appropriate water quality objectives for the protection of beneficial uses.

The SWRCB first formally concluded that permits for MS4s must contain effluent limitations based on water quality standards in its Order WQ 91-03. In that Order, the SWRCB also concluded that it was appropriate for Regional Boards to achieve this result by requiring best

management practices, rather than by inserting numeric effluent limitations into MS4 permits. Later, in Order WQ 98-01, the SWRCB prescribed specific precedent setting Receiving Water Limitations language to be included in all future MS4 permits. This language specifically requires that MS4 dischargers meet water quality standards and allows for the use of narrative BMPs (increasing in stringency and implemented in an iterative process) as the mechanism by which water quality standards can be met.

In Order WQ 99-05, the SWRCB modified its receiving water limitations language in Order WQ 98-01 to meet specific objections by USEPA (the modifications resulted in stricter compliance with water quality standards). SWRCB Order WQ 99-05 states:

“In Order WQ 98-01, the SWRCB ordered that certain receiving water limitation language be included in future municipal storm water permits. Following inclusion of that language in permits issued by the San Francisco Bay and San Diego Regional Boards for Vallejo and Riverside respectively, the USEPA objected to the permits. The USEPA objection was based on the receiving water limitation language. The USEPA has now issued those permits itself and has included receiving water limitation language it deems appropriate.

In light of USEPA’s objection to the receiving water limitation language in Order WQ 98-01 and its adoption of alternative language, the SWRCB is revising its instructions regarding receiving water limitation language for municipal storm water permits. It is hereby ordered that Order WQ 98-01 will be amended to remove the receiving water limitation language contained therein and to substitute the USEPA language. Based on the reasons stated here, and as a precedent decision, the following receiving water limitation language shall be included in future municipal storm water permits.”

In 1999 case involving MS4 permits issued by USEPA to several Arizona cities (*Defenders of Wildlife v. Browner*, 1999, 197 F. 3d 1035), the United States Court of Appeals for the Ninth Circuit upheld USEPA’s requirement for MS4 dischargers to meet water quality standards, but it did so on the basis of USEPA’s discretion rather than on the basis of strict compliance with the Clean Water Act. In other words, while holding that the Clean Water Act does not require all MS4 discharges to comply strictly with state water quality standards, the Court also held that USEPA has the authority to determine that ensuring strict compliance with state water quality standards is necessary to control pollutants. On the question of whether MS4 permits must contain numeric effluent limitations, the court upheld USEPA’s use of iterative BMPs in place of numeric effluent limits.

On October 14, 1999, the SWRCB issued a legal opinion on the federal appellate decision and provided advice to the Regional Boards on how to proceed in the future. In the memorandum, the SWRCB concludes that the recent Ninth Circuit opinion upholds the discretion of USEPA and the State to (continue to) issue permits to MS4s that require compliance with water quality standards through iterative BMPs. Moreover, the memorandum states that “[...] because most MS4 discharges enter impaired water bodies, there is a real need for permits to include stringent requirements to protect those water bodies. As TMDLs are developed, it is likely that MS4s will have to participate in pollutant load reductions, and the MS4 permits are the most effective vehicles for those reductions.” In summary, the SWRCB found that the Regional Boards should continue to include the RWL established in SWRCB Order WQ 99-05 in all future permits.

The issue of the RWLs language was also central to BIA’s (and others’) appeal of Order No. 2001-01 (Order No. R9-2007-0001 serves as the reissuance of Order No. 2001-01). BIA contended that the MEP standard was a ceiling on what could be required of the Copermittees in implementing their urban runoff management programs, and that Order No. 2001-01’s receiving

water limitations requirements exceeded that ceiling. In other words, BIA argued that the Copermitees could not be required to comply with receiving water limitations if they necessitated efforts which went beyond the MEP standard. Again, the courts upheld the Regional Board's discretion to require compliance with water quality standards in municipal storm water permits, without limitation. The Court of Appeal, Fourth Appellate District found that the Regional Board has "the authority to include a permit provision requiring compliance with water quality standards."<sup>102</sup> On further appeal by BIA, the California State Supreme Court declined to hear the matter.

While implementation of the iterative BMP process is a means to achieve compliance with water quality objectives, it does not shield the discharger from enforcement actions for continued non-compliance with water quality standards. Consistent with USEPA guidance,<sup>103</sup> regardless of whether or not an iterative process is being implemented, discharges that cause or contribute to a violation of water quality standards are in violation of Order No. R9-2007-0001.

**Finding E.2:** The Basin Plan identifies the following beneficial uses for water bodies in the Santa Diego County watersheds: Municipal and Domestic Supply (MUN), Agricultural Supply (AGR), Industrial Process Supply (PROC), Industrial Service Supply (IND), Ground Water Recharge (GWR), Contact Water Recreation (REC1) Non-contact Water Recreation (REC2), Warm Freshwater Habitat (WARM), Cold Freshwater Habitat (COLD), Wildlife Habitat (WILD), Rare, Threatened, or Endangered Species (RARE), Freshwater Replenishment (FRSH), Hydropower Generation (POW), and Preservation of Biological Habitats of Special Significance (BIOL). The following additional beneficial uses are identified for coastal waters of San Diego County: Navigation (NAV), Commercial and Sport Fishing (COMM), Estuarine Habitat (EST), Marine Habitat (MAR), Aquaculture (AQUA), Migration of Aquatic Organisms (MIGR), Spawning, Reproduction, and/or Early Development (SPWN), and Shellfish Harvesting (SHELL).

**Discussion:** The San Diego County watersheds include all of Carlsbad, San Dieguito, Penasquitos, San Diego, Pueblo, Sweetwater, and Otay watersheds, and portions of Santa Margarita, San Luis Rey, and Tijuana watersheds. Major Rivers include the Santa Margarita River, the San Luis Rey River, San Dieguito River, San Diego River, Sweetwater River, Otay River and the Tijuana River. Major coastal waterbodies include Buena Vista Lagoon, Agua Hedionda Lagoon, Batiquitos Lagoon, San Elijo Lagoon, San Dieguito Lagoon, Los Penasquitos Lagoon, Mission Bay, San Diego Bay, Tijuana River estuary, and the Pacific Ocean. Major inland waterbodies include Lake Henshaw, Lake Wohlford, Lake Hodges, Sutherland Reservoir, Miramar Reservoir, San Vicente Reservoir, El Capitan Reservoir, Cuyamaca Reservoir, Sweetwater Reservoir, Loveland Reservoir, Otay Lakes, Barrett Lake and Morena Reservoir.

The San Diego County watersheds are approximately 2820 square miles and includes unincorporated portions of San Diego County, the Cities of Carlsbad, Chula Vista, Coronado, Del Mar, El Cajon, Encinitas, Escondido, Imperial Beach, La Mesa, Lemon Grove, National City, Oceanside, Poway, San Diego, San Marcos, Santee, Solana Beach, Vista, as well as the San Diego Unified Port District and the San Diego County Regional Airport Authority, portions of the Cleveland National Forests, and the several Indian Reservations. Approximately 2.8 million people reside within the permitted area. Approximately 442 thousand people reside in the unincorporated area while the rest reside within the cities.

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<sup>102</sup> Building Industry Association et al., v. State Water Resources Control Board, et al. 2004.

<sup>103</sup> USEPA, 1998. Jan. 21, 1998 correspondence, "SWRCB/OCC File A-1041 for Orange County," from Alexis Strauss to Walt Petit, and March 17, 1998 correspondence from Alexis Strauss to Walt Petit.

**Finding E.3:** This Order is in conformance with SWRCB Resolution No. 68-16 and the federal Antidegradation Policy described in 40 CFR 131.12.

**Discussion:** Urban runoff management programs are required to be designed to reduce pollutants in urban runoff to the maximum extent practicable and achieve compliance with water quality standards. Therefore, implementation of urban runoff management programs, which satisfy the requirements of Order No. R9-2007-0001, will prevent violations of receiving water quality standards. The Basin Plan states that “Water quality objectives must [...] conform to US EPA regulations covering antidegradation (40 CFR 131.12) and State Board Resolution 68-16, Statement of Policy with Respect to Maintaining High Quality of Waters in California.” As a result, when water quality standards are met through the implementation of urban runoff management programs, USEPA and SWRCB antidegradation policy requirements are also met.

**Finding E.4:** Section 6217(g) of the Coastal Zone Act Reauthorization Amendments of 1990 (CZARA) requires coastal states with approved coastal zone management programs to address non-point pollution impacting or threatening coastal water quality. CZARA addresses five sources of non-point pollution: agriculture, silviculture, urban, marinas, and hydromodification. This NPDES permit addresses the management measures required for the urban category, with the exception of septic systems. The adoption and implementation of this NPDES permit relieves the Permittee from developing a non-point source plan, for the urban category, under CZARA. The Regional Board addresses septic systems through the administration of other programs.

**Discussion:** Coastal states are required to develop programs to protect coastal waters from nonpoint source pollution, as mandated by the federal CZARA. CZARA Section 6217 identifies polluted runoff as a significant factor in coastal water degradation, and requires implementation of management measures and enforceable policies to restore and protect coastal waters. In lieu of developing a separate NPS program for the coastal zone, California’s NPS Pollution Control Program was updated in 2000 to address the requirements of both the CWA section 319 and the CZARA section 6217 on a statewide basis. The California Coastal Commission (CCC), the SWRCB, and the nine Regional Water Quality Control Boards are the lead State agencies for upgrading the program, although 20 other State agencies also participate. Pursuant to the CZARA (6217(g) Guidance Document the development of urban runoff management programs pursuant to this NPDES permit fulfills the need for coastal cities to develop an urban runoff non-point source plan identified in the State’s Non-point Source Program Strategy and Implementation Plan.<sup>104</sup>

**Finding E.5:** Section 303(d)(1)(A) of the CWA requires that “Each state shall identify those waters within its boundaries for which the effluent limitations...are not stringent enough to implement any water quality standard (WQS) applicable to such waters.” The CWA also requires states to establish a priority ranking of impaired waterbodies known as Water Quality Limited Segments and to establish TMDLs for such waters. This priority list of impaired waterbodies is called the Section 303(d) List. The current Section 303(d) List was approved by the State Water Resources Control Board on February 4, 2003 and on July 25, 2003 by USEPA.

**Discussion:** Section 303(d) of the federal CWA (CWA, 33 USC 1250, et seq., at 1313(d)), requires States to identify waters that do not meet water quality standards after applying certain required technology-based effluent limits (“impaired” water bodies). States are required to compile this information in a list and submit the list to USEPA for review and approval. This list

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<sup>104</sup> SWRCB/CCC, 2000. Nonpoint Source Program Strategy And Implementation Plan, 1998-2013 (PROSIP).

is known as the Section 303(d) list of impaired waters. As part of this listing process, States are required to prioritize waters/watersheds for future development of TMDL. The SWRCB and Regional Boards have ongoing efforts to monitor and assess water quality, to prepare the Section 303(d) list, and to subsequently develop TMDLs. The 2002 California 303(d) List identifies impaired receiving water bodies and their watersheds within the State of California. Urban runoff that is discharged from the Copermittee's MS4s is a leading cause of receiving water quality impairment in the San Diego Region.

**Finding E.6:** This Order fulfills a component of the TMDL Implementation Plan adopted by this Regional Board on August 14, 2002 for diazinon in Chollas Creek by establishing WQBELs for the Cities of San Diego, Lemon Grove, and La Mesa, the County of San Diego, and the San Diego Unified Port District; and by requiring: 1) legal authority, 2) implementation of a diazinon toxicity control plan and a diazinon public outreach/ education program, 3) achievement of the Compliance Schedule, and 4) a monitoring program. The establishment of WQBELs expressed as iterative BMPs to achieve the WLA compliance schedule is appropriate and is expected to be sufficient to achieve the WLA specified in the TMDL.

**Discussion:** On August 14, 2002, the Regional Board adopted the TMDL Implementation Plan<sup>105</sup> for diazinon in Chollas Creek by establishing WQBELs for the Cities of San Diego, Lemon Grove, and La Mesa, the County of San Diego, and the San Diego Unified Port District. The adopted Implementation Plan states:

“The Regional Board will revise existing waste discharge requirements / NPDES permits to incorporate effluent limitations in conformance with the Waste Load Allocations for diazinon as specified above. Modifications to the MS4 Permit can occur when the permit is reopened or during scheduled permit reissuance. Compliance with numeric limitations for diazinon will be required in accordance with a phased schedule of compliance. The compliance schedule will be jointly developed by the Regional Board and the Chollas Creek stakeholders and will be finalized no later than one year following adoption of this TMDL by the Regional Board. The phased compliance schedule will apply only to attainment of numeric limitations for diazinon. All other requirements of this TMDL will be immediately effective upon incorporation into applicable NPDES permits.”

On September 30, 2004, the compliance schedule was developed. The Order incorporates the compliance schedule. The TMDL Implementation Plan requires 1) Legal authority, 2) Implementation of a diazinon toxicity control plan and a diazinon public outreach / education program, 3) Achievement of the Compliance Schedule, and 4) Monitoring program. These requirements have been incorporated in the Order. The Implementation Plan states:

“The municipal Copermittees in the Chollas Creek watershed shall implement the requirements of the MS4 Permit.” And

“The Regional Board will use its enforcement authority as necessary to ensure compliance with applicable waste discharge requirements and Basin Plan waste discharge prohibitions.”

**Finding E.7:** This Order fulfills a component of the TMDL Implementation Plan adopted by this Regional Board on February 9, 2005 for dissolved copper in Shelter Island Yacht Basin (SIYB) by establishing WQBELs expressed as BMPs to achieve the WLA of 30 kg copper / year for the

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<sup>105</sup> Regional Board, 2002. Basin Plan Amendment, Attachment A to Resolution No. R9-2002-0123, Chollas Creek Diazinon Total Maximum Daily Load. P. 6-8.

City of San Diego and the San Diego Unified Port District. The establishment of WQBELs expressed as BMPs is appropriate and is expected to be sufficient to achieve the WLA specified in the TMDL.

**Discussion:** On February 9, 2005, the Regional Board adopted the TMDL Implementation Plan<sup>106</sup> for dissolved copper in the SIYB by establishing WQBELs expressed as BMPs to achieve the WLAs for the San Diego Unified Port District and to a much lesser extent the City of San Diego. The TMDL Implementation Plan states:

“The Regional Board will regulate discharges of copper to SIYB through the issuance of WDRs, Waivers of WDRs (waivers), or adoption of Waste Discharge prohibitions.” And

“The Regional Board will amend Order No. 2001-01, “Waste Discharge Requirements for Discharges of Urban Runoff from the Municipal Separate Storm / Sewer Systems” to require that discharges of copper into SIYB waters via the City’s municipal separate storm sewer system not exceed a 30 mg/kg wasteload for copper.”

The Order is a WDR, therefore the discharge of copper to SIYB is regulated as required in the TMDL Implementation Plan. As stated in Finding A.2, the Order renews Order No. 2001-01, therefore the TMDL Implementation Plan requirements are included in this Order. The establishment of WQBELs expressed as BMPs is appropriate and is expected to be sufficient to achieve the WLAs specified in the TMDL.

**Finding E.8:** This Order establishes WQBELs and conditions consistent with the requirements and assumptions of the WLAs in the TMDLs as required by 40 CFR 122.44(d)(1)(vii)(B).

**Discussion:** The establishment of WQBELs expressed as iterative BMPs to achieve the WLA compliance schedule is appropriate and is expected to be sufficient to achieve the WLAs specified in the TMDL.

**Finding E.9:** Requirements in this Order that are more explicit than the federal storm water regulations in 40 CFR 122.26 are prescribed in accordance with the CWA section 402(p)(3)(iii) and are necessary to meet the MEP standard.

**Discussion:** The CWA explicitly preserves independent state authority to enact and implement its own standards and requirements, provided that such standards and requirements are at least as stringent as those that would be mandated by the CWA and the federal regulations. For example, as one general overriding principle, CWA section 510 states “nothing in this chapter shall (1) preclude or deny the right of any State or political subdivision thereof or interstate agency to adopt or enforce (A) any standard or limitation respecting discharges of pollutants, or (B) any requirement respecting control or abatement of pollution [...]” When relating specifically to storm water, CWA section 402(p)(3)(B)(iii) clearly provides states with wide-ranging discretion, stating that municipal storm water permits “[s]hall require controls to reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques and system, design and engineering methods, and such other provisions as the Administrator or the State determines appropriate for the control of such pollutants”

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<sup>106</sup> Regional Board, 2005. Basin Plan Amendment, Attachment A to Resolution No. R9-2005-0019, Amendment to the Water Quality Control Plan for the San Diego Region to Incorporate a Total Maximum Daily Load for Dissolved Copper in Shelter Island Yacht Basin, San Diego Bay. P. 5.

Therefore, where the Order contains requirements more specific than those included in the federal NPDES regulations 40 CFR 122.26(d), it is seeking to meet the above CWA requirements, as well as other particular federal NPDES regulations such as 40 CFR 122.44(d)(1)(i). This federal NPDES regulation requires NPDES permits to include limitations to “control all pollutants or pollutant parameters (either conventional, nonconventional, or toxic pollutants) which the Director determines are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any State water quality standard, including State narrative criteria for water quality.” Given the continued impact of urban runoff on receiving waters within the San Diego region, increased specificity in municipal storm water permits is necessary to meet the above CWA and federal regulation requirements.

In a 1992 decision, the U.S. Court of Appeals for the Ninth Circuit (NRDC v. USEPA, 966 F.2d 1292) interpreted the language in Clean Water Act section 402(p)(3)(B)(iii) as providing the State with substantial discretion and authority: “[t]he language in (iii), above, requires the Administrator or the State to design controls. Congress did not mandate a minimum standards approach or specify that USEPA develop minimal performance requirements [...] we must defer to USEPA on matters such as this, where USEPA has supplied a reasoned explanation of its choices.” The decision in essence holds that USEPA and the States are authorized to require implementation of storm water control programs that, upon “reasoned explanation,” accomplish the goals of CWA section 402(p). The Ninth Circuit Court of Appeals further reinforced the State’s authority in this area more recently in 1999. In Defenders of Wildlife v. Browner (1999) Case No. 98-71080, the Court cited the language of CWA section 402(p)(3)(B)(iii) and stated “[t]hat provision gives the USEPA discretion to determine what pollution controls are appropriate. As this court stated in NRDC v. USEPA, ‘Congress gave the administrator discretion to determine what controls are necessary [...].’”

Furthermore, the increased specificity included in the Order is in line with USEPA guidance included in its *Guidance Manual for the Preparation of Part 2 of the NPDES Permit Applications for Discharges from Municipal Separate Storm Sewer Systems*<sup>107</sup> and its *Interim Permitting Approach for Water Quality-Based Effluent Limitations in Storm Water Permits*.<sup>108</sup> Where the permit is more specific than the federal regulations, it is frequently based on the recommendations of the Guidance Manual. The Interim Permitting Approach also supports increased specificity in storm water permits, recommending that municipal storm water permits use BMPs in first-round storm water permits, and expanded or better-tailored BMPs in subsequent permits, where necessary, to provide for the attainment of water quality standards. In cases where adequate information exists to develop more specific conditions or limitations to meet water quality standards, these conditions or limitations are to be incorporated into storm water permits, as necessary and appropriate.” It is important to note that the SWRCB cited USEPA’s Interim Permitting Approach as support for its decision which upheld the increased specificity of numeric sizing criteria requirements for post-construction BMPs as appropriate requirements in municipal storm water permits.

**Finding E.10:** Urban runoff treatment and/or mitigation must occur prior to the discharge of urban runoff into a receiving water. Federal regulations at 40 CFR 131.10(a) state that in no case shall a state adopt waste transport or waste assimilation as a designated use for any waters of the

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<sup>107</sup> USEPA, 1992. *Guidance Manual for the Preparation of Part II of the NPDES Permit Applications for Discharges from Municipal Separate Storm Sewer Systems*. EPA 833-B-92-002.

<sup>108</sup> USEPA, 1996. *Interim Permitting Approach for Water Quality-Based Effluent Limitations in Storm Water Permits*. 61 FR 43761.

U.S. Authorizing the construction of an urban runoff treatment facility within a water of the U.S., or using the water body itself as a treatment system or for conveyance to a treatment system, would be tantamount to accepting waste assimilation as an appropriate use for that water body. Furthermore, the construction, operation, and maintenance of a pollution control facility in a water body can negatively impact the physical, chemical, and biological integrity, as well as the beneficial uses, of the water body. This is consistent with USEPA guidance to avoid locating structural controls in natural wetlands.

**Discussion:** Urban runoff treatment and/or mitigation in accordance with any of the requirements in the Order must occur prior to the discharge of storm water or urban runoff into receiving waters. Allowing polluted runoff to enter receiving waters prior to treatment to the MEP will result in degradation of the water body and potential exceedances of water quality standards, from the discharge point to the point of dissipation, infiltration, or treatment. Furthermore, the construction, operation, and maintenance of a pollution control facility in a water body can negatively impact the physical, chemical, and biological integrity, as well as the beneficial uses, of the water body. This requirement is supported by federal regulation 40 CFR 131.10(a) and USEPA guidance. According to USEPA,<sup>109</sup> “To the extent possible, municipalities should avoid locating structural controls in natural wetlands. Before considering siting of controls in a natural wetland, the municipality should demonstrate that it is not possible or practicable to construct them in sites that do not contain natural wetlands... Practices should be used that settle solids, regulate flow, and remove contaminants prior to discharging storm water into a wetland.”

**Finding E.11:** Urban runoff is a significant contributor to the creation and persistence of Toxic Hot Spots in San Diego Bay. CWC section 13395 requires regional boards to reevaluate WDRs associated with toxic hot spots. The SWRCB adopted the Consolidated Toxic Hot Spot Cleanup Plan in June 1999. The Plan states: “The reevaluation [of WDRs associated with toxic hot spots] shall consist of (1) an assessment of the WDRs that may influence the creation or further pollution of the known toxic hot spot, (2) an assessment of which WDRs need to be modified to improve environmental conditions at the known toxic hot spot, and (3) a schedule for completion of any WDR modifications deemed appropriate.”

**Discussion:** Toxic hot spots are those areas in enclosed bays, estuaries, or any adjacent waters in the “contiguous zone” or the “ocean”, where pollution or contamination affects the interests of the state, and where hazardous substances have accumulated to levels which: 1) may pose a substantial present or potential hazard to aquatic life, wildlife, fisheries, or human health, or 2) may adversely affect the beneficial uses of the bay, estuary, or ocean waters, or 3) exceeds adopted water quality or sediment quality objectives. San Diego Bay contains several toxic hot spots. In a National Oceanic and Atmospheric Administration (NOAA) study which compared EMAP-type sediment toxicity data from various bays, San Diego Bay ranked second with 56 percent of the area of the Bay considered toxic. In addition to chemical and physical impacts, urban runoff often contains pollutants that cause toxicity to aquatic organisms (i.e., adverse responses of organisms to chemicals or physical agents ranging from mortality to physiological responses such as impaired reproduction or growth anomalies). Toxic pollutants impact the overall quality of aquatic systems and beneficial uses of receiving waters. A study of urban runoff samples from Chollas Creek in San Diego County, revealed toxic concentrations of

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<sup>109</sup> USEPA, 1992. Guidance Manual for the Preparation of Part II of the NPDES Permit Applications for Discharges from Municipal Separate Storm Sewer Systems. EPA 833-B-92-002.

organophosphate pesticides and metals.<sup>110</sup> In Los Angeles County, storm water samples were found to be toxic to various aquatic organisms in the Los Angeles River, the San Gabriel River, Ballona Creek, and the Santa Monica Bay.<sup>111</sup> Also, a water quality data assessment conducted in Aliso Creek in Orange County showed that storm events caused varying degrees of mortality to test organisms.<sup>112</sup> For these reasons, the Order includes directives to prevent urban runoff from contributing to the further degradation of toxic hot spots.

**Finding E.12:** The issuance of waste discharge requirements and an NPDES permit for the discharge of urban runoff from MS4s to waters of the U.S. is exempt from the requirement for preparation of environmental documents under the California Environmental Quality Act (CEQA) (Public Resources Code, Division 13, Chapter 3, section 21000 et seq.) in accordance with the CWC section 13389.

**Discussion:** CWC Section 13389 exempts the adoption of waste discharge requirements (such as NPDES permits) from CEQA requirements: “Neither the state board nor the regional boards shall be required to comply with the provisions of Chapter 3 (commencing with section 21100) of Division 13 of the Public Resources Code prior to the adoption of any waste discharge requirement, except requirements for new sources as defined in the Federal Water Pollution Control Act or acts amendatory thereof or supplementary thereto.”

This CEQA exemption was challenged during BIA’s (and others’) appeal of Order No. 2001-01 (Order No. R9-2007-0001 serves as the reissuance of Order No. 2001-01). BIA contended that the CEQA exemption did not apply to permit requirements where the Regional Board utilized its discretion to craft permit requirements which were more prescriptive than required by federal law. The Court of Appeal, Fourth Appellate District disagreed with this argument, stating “we also reject Building Industry’s argument to the extent it contends the statutory CEQA exemption in Water Code section 13389 is inapplicable to a particular NPDES permit provision that is discretionary, rather than mandatory, under the CWA.”<sup>113</sup> On further appeal by BIA, the California State Supreme Court declined to hear the matter.

In a recent decision, the Court of Appeal of the State of California, Second Appellate District, upheld the CEQA exemption for municipal storm water NPDES permits (County of Los Angeles, et al. v. California State Water Resources Control Board, et al.).

## F. Public Process

**Finding F.1:** The Regional Board has notified the Copermittees, all known interested parties, and the public of its intent to consider adoption of an Order prescribing waste discharge requirements that would serve to renew an NPDES permit for the existing discharge of urban runoff.

**Discussion:** Public notification of development of a draft permit is required under Federal regulation 40 CFR 124.10(a)(1)(ii). This regulation states “(a) Scope. (1) The Director shall give public notice that the following actions have occurred: (ii) A draft permit has been prepared

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<sup>110</sup> Bay, et al., 2001. Characterization of Stormwater Toxicants from an Urban Watershed to Freshwater and Marine Organisms. Southern California Coastal Water Research Project. Annual Report 1999-2000.

<sup>111</sup> LARWQCB, 2001. The Role of Municipal Operators In Controlling the Discharge of Pollutants in Storm Water from Industrial/Commercial Facilities: A Case for Inspection Activities in the Large and Medium Municipal Separate Storm Sewer Permits.

<sup>112</sup> Regional Board, 2002. Fact Sheet/Technical Report for Regional Board Order No. R9-2002-0001.

<sup>113</sup> Building Industry Association et al., v. State Water Resources Control Board, et al. 2004.

under Sec. 124.6(d).” Public notifications “shall allow at least 30 days for public comment,” as required under Federal regulation 40 CFR 124.10(b)(1).

**Finding F.2:** The Regional Board has, at public meetings on (date), held public hearings and heard and considered all comments pertaining to the terms and conditions of this Order.

**Discussion:** Public hearings are required under CWC Section 13378, which states “Waste discharge requirements and dredged or fill material permits shall be adopted only after notice and any necessary hearing.” Federal regulation 40 CFR 124.12(a)(1) also requires public hearings for draft permits, stating “The Director shall hold a public hearing whenever he or she finds, on the basis or requests, a significant degree of public interest in a draft permit(s).” Regarding public notice of a public hearing, Federal regulation 40 CFR 124.10(b)(2) states that “Public notice of a public hearing shall be given at least 30 days before the hearing.”

## X. DIRECTIVES DISCUSSION

This section discusses significant changes which have been made to the requirements of the Order from the requirements which were previously included in Order No. 2001-01. For each section of the Order that has been changed there is a discussion which describes the change that was made and provides the rationale for the change. In addition, comments on the Copermittees’ ROWD recommendations, as they pertain to each changed requirement of the Order, are provided.

Requirements of the Order that are not discussed in this section have not been significantly changed from those requirements previously included in Order No. 2001-01. For such requirements, discussions and rationale for the requirements can be found in section VII of the Fact Sheet/Technical Report for Regional Board Order No. 2001-01, dated November 6, 2001. Section VII also provides additional background information for those requirements that have undergone significant change which are described in detail in this report. The Fact Sheet/Technical Report is available for download at:

[http://www.waterboards.ca.gov/sandiego/programs/sd\\_stormwater.html](http://www.waterboards.ca.gov/sandiego/programs/sd_stormwater.html)

Legal authority citations are provided for each major section of the Order. These citations apply to all applicable requirements within the section for which they are provided.

### A. Prohibitions and Receiving Water Limitations

The following legal authority applies to section A:

**Broad Legal Authority:** CWA sections 402(p)(3)(B)(ii-iii), CWC section 13377, and Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(B, C, E, and F) and 40 CFR 122.26(d)(2)(iv).

**Specific Legal Authority:** The Regional Board Water Quality Control Plan for the San Diego Basin (Basin Plan) contains the following waste discharge prohibition: “The discharge of waste to waters of the state in a manner causing, or threatening to cause a condition of pollution, contamination, or nuisance as defined in California Water Code Section 13050, is prohibited.”

California Water Code section 13050(l) states “(1) ‘Pollution’ means an alteration of the quality of waters of the state by waste to a degree which unreasonably affects either of the following: (A) The water for beneficial uses. (B) Facilities which serve beneficial uses. (2) ‘Pollution’ may include “contamination.”

California Water Code section 13050(k) states “‘Contamination’ means an impairment of the quality of waters of the state by waste to a degree which creates a hazard to public health through poisoning or through the spread of disease. ‘Contamination’ includes any equivalent effect resulting from the disposal of waste, whether or not waters of the state are affected.”

California Water Code section 13050(m) states “‘Nuisance’ means anything which meets all of the following requirements: (1) Is injurious to health, or is indecent or offensive to the senses, or an obstruction to the free use of property, so as to interfere with the comfortable enjoyment of life or property. (2) Affects at the same time an entire community or neighborhood, or any considerable number of persons, although the extent of the annoyance or damage inflicted upon individuals may be unequal. (3) Occurs during, or as a result of, the treatment or disposal of wastes.”

California Water Code section 13241 requires each regional board to “establish such water quality objectives in water quality control plans as in its judgment will ensure the reasonable protection of beneficial uses and the prevention of nuisance [...]”

California Water Code Section 13243 provides that “A regional board, in a water quality control plan or in waste discharge requirements, may specify certain conditions or areas where the discharge of waste, or certain types of waste, will not be permitted.”

California Water Code Section 13263(a) provides that waste discharge requirements prescribed by the Regional Board implement the Basin Plan.

Federal NPDES regulations 40 CFR 122.26(d)(2)(iv)(A - D) require municipalities to implement controls to reduce pollutants in urban runoff from commercial, residential, industrial, and construction land uses or activities.

Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(A - D) require municipalities to have legal authority to control various discharges to their MS4.

Federal NPDES regulation 40 CFR 122.44(d)(1) requires municipal storm water permits to include any requirements necessary to “[a]chieve water quality standards established under section 303 of the CWA, including State narrative criteria for water quality.”

Federal NPDES regulation 40 CFR 122.44(d)(1)(i) requires NPDES permits to include limitations to “control all pollutants or pollutant parameters (either conventional, nonconventional, or toxic pollutants) which the Director determines are or may be discharged at a level which will cause, have reasonable potential to cause, or contribute to an excursion above any State water quality standard, including State narrative criteria for water quality.”

**Section A** of the Order combines two previously distinct requirement sections – Prohibitions and RWLs. These sections have been combined into one section for organization purposes and to reduce redundancy, since both sections address the same issue. In addition, the prohibition specifically addressing post-development runoff has been removed from the Order since it reiterated other more broad prohibitions, making it redundant. These changes have no net effect on the implementation and enforcement of the Order.

**B. Non-Storm Water Discharges**

The following legal authority applies to section B:

**Broad Legal Authority:** CWA sections 402(p)(3)(B)(ii-iii), CWC section 13377, and Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(B, C, E, and F) and 40 CFR 122.26(d)(2)(iv).

**Specific Legal Authority:** Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(B) requires MS4 operators “to detect and remove (or require the discharger to the municipal separate storm sewer to obtain a separate NPDES permit for) illicit discharges and improper disposal into the storm sewer.”

Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(B)(1) provides that the Copermittees shall prevent all types of illicit discharges into the MS4 except for certain non-storm water discharges.

**Section B** of the Order has been reworded to simplify and clarify the requirements for addressing non-storm water discharges that are not prohibited. This rewording has no net effect on the implementation and enforcement of the Order.

In their ROWD, the Copermittees recommend expanding the BMP exemption for emergency fire fighting flows so that it would apply to all emergency water flows. However, the Copermittees provide no information regarding what types of urban runoff are considered “emergency water flows.” In addition, the level of pollutants in such flows is not discussed. Due to the lack of such information, the requirement regarding emergency fire fighting flows has not been changed.

**C. Legal Authority**

The following legal authority applies to section C:

**Broad Legal Authority:** CWA sections 402(p)(3)(B)(ii-iii), CWC section 13377, and Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(B, C, E, and F) and 40 CFR 122.26(d)(2)(iv).

**Specific Legal Authority:** Federal NPDES regulation 40 CFR 122.26(d)(2)(i)(A) provides that the Copermittees shall develop and implement legal authority to “Control through ordinance, order or similar means, the contribution of pollutants to the municipal storm sewer by storm water discharges associated with industrial activity and the quality of storm water discharged from sites of industrial activity.”

Federal NPDES regulation 40 CFR 122.26(d)(2)(i)(D) provides that the Copermittees shall develop and implement legal authority to “Control through interagency agreements among coapplicants the contribution of pollutants from one portion of the municipal system to another portion of the municipal system.”

Illicit discharge is defined under Federal NPDES regulation 40 CFR 122.26(b)(2) as “any discharge to a municipal separate storm sewer system that is not composed entirely of storm water except discharges pursuant to a NPDES permit (other than the NPDES permit for discharges from the municipal separate storm sewer) and discharges resulting from fire fighting activities.”

Federal NPDES regulations 40 CFR 122.26(d)(2)(iv)(A - D) require municipalities to implement controls to reduce pollutants in urban runoff from commercial, residential, industrial, and construction land uses or activities.

Federal NPDES regulation 40 CFR 122.26(d)(1)(ii) requires from the Copermittee “A description of existing legal authority to control discharges to the municipal separate storm sewer system.”

**Section C.1.j** has been added to the Order to ensure that BMPs implemented by third parties are effective. Since the Copermittees cannot passively receive and discharge pollutants from third parties, the Copermittees must ensure discharges of pollutants to the MS4 are reduced to the MEP. In order to achieve this, the Copermittees must be able to ensure that effective BMPs are being implemented by requiring the third parties to document BMP effectiveness. Regarding the Copermittees’ ability to require documentation and reporting from third parties, USEPA states “municipalities should provide documentation of their authority to enter, sample, inspect, review, and copy records, etc., as well as demonstrate their authority to require regular reports.”<sup>114</sup>

**Section C.2.d** has been added to the Order to ensure that the Copermittees’ enforcement tools are effective enough to ensure compliance with the Order. USEPA supports the need for the adequate Copermittee enforcement when it states that the Copermittees’ general counsels “should state that the applicant has the legal authority to apply and enforce the requirements of 40 CFR 122.26(d)(2)(i)(A-F).”<sup>115</sup>

## **D. Jurisdictional Urban Runoff Management Program**

### **D.1. Development Planning**

The following legal authority applies to section D.1:

**Broad Legal Authority:** CWA sections 402(p)(3)(B)(ii-iii), CWA section 402(a), CWC section 13377, and Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(B, C, E, and F), 40 CFR 131.12, and 40 CFR 122.26(d)(2)(iv).

**Specific Legal Authority:** Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(A)(2) provides that Copermittees develop and implement a proposed management program which is to include “A description of planning procedures including a comprehensive master plan to develop, implement and enforce controls to reduce the discharge of pollutants from municipal separate storm sewers which receive discharges from areas of new development and significant redevelopment. Such plan shall address controls to reduce pollutants in discharges from municipal separate storm sewers after construction is completed.”

Federal NPDES regulation 40 CFR 122.44(d)(1) requires municipal storm water permits to include any requirements necessary to “[a]chieve water quality standards established under section 303 of the CWA, including State narrative criteria for water quality.”

**Sections D.1.a and D.1.b** (General Plan and Environmental Review Process) require the Copermittees to update and revise their General Plan (or equivalent plan) and environmental review processes to ensure water quality and watershed protection principles are included. The Copermittees are required to detail any changes to the General Plan or environmental review process in their Jurisdictional Urban Runoff Management Program Annual Reports.

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<sup>114</sup> USEPA, 1992. Guidance Manual for the Preparation of Part 2 of the NPDES Permit Applications for Discharges from Municipal Separate Storm Sewer Systems. EPA 833-B-92-002.

<sup>115</sup> Ibid.

The change made to these sections, which requires updating the General Plan and Environmental Review Process on an as needed basis, is supported by information provided in the Copermittees' ROWD. The ROWD states that all Copermittees have either updated, are in the process of updating, or have assessed their General Plan to ensure the General Plans include the required principles and are in compliance with Order No. 2001-01. The ROWD also states that all the Copermittees have updated their environmental review processes.

**Section D.1.c** (Approval Process Criteria and Requirements) requires that all development projects (regardless of size) implement BMPs to reduce pollutant discharges to the MEP. Source control and site design BMP requirements were not clearly described in this section of Order No. 2001-01. Additional detail has been added to this section to better describe the source control and site design BMPs needed for implementation. This additional detail is consistent with the requirements of the Model SUSMP. However, only source control and site design BMPs that apply to all types of development projects are required (i.e., properly designed trash storage areas).

In addition, Order No. 2001-01's requirement that applicants must provide evidence of coverage under the General Industrial Permit has been removed. This requirement was difficult to implement since industrial tenants for a development project are usually not known during the planning stage.

**Sections D.1.d and D.1.d.(1)** (Standard Urban Storm Water Mitigation Plans) require the Copermittees to review and update their local SUSMPs for compliance with the Order. The sections also require all Priority Development Projects falling under certain categories to meet SUSMP requirements. The update is necessary to ensure that the Copermittees' local SUSMPs are consistent with the changes that have been made to the Order's SUSMP requirements. The requirement for the development/adoption of a Model SUSMP has been removed since a model was completed and adopted in 2002.

**Section D.1.d.(2)** (Priority Development Project Categories) has been changed to simplify and clarify the Priority Development Project categories. The two housing development categories were combined into one category that includes 10 or more housing units. In addition, requirements which specifically apply to restaurants have been combined in this section. The section has been modified to clarify that restaurants with less than 5,000 square feet of development are subject to SUSMP requirements, except for the treatment control BMP and hydromodification control requirements. This is consistent with Order No. 2001-01's approach for applying SUSMP requirements to restaurants.

**Section D.1.d.(2)(i)** includes Retail Gasoline Outlets (RGOs) as a Priority Development Project category because RGOs are points of confluence for motor vehicles for automotive related services such as repair, refueling, tire inflation, and radiator fill-up. RGOs consequently produce significantly greater pollutant loadings of hydrocarbons and trace metals (including copper and zinc) than other urban areas. To meet MEP, source control and structural treatment BMPs are needed at RGOs that meet the following criteria: (a) 5,000 square feet or more of developed area, or (b) a projected ADT of 100 or more vehicles per day. These are appropriate thresholds since development size and volume of traffic are good indicators of potential impacts of urban runoff from RGOs on receiving waters.

In SWRCB WQ Order No. 2000-11, the SWRCB removed RGOs as a SUSMP category because the SWRCB found that RGOs were already heavily regulated and limited on their ability to construct infiltration devices or perform treatment. Order No. 2000-11 also acknowledged that a

threshold (size, average daily traffic, etc.) appropriate to trigger SUSMP requirements should be developed, and that specific findings regarding RGOs should be included in MS4 permits to justify the requirement.<sup>116</sup> The SWRCB also removed the RGO category from the San Diego County MS4 permit (Order No. 2001-01) because the Regional Board did not specifically address the issues raised in WQ Order No. 2000-11.

As discussed further below, the LARWQCB and the Regional Board have adequately addressed these issues. RGOs have been included as a SUSMP category in the Los Angeles County MS4 permit (Order No. R4-01-182), the statewide general Phase II MS4 permit (WQ Order No. 2003-0005-DWQ), and the Regional Board Southern Riverside County MS4 permit (Order No. R9-2004-001). The SWRCB also addressed the inclusion of RGOs through the appeals of MS4 permits issued by the Los Angeles and San Francisco Bay Area Regional Boards. The SWRCB held a workshop addressing RGOs and identified RGOs as significant sources of pollutants. The SWRCB then dismissed the petitions for removal of RGOs from the SUSMP requirements in the Los Angeles and San Francisco Bay Area MS4 permits.

The following issues regarding RGOs have been addressed:

**Heavily Regulated** - The heavily regulated distinction does not remove RGOs as significant source of pollutants in urban runoff and therefore should not be a basis for exempting them from SUSMP requirements. Other regulation of RGOs is separate from regulation under the CWA and does not necessarily relate to water quality and urban runoff. Moreover, other municipalities already require that RGOs implement structural BMPs, even though RGOs are regulated under other programs.

**Treatment Limitations** - Inexpensive and effective structural treatment BMPs which reduce pollutants and control peak flow rates and velocities are available for use at RGOs. Studies have shown that some catch basin inserts can remove hydrocarbons and heavy metals, which are typical pollutants of concern at RGOs. Sand or media filters have also been found to be effective and available for use at RGOs. Cisterns are examples of established BMPs to control flow, but RGOs could also use site design measures such as small weirs, baffles, and redirecting roof runoff to pervious areas.

**Safety** - No evidence has been provided to indicate that use of these structural BMPs at RGOs will pose a safety risk. In fact, filter BMPs have been installed at RGOs in other municipalities without apparent adverse safety effects. In addition, similar BMPs such as oil/water separators have been used for years by RGOs without safety problems.

**Threshold** - Studies indicate that runoff from RGOs contains similar pollutants to runoff from commercial parking lots. In precedential WQ Order 2000-11, the SWRCB determined that parking lots with a size threshold of 5,000 square feet or more is an appropriate SUSMP category. Based in part on the similarity of pollutants, the 5,000 square feet size threshold was also included for RGOs in the Order. In addition, other municipalities currently use similar size thresholds for RGOs when requiring design standards to mitigate storm water runoff. To provide additional flexibility for the Copermittees, another threshold of 100 or more motor vehicles ADT has been added to the Order. This threshold is based on requirements used in Washington and Oregon for what are considered "high use" sites. This is an appropriate threshold since vehicular traffic is a good indicator of the amount of pollutants generated at a site.

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<sup>116</sup> SWRCB, 2000. Order WQ 2000-11.

The Regional Board followed the SWRCB's direction regarding RGOs by including the above discussion in this Fact Sheet, as well as a specific finding that justifies the regulation of urban runoff from RGOs that meet certain criteria. Considering all of the supporting documentation discussed above, it is appropriate to include RGOs as a Priority Development Project category.

Additional detailed supporting information can be found in the 2001 technical report titled *Retail Gasoline Outlets: New Development Design Standards for Mitigation of Storm Water Impacts* by the LARWQCB and the Regional Board.

**Section D.1.d.(4)** (Site Design BMP Requirements) requires the Copermittees to place site design requirements on new development within their jurisdictions. The site design BMP options listed in these sections are consistent with the site design BMPs currently required by the Copermittees in the Model SUSMP. However, the Model SUSMP employs an open-ended approach to requirements for site design BMPs, requiring implementation of site design BMPs "where determined applicable and feasible by the Copermittee." Unfortunately, this approach has proven to be ineffective in integrating site design BMPs in project designs. Audits of ten of the Copermittees' SUSMP programs exhibited that "many of the SUSMP plans reviewed for this program evaluation did not adequately address site design."<sup>117</sup> Moreover, the auditor identified site design as one of three principal areas where further program oversight was necessary.<sup>118</sup>

For these reasons, the Order directs the Copermittees to require new development projects to employ at least one site design BMP from each of the two lists of site design BMP options provided in this section of the Order. Two lists of site design BMP options are provided to represent different categories of site design BMPs available for implementation. The first list includes site design BMPs that are less frequently utilized, though they are effective and achievable. The second list includes site design BMPs which are commonly cited in project proponents' SUSMP reports as the site design BMPs that have been incorporated into Priority Development Projects. Implementation of one site design BMP from each list is required to improve site design implementation at Priority Development Projects, while providing a reasonable and achievable minimum measure for site design BMP implementation. Through its process of conditioning development projects under the CWA section 401 Water Quality Certification program, the Regional Board finds that this level of site design BMP implementation is feasible for all projects. This site design BMP requirement will help ensure that site design BMPs are implemented for new development projects. Site design BMPs are a critical component of urban runoff management at new development projects, since the BMPs provide multiple benefits including preservation of hydrologic conditions, reduction of pollutant discharges, cost effectiveness, and green space.

The Order continues to provide the Copermittees with flexibility in implementing site design BMP requirements by providing lists from which site design BMP approaches can be chosen. Moreover, flexibility is inherently included in the site design options listed - each option provides the opportunity for numerous implementation approaches that can be used to achieve compliance.

In its October 29, 2004 letter to the Copermittees, as well as in subsequent meetings, the Regional Board notified Copermittees of the need for improvement in site design BMP implementation at development projects. In addition, at its May 5, 2005 meeting with the Copermittees, the

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<sup>117</sup> Tetra Tech, Inc., 2005. Program Evaluation Report –San Diego Standard Urban Storm Water Mitigation Plan (SUSMP) Evaluation. P. 4.

<sup>118</sup> Tetra Tech, Inc., 2005. Program Evaluation Report –San Diego Standard Urban Storm Water Mitigation Plan (SUSMP) Evaluation. P. 3.

Regional Board suggested that the Copermittees propose specific methods in their ROWD that would improve site design BMP implementation. In response, the Copermittees recommended that the Order “include an option for Copermittees to develop a low-impact design credit program.” However, such a requirement would be unenforceable, due to its vague nature. Moreover, if such a credit program were to take years to develop, lack of implementation of site design BMPs would continue unabated. To address this issue, the Order includes minimum requirements for site design BMP implementation, while also providing the Copermittees with their requested option to develop a site design credit program.<sup>119</sup> This provides assurance that site design BMPs will be implemented in a timely manner, while also providing the Copermittees with flexibility for site design credit program development.

The site design BMP options listed do not need to be costly. Some design options, such as concave vegetated surfaces or routing rooftop or walkway runoff to landscaped areas, are cost neutral.<sup>120</sup> Other site design BMPs, such as minimizing parking stall widths or use of efficient irrigation devices, are oftentimes already required. In addition, use of these site design BMPs reduces runoff quantity, allowing for treatment control BMPs on site to be smaller, therefore savings costs. Routing runoff through landscaped areas can also reduce the cost of irrigation.

**Section D.1.d.(5)** (Source Control BMP Requirements) requires that Priority Development Projects implement minimum source control BMPs. This section has been added to provide more detail and clarify the Order’s requirements for source control BMPs. The minimum source control BMPs listed in the section are consistent with the Model SUSMP.

**Section D.1.d.(6)** (Treatment Control BMP Requirements) clarifies that treatment control BMPs are not required to be designed to treat runoff from preservation areas, or other areas not being disturbed at a priority development project. This is a clarification of the requirements of Order No. 2001-01.

**Section D.1.d.(6)(c)(i)** ensures that priority development project proponents utilize the most accurate information to determine the volume or flow of runoff which must be treated. Using detailed local rainfall data, the County of San Diego has developed the 85<sup>th</sup> Percentile Precipitation Isopluvial Map, which exhibits the size of the 85<sup>th</sup> percentile storm event throughout San Diego County. Since this map uses detailed local rainfall data, it is more accurate for calculating the 85<sup>th</sup> percentile storm event than other methods which were included in Order No. 2001-01. The other methods found in Order No. 2001-01 were included as options to be used in the event that detailed accurate rainfall data did not exist for various locations within San Diego County. The County of San Diego’s development of the 85<sup>th</sup> Percentile Precipitation Isopluvial Map makes these other less accurate methods superfluous. Therefore, these other methods for calculating the 85<sup>th</sup> percentile storm event have been removed from the current Order.

**Section D.1.d.(6)(d)(i)** (Treatment Control BMPs) requires that treatment control BMPs selected for implementation at Priority Development Projects have a removal efficiency rating that is higher than the “low removal efficiency,” as presented in the Model SUSMP. The requirement allows exceptions for those projects that, with a feasibility analysis, can justify the use of a treatment control BMP with a low removal efficiency for a Priority Development Project. This requirement is needed because to date, the Copermittees have generally approved low removal efficiency treatment control BMPs without justification or evidence that use of higher efficiency treatment BMPs was considered and found to be infeasible. Specifically, it has been found

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<sup>119</sup> See section discussion for section D.1.d.(7) on the site design BMP credit program.

<sup>120</sup> BASMAA, 1999. Start at the Source. P. 149.

during audits of the Copermittees' SUSMP programs that many SUSMP reports do not adequately describe the selection of treatment control BMPs. Moreover, USEPA's contractor Tetra Tech, Inc. recommends that "project proponents should begin with the treatment control that is most effective at removing the pollutants of concern [...] and provide justification if that treatment control BMP is not selected."<sup>121</sup>

In the ROWD, the Copermittees acknowledge the need for further attention to the selection and implementation of effective treatment BMPs. They propose to work with the Regional Board to come to a "common understanding" without a fixed permit requirement. However, due to this widespread deficiency regarding treatment control BMP selection in the Copermittees' SUSMP programs, the treatment control BMP feasibility requirement is needed in the Order. The requirement is needed to provide clarification that selection of low efficiency treatment control BMPs over high efficiency BMPs without justification does not meet permit requirements and is not in compliance with the MEP standard.

**Section D.1.d.(7)** (Site Design BMP Substitution Program) has provisions for the site design BMP credit program which largely mirror components of the program suggested by the Copermittees in their ROWD. In their ROWD, the Copermittees requested the option to develop a site design BMP credit program, under which projects that implement a high level of site design BMPs could receive credit towards compliance with treatment control BMP requirements. The program would provide the opportunity for development projects to avoid partial or full treatment control BMP implementation in exchange for implementation of a high level of site design BMPs. The Regional Board agrees that such a program could be beneficial. As the ROWD notes, the program could achieve equal or greater water quality benefits while also (1) providing greater assurance of adequate operation and maintenance; (2) improved review processes of site design BMP proposals; (3) increased acceptance of site design BMPs; and (4) greater usage of site design BMPs. For this reason, the Regional Board has added to the Order an option for the Copermittees to develop such a program.

In addition to the Copermittees' proposals, the provisions require (1) that runoff originating from pollutant generating exposed impervious areas must be routed through pervious areas prior to entering the MS4, and (2) that development project categories, such as automotive repair shops or streets, roads, highways, or freeways, which have a high potential to generate high levels of pollutants, not be covered under the program. Runoff from pollutant generating impervious areas must be routed through pervious areas in order to ensure that some level of treatment is provided for the protection of water quality. Without such a provision, the program could result in the direct discharge of significant levels of pollutants to the MS4 without treatment. In addition, development projects which frequently generate high levels of pollutants, such as automotive repair shops and streets, roads, highways, and freeways, should not be included in the program due to the need for treatment control BMPs at such development projects. When high levels of pollutants are present at a development project, site design BMPs alone are unlikely to adequately reduce pollutant discharges; treatment BMPs are also needed to polish urban runoff and serve as a last line of defense.

In precedent setting Order No. 2000-11, the State Board determined that implementation of treatment control BMPs is appropriate for development projects falling under the priority development project categories. Therefore, any program which allows development projects to forgo treatment control BMP implementation must include provisions which will achieve similar

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<sup>121</sup> Tetra Tech, Inc., 2005. Program Evaluation Report –San Diego Standard Urban Storm Water Mitigation Plan (SUSMP) Evaluation. P. 5.

water quality benefits. To ensure that this is the case for the site design BMP credit program, minimum provisions for the program have been added to the Order. Due to the addition of the minimum provisions in the Order, the program will not need to undergo a lengthy Regional Board approval process at a later date.

**Section D. 1.d.(8)** (Treatment Control BMP Design Standards) addresses a need for the Copermittees to develop and apply consistent criteria for the design and maintenance of structural treatment BMPs. Correct BMP design is critical to ensure that BMPs are effective and perform as intended. Without design criteria, there is no assurance that this will occur, since there is no standard for design or review. This issue was noted during audits of the Copermittees' SUSMP programs, where it was found that "some SUSMP reports did not clearly describe how treatment control BMPs were designed."<sup>122</sup> Based upon these findings, it was recommended that the Copermittees "require developers to use standard forms to document the design of treatment control BMPs. As an example, Ventura County has developed a BMP manual that includes standard design procedure forms for BMPs. Ventura County's *Technical Guidance Manual for Storm Water Quality Control Measures* is available at <http://www.vcstormwater.org/publications.htm>."<sup>123</sup> California Stormwater Quality Association (CASQA) also confirms the necessity of design criteria when it includes such criteria in its New Development and Redevelopment BMP Handbook.<sup>124</sup>

**Section D.1.d.(11)** (Waiver Provision) allows Copermittees to waive treatment BMPs when all available BMPs have been considered and rejected as infeasible. The requirement also allows the Copermittees to develop a program to require projects that receive waivers, to transfer the cost savings to a fund. The intent of the requirements is to allow Copermittees the necessary flexibility to waive treatment BMPs when it can be established that the implementation of treatment BMPs that meet numeric sizing criteria is not feasible at a given site. This provision also allows Copermittees discretion to transfer the cost savings from such a waiver to a fund for water quality projects within the watershed.

**Section D.1.e** (Treatment Control BMP Maintenance Tracking) requires steps to be taken by the Copermittees to ensure that approved treatment control BMPs are correctly constructed and maintained, including development of a database. This is critical to ensure that the treatment control BMPs are effective in removing pollutants from urban runoff leaving new development and significant redevelopment projects. Treatment control BMP maintenance has been identified as a critical aspect of addressing urban runoff from new development and significant redevelopment by many prominent urban runoff authorities, including the CASQA which states that "long-term performance of BMPs hinges on ongoing and proper maintenance."<sup>125</sup> USEPA also stresses the importance of BMP maintenance, stating: "Lack of maintenance often limits the effectiveness of storm water structural controls such as detention/retention basins and infiltration devices."<sup>126</sup>

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<sup>122</sup> Tetra Tech, Inc., 2005. Program Evaluation Report –San Diego Standard Urban Storm Water Mitigation Plan (SUSMP) Evaluation. P. 5.

<sup>123</sup> Ibid.

<sup>124</sup> California Stormwater Quality Association, 2003. Stormwater Best Management Practice Handbook – New Development and Redevelopment.

<sup>125</sup> California Stormwater Quality Association, 2003. Stormwater Best Management Practice Handbook – New Development and Redevelopment. P. 6-1.

<sup>126</sup> USEPA, 1992. Guidance Manual for the Preparation of Part II of the NPDES Permit Applications for Discharges from Municipal Separate Storm Sewer Systems. EPA 833-B-92-002.

This permit section is needed due to findings that treatment control BMPs and treatment control BMP maintenance have predominantly not been tracked by the Copermittees. Following audits of SUSMP implementation of ten Copermittees, each of the Copermittees were recommended to develop a tracking system for treatment control BMPs and treatment control BMP maintenance. It has been found that “source and treatment control BMPs should be tracked in order to assess the number of BMPs installed, for reporting purposes, and to create an inventory for verifying maintenance in the future.”<sup>127</sup> Moreover, during the SUSMP audits, two of the ten Copermittees audited were found to have inadequately maintained treatment BMPs within their jurisdiction.<sup>128</sup> Again, it was recommended that Copermittees “should periodically inspect selected SUSMP projects to verify if BMPs are being properly maintained.”<sup>129</sup> USEPA also recommends “post-construction inspection and maintenance of BMPs” in the Phase II storm water regulations.<sup>130</sup>

At its May 5, 2005 meeting with the Copermittees, the Regional Board requested that the Copermittees propose a program for addressing treatment control BMP tracking and inspection in their ROWD. In response, the Copermittees’ ROWD did not propose a program but instead recommended that the Order include “an option for the Copermittees to develop a Model Program for Permanent BMP Operation and Maintenance Verification.”<sup>131</sup> This proposal lacks sufficient detail to be included in the Order, since it would result in an unenforceable permit requirement. As a result, the Order has been crafted to allow the Copermittees to develop their proposed program, but with minimum measurable outcomes to ensure that the program is adequate and effective.

These minimum measurable outcomes largely incorporate suggestions from the Copermittees’ ROWD, though some contain more detailed requirements than what was proposed by the Copermittees. In particular, while the Copermittees are free to prioritize most projects with treatment control BMPs, those projects with drainage insert treatment control BMPs must be categorized as at least a medium priority. This will ensure that such projects will be inspected every other year. Tracking of these projects in this manner is necessary because of the frequent maintenance that drainage inserts require, as well as the sensitivity of drainage insert performance to adequate maintenance. Drainage inserts fill relatively rapidly, causing plugging and bypass, rendering them ineffective. For example, CASQA recommends “frequent maintenance, on the order of several times per year.”<sup>132</sup>

Another significant measurable outcome requirement is that all projects with treatment control BMPs must be inspected for operation and maintenance at least once during the permit cycle. This is reasonable, since treatment control BMPs are typically recommended to be maintained semi-annually or annually. An activity which needs to be conducted semi-annually or annually should be spot-checked at least once every five years. Twenty percent of the projects within a jurisdiction with approved treatment BMPs are required to be inspected annually in order to ensure that treatment control BMP operation and maintenance oversight is consistent during the permit cycle.

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<sup>127</sup> Tetra Tech, Inc., 2005. Program Evaluation Report –San Diego Standard Urban Storm Water Mitigation Plan (SUSMP) Evaluation. P. 6.

<sup>128</sup> Ibid. P. 25, 38.

<sup>129</sup> Ibid.

<sup>130</sup> Federal Register / Vol. 64, No. 235 / Wednesday, December 8, 1999 / Rules and Regulations. P. 68845.

<sup>131</sup> San Diego County Copermittees, 2005. Report of Waste Discharge. P. D-16.

<sup>132</sup> California Stormwater Quality Association, 2003. Stormwater Best Management Practice Handbook – New Development and Redevelopment. P. M-52.

**Section D.1.f** (BMP Verification) helps ensure that BMPs constructed at new development sites are consistent with proposed and approved design plans. Correct construction of BMPs is necessary to ensure that the BMPs are effective and that pollutants discharged from new development projects are reduced to the maximum extent practicable and do not cause or contribute to violations of water quality standards. This permit section is needed because it has been found that BMPs frequently are not constructed in the field as they were proposed by applicants and/or approved by Copermittees. Four of the ten Copermittees audited during the SUSMP audits were found to have projects within their jurisdictions with incorrectly constructed BMPs. It was recommended that Copermittees ensure “that the SUSMP BMPs are properly installed in the field. This includes verifying factors such as the location, sizing, and type of BMPs installed.”<sup>133</sup> Also recommended is that “Copermittees should ensure that the BMP design details in SUSMP reports are translated to the engineering plan sheets used in the field.”<sup>134</sup> In addition, USEPA recommends such practices in the Phase II storm water regulations, promoting “inspections during construction to verify BMPs are built as designed.”<sup>135</sup>

**Section D.1.g** (Hydromodification) addresses the changes in a watershed’s runoff characteristics resulting from development, together with associated morphological changes to channels receiving the runoff. These changes are termed hydromodification. As the total area of impervious surfaces increases in previously undeveloped areas, infiltration of rainfall decreases, causing more water to run off the surface at a higher rate. Runoff from developed areas can produce erosive flows in channels under rainfall conditions where previously they did not exist. Moreover, runoff from developed areas increases the duration of time that channels are exposed to erosive flows. The increase in the volume of runoff and the length of time that erosive flows occur ultimately intensify sediment transport, causing changes in sediment transport characteristics and the hydraulic geometry (width, depth, slope) of channels.<sup>136</sup>

These types of changes have been documented in southern California. It has been reported that researchers studying flood frequencies in Riverside County have found that increases in watershed imperviousness of only 9-22% can result in increases in peak flow rates for the two-year storm event of up to 100%.<sup>137</sup> Such changes in runoff have significant impacts on channel morphology. It has recently been found that ephemeral/intermittent channels in southern California appear to be more sensitive to changes in imperviousness than channels in other areas. Morphology of small channels in southern California was found to change with only 2-3% watershed imperviousness, as opposed to 7-10% watershed imperviousness in other parts of the nation.<sup>138</sup>

Stream channels typically respond to increased runoff rates and durations by increasing their cross-sectional area to accommodate the higher flows. This is done through widening of the channel banks, down-cutting of the channel bed, or both. This channel instability results in streambank erosion and habitat degradation, which is a significant impact to beneficial uses. Channel instability causes impacts to beneficial uses through sedimentation, loss of overhead

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<sup>133</sup> Tetra Tech, Inc., 2005. Program Evaluation Report –San Diego Standard Urban Storm Water Mitigation Plan (SUSMP) Evaluation. P. 6.

<sup>134</sup> Ibid.

<sup>135</sup> Federal Register / Vol. 64, No. 235 / Wednesday, December 8, 1999 / Rules and Regulations. P. 68845.

<sup>136</sup> Santa Clara Valley Urban Runoff Pollution Prevention Program, 2005. Hydromodification Management Plan. P. 1-1.

<sup>137</sup> Schueler and Holland, 2000. Storm Water Strategies for Arid and Semi-Arid Watersheds (Article 66). The Practice of Watershed Protection.

<sup>138</sup> Coleman, et. al., 2005. Effect of Increases in Peak Flows and Imperviousness on the Morphology of Southern California Streams. P. iv.

cover, and loss of instream habitat structures, such as the loss of pool and riffle sequences.<sup>139</sup> Numerous studies have exhibited the link between urbanization, poor habitat quality, and impaired beneficial uses such as reduced insect and fish diversity.<sup>140</sup> These findings are also supported by the Copermittees' bioassessment data, which typically exhibits Poor to Very Poor Index of Biotic Integrity ratings for San Diego County channels, even though toxicity is frequently not found to be persistent.<sup>141</sup>

This section of the Order expands the requirements for control of hydromodification caused by changes in runoff resulting from development and urbanization. Expansion of these requirements is needed due to the current lack of a clear standard for controlling hydromodification resulting from development. While the Model SUSMP developed by the Copermittees requires project proponents to control hydromodification, it provides no standard or performance criteria for how this is to be achieved. Without any kind of clear standard or criteria, what must be done to prevent hydromodification is not known by project proponents and plan reviewers. As a result, project proponents do not know what to propose (if anything) and Copermittee review staff do not know what to require. Ultimately, Priority Development Projects implement few measures which can be expected to adequately control hydromodification. In any event, it is clear that Priority Development Projects in San Diego County are not implementing the type of measures which have been identified and required in other parts of California as necessary to prevent hydromodification.

To address this situation, this section of the Order requires the development and implementation of a Hydromodification Management Plan and outlines a process for the development and implementation of a standard and criteria to limit hydromodification of downstream channels. The required process is based on processes currently being developed and/or used in the San Francisco Bay Area and Los Angeles and Ventura Counties.<sup>142</sup> It also corresponds with the planned second phase of the Southern California Stormwater Monitoring Coalition's Hydromodification Control Study, which is expected to develop a regional stream classification system, a numerical model to predict the hydrological changes resulting from development, and to identify effective mitigation strategies.

A detailed example of a process that can be used to develop a standard and criteria for control of hydromodification resulting from new development can be found in the Santa Clara Valley Urban Runoff Pollution Prevention Hydromodification Management Plan.<sup>143</sup> It involves developing ratios of work done on representative channel segments by runoff, where work done to a channel segment under pre-urban conditions is compared to work done under existing conditions. The calculated ratio is called the Erosion Potential (Ep) of the channel segment.<sup>144</sup> The Ep ratios for particular channel segments are then compared to field classified erosion conditions (such as stable/low or medium/high level of erosion). This comparison is used to identify an Ep ratio that has a low risk of resulting in an unstable channel or a channel with a medium/high level of

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<sup>139</sup> Schueler and Holland, 2000. The Importance of Imperviousness (Article 1). The Practice of Watershed Protection.

<sup>140</sup> Ibid.

<sup>141</sup> County of San Diego, 2005. San Diego County Municipal Copermittees 2003-2004 Urban Runoff Monitoring Final Report. By MEC Analytical Systems – Weston Solutions, Inc. Index of Biotic Integrity ratings give an absolute value to the benthic community quality based on the range of reference conditions in the region. The Index of Biotic Integrity ratings can be used to evaluate community conditions over time to monitor the effects of habitat degradation or the success of restoration efforts.

<sup>142</sup> See <http://www.cccleanwater.org/construction/nd.php> or <http://www.scvurppp.org/> under "C.3 Submittals" for examples of a Hydromodification Management Plans.

<sup>143</sup> Santa Clara Valley Urban Runoff Pollution Prevention Program, 2005. Hydromodification Management Plan. P. 3-1 – 3-20.

<sup>144</sup> Ep is discussed in detail in the definitions section of the Permit.

erosion. Generally, an Ep of approximately 1, where work done hydraulically on a channel matches a baseline condition, will have a low risk of causing stream instability.

Once an Ep ratio that will result in stable channels is determined, it is used as a standard upon which to base development of runoff flow rate and duration criteria. Stream channel erosion is caused by increases in runoff flow rates and durations for the small and moderate magnitude runoff flows above the threshold for sediment transport and channel bank erosion.<sup>145</sup> Runoff flow rate and duration criteria identify the range of storms for which flow rates and durations must be controlled to pre-project conditions in order to meet the Ep standard. This involves identifying the critical flow that produces the critical shear stress that initiates bed movement or that erodes the toe of channel banks, and then relating the critical flow to a percentage of the 2-year peak flow, which serves as the lower bound of the range of storm events which must be controlled. The upper bound of the range of storm events is based on the storm event where significant post-project increases in the total work done on the channel do not occur.

Due to the ongoing high level of development in San Diego County, this section of the Order also contains an interim hydromodification standard for large Priority Development Projects. Without an interim hydromodification standard, major Priority Development Projects will be developed without hydromodification controls, resulting in impacts to relatively stable streams with good habitat quality. Examples of areas that can be expected to be developed in the near future include the Otay Valley Hydrologic Area and the Bonsall Hydrologic Subarea.

Priority Development Projects over 50 acres in size are required to meet the interim criteria because large projects have a greater potential to impact streams through hydromodification. Larger projects create more impervious surface, increasing runoff flow rates and durations to a greater extent, resulting in greater potential for hydromodification of receiving channels. The 50 acre size limit was chosen based on high priority status placed on construction sites larger than 50 acres. Applying an interim criteria to projects over 50 acres in size is manageable for Copermittees because of the relative infrequency of development projects larger than 50 acres. Approximately 88% of the construction sites with coverage under the statewide General Construction Storm Water Permit are smaller than 50 acres in size. Moreover, since larger Priority Development Projects typically have greater resources, they have the capability to conduct the necessary analyses and implement measures to maintain the morphology of receiving channels. For example, such analysis (together with proposed implementation of flow rate and duration controls) has been conducted for the Rancho Mission Viejo project in southern Orange County.<sup>146</sup>

The Copermittees' ROWD essentially proposes a continuation of the current process for addressing hydromodification. As with the existing process, it is proposed that the project proponent will somehow demonstrate that the Priority Development Project will not impact downstream erosion or stream habitat. However, as discussed above, without a standard or specific criteria for how this will be done, neither the project proponent or a Copermittee's project review staff will know what needs to be implemented. Without specific standards or criteria, effective measures cannot be expected to be implemented to control hydromodification. For this reason, this section contains requirements that specific standards and criteria to control hydromodification be developed.

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<sup>145</sup> Santa Clara Valley Urban Runoff Pollution Prevention Program, 2005. Hydromodification Management Plan. P. 5-1.

<sup>146</sup> County of Orange, 2004. The Ranch Plan Draft Environmental Impact No. 589. Section 4.5.

**Section D.1.h** (Enforcement of Development Sites) ensures that the Copermittees will use enforcement to pursue corrections of noted violations at development sites. The section is being added to the Development Planning to complement the requirements for inspections of post-construction BMPs and BMP maintenance. Where ineffective BMP implementation or inadequate BMP maintenance is noted during inspections, Copermittees must take effective enforcement actions that ensure violations are corrected and pollutants are reduced to the maximum extent practicable. USEPA recommends the development of ordinances and the use of enforcement procedures to address post-construction storm water management issues in the Phase II storm water regulations.<sup>147</sup>

## **D. 2. Construction**

The following legal authority applies to section D.2:

**Broad Legal Authority:** CWA sections 402(p)(3)(B)(ii-iii), CWC section 13377, and Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(B, C, E, and F) and 40 CFR 122.26(d)(2)(iv).

**Specific Legal Authority:** Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(D) provides that the proposed management program include “A description of a program to implement and maintain structural and non-structural best management practices to reduce pollutants in storm water runoff from construction sites to the municipal storm sewer system.”

Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(D)(1) provides that the proposed management program include “A description of procedures for site planning which incorporate consideration of potential water quality impacts.”

Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(D)(2) provides that the proposed management program include “A description of requirements for nonstructural and structural best management practices.”

Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(D)(3) provides that the proposed management program include “A description of procedures for identifying priorities for inspecting sites and enforcing control measures which consider the nature of the construction activity, topography, and the characteristics of soils and receiving water quality.”

Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(D)(4) provides that the proposed management program include “A description of appropriate educational and training measures for construction site operators.”

Federal NPDES regulation 40 CFR 122.26(d)(2)(i)(A) provides that each Copermittee must demonstrate that it can control “through ordinance, permit, contract, order or similar means, the contribution of pollutants to the municipal storm sewer by storm water discharges associated with industrial activity and the quality of storm water discharged from site of industrial activity.”

Federal NPDES regulation 40 CFR 122.26(b)(14) provides that “The following categories of facilities are considered to be engaging in ‘industrial activity’ for the purposes of this subsection: [...] (x) Construction activity including cleaning, grading and excavation activities [...]”

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<sup>147</sup> Federal Register / Vol. 64, No. 235 / Wednesday, December 8, 1999 / Rules and Regulations. P. 68845.

Federal NPDES regulation 40 CFR 122.44(d)(1)(i) requires NPDES permits to include limitations to “control all pollutants or pollutant parameters (either conventional, nonconventional, or toxic pollutants) which the Director determines are or may be discharged at a level which will cause, have reasonable potential to cause, or contribute to an excursion above any State water quality standard, including State narrative criteria for water quality.”

**Section D.2.a** (Ordinance Update and Approval Process) requires each Copermittee to review and update its grading and storm water ordinances as necessary to comply with the MS4 permit. By updating the grading and storm water ordinances, the Copermittees will have the necessary legal authority to require construction sites to implement effective BMPs that will reduce pollutant discharges to the maximum extent practicable. The Order allows the Copermittees 365 days to review and update their ordinances. The 365 days should be more than adequate to allow for the relatively minor changes that might be needed since their ordinances were last updated under Order No. 2001-01.

This section now requires the Copermittees to review project proponents’ storm water management plans for compliance with local regulations, policies, and procedures. USEPA recommends that it is often easier and more effective to incorporate storm water quality controls during the site plan review process or earlier.<sup>148</sup> In the Phase I storm water regulations, USEPA states that a primary control technique is good site planning.<sup>149</sup> USEPA goes on to say that the most efficient controls result when a comprehensive storm water management system is in place.<sup>150</sup> To determine if a construction site is in compliance with construction and grading ordinances and permits, USEPA states that the “MS4 operator should review the site plans submitted by the construction site operator before ground is broken.”<sup>151</sup> Site plan review aids in compliance and enforcement efforts since it alerts the “MS4 operator early in the process to the planned use or non-use of proper BMPs and provides a way to track new construction activities.”<sup>152</sup> During audits of San Diego Copermittee storm water programs, it was found on two separate occasions that site plan and SWPPP review were inadequate and inconsistent.<sup>153</sup>

**Section D.2.b** (Source Identification) requires the Copermittees to develop and update a watershed based inventory of all construction sites regardless of size or ownership. This section has been modified to require at least monthly updates of construction site inventories to ensure the Copermittees have a more accurate inventory of construction sites within their jurisdiction. A regularly updated inventory of active construction sites will assist the Copermittees in ensuring that all sites are inspected per Order requirements. In the ROWD, the Copermittees provide support for more regular updates by stating “Any inventory...is likely to change significantly within weeks or even days.”<sup>154</sup> Reporting of the inventory to the Regional Board would remain on an annual basis in the Jurisdictional Urban Runoff Management Program Annual Report.

**Section D.2.c** (BMP Implementation) includes modifications to the requirements for each Copermittee to designate and ensure implementation of a set of minimum BMPs at construction sites. These modifications are based on Regional Board findings and experience during implementation of Order No. 2001-01. During audits of the Copermittees’ storm water programs,

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<sup>148</sup> USEPA, 1992. Guidance 833-8-92-002. Section 6.3.2.1.

<sup>149</sup> Federal Register / Vol. 55, No. 222 / Friday, November 16, 1990 / Rules and Regulations. P. 48034.

<sup>150</sup> Ibid.

<sup>151</sup> USEPA, 2000. Guidance 833-R-00-002. Section 4.6.2.4, P. 4-30.

<sup>152</sup> Ibid., P. 4-31.

<sup>153</sup> Tetra Tech, Inc., 2002. Program Evaluation Report – San Diego Area Storm Water Programs – El Cajon. P. 15; and Tetra Tech, 2005. Program Evaluation Report – San Diego Area Storm Water Programs – Port of San Diego. P. 15.

<sup>154</sup> San Diego County Copermittees, 2005. Report of Waste Discharge. P. D-23.

BMP implementation at construction sites was found to be second only to education in the number of deficiencies and potential permit violations. Eleven cities had deficiencies or potential permit violations, with the most common being that BMPs were not adequately implemented at construction sites and that the Copermittees' standards were not up to date. Both private and public construction sites were found to have inadequately implemented BMPs.<sup>155</sup> In addition, the only civil liability assessed on a municipality for violations of an MS4 permit under the previous municipal permit, Order No. 2001-01, was based in part on a Copermittee's failure to adequately implement or require implementation of BMPs at a construction site.<sup>156</sup>

This section describes the types of BMPs that are required to be implemented at construction sites. Many of these BMPs are found in Order No. 2001-01.<sup>157</sup> Differences in the BMP requirements from Order No. 2001-01 include: Removal of site priority specific BMP designations; removal of seasonal restrictions on grading; more specificity on slope stabilization; more specificity on phased grading; and the addition of advanced treatment requirements. Since pollution prevention methods are considered a BMP, the pollution prevention requirements have been moved to the BMP implementation section.

Unlike Order No. 2001-01, this Order does not require the Copermittee to designate a set of minimum BMPs for high, medium, and low threat to water quality construction sites. This change was made in recognition of most Copermittees' application of one consistent set of BMPs throughout their jurisdictions.

The Order's requirements for seasonal restrictions on grading have been changed. Seasonal restrictions on grading for storm water are difficult to implement due to the conflict between seasonal grading restrictions and endangered bird's breeding seasons; therefore the seasonal grading restrictions have not been included with the other BMPs in the Order. Found in southern California, the Least Bell's Vireo and the Coastal California Gnatcatcher are listed as federally endangered and threatened, respectively.<sup>158</sup> Permits issued by the California Department of Fish and Game (CDFG) restrict grading during these birds' breeding seasons, which is from April 10 to August 31 for the Least Bell's Vireo<sup>159</sup> and from February 15 to August 31 for the Coastal California Gnatcatcher.<sup>160</sup> Ideally storm water restrictions on grading would be during the wet season from October 1 through April 30.<sup>161</sup> Combined these restrictions would limit construction grading to be during the month of September, which is infeasible. Section D.2.c of the Order still requires "project proponents to minimize grading during the wet season and coincide grading with seasonal dry weather periods to the extent feasible. If grading does occur during the wet season, require project proponent to implement additional BMPs for any rain events which may occur."

**Sections D.2.c.(1)(e-f)** of the Order require slope stabilization on all active and inactive slopes during rain events regardless of the season, except in areas implementing advanced treatment. Slope stabilization is also required on inactive slopes throughout the rainy season. These

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<sup>155</sup> Tetra Tech, Inc., various. Program Evaluation Reports San Diego Area Storm Water Programs.

<sup>156</sup> Regional Board, 2005. Order No. R9-2005-0237. Administrative Assessment of Civil Liability against JRMC Realty, Inc. and the City of Escondido. P. 3.

<sup>157</sup> Regional Board, 2001. Order No. 2001-01, San Diego County MS4 Permit. P. 22.

<sup>158</sup> State of California, Department of Fish and Game, 2005. State and Federally Listed Endangered and Threatened Animals of California.

<sup>159</sup> United States Department of the Interior, Fish and Wildlife Service, 2001. Least Bell's Vireo Survey Guidelines.

<sup>160</sup> United States Department of the Interior, Fish and Wildlife Service, 1997. Coastal California Gnatcatcher (*Poliptila californica californica*) Presence/Absence Survey Guidelines.

<sup>161</sup> Regional Board, 2001. Order No. 2001-01, San Diego County MS4 Permit. Directive F.2.g.(2).

requirements are needed because un-stabilized slopes at construction sites are significant sources of erosion and sediment discharges during rainstorms. “Steep slopes are the most highly erodible surface of a construction site, and require special attention.”<sup>162</sup> USEPA exhibits the importance of slope stabilization when it states that “slope length and steepness are key influences on both the volume and velocity of surface runoff. Long slopes deliver more runoff to the base of slopes and steep slopes increase runoff velocity; both conditions enhance the potential for erosion to occur.”<sup>163</sup> In lieu of vegetation preservation or replanting, soil stabilization is the most effective measure in preventing erosion on slopes. Research has shown that effective soil stabilization can reduce sediment discharge concentrations up to six times, as compared to soils without stabilization.<sup>164</sup> In their ROWD,<sup>165</sup> the Copermittees propose that standardized requirements for slope stabilization be developed after Permit adoption, due to the unique differences between the Copermittees’ programs and the “need to develop consensus.” However, slope stabilization at construction sites is already the consensus among the regulatory community and is found throughout construction BMP manuals and permits. For these reasons, slope stabilization requirements have been added to the Order, while providing sufficient flexibility for each Copermittee’s unique storm water program.

**Sections D.2.c.(1)(g-j)** of the Order provide more specificity regarding phased grading requirements, prescribing that phased grading be implemented utilizing a maximum disturbed area, as determined by the Copermittees. This specificity has been added to the Order because of the importance of phased grading in controlling sediment from leaving construction sites. Phased grading minimizes the disturbed area and the time that the soil is exposed to erosive conditions.<sup>166</sup> USEPA provides guidance stating “construction should be planned to occur in phases in order to minimize the amount of disturbed land exposed at any one time, thus limiting the overall erosion potential of the site.”<sup>167</sup> It is important to note that phased grading does not limit the overall development of a project. Moreover, phased grading should not be confused with seasonal restrictions on grading that were addressed above.

The Copermittees are required to designate a maximum disturbed area to be open at any one time. The Order prescribes that construction projects within the Copermittees’ jurisdiction are not allowed to expose more soil than the maximum disturbed area, unless authorized to do so in writing by the Copermittee. Prior to the Copermittee’s authorization to exceed the maximum disturbed area, the construction site must be in compliance with applicable storm water regulations and have adequate control practices implemented to prevent storm water pollution. The Copermittee’s authorization gives the construction industry the flexibility needed to conduct business while continuing to protect water quality. This permit requirement is not unprecedented. The Caltrans construction standard specifications states that no more than 17 acres be exposed unless otherwise approved by their engineer in writing.<sup>168</sup> If needed, local Caltrans districts can

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<sup>162</sup> Schueler, T. and Holland, H., 2000. “Muddy Water In – Muddy Water Out?” The Practice of Watershed Protection. P. 6.

<sup>163</sup> USEPA, 1990. “Sediment and Erosion Control: An Inventory of Current Practices.” P. II-1.

<sup>164</sup> Schueler, T. and Holland, H., 2000. “Muddy Water In – Muddy Water Out?” The Practice of Watershed Protection. P. 5.

<sup>165</sup> San Diego County Copermittees, 2005. Report of Waste Discharge. P. D-27.

<sup>166</sup> Schueler, T. and Holland, H., 2000. “Muddy Water In – Muddy Water Out?” The Practice of Watershed Protection. P. 5.

<sup>167</sup> USEPA, 1990. “Sediment and Erosion Control: An Inventory of Current Practices.” P. III-1.

<sup>168</sup> State of California, Department of Transportation, 2002. “Standard Specifications for Construction of Local Streets and Roads.” Section 7-1.01G; P. 52.

decrease the maximum disturbed soil area to 5 acres during the rainy season.<sup>169</sup> In the Order, the Copermittee determines the maximum disturbed acreage size.

In the ROWD,<sup>170</sup> the Copermittees report that because their programs are unique, more time is needed on phased grading to develop consensus and to further dialogue. They speculate that the phased grading requirements will need consultation with the construction community, California Department of Fish and Game, United States Fish and Wildlife Service, and the Army Corps of Engineers. The Copermittees propose that they develop phased grading requirements after adoption of the Order. However, phased grading was a requirement in Order No. 2001-01.<sup>171</sup> In the five years since the adoption of Order No. 2001-01, the Copermittees did not develop a consensus on phased grading requirements. Even though previously required, the Regional Board inspectors have never observed phased grading implemented within the jurisdictions of the Copermittees. The lack of Copermittee action on phased grading during the past Permit cycles has necessitated the adoption of more specific enforceable requirements on phased grading. Caltrans and its private contractors from the construction community have implemented phased grading on construction projects since 2000 with no issues raised by the construction community or resource agencies. The ability of the Copermittee to increase the size of the maximum disturbed area for a given site will enable the construction site to feasibly grade while maintaining compliance with other environmental permits.

**Section D.2.c.(1)(k)** of the Order requires the implementation of advanced treatment for sediment at construction sites that the Copermittees or the Regional Board determines to be a significant threat to water quality. In evaluating the threat to water quality, the following factors shall be considered: (1) soil erosion potential; (2) the site's slopes; (3) project size and type; (4) sensitivity of receiving water bodies; (5) proximity to receiving water bodies; (6) non-storm water discharges; and (7) any other relevant factors. Advanced treatment is defined in the Order as "using mechanical or chemical means to flocculate and remove suspended sediment from runoff from construction sites prior to discharge." Advanced treatment consists of a three part treatment train of coagulation, sedimentation, and polishing filtration.

Advanced treatment has been effectively implemented extensively in the other states and in the Central Valley Region of California.<sup>172</sup> In addition, the Regional Board's inspectors have observed advanced treatment being effectively implemented at large sites greater than 100 acres and at small, 5 acre, infill sites. Advanced treatment is often necessary for Copermittees to ensure that discharges from construction sites are not causing or contributing to a violation of water quality standards. For example, the Basin Plan lists the water quality objective for turbidity as 20 NTU for all hydrologic areas and subareas except for the Coronado HA (10.10) and the Tijuana Valley (11.10). For certain construction sites with large slopes and exposed areas, the only technology that is likely to meet 20 NTU is advanced treatment combined with erosion and sediment controls. To ensure the MEP standard and water quality standards are met, the requirement for implementation of advanced treatment at high threat construction sites has been added to the Order, while still providing sufficient flexibility for each Copermittee's unique program.

**Sections D.2.c.(1)(l-m)** of the Order require the revegetation of a construction site as early as feasible. The Order includes revegetation requirements in the BMP implementation section,

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<sup>169</sup> Caltrans Storm Water Quality Handbooks, 2000. "Construction Site Best Management Practices Manual." Section 2.2.4.1.

<sup>170</sup> San Diego County Copermittees, 2005. Report of Waste Discharge. P. D-27.

<sup>171</sup> Regional Board, 2001. Order No. 2001-01, San Diego County MS4 Permit. Directive F.2.b.(4); P. 22.

<sup>172</sup> SWRCB, 2004. Conference on Advanced Treatment at Construction Sites.

while Order No. 2001-01 required revegetation as part of the grading ordinance update. Implementation of revegetation reduces the threat of polluted storm water discharges from construction sites. For example, it has been found that construction sites should permanently stabilize disturbed soils with vegetation at the conclusion of each phase of construction.<sup>173</sup> A survey of grading and clearing programs found one-third of the programs without a time limit for permanent revegetation, “thereby increasing the chances for soil erosion to occur.”<sup>174</sup> USEPA states “the establishment and maintenance of vegetation are the most important factors to minimizing erosion during development.”<sup>175</sup> With the construction site being responsible for revegetation, the Copermittee will be more likely to enforce revegetation requirements during oversight of construction site requirements.

**Section D.2.c.(2)** of the Order requires that dry season BMP implementation must include planning for and addressing rain events that may occur during the dry season. This requirements was added to the Order to emphasize that, although rare, thunderstorms do occur in inland areas of the San Diego Region during the dry season.

**Section D.2.d** (Inspection of Construction Sites) prescribes a minimum inspection frequency for construction sites. Where Order No. 2001-01 required weekly inspections of high priority sites and monthly inspections of medium and low priority sites during the wet season, this Order prescribes biweekly inspections during the wet season of high priority sites, monthly inspections for medium priority sites, and as needed inspections for low priority sites. High priority sites are identified as all sites greater than 50 acres, or greater than 1 acre and tributary to a CWA Section 303(d) water body impaired for sediment or discharging directly to a ESA. Medium priority sites are all sites causing soil disturbance of one acre or more that are not a high priority. The proposed changes to the Order allow the Copermittees to concentrate more effort on sites that are less than 50 acres, but still have significant disturbed areas. The reduction in inspection frequency for sites greater than 50 acres is justified because the sites have generally improved their erosion and sediment control measures since adoption of Order No. 2001-01. Biweekly inspections of these sites in the future should be sufficient to ensure compliance at these sites.

The Order omits Order No. 2001-01’s provision allowing a Copermittee to decrease the inspection frequency for high priority sites if the Copermittee certifies in writing to the Regional Board that they have recorded the site’s Waste Discharge Identification Number, reviewed the site’s Storm Water Pollution Prevention Plan (SWPPP), assured the site’s SWPPP is in compliance, and assured the SWPPP is properly implemented at the site. Under Order No. 2001-01, the Regional Board never received from any of the Copermittees a certification to decrease the inspection frequency at high priority sites. Since the certification process was never used, the language has been deleted from the Order.

In their ROWD,<sup>176</sup> the Copermittees recommend that the use of weather triggered action plans be used in place of minimum inspection frequencies at construction sites during the month of October. The Copermittees’ proposal is not to be confused with using weather triggered action plans to implement BMPs; rather the plan would be used during October by Copermittees to conduct inspections. The Order does not include this measure because historical rainfall data shows that San Diego received significant rainfall during October in 2005, 2004, and 2000.<sup>177</sup>

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<sup>173</sup> Schueler, T. and Holland, H., 2000. “Muddy Water In – Muddy Water Out?” The Practice of Watershed Protection. P. 5.

<sup>174</sup> Ibid.; P.11.

<sup>175</sup> USEPA, 1990. “Sediment and Erosion Control: An Inventory of Current Practices”, P. II-1

<sup>176</sup> San Diego County Copermittees, 2005. Report of Waste Discharge. P. D-27.

<sup>177</sup> National Weather Service, Surface Observations at Lindbergh field; [www.wrh.noaa.gov/sgx/obs/rtp/linber.html](http://www.wrh.noaa.gov/sgx/obs/rtp/linber.html)

Moreover, based upon Regional Board inspections, construction sites rarely have been found to have fully implemented their SWPPP by October 1 in anticipation of the rainy season. During those years that rainfall does not occur during October, Copermittees' biweekly inspections during October can ensure that construction sites are implementing and preparing for the eventual rains. Like dry weather inspections, these inspections can also identify sources of non-storm water pollution and discharges.

This section also requires the Copermittees to track the number of inspections for each inventoried construction site. This requirement has been added to ensure that the Copermittees can demonstrate that construction sites are inspected at the minimum frequencies.

**Section D.2.e** (Enforcement of Construction Sites) requires each Copermittee to develop and implement an escalating enforcement process that achieves prompt and effective corrective actions at all construction sites for violations of the Copermittee's requirements and ordinances. Each Copermittee develops their own unique enforcement procedure tailored for their specific jurisdiction. This requirement is similar to Order No. 2001-01, except that enforcement procedures are required to be escalating and enforcement sanctions are required to be implemented in a prompt and effective manner.

Under Order No. 2001-01, inspections conducted by the Regional Board noted deficiencies in the Copermittees' enforcement procedures and implementation. The most common issues found were that enforcement was not firm and appropriate to correct the violation, and that repeat violations did not result in escalated enforcement procedures. Moreover, in the municipal audit reports, deficiencies and potential permit violations were found in Copermittee's enforcement programs.<sup>178</sup> USEPA supports enforcement of ordinances and permits at construction sites stating "Effective inspection and enforcement requires [...] penalties to deter infractions and intervention by the municipal authority to correct violations."<sup>179</sup> In addition, USEPA expects permits issued to municipalities to address "weak inspection and enforcement."<sup>180</sup> For these reasons, the enforcement requirements in this section have been modified, while providing sufficient flexibility for each Copermittee's unique storm water program.

In their ROWD, the Copermittees strongly oppose "the revision of Permit requirements for the purpose of standardizing processes that are necessarily unique to individual jurisdictions."<sup>181</sup> However, the Order does not require that Copermittees standardize enforcement procedures to be the same among all the Copermittees, but requires that each Copermittee will consistently implement their unique enforcement procedures at construction sites within their jurisdiction.

The Order requires that inspectors have the authority to conduct immediate enforcement actions when appropriate. Inspectors conducting immediate enforcement will quickly implement corrections to violations, thereby minimizing and preventing threats to water quality. When inspectors are unable to conduct immediate enforcement actions, the threat to water quality continues until an enforcement incentive is issued to correct the violation. In the municipal audits, storm water inspectors for several municipalities were found to lack the necessary

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<sup>178</sup> Tetra Tech, Inc., 2002-05, Program Evaluation Reports – San Diego Area Storm Water Programs – July 23, 2002, Chula Vista P. 11, El Cajon P. 15; April 8, 2003, Oceanside P. 16; December 17, 2003, San Marcos P.20, Vista P.26; June 11, 2004, Poway P. 12, Santee, P. 15; January 31, 2005, Del Mar P.9, Solana Beach, P.12.

<sup>179</sup> USEPA, 1992. Guidance 833-8-92-002. Section 6.3.2.3.

<sup>180</sup> Federal Register / Vol. 55, No. 222 / Friday, November 16, 1990 / Rules and Regulations. P. 48058

<sup>181</sup> San Diego County Copermittees, 2005. Report of Waste Discharge. P. D-28.

enforcement authority.<sup>182</sup> In its Phase II Compliance Assistance Guidance, USEPA says that “Inspections give the MS4 operator an opportunity to provide additional guidance and education, issue warnings, or assess penalties.”<sup>183</sup> In order to issue warnings and assess penalties during inspections, inspectors need to have the legal authority to conduct enforcement.

### **D.3. Existing Development**

#### **D.3.a Municipal**

The following legal authority applies to section D.3.a:

**Broad Legal Authority:** CWA sections 402(p)(3)(B)(ii-iii), CWC section 13377, and Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(B, C, E, and F) and 40 CFR 122.26(d)(2)(iv).

**Specific Legal Authority:** Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(A)(1) provides that the proposed management program include “A description of maintenance activities and a maintenance schedule for structural controls to reduce pollutants (including floatables) in discharges from municipal separate storm sewers.”

Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(A)(3) provides that the proposed management program include “A description for operating and maintaining public streets, roads and highways and procedures for reducing the impact on receiving waters of discharges from municipal storm sewer systems, including pollutants discharged as a result of deicing activities.”

Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(A)(4) provides that the proposed management program include “A description of procedures to assure that flood management projects assess the impacts on the water quality of receiving water bodies and that existing structural flood control devices have been evaluated to determine if retrofitting the device to provide additional pollutant removal from storm water is feasible.”

Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(A)(5) provides that the proposed management program include “A description of a program to monitor pollutants in runoff from operating or closed municipal landfills or other treatment, storage or disposal facilities for municipal waste, which shall identify priorities and procedures for inspections and establishing and implementing control measures for such discharges.”

Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(A)(6) provides that the proposed management program include “A description of a program to reduce to the maximum extent practicable, pollutants in discharges from municipal separate storm sewers associated with the application of pesticides, herbicides, and fertilizer which will include, as appropriate, controls such as educational activities, permits, certifications, and other measures for commercial applicators and distributors, and controls for application in public right-of-ways and at municipal facilities.”

Federal NPDES regulation 40 CFR 122.44(d)(1)(i) requires NPDES permits to include limitations to “control all pollutants or pollutant parameters (either conventional, nonconventional, or toxic pollutants) which the Director determines are or may be discharged at a

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<sup>182</sup> Tetra Tech, Inc., 2003-05. Program Evaluation Reports – San Diego Area Storm Water Programs –April 8, 2003, Oceanside P. 16; June 11, 2004, Poway P. 12, Santee, P. 15; January 31, 2005, Solana Beach, P.12.

<sup>183</sup> USEPA, 2000. 833-R-00-002, Storm Water Phase II Compliance Assistance Guide, P.4-31

level which will cause, have reasonable potential to cause, or contribute to an excursion above any State water quality standard, including State narrative criteria for water quality.”

**Section D.3.a.(2)** (BMP Implementation) requires the Copermittees to designate minimum BMPs for all municipal areas and activities, regardless of their threat to water quality. The requirement that different types of BMPs be designated for different threat to water quality categories of municipal areas and activities has been removed from the Order to help simplify and clarify the Order’s requirements. BMPs required to be implemented at a site can now be based on the sources or activities present at the site. This more closely matches the approach taken by the Copermittees in their JURMPs. Threat to water quality is used to determine inspection frequencies in section D.3.a.(7).

**Section D.3.a.(3)** (Operation and Maintenance of MS4 and Structural Controls) requires the Copermittees to inspect and remove waste from their MS4s prior to the rainy season. Additional wording has been added to clarify the intent of the requirements. The Copermittees will be required to inspect all storm drain inlets and catch basins. This change will assist the Copermittees in determining which basins/inlets need to be cleaned and at what priority. Removal of trash has been identified by the Copermittees as a priority issue in their long-term effectiveness assessment. To address this issue, wording has been added to require the Copermittees, at a minimum, inspect and remove trash from all their open channels at least once a year.

**Section D.3.a.(5)** (Sweeping of Municipal Areas) requires the Copermittees to implement a program to sweep all municipal roads, streets, highways, and parking facilities. This section has been added to ensure that the Copermittees are implementing this effective BMP at all appropriate areas. The reporting requirements of the Order have also be modified to ensure that the Copermittees consistently report their sweeping and pollutant removal activities.

**Section D.3.a.(6)** (Limit Infiltration From Sanitary Sewer to MS4/Provide Preventive Maintenance of Both) requires the Copermittees to implement controls and measures to limit infiltration of seepage from municipal sanitary sewers to MS4s through thorough, routine preventive maintenance of the MS4. In their ROWD, the Copermittees requested this section be removed from the Illicit Discharge Detection and Elimination Component and added to the Municipal Component since it is a municipal activity. We agree and have moved the section to the municipal component of the Order.

**Section D.3.a.(7)** (Inspection of Municipal Areas and Activities) establishes a minimum set of municipal areas and activities for oversight and inspection by the Copermittees. In their ROWD, the Copermittees stated that some high priority areas on the list are not present in San Diego County. In response to this comment, incinerators, uncontrolled sanitary landfills, sites for disposing and treating sewage sludge, and hazardous waste treatment, disposal, and recovery facilities have been removed as high priority municipal areas. Household hazardous waste collection facilities and parks/recreation facilities have been identified by the Copermittees as municipal areas in their JURMPs and therefore have been added to the high priority list.

### **D.3.b. Industrial and Commercial**

The following legal authority applies to section D.3.b:

**Broad Legal Authority:** CWA sections 402(p)(3)(B)(ii-iii), CWC section 13377, and Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(B, C, E, and F) and 40 CFR 122.26(d)(2)(iv).

**Specific Legal Authority:** Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(C) provides that the proposed management program include “A description of a program to monitor and control pollutants in storm water discharges to municipal systems from municipal landfills, hazardous waste treatment, disposal and recovery facilities, industrial facilities that are subject to section 313 of title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA), and industrial facilities that the municipal permit applicant determines are contributing a substantial pollutant loading to the municipal storm sewer system.”

Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(C)(1) provides that the Copermittee must “identify priorities and procedures for inspections and establishing and implementing control measures for such discharges.”

Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(C)(2) provides that the proposed management program shall “Describe a monitoring program for storm water discharges associated with the industrial facilities identified in paragraph (d)(2)(iv)(C) of this section, to be implemented during the term of the permit, including the submission of quantitative data on the following constituents: any pollutants limited in effluent guidelines subcategories, where applicable; any pollutant listed in an existing NPDES permit for a facility; oil and grease, COD, pH, BOD5, TSS, total phosphorus, total Kjeldhal nitrogen, nitrate plus nitrite nitrogen, and any information on discharges required under 40 CFR 122.21(g)(7)(iii) and (iv).”

Federal NPDES regulation 40 CFR 122.26(d)(2)(ii) provides that the Copermittee “Provide an inventory, organized by watershed of the name and address, and a description (such as SIC codes) which best reflects the principal products or services provided by each facility which may discharge, to the municipal separate storm sewer, storm water associated with industrial activity.”

Federal NPDES regulation 40 CFR 122.44(d)(1)(i) requires NPDES permits to include limitations to “control all pollutants or pollutant parameters (either conventional, nonconventional, or toxic pollutants) which the Director determines are or may be discharged at a level which will cause, have reasonable potential to cause, or contribute to an excursion above any State water quality standard, including State narrative criteria for water quality.”

Federal NPDES regulation 40 CFR 122.26(d)(2)(i)(A) provides that each Copermittee must demonstrate that it can control “through ordinance, permit, contract, order or similar means, the contribution of pollutants to the municipal storm sewer by storm water discharges associated with industrial activity and the quality of storm water discharged from site of industrial activity.”

Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(A) provides that the Copermittee develop a proposed management program which includes “A description of structural and source control measures to reduce pollutants from runoff from commercial and residential areas that are discharged from the municipal storm sewer system that are to be implemented during the life of the permit, accompanied with an estimate of the expected reduction of pollutant loads and a proposed schedule for implementing such controls.”

**Section D.3.b** requires the Copermittees to implement an industrial and commercial program to reduce pollutants in runoff from all industrial and commercial sites/sources. The industrial and commercial sections of Order No. 2001-01 have been combined into one section in this Order. This change will streamline and simplify the Order, without negatively impacting water quality. This change is not unprecedented because industrial and commercial facilities are commonly

addressed together. For example, the Southern Riverside County MS4 Permit<sup>184</sup> combined industrial and commercial programs into one section. In addition, in their ROWD,<sup>185</sup> the Copermittees jointly addressed industrial and commercial components. USEPA contractor Tetra Tech also evaluated and reported on the industrial and commercial programs jointly during their program evaluations.<sup>186</sup>

**Section D.3.b.(1)(a)** (Commercial Sites/Sources) requires that building material retailers and storage, animal facilities, and power washing services be included in the Copermittee's inventory of commercial sites/sources. In their ROWD, the Copermittees state "Two sources that were not identified in the Permit [Order No. 2001-01] as high priorities (animal facilities and pressure washers) were determined to justify close attention due their significant number and their potential to discharge pollutants." The Regional Board agrees with the Copermittees statement in the ROWD; therefore, animal facilities and pressure washers are included in the source identification section. Building material retailers and storage facilities are included because they are potential sources of pollutants to urban runoff. These facilities typically store and vend building materials in the outdoors exposed to storm water without implementing BMPs.

The Order has revised requirements for identifying industrial sites/sources. The revised requirements are identical to those found in the Southern Riverside County MS4 permit.<sup>187</sup> USEPA requires the same identification: "Measures to reduce pollutants in storm water discharges to municipal separate storm sewers from municipal landfills, hazardous waste treatment, disposal and recovery facilities, industrial facilities that are subject to section 313 of title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA)."<sup>188</sup> USEPA "also requires the municipal storm sewer permittee to describe a program to address industrial dischargers that are covered under the municipal storm sewer permit."<sup>189</sup> In order to more closely follow USEPA's guidance, this Order also includes operating and closed landfills, and hazardous waste treatment, disposal, storage and recovery facilities.

The Order continues to require the Copermittees to identify industrial sites and sources subject to the General Industrial Permit or other individual NPDES permit. This requirement is despite the Copermittees' recommendation, "The Permit should be amended to eliminate the requirement to include sites with coverage under the General Industrial Permit, or other permits with storm water requirements, on the list of minimum high priority industrial facilities."<sup>190</sup> USEPA supports the municipalities regulating industrial sites and sources that are already covered by a NPDES permit:

"Municipal operators of large and medium municipal separate storm sewer systems are responsible for obtaining system-wide or area permits for their system's discharges. These permits are expected to require that controls be placed on storm water discharges associated with industrial activity which discharge through the municipal system. It is anticipated that general or individual permits covering industrial storm water discharges to these municipal

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<sup>184</sup> Regional Board, 2004. Order No. R9-2004-001; Riverside County MS4 Permit. Section H.2; P. 24.

<sup>185</sup> San Diego County Copermittees, 2005. Report of Waste Discharge. Section D.5.1, P. D-37.

<sup>186</sup> Tetra Tech, Inc., 2002-05. Program Evaluation Reports – San Diego Area Storm Water Programs; July 23, 2002; December 13, 2002; December 26, 2002; April 8, 2003; December 17, 2003; June 11, 2004; January 31, 2005.

<sup>187</sup> Regional Board, 2004. Order No. R9-2004-001; Riverside County MS4 Permit. Section H.2.b)(2); P. 25.

<sup>188</sup> Federal Register / Vol. 55, No. 222 / Friday, November 16, 1990 / Rules and Regulations. P. 48056.

<sup>189</sup> Ibid.

<sup>190</sup> San Diego County Copermittees, 2005. Report of Waste Discharge. Section D.5.6, P. D-43

separate storm sewer systems will require industries to comply with the terms of the permit issued to the municipality, as well as other terms specific to the permittee.”<sup>191</sup>

And:

“Although today’s rule will require industrial discharges through municipal storm sewers to be covered by separate permit, USEPA still believes that municipal operators of large and medium municipal systems have an important role in source identification and the development of pollutant controls for industries that discharge storm water through municipal separate storm sewer systems is appropriate. Under the CWA, large and medium municipalities are responsible for reducing pollutants in discharges from municipal separate storm sewers to the maximum extent practicable. Because storm water from industrial facilities may be a major contributor of pollutants to municipal separate storm sewer systems, municipalities are obligated to develop controls for storm water discharges associated with industrial activity through their system in their storm water management program.”<sup>192</sup>

The Order’s requirement to inventory those sites subject to the General Industrial Permit is identical to the requirements found in the Southern Riverside County MS4 Permit, Order No. R9-2004-001.<sup>193</sup> USEPA supports the list of industrial facilities in the Order when it states the following:

“The issue of industrial inspections also arose for the Los Angeles County MS4 permit. The State Board, in a memo dated November 9, 2001, from Michael Lauffer of the State board to Dennis Dickerson, Executive Officer of the Los Angeles Regional Board, noted that under Section 402 (p)(3)(B)(iii) of the CWA, the Board has broad authority to require ‘such other provisions...as the State determines appropriate...’ and that this would provide a basis for requirements that go beyond specific provisions of the EPA regulations. We would agree with the State Board on this matter, and that the Regional Board would have the authority to require inspections of all the industrial facilities listed in the permit [Order], notwithstanding the specific provisions of the EPA regulations.”<sup>194</sup>

**Section D.3.b.(2)** (BMP Implementation) adds a pollution prevention requirement, since pollution prevention methods are considered a BMP. Moving this requirement will streamline the Order, without causing a detrimental effect on water quality.

**Section D.3.b.(3)** (Inspection of Industrial and Commercial Sites/Sources) includes requirements for inspections of industrial and commercial sites/sources. The Order is similar to the Southern Riverside County MS4 permit<sup>195</sup> in requiring that inspections check for coverage under the General Industrial Permit; assessment of compliance with Copermittee ordinances and permits related to urban runoff; assessment of BMP implementation, maintenance, and effectiveness; visual observations for non-storm water discharges, potential illicit connections, and potential discharge of pollutants in storm water runoff; and education and outreach on storm water pollution prevention. The Order also requires that inspections include review of BMP implementation plans if the site uses or is required to use such a plan, and the review of facility monitoring data if the site monitors its runoff. These changes are necessitated by the results of

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<sup>191</sup> Federal Register / Vol. 55, No. 222 / Friday, November 16, 1990 / Rules and Regulations. P. 48006.

<sup>192</sup> Ibid. P. 48000

<sup>193</sup> Regional Board, 2004. Order No. R9-2004-001; Riverside County MS4 Permit. Section H.2.b)(2); P. 25.

<sup>194</sup> Letter dated March 5, 2004 from Doug Eberhardt, EPA Manager to John Robertus, Executive Officer of Regional Board containing comments on Order No. R9-2004-001.

<sup>195</sup> Regional Board, 2004. Order No. R9-2004-001; Riverside County MS4 Permit. Section H.2.d)(3); P. 26.

storm water program evaluations.<sup>196</sup> It was observed that 12 Copermittees had deficiencies or potential permit violations in their industrial and commercial component. The inspection section received twice as many comments than any other requirement in the industrial/commercial program evaluation reports section. These changes in the Order mimic USEPA's guidance: "Site inspections should include (1) an evaluation of the pollution prevention plan and any other pertinent documents, and (2) an onsite visual inspection of the facility to evaluate the potential for discharges of contaminated storm water from the site and to assess the effectiveness of the pollution prevention plan."<sup>197</sup> In 1999, USEPA "recognized visual inspection as a baseline BMP for over 10 years," and "visual inspections are an effective way to identify a variety of problems. Correcting these problems can improve the water quality of the receiving water."<sup>198</sup>

**Section D.3.b.(3)(c)** of the Order requires that at a minimum, 40% of the sites inventoried shall be inspected each year, including all sites determined to pose a high threat to water quality. This requirement maintains inspection frequencies and rates while allowing more flexibility for the Copermittees to decide where to conduct inspections. In the ROWD,<sup>199</sup> the Copermittees reported 18,017 industrial and commercial sources. In fiscal year 2002-2003, the Copermittees conducted 10,133 inspections, giving an inspection rate of 56%. In fiscal year 2003-2004, the Copermittees conducted 8,546 inspections giving an inspection rate of 47%. USEPA guidance<sup>200</sup> says, "management programs should address minimum frequency for routine inspections." The USEPA Fact Sheet – Visual Inspection<sup>201</sup> says, "To be effective, inspections must be carried out routinely. This requires a corporate commitment to implementing them."

In their ROWD,<sup>202</sup> the Copermittees recommend, "The Permit should allow revision of mandated inspection requirements in accordance with demonstrated needs." The Copermittees "strongly discourage Permit requirements that seek to establish minimum levels of inspection activity." The Order includes the minimum level of inspection activity because without minimum levels, the Regional Board has no assurance that inspections of commercial and industrial sites will be conducted. Without inspections, the Copermittees would be unable to adequately verify that industrial and commercial sites are in compliance with their local storm water ordinances and regulations. Even though minimum inspection levels have been included, the Order allows enough flexibility to maximize the effectiveness of inspections by concentrating resources on industrial and commercial sites that are higher threats to water quality without neglecting other industrial and commercial sites. Further flexibility is provided in prioritizing inspections, as discussed next.

The Order no longer includes a section titled "Threat to Water Quality Prioritization." Rather, threat to water quality prioritization is incorporated within the inspection section. The Order requires several criteria to determine if a site is a high threat to water quality that needs an annual inspection. This change is identical to the requirements in the Southern Riverside County MS4 permit,<sup>203</sup> except for the addition of a few criteria recommended in the Copermittees' ROWD.<sup>204</sup> The Copermittees recommended criteria that are included in the Order are No Exposure

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<sup>196</sup> Tetra Tech, Inc., 2002-05. Program Evaluation Reports – San Diego Area Storm Water Programs; July 23, 2002; December 13, 2002; December 26, 2002; April 8, 2003; December 17, 2003; June 11, 2004; January 31, 2005.

<sup>197</sup> USEPA, 1992. Guidance 833-8-92-002, section 6.3.3.4 "Inspection and Monitoring".

<sup>198</sup> USEPA, 1999. 832-F-99-046, "Storm Water Management Fact Sheet – Visual Inspection".

<sup>199</sup> San Diego County Copermittees, 2005. Report of Waste Discharge. Section D.5.

<sup>200</sup> USEPA, 1992. Guidance 833-8-92-002, section 6.3.3.4 "Inspection and Monitoring".

<sup>201</sup> USEPA, 1999. 832-F-99-046., "Storm Water Management Fact Sheet – Visual Inspection".

<sup>202</sup> San Diego County Copermittees, 2005. Report of Waste Discharge. Section D.5.3.

<sup>203</sup> Regional Board, 2004. Order No. R9-2004-001; Riverside County MS4 Permit. Section H.2.d)(1); P. 26.

<sup>204</sup> San Diego County Copermittees, 2005. Report of Waste Discharge. Section D.5.1.

Certification / Notice of Non-Applicability, Compliance History, and Facility Design. “Existing Regulatory Oversight” is already included as a criterion in the Order as “Whether the site is subject to the Statewide Industrial Permit.” Self-certification status and Green Business Certification are not included in the Order because these certifications do not ensure that storm water is addressed. In the ROWD,<sup>205</sup> the Copermittees recommend, “The Permit should allow re-prioritization of currently mandated minimum high priority industrial and commercial sources.” The Order has been modified to increase flexibility and allow the Copermittees to reprioritize sites as more information is learned about the sites’ potential threat to water quality.

In their ROWD<sup>206</sup>, the Copermittees recommend, “The Permit should allow and encourage alternatives to current inspection requirements.” They suggest utilizing non-inspection methods including self-certification, certified submission of monitoring results demonstrating that benchmarks have been met, third-party inspections, facility- or industry-specific surveys, and/or phone interviews. The proposed alternatives do not provide the same level of compliance oversight as inspections provide; therefore the Order includes such a section not as an alternative to inspections but in addition to inspections. The Order allows the use of these alternatives if they are determined to be necessary by the Copermittee.

**Section D.3.b.(4)** (Regulation of Mobile Businesses) is a new section. Mobile businesses are service industries that travel to the customer to perform the service rather than the customer traveling to the business to receive the service. Examples of mobile businesses are power washing, mobile vehicle washers, carpet cleaners, port-a-potty servicing, pool and fountain cleaning, mobile pet groomers, and landscapers. These mobile services produce waste streams that could potentially impact water quality if appropriate BMPs are not implemented. Mobile businesses present a unique difficulty in storm water regulation. Due to the transient nature of the business, the regular, effective practice of unannounced inspections is difficult to implement. Also, tracking these mobile businesses is difficult because they are often not permitted or licensed and their services cross Copermittee jurisdictions. The Order takes into account the difficulties in regulating mobile businesses. Only those mobile businesses that are known to operate within their jurisdiction are required to be inventoried and notified. The inventory shall be updated as additional mobile businesses are identified.

The Order requires that mobile businesses shall be inspected as needed. Inspections can be accomplished in response to complaints. Inspections can be scheduled through contacting the business. Impromptu inspections can be conducted if a Copermittee’s inspector observes a mobile business operating in the course of the inspector’s normal travels throughout their jurisdiction. In their ROWD,<sup>207</sup> the Copermittees recommend, “Copermittees should increase their collaboration on the regulation of mobile businesses”. The Order allows but does not require collaboration among the Copermittees. Due to the Copermittee’s differences in watersheds, culture, ethnicity, ordinances, regulations, policies and procedures, Copermittee collaboration on regulating mobile businesses is left up to the Copermittees as they see fit.

**Section D.3.b.(5)** (Enforcement of Industrial and Commercial Sites/Sources) requires that inspectors have authority to conduct immediate enforcement actions when appropriate. Inspectors conducting immediate enforcement will quickly correct violations, thereby minimizing and preventing threats to water quality. When inspectors are unable to conduct immediate enforcement actions, the threat to water quality continues until an enforcement incentive is issued

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<sup>205</sup> Ibid. Section D.5.2.

<sup>206</sup> Ibid. Section D.5.4

<sup>207</sup> Ibid. Section D.5.5.

to correct the violation. In the municipal audits, Tetra Tech reported deficiencies where several Copermittees needed to ensure that their storm water inspectors have enforcement authority.<sup>208</sup> In its Phase II Compliance Assistance Guidance, USEPA says that “Inspections give the MS4 operator an opportunity to additional guidance and education, issue warnings, or assess penalties.”<sup>209</sup> In order to issue warnings and assess penalties during inspections, inspectors need to have the legal authority to conduct enforcement.

### **D.3.c. Residential**

The following legal authority applies to section D.3.c:

**Broad Legal Authority:** CWA sections 402(p)(3)(B)(ii-iii), CWC section 13377, and Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(B, C, E, and F) and 40 CFR 122.26(d)(2)(iv).

**Specific Legal Authority:** Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(A) provides that the Copermittee develop a proposed management program which includes “A description of structural and source control measures to reduce pollutants from runoff from commercial and residential areas that are discharged from the municipal storm sewer system that are to be implemented during the life of the permit, accompanied with an estimate of the expected reduction of pollutant loads and a proposed schedule for implementing such controls.”

Federal NPDES regulation 40 CFR 122.44(d)(1)(i) requires NPDES permits to include limitations to “control all pollutants or pollutant parameters (either conventional, nonconventional, or toxic pollutants) which the Director determines are or may be discharged at a level which will cause, have reasonable potential to cause, or contribute to an excursion above any State water quality standard, including State narrative criteria for water quality.”

**Section D.3.c.(2)(b)** of the Order moves the residential pollution prevention requirements together with the other BMP requirements in order to improve the organization of the Order. This change has no net effect on the implementation and enforcement of the Order.

**Section D.3.c.(2)(c)** of the Order moves the requirement for proper management of used oil, toxic materials, and other household hazardous wastes to the residential section of the Order, since this requirement generally applies to residents. This change improves the organization of the Order, and has no net effect on its implementation and enforcement.

**Section D.3.c.(4)** (Regional Residential Education Program) of the Order requires each Copermittee to participate in a Regional Residential Education Program. An education program specifically targeting residential sources is needed due to the fact that residential housing units encompass the largest category of specific sources in San Diego County and have been identified by the Copermittees as a regional priority source. Moreover, the Copermittees recommend in their ROWD that such a program be developed. Section F.7 of the Order, which is referenced in section D.3.c.(4), expands on the Regional Residential Education Program requirements by requiring that the program focus on bacteria, nutrients, sediment, pesticides, and trash. This is appropriate for a regional education program, since the Copermittees have identified these constituents as regional priorities.

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<sup>208</sup> Tetra Tech, Inc., 2002-05. Program Evaluation Reports – San Diego Area Storm Water Programs.

<sup>209</sup> USEPA, 2000. Storm Water Phase II Compliance Assistance Guide. 833-R-00-002. P. 4-31.

#### **D.4. Illicit Discharge Detection and Elimination**

The following legal authority applies to section D.4:

**Broad Legal Authority:** CWA sections 402(p)(3)(B)(ii-iii), CWC section 13377, and Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(B, C, E, and F) and 40 CFR 122.26(d)(2)(iv).

**Specific Legal Authority:** Federal NPDES regulations 40 CFR 122.26(d)(2)(iv)(B) provides that the proposed management program “shall be based on a description of a program, including a schedule, to detect and remove (or require the discharger to the municipal storm sewer to obtain a separate NPDES permit for) illicit discharges and improper disposal into the storm sewer.”

Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(B)(1) provides that the Copermittee include in its proposed management program “a program, including inspections, to implement and enforce an ordinance, orders or similar means to prevent illicit discharges to the municipal storm sewer system.”

Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(B)(2) provides that the Copermittee include in its proposed management program “a description of procedures to conduct on-going field screening activities during the life of the permit, including areas or locations that will be evaluated by such field screens.”

Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(B)(3) provides that the Copermittee include in its proposed management program “procedures to be followed to investigate portions of the separate storm sewer system that, based on the results of the field screen, or other appropriate information, indicate a reasonable potential of containing illicit discharges or other sources of non-storm water.”

Federal NPDES regulations 40 CFR 122.26(d)(2)(iv)(B)(4) provides that the Copermittee include in its proposed management program “a description of procedures to prevent, contain, and respond to spills that may discharge into the municipal separate storm sewer.”

Federal NPDES regulations 40 CFR 122.26(d)(2)(iv)(B)(5) provides that the Copermittee include in its proposed management program “a description of a program to promote, publicize, and facilitate public reporting of the presence of illicit discharges or water quality impacts associated with discharges from municipal separate storm sewers.”

Federal NPDES regulations 40 CFR 122.26(d)(2)(iv)(B)(6) provides that the Copermittee include in its proposed management program “a description of educational activities, public information activities, and other appropriate activities to facilitate the proper management and disposal of used oil and toxic materials.”

Federal NPDES regulations 40 CFR 122.26(d)(2)(iv)(B)(7) provides that the Copermittee include in its proposed management program “a description of controls to limit infiltration of seepage from municipal sanitary sewers to municipal separate storm sewer systems where necessary.”

**Section D.4.a** (Illicit Discharges and Connections) requires the Copermittees to implement a program to actively seek and eliminate illicit connections and discharges (IC/ID). Additional wording has been added to this section to clarify and ensure that all appropriate (i.e., field personnel) municipal personnel are utilized in the program to observe and report these illicit discharges and connections.

**Section D.4.b** (Develop/Maintain MS4 Map) requires the Copermittees to develop or obtain a map of their entire MS4 system and drainages within their jurisdictions. To provide clarification to the Order, this requirement has been moved to the IC/ID component of the Order from the Dry Weather Field Screening and Analytical Monitoring Specifications (Attachment E in previous Order No. 2001-01).

**Section D.4.d** (Investigation/Inspection and Follow-Up) requires the Copermittees to conduct follow up investigations and inspect portions of the MS4 for illicit discharges and connections, based on dry weather field screening and analytical monitoring results. The section also requires the Copermittees to establish criteria for triggering follow up investigations. Additional language has been added to this section to clarify the minimum level of effort and timeframes for follow up investigations when dry weather action levels (developed by the Copermittees) are exceeded. Timely investigation and follow up when action levels are exceeded is necessary to identify sources of illicit discharges, especially since many of the discharges are transitory. The requirements for a 48-hour minimum response time when action levels are exceeded and for immediate response to obvious illicit discharges is necessary to ensure timely response by the Copermittees.

In its October 29, 2004 letter to the Copermittees, as well as in subsequent meetings, the Regional Board notified Copermittees that standardized procedures were necessary to ensure timely IC/ID investigations. In the ROWD, the Copermittees state that procedures for dry weather programs should not be standardized and that a minimum response timeframe would hamper their efforts to prioritize and respond to IC/IDs. However, the purpose of the dry weather action levels is to help the Copermittees prioritize and investigate the most likely IC/IDs. Sampling locations that exceed these action levels warrant timely investigation/response, and the minimum time frames in the requirements are reasonable. The Copermittees may also determine that the exceedances do not pose a threat to water quality and therefore do not warrant further investigation. The rationale for no further action for dry weather sampling stations that exceed action levels would be reported in the Jurisdictional Urban Runoff Management Program Annual Report.

#### **D.5. Education Component**

The following legal authority applies to section D.5:

**Broad Legal Authority:** CWA sections 402(p)(3)(B)(ii-iii), CWC section 13377, and Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(B, C, E, and F) and 40 CFR 122.26(d)(2)(iv).

**Specific Legal Authority:** Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(A)(6) provides that the proposed management program include "A description of a program to reduce to the maximum extent practicable, pollutants in discharges from municipal separate storm sewers associated with the application of pesticides, herbicides, and fertilizer which will include, as appropriate, controls such as educational activities, permits, certifications, and other measures for commercial applicators and distributors, and controls for application in public right-of-ways and at municipal facilities."

Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(B)(6) provides that the proposed management program include "A description of educational activities, public information activities, and other appropriate activities to facilitate the proper management and disposal of used oil and toxic materials."

Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(D)(4) provides that the proposed management program include “A description of appropriate educational and training measures for construction site operators.”

**Section D.5** includes an introductory paragraph that is the same as in Order No. 2001-01, except for the removal of Quasi-Governmental Agencies/ Districts. The Copermittees’ ROWD recommends elimination of the requirement to educate quasi-governmental entities.<sup>210</sup>

**Section D.5.a** (General Requirements) includes education topics from the existing permit with some minor wording and formatting changes. The Copermittees’ ROWD recommends that the Copermittees should focus educational efforts on the most important constituents and not on a list of topics.<sup>211</sup> The Regional Board agrees with the focused efforts, but a list of topics is needed to provide a goal of basic storm water knowledge. The Copermittees can choose how and to what degree to address these topics. Copermittees may decide to focus on some topics and not on others. Some topics may be more important for certain target communities or watersheds.

The Regional Board has incorporated the following recommendation from the Copermittees’ ROWD into the permit: “Copermittee educational programs should emphasize underserved target audiences, high-risk behaviors, and “allowable” behaviors and discharges.”<sup>212</sup> In conducting audits of the Copermittees’ storm water program, Tetra Tech found that several of the Copermittees could improve education of specific target audiences with pollutant-specific educational campaigns, messages, or technical guidance.<sup>213</sup>

**Section D.5.b** (Specific Requirements) requires the Copermittees to educate their own departments and personnel. The new development and redevelopment as well as the municipal construction education requirements were taken from Order No. 2001-01 with some minor wording changes. Additional clarification was added regarding storm water management plans and SUSMP requirements due to deficiencies found during the SUSMP audits. The Regional Board considers it vital for the Copermittees’ planning and development staff, who have a broad authority and influence over new and redevelopment projects, to thoroughly understand storm water management plan development and SUSMP requirements. Municipal construction staff also need a thorough understanding of SUSMP requirements to adequately oversee active construction projects which are implementing SUSMPs.

A new requirement has also been added for education of activity specific BMPs for municipal personnel and contractors performing activities that generate pollutants. Education is required at all levels of municipal staff and contractors. Education is especially important for the staff in the field performing activities which might result in discharges of pollutants if proper BMPs are not used. The CASQA Municipal Handbook states that successful implementation of BMPs is dependent on “Effective training of municipal and contract employees working in both fixed facilities and field programs.”<sup>214</sup> This training can be conducted in either a formal or an informal tail-gate format.

**Section D.5.b.(2)** (New Development and Construction Education) requires the Copermittees to educate all project applicants, developers, contractors, property owners, community planning

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<sup>210</sup> San Diego County Copermittees, 2005. Report of Waste Discharge. P. D-57.

<sup>211</sup> Ibid. P. D-52.

<sup>212</sup> Ibid. P. D-53.

<sup>213</sup> Tetra Tech, Inc., 2002-03. Program Evaluation Reports -- San Diego Area Stormwater Program.

<sup>214</sup> California Stormwater Quality Association, 2003. Stormwater Best Management Practices Handbook, Municipal. P. 5-1

groups, and other responsible parties about stormwater issues and BMPs, including annual training before the rainy season. The first requirement is taken from the existing permit sections on new development and construction, with some minor wording changes and an additional topic at the end to recognize the importance of training for field level construction workers. Different levels of training will be needed for planning groups, owners, developers, contractors, and construction workers, but everyone should get a general education of stormwater requirements. Education of all construction workers can prevent unintentional discharges, such as discharges by workers who are not aware that they are not allowed to wash things down the storm drains. Training for BMP installation workers is imperative because the BMPs will fail if not properly installed and maintained.<sup>215</sup> Training for field level workers can be formal or informal tail-gate format.

**Section D.5.b.(3)** (Residential, General Public, and School Children Education) requires the Copermittees to collaboratively develop and implement a plan to educate residential, general public, and school children through use of mass media, mailers, door hangers, booths at public events, classroom education, field trips, hands-on experiences, or other educational methods. USEPA supports education of the general community when it states: “An informed and knowledgeable community is critical to the success of a storm water management program since it helps ensure the following:

Greater support for the program as the public gains a greater understanding of the reasons why it is necessary and important. [...]

Greater compliance with the program as the public becomes aware of the personal responsibilities expected of them and others in the community, including the individual actions they can take to protect or improve the quality of area waters.”<sup>216</sup>

Regarding target audiences, USEPA also finds that “The public education program should use a mix of appropriate local strategies to address the viewpoints and concerns of a variety of audiences and communities, including minority and disadvantaged communities, as well as children.”<sup>217</sup> The SWRCB TAC also supports education of schoolchildren, stating:

“Target Audiences should include:

1. Government: Educate government agencies and officials to achieve better communication, consistency, collaboration, and coordination at the federal, state and local levels.
2. K-12/Youth Groups: Establish statewide education programs, including curricula, on watershed awareness and nonpoint source pollution problems and solutions, based on a state lead role building upon and coordinating with existing local programs.
3. Development Community: Educate the development community, including developers, contractors, architects, and local government planners, engineers, and inspectors, on nonpoint source pollution problems associated with development and redevelopment and construction activities and involve them in problem definitions and solutions.
4. Business and Industrial Groups.”<sup>218</sup>

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<sup>215</sup> Ibid P.2-6.

<sup>216</sup> USEPA, 2000. Storm Water Phase II Compliance Assistance guide. EPA 833-R-00-002.

<sup>217</sup> Ibid.

<sup>218</sup> SWRCB, 1994. Urban Runoff Technical Advisory Committee Report and Recommendations. Nonpoint Source Management Program.

## D.6 Public Participation

The following legal authority applies to section D.6:

**Broad Legal Authority:** CWA sections 402(p)(3)(B)(ii-iii), CWC section 13377, and Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(B, C, E, and F) and 40 CFR 122.26(d)(2)(iv).

No significant changes have been made to this section of the Order.

## E. Watershed Urban Runoff Management Program

The following legal authority applies to section E:

**Broad Legal Authority:** CWA sections 402(p)(3)(B)(ii-iii), CWC section 13377, and Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(B, C, E, and F) and 40 CFR 122.26(d)(2)(iv).

**Specific Legal Authority:** Federal NPDES regulation 40 CFR 122.26(a)(3)(ii) states: “The Director may [...] issue distinct permits for appropriate categories of discharges [...] including, but not limited to [...] all discharges within a system that discharge to the same watershed [...]”

Federal NPDES regulations 40 CFR 122.26(a)(3)(v) states: “Permits for all or a portion of all discharges from large or medium municipal separate storm sewer systems that are issued on a system-wide, jurisdiction-wide, watershed, or other basis may specify different conditions relating to different discharges covered by the permit, including different management programs for different drainage areas [watersheds] which contribute storm water to the system.”

Federal NPDES regulation 40 CFR 122.26(a)(5) states: “The Director may issue permits for municipal separate storm sewers that are designated under paragraph (a)91(v) of this section on a system-wide basis, a jurisdiction-wide basis, watershed basis, or other appropriate basis.”

Federal NPDES regulation 40 CFR 122.26(d)(2)(iv) states: “Proposed programs may impose controls on a systemwide basis, a watershed basis, a jurisdiction basis, or on individual outfalls.”

**Section E.2.b** of the Order requires the Copermittees to develop a watershed map. The section has been slightly modified from Order No. 2001-01 in that it no longer requires mapping of inventoried construction sites. The reason for this change is the temporary nature of construction sites. The location of construction sites is constantly changing, making the mapping of construction sites not useful.

**Section E.2.c** of the Order requires identification and description of available water quality data for each watershed. The minimum types of water quality data the Copermittees must consider are listed. For the most part, the listed types of water quality data match the types of data already used by the Copermittees for watershed management. Additional types of monitoring to be considered have been added, such as toxic hot spot and TMDL monitoring, because of their potential to provide useful information during identification and prioritization of watershed water quality problems. The listing of data types is necessary because the Copermittees have previously not used all available watershed water quality data while assessing watershed conditions. For example, in a March 10, 2003 letter, the Regional Board directed the Copermittees to utilize additional available data during WURMP implementation because initial Copermittee data use was limited.

**Sections E.2.d and E.2.e** of the Order require assessment and analysis of water quality data to prioritize each watershed's water quality problems, together with identification of the sources of the high priority water quality problems. These requirements are essentially the same as the requirements of Order No. 2001-01; they have simply been reorganized to more clearly convey the process required.

**Section E.2.f** of the Order requires the Copermittees to develop a list of Watershed Water Quality Activities for potential implementation. This requirement developed over time while working with the Copermittees on their WURMP implementation under Order No. 2001-01. In October 2004 letters, the Regional Board recommended the Copermittees develop a list of Watershed Water Quality Activities for potential implementation. Following receipt of the Regional Board letters, the Copermittees created Watershed Water Quality Activity lists. Although the Copermittees' lists needed improvement, the Regional Board found the lists to be useful planning tools that can be evaluated to identify effective and efficient Watershed Water Quality Activities. Because the lists are useful and have become a part of the WURMP implementation process, a requirement for their development has been written into the Order.

The goal of the WURMPs is to abate sources and reduce pollutant discharges causing the high priority water quality problems within a watershed. For this reason, it is required that the Watershed Water Quality Activity list describes how each Watershed Water Quality Activity will meet this goal.

**Section E.2.g** of the Order requires the Copermittees within a watershed to develop a strategy for implementation of Watershed Water Quality Activities and Watershed Education activities. The requirement for development of an implementation strategy is necessary because it should guide effective implementation of watershed activities. Moreover, it has been found that many of the Copermittees' current Watershed Water Quality Activities have no clear connection to the high priority water quality problems within the watersheds where they are being implemented. For example, when reviewing the 2003-2004 Watershed Urban Runoff Management Program Annual Report for the San Diego River, the Regional Board found that for several of the Watershed Water Quality Activities being implemented, it is "unclear what the connection is between this project and the identified high priority water quality problems in the watershed."<sup>219</sup> Similar findings were also noted during Regional Board review of the 2002-2003 Watershed Urban Runoff Management Program Annual Reports and issuance of corresponding comment letters.

**Section E.2.h** of the Order requires the Copermittees to evaluate the effectiveness of proposed activities. This will help the Copermittees choose the most effective activities for implementation. Implementation of effective activities is critical to ensure an effective Watershed Urban Runoff Management Program.

**Section E.2.i** of the Order requires each Copermittee to implement a certain number of Watershed Water Quality Activities annually. In crafting this section of the Order and the Watershed Water Quality Activity definition, the Regional Board sought to obtain a balance between the enforceability of the Order and Copermittee flexibility in implementing the Order.

So that the section is enforceable, it requires each Copermittee to implement a minimum number of Watershed Water Quality Activities which will directly and significantly abate sources and reduce pollutant discharges causing the high priority water quality problems within a watershed.

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<sup>219</sup> Regional Board, 2005. Review of Notices of Violation Issued to the San Diego County Copermittees for Watershed Urban Runoff Management Program Implementation.

This requirement provides measurable outcomes for WURMP implementation. WURMP measurable outcomes are needed in the Order because the Regional Board previously found that Copermittee implementation of Watershed Water Quality Activities was inadequate over the course of several years, despite several Regional Board efforts to precipitate improvement. The Regional Board issued comment letters in March 2003, California Water Code section 13267 information request letters in October 2004, and Notices of Violation in June 2005, all in an attempt to improve the Copermittees' implementation of Watershed Water Quality Activities that would effectively reduce discharges of pollutants causing the watersheds' high priority water quality problems. In addition, in a detailed review of the Copermittees' 2003-2004 Watershed Urban Runoff Management Program Annual Reports, the Regional Board found that for most watersheds, the Copermittees' reported "water quality activities" would not result in any significant reduction of pollutant discharges.<sup>220</sup>

Despite these efforts and findings by the Regional Board, the majority of the Copermittees contended as a group that their WURMP implementation was adequate and that they were in compliance with Order No. 2001-01's WURMP requirements. The Copermittees' position exhibits the lack of clarity and unenforceability of Order No. 2001-01's language regarding implementation of Watershed Water Quality Activities. To rectify this situation and ensure that WURMP implementation actually results in pollutant discharge reductions, a requirement for measurable outcomes has been added to the Order in the form of a minimum number of Watershed Water Quality Activities to be implemented which must reduce the discharge of pollutants and abate pollutant sources.

While section J.1.h specifically requires implementation of a measurable number of Watershed Water Quality Activities, the section and the Watershed Water Quality Activity definition also provide significant flexibility to the Copermittees regarding what constitutes a Watershed Water Quality Activity. The bottom line requirements for Watershed Water Quality Activity is that they reduce pollutant discharges causing high priority water quality problems within a watershed and exceed the baseline jurisdictional requirements. Beyond these bottom line requirements, the Copermittees have ample implementation flexibility. For example, both jurisdictional and regional activities in some circumstances can be considered Watershed Water Quality Activities. The same is true for TMDL activities. In addition, Copermittees can implement Watershed Water Quality Activities within their jurisdictions or outside of their jurisdictions; whichever they prefer. Moreover, Copermittees within a watershed can implement different Watershed Water Quality Activities, provided they are part of the watershed Copermittees' larger watershed strategy.

Details regarding what constitutes a Watershed Water Quality Activity are included in the definition section of the Order. The definition was written to clarify the following points:

- A Watershed Water Quality Activity must abate the sources and/or reduce the discharge of pollutants causing high priority water quality problems in the watershed. Activities that do not specifically abate sources and/or reduce pollutant discharges causing high priority water quality problems in a watershed are not Watershed Water Quality Activities.
- Watershed Water Quality Activities must implement an overall watershed strategy collaboratively developed by the Copermittees within a watershed.

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<sup>220</sup> Regional Board, 2005. Supplemental Report for Review of Notices of Violation Issued to the San Diego County Copermittees for Watershed Urban Runoff Management Program Implementation. P. 5-14.

- Jurisdictional activities which exceed the baseline jurisdictional requirements may constitute Watershed Water Quality Activities, if they are more protective of water quality than baseline jurisdictional activities. Such activities must specifically abate sources and/or reduce the discharge of pollutants causing high priority water quality problems within a watershed. The jurisdictional activities must be organized and implemented as part of a larger watershed strategy.
- Specific Watershed Water Quality Activities do not need to be implemented watershed-wide, but all Copermittees within a watershed must implement well-coordinated Watershed Water Quality Activities.
- Watershed Water Quality Activities must be new activities; activities that have been conducted for many years without regard for watershed concerns are not Watershed Water Quality Activities. Moreover, as high priority water quality problems within watersheds continue, efforts to implement new and more effective activities are needed.
- Education, public participation, and planning efforts are not Watershed Water Quality Activities.
- Activities that only consist of monitoring are not Watershed Water Quality Activities. There must also be an element of the monitoring program that directly results in the abatement of sources and/or reduction of pollutant discharges causing high priority water quality problems.

This section of the Order also splits the implementation of Watershed Water Quality Activities into two categories. The first category requires implementation on an annual basis. This helps ensure meaningful and consistent implementation and allows for the use of measurable outcomes. The second category recognizes that not all Watershed Water Quality Activities lend themselves to annual implementation. The Copermittees are provided significant flexibility in taking the steps necessary to implement long-term Watershed Water Quality Activities, since no time frame for implementation is dictated.

**Sections E.2.j and E.2.k** of the Order require development of a list of potential Watershed Education Activities and implementation of a portion of those activities. Specific implementation of Watershed Education Activities in each jurisdiction within a watershed is being required due to the Regional Board's findings that previous Copermittee reporting often has not exhibited implementation of watershed and pollutant specific education activities. Moreover, the Regional Board has found from the Copermittees' reporting that regional education efforts are not always implemented in all watersheds. These findings have been documented in the Regional Board's Watershed Urban Runoff Management Program Annual Report review letters, which were issued in March 2003 and October 2004.

Implementation of Watershed Education Activities has been split into two categories, in order to represent two types of education pertaining to watershed management of urban runoff. During the previous permit cycle, the Copermittees primarily focused on watershed concept-based education activities. These efforts should proceed, but as high priority water quality problems and impairments within watersheds continue, source and pollutant discharge-based education efforts are also needed. The two categories of Watershed Education Activities provided in the Order ensure that both types of watershed education are conducted.

**Section E.2.l** of the Order includes minor alterations from Order No. 2001-01 which encourage the Copermittees to seek participation in the WURMP process from other potential interested parties. Increased participation in the WURMP process by interested parties can improve support for WURMP implementation, increasing the probability of implementation of effective programs.

**Section E.2.m** of the Order requires Copermittee collaboration, including frequent regularly scheduled meetings. The requirement for regularly scheduled meetings has been added based on Regional Board findings that watershed groups which hold regularly scheduled meetings (such as for San Diego Bay) typically produced better programs and work products than watershed groups that went for extended periods of time without scheduled meetings (such as San Dieguito and Los Penasquitos). For example, in their 2002-2003 Annual Reports, the San Dieguito and Los Penasquitos watersheds listed implementation of the same watershed activities, despite the fact that the two watersheds have different high priority water quality problems.

#### **F. Regional Urban Runoff Management Program**

The following legal authority applies to section F:

**Broad Legal Authority:** CWA sections 402(p)(3)(B)(ii-iii), CWC section 13377, and Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(B, C, E, and F) and 40 CFR 122.26(d)(2)(iv).

**Specific Legal Authority:** Federal NPDES regulation 40 CFR 122.26(d)(2)(i)(D) provides that “[The Copermittee must demonstrate that it can control] through interagency agreements among coapplicants the contribution of pollutants from one portion of the municipal system to another portion of the municipal system.”

Federal NPDES regulations 40 CFR 122.26(a)(3)(v) states: “Permits for all or a portion of all discharges from large or medium municipal separate storm sewer systems that are issued on a system-wide, jurisdiction-wide, watershed, or other basis may specify different conditions relating to different discharges covered by the permit, including different management programs for different drainage areas [watersheds] which contribute storm water to the system.”

Federal NPDES regulation 40 CFR 122.26(a)(5) states: “The Director may issue permits for municipal separate storm sewers that are designated under paragraph (a)91)(v) of this section on a system-wide basis, a jurisdiction-wide basis, watershed basis, or other appropriate basis.”

Federal NPDES regulation 40 CFR 122.26(d)(2)(iv) states: “Proposed programs may impose controls on a systemwide basis, a watershed basis, a jurisdiction basis, or on individual outfalls.”

**Section F** of the Order requires the Copermittees to develop a Regional Urban Runoff Management Program to facilitate Copermittee implementation of urban runoff management activities on a regional level. The requirement has been included in the Order because of the recognition that some aspects of urban runoff management can be effectively addressed at a regional level. Residential education and implementation of TMDLs covering multiple watersheds are examples of urban runoff issues which can be addressed regionally, since the scope of these issues are not limited to particular jurisdictions or watersheds. Such regional implementation provides opportunities for improved efficiency and utilization of economies of scale.

The Copermittees' ROWD identifies regional urban runoff management as an important aspect of their programs.<sup>221</sup> This requirement for the development of a regional urban runoff management program provides organization and structure for both the Copermittees and Regional Board to track regional efforts. The requirements include continuation of existing regional efforts and identify additional areas for regional implementation. However, significant flexibility has been provided to the Copermittees for new regional requirements. Typically, implementation of such regional requirements is required only where it is determined to be necessary by the Copermittees.

## G. Fiscal Analysis

The following legal authority applies to section G:

**Broad Legal Authority:** CWA sections 402(p)(3)(B)(ii-iii), CWC section 13377, and Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(B, C, E, and F) and 40 CFR 122.26(d)(2)(iv).

**Specific Legal Authority:** Federal NPDES regulation 40 CFR 122.26(d)(2)(vi) provides that “[The Copermittee submit] for each fiscal year to be covered by the permit, a fiscal analysis of the necessary capital and operation and maintenance expenditures necessary to accomplish the activities of the programs under paragraphs (d)(2)(iii) and (iv) of this section. Such analysis shall include a description of the source of funds that are proposed to meet the necessary expenditures, including legal restrictions on the use of such funds.”

**Section G** has been expanded to achieve better consistency between the Copermittees in reporting budget and expenditure information. The section also requires clarification regarding which expenditures are solely attributable to the urban runoff program, as opposed to those expenditures which are also partially attributable to other programs (such as trash collection and street sweeping). Consistency and clarification of fiscal information are valuable for assessing program effectiveness and adapting programs to help ensure that they are efficient and effective, which is one important purpose of the fiscal analysis.

This section also requires the Copermittees to develop and use a metric for fiscal analysis reporting. This provides standardization of reporting so that figures between Copermittees are comparable, which is one of many types of information which can be used by the Regional Board to better understand Copermittee program implementation. Standardization and comparison of fiscal analysis reporting is supported by the State Board funded NPDES Stormwater Cost Survey, which finds that “standards for reporting costs and stormwater activities are needed to allow accurate cost comparisons to be made between stormwater activities.”<sup>222</sup> This document also provides guidance regarding categorization of expenditures for tracking and reporting.

## H. Total Maximum Daily Loads

The following legal authority applies to section H:

**Broad Legal Authority:** CWA sections 402(p)(3)(B)(ii-iii), CWC section 13377, and Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(B, C, E, and F) and 40 CFR 122.26(d)(2)(iv).

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<sup>221</sup> San Diego County Copermittees, 2005. Report of Waste Discharge. P. C-12.

<sup>222</sup> Currier, et al., 2005. NPDES Storm Water Cost Survey Final Report. Prepared for California State Water Resources Control Board by Office of Water Programs, California State University, Sacramento. P. 63.

**Specific Legal Authority:** Federal NPDES regulation 40 CFR 122.44(d)(1) requires municipal storm water permits to include any requirements necessary to “[a]chieve water quality standards established under section 303 of the CWA, including State narrative criteria for water quality.”

Federal NPDES regulation 40 CFR 122.44(d)(1)(i) requires NPDES permits to include limitations to “control all pollutants or pollutant parameters (either conventional, nonconventional, or toxic pollutants) which the Director determines are or may be discharged at a level which will cause, have reasonable potential to cause, or contribute to an excursion above any State water quality standard, including State narrative criteria for water quality.”

**Section H** of the Order incorporates the two TMDLs that have been fully approved and are effective for the Copermittees. These TMDLs are for diazinon in Chollas Creek and for dissolved copper in SIYB.

Where a TMDL has been approved, NPDES permits must contain effluent limitations and conditions consistent with the requirements and assumptions in the TMDL.<sup>223</sup> Effluent limitations are generally expressed in numerical form. However, USEPA recommends that for NPDES-regulated municipal and small construction storm water discharges, effluent limitations should be expressed as best management practices or other similar requirements rather than as numeric effluent limitations.<sup>224</sup> Consistent with USEPA’s recommendation, this section implements WQBELs expressed as an iterative BMP approach capable of meeting the WLAs in accordance with the associated compliance schedule. The Order’s WQBELs include the numeric WLA as a performance standard and not as an effluent limitation. The WLA can be used to assess if additional BMPs are needed to achieve the TMDL Numeric Target in the waterbody.

**Section H.1.a** requires the Copermittees to implement BMPs capable of achieving the WLAs for diazinon in the storm drains in accordance with the Compliance Schedule. This requirement is consistent with the USEPA memorandum dated November 22, 2002, which states that NPDES permit conditions must be consistent with the assumptions and requirements of available WLAs.<sup>225</sup>

**Section H.1.b** requires that the Copermittees not cause or contribute to violations of the Interim TMDL Numeric Targets for diazinon in Chollas Creek. This requirement is necessary to ensure the effectiveness of the BMPs. The BMPs for diazinon control consist primarily of a phase out of the legal uses of diazinon and education and public outreach. Due to the difficulty in measuring the effectiveness of these BMPs directly, an indirect assessment method is necessary in the form of a receiving water limit.

**Section H.1.c** requires the Copermittees to implement the Diazinon Toxicity Control Plan and Diazinon Public Outreach / Education Program as described in the report titled, *Technical Report for Total Maximum Daily Load for Diazinon in Chollas Creek Watershed, San Diego County*, August 14, 2002, to achieve the WLA. These BMPs are expected to be effective based on the current monitoring in Chollas Creek which shows dramatically decreasing levels of diazinon in the water column.<sup>226</sup>

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<sup>223</sup> 40 CFR 122.44(d)(1)(vii)(B)

<sup>224</sup> USEPA, 2002. Establishing Total Maximum Daily Load (TMDL) Wasteload Allocations (WLAs) for Storm Water Sources and NPDES Permit Requirements Based on Those WLAs. P. 4.

<sup>225</sup> Ibid.

<sup>226</sup> Chollas Creek Copermittees, 2006. Response to Monitoring in Chollas Creek, Investigation Order No. R9-2004-0277, Proposition 13, PRISM Grant Agreement No. 04-17-559-0, San Diego Region, Integrated Pest Management

Compliance with Section H.1.a and c will be assessed with the WURMP annual reports, which will include a description of all TMDL activities implemented in the watershed and an effectiveness assessment of those activities. Compliance with Section H.1.b will be assessed using the monitoring data collected pursuant to the existing Investigation Order No. R9-2004-0277, *California Department of Transportation and San Diego Municipal Separate Storm Sewer System Copermittees Responsible for the discharge of Diazinon in the Chollas Creek Watershed, San Diego, California* (Investigation Order). This Investigation Order requires water column samples to be collected at two locations and analyzed for diazinon during three storms annually. Water column samples will also be analyzed for total and dissolved copper, lead, and zinc, and hardness. Acute and chronic toxicity tests will be conducted using the water flea for samples from each of these storm events at these two locations. Concentrations of diazinon in sediment at three locations will also be evaluated.

The diazinon water column values obtained from the Investigation Order R9-2004-0277 sampling will be compared with the Interim TMDL Numeric Target adjusted for the time schedule as shown below:

Calendar Year	Year	Waste Load Allocation	Interim TMDL Numeric Target	% Reduction
2004	1	0.460 µg/L	0.5 µg/L	0
2005	2	0.460 µg/L	0.5 µg/L	0
2006	3	0.460 µg/L	0.5 µg/L	0
2007	4	0.414 µg/L	0.45 µg/L	10
2008	5	0.322 µg/L	0.35 µg/L	20
2009	6	0.184 µg/L	0.20 µg/L	30
2010	7	0.045 µg/L	0.05 µg/L	30

#### Chollas Creek Diazinon TMDL - Background

Chollas Creek was placed on the CWA section 303(d) List of Water Quality Limited Segments (303(d) List) in 1996 for toxicity. The pesticide diazinon was found to be causing the toxicity. The Regional Board has established a TMDL for diazinon to address the toxicity as required by the CWA for water quality limited segments at the August 14, 2002 Regional Board meeting. The State Water Resources Control Board approved the TMDL on July 16, 2003. The Office of Administrative Law approved the TMDL on September 11, 2003. USEPA approved the TMDL on November 3, 2003. Documentation for the Chollas Creek Diazinon TMDL is in the report titled, "Technical Report for Total Maximum Daily Load for Diazinon in Chollas Creek Watershed, San Diego County, August 14, 2002."

The Chollas Creek diazinon TMDL is a concentration based TMDL determined from the CDFG's Water Quality Criteria (WQC) for the protection of freshwater aquatic organisms from diazinon. Using a margin of safety (MOS) of 10%, the TMDL is equal the WLA plus the MOS. The TMDL Numeric Targets and WLA derived from the CDFG WQC are shown in the table below.

## TMDL Numeric Targets and Waste Load Allocation for Diazinon Acute and Chronic Conditions

Exposure Duration	TMDL Numeric Targets	Margin of Safety	Waste Load and Load Allocations
Acute	0.08 µg/L	0.008 µg/L	0.072 µg/L
Chronic	0.05 µg/L	0.005 µg/L	0.045 µg/L

A compliance schedule for achieving the WLAs was established by the Regional Board Executive Officer on September 30, 2004. This compliance schedule uses an exponential approach to reduction that involves an increasing percent reduction over a 7-year period to meet the objectives. This percent reduction established for WLA in the September 2004 compliance schedule was used to calculate the Interim TMDL Numeric Targets shown in the table below:

## Compliance Schedule for Diazinon TMDL Implementation

Calendar Year	Year	Waste Load Allocation	Interim TMDL Numeric Target	% Reduction
2004	1	0.460 µg/L	0.5 µg/L	0
2005	2	0.460 µg/L	0.5 µg/L	0
2006	3	0.460 µg/L	0.5 µg/L	0
2007	4	0.414 µg/L	0.45 µg/L	10
2008	5	0.322 µg/L	0.35 µg/L	20
2009	6	0.184 µg/L	0.20 µg/L	30
2010	7	0.045 µg/L	0.05 µg/L	30

The WLAs shall not be exceeded more than 1 time in any 3-year period. Season and flow conditions will not be a consideration.

**Section H.2.a** requires the Copermittees in the SIYB watershed to implement BMPs to maintain a total annual copper load of less than or equal to 30 kg copper/year.

**Section H.2.b** requires the Copermittees in the SIYB watershed to implement, at a minimum, the BMPs contained in the Copermittees' JURMP which address the discharge of copper to achieve the total annual copper load in Section H.2.a above. The WLA was established to maintain the current discharge level of 30 kg copper/year which leads to the conclusion that the current BMPs being implemented in the Copermittees' JURMP will be effective in maintaining this discharge level. Compliance with these requirements will be assessed by re-evaluating the data and assumptions used to estimate the WLA to SIYB of 30 kg copper/year. The Copermittees will be required to evaluate if any changes have occurred in the watershed which could cause or contribute to a higher copper urban runoff discharge and any actions necessary to address these changes. Because the original WLA for municipalities in SIYB was calculated using land use data, drainage area size, event mean concentration and modeling with no actual water quality samples, it is appropriate to use the same or similar method to assess compliance.

SIYB Copper TMDL - Background

SIYB is a popular recreational marina located at the north end of San Diego Bay. It is a semi-enclosed marina that supports a high density of recreational vessels in an area of low tidal flushing. The SIYB watershed is within the City of San Diego. SIYB was placed on the CWA Section 303(d) List of Water Quality Limited Segments (303(d) List) in 1996 due to high concentrations of dissolved copper. The Regional Board has established a TMDL for dissolved copper in SIYB as required by the CWA at the February 9, 2005 Regional Board meeting. The SWRCB approved resolution R9-2005-0019 on September 22, 2005. The Office of Administrative Law approved the TMDL on December 2, 2006 and Resolution R9-2005-0019

has been forwarded to USEPA for final review and approval. Documentation for the SIYB Copper TMDL is included in the report titled, "Total Maximum Daily Load for Dissolved Copper in Shelter Island Yacht Basin, San Diego Bay, Technical Report, February 9, 2005."

The existing dissolved copper load from urban runoff to SIYB was estimated to be roughly 30 kg copper/year or 1% of total loading. Due to the relatively insignificant magnitude of the contribution of dissolved copper from urban runoff, no reductions were assigned to urban runoff and the WLA was assigned the existing 30 kg copper/year. The Basin Plan has been amended to include the following "The Regional Board will amend Order No. 2001-01, *Waste Discharge Requirements for Discharges of Urban Runoff from the Municipal Separate Storm /Sewer Systems* to require that discharges of copper into Shelter Island Yacht Basin waters via the City of San Diego's MS4 not exceed a 30 kg/year wasteload for copper."<sup>227</sup>

The WLA for urban runoff was estimated using land use data, drainage area size, event mean concentration for copper in residential areas. This information and assumptions such as wet weather copper concentrations equal dry weather concentrations were used to estimate the WLA of 30 kg copper/year. Once during the permit cycle, the Copermittees will evaluate the data and assumptions used in estimating the WLA to ensure that nothing has changed which could result in a higher copper discharge.

## I. Program Effectiveness Assessment

The following legal authority applies to section I:

**Broad Legal Authority:** CWA sections 402(p)(3)(B)(ii-iii), CWC section 13377, and Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(B, C, E, and F) and 40 CFR 122.26(d)(2)(iv).

**Specific Legal Authority:** Federal NPDES regulation 40 CFR 122.26(d)(2)(v) provides that the Copermittees must include "Estimated reductions in loadings of pollutants from discharges of municipal storm sewer constituents from municipal storm sewer systems expected as the result of the municipal storm water quality management program. The assessment shall also identify known impacts of storm water controls on ground water." Under Federal NPDES regulation 40 CFR 122.42(c) applicants must provide annual reports on the progress of their storm water management programs.

**Section I.1.a** of the Order requires the Copermittees to assess the effectiveness of the implementation of their jurisdictional programs and activities. The section requires both specific activities and broader programs to be assessed since the effectiveness of jurisdictional efforts may be evident only when considered at different scales. The effectiveness assessment requirements incorporate the approaches developed by the Copermittees in their October 16, 2003 "Framework for Assessing the Effectiveness of Jurisdictional Urban Runoff Management Programs," including use of "outcome levels" and "major effectiveness assessment elements."

In their ROWD, the Copermittees request that use of particular outcome levels not be required for assessing the effectiveness of specific activities implemented by the Copermittees. Because many of the techniques for using the various outcome levels are still in development, the conditions under which each outcome level must be used is not specified in the Order. However,

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<sup>227</sup>Regional Board, 2005. Attachment A to Resolution No. R9-2005-0019, Amendment to the Water Quality Control Plan for the San Diego Region to Incorporate a Total Maximum Daily Load for Dissolved Copper in Shelter Island Yacht Basin, San Diego Bay. P. 5.

during review of the Copermittees' annual reports, the Regional Board has frequently needed to request that the Copermittees improve their effectiveness assessments and utilize the various assessment methods that are available. Moreover, half of the Copermittees audited were found to have inadequate effectiveness assessments which frequently lacked use of measurable goals. For these reasons, the Order contains language requiring the Copermittees to utilize the various outcome levels "where applicable and feasible." This will help ensure that the Copermittees vigorously use outcome levels, while also providing the Copermittees with flexibility to develop techniques to use outcome levels where such techniques do not currently exist.

The Copermittees also request in their ROWD that they not be responsible for assessment of the impact of their jurisdictional programs on pollutant load reductions, urban runoff water quality, and receiving water quality (outcome levels 4-6). This request slights the overall goal of the Copermittees' jurisdictional programs, which is to reduce discharged pollutants loads and improve water quality. A link between the Copermittees' jurisdictional programs and improved urban runoff and receiving water conditions must be made whenever adequate information exists. This can help validate current efforts, which is essential for maintaining program support, while also guiding future efforts.

Assessments of jurisdictional programs on water quality have been conducted by Copermittees in the past and have been useful. For example, the City of Encinitas reports decreasing bacteria levels in commercial areas following increased inspections of commercial facilities. The City also reports similar results in residential areas following increased residential education efforts.<sup>228</sup> Such information provides very useful feedback to the Copermittees, since the results are specific and localized. The results provide direct evidence of program impact which may otherwise be missed by assessments conducted at a watershed level. Program assessment capable of linking jurisdictional programs and water quality improvements is an important tool that can exhibit to program managers, decision makers, and the public that jurisdictional urban runoff management program efforts are worthwhile and should continue. For these reasons, the Order requires the Copermittees to assess the impact of their jurisdictional program on pollutant load reductions and water quality, where applicable and feasible.

**Section I.1.b** of the Order requires the Copermittees improve jurisdictional activities or BMPs when they are found to be ineffective or when water quality impairments are continuing. This requirement fulfills the purpose of conducting effectiveness assessments – to improve and refine the Copermittees' programs. The requirement is consistent with USEPA's Phase II regulations, which state: "If the permittee determines that its original combination of BMPs are not adequate to achieve the objectives of the municipal program, the MS4 should revise its program to implement BMPs that are adequate [...]."<sup>229</sup>

**Section I.2.a** of the Order requires the Copermittees to assess the effectiveness of the implementation of their watershed programs and activities. The section requires both specific activities and broader programs to be assessed since the effectiveness of watershed efforts may be evident only when considered at different scales. The effectiveness assessment requirements incorporate the approaches developed by the Copermittees in their October 16, 2003 "Framework for Assessing the Effectiveness of Jurisdictional Urban Runoff Management Programs," including use of "outcome levels" and major effectiveness assessment elements.

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<sup>228</sup> City of Encinitas, 2006. Jurisdictional Urban Runoff Management Program Annual Report FY 2004-2005. P. 11-9.

<sup>229</sup> Federal Register / Vol. 64, No. 235 / Wednesday, December 8, 1999 / Rules and Regulations. P. 68762.

As with the jurisdictional assessments discussed for section I.1.a, the Order contains language requiring the Copermittees to utilize outcome levels 1-4 for assessment “where applicable and feasible.” This will help ensure that the Copermittees vigorously use the outcome levels, while also providing the Copermittees with flexibility to develop techniques to use outcome levels where such techniques do not currently exist. The section also places particular focus on the Copermittees’ utilization of outcome levels 5 and 6, which address urban runoff and receiving water quality. Since the entire thrust of the watershed urban runoff management programs is to improve the high priority water quality problems within the various watersheds, use of outcome levels 5 and 6 is needed to assess the effectiveness of the watershed urban runoff management programs. After 15 years of implementation of the storm water program in San Diego County, impact of the program on water quality must be assessed. Without such assessments, it will not be known whether the watershed urban runoff management programs are achieving their purpose. The Copermittees’ receiving waters monitoring program, which is watershed-based, is expected to provide the Copermittees with information to conduct these assessments.

**Section I.2.b** of the Order includes requirements for modification of watershed activities similar to those for modification of jurisdictional activities discussed in section I.1.b. Please see the section I.1.b discussion for further information.

**Section I.3.a** of the Order requires the Copermittees to assess the effectiveness of their regional activities and programs in a manner similar to the assessment requirements discussed for section I.1.a and I.2.a. Please see the discussions for these sections for further information. Section I.3.a also requires the Copermittees to evaluate their progress in implementing measures on a regional basis. These evaluations are needed to track the Copermittees’ progress towards meeting their goals and objectives for regional urban runoff management.

**Section I.4** (TMDL BMP Implementation Plan) requires the Copermittees to assess the effectiveness of their TMDL BMP Implementation Plans or equivalent plans in a manner similar to the assessment of the effectiveness of the watershed urban runoff management programs. This is appropriate, since implementation of TMDL BMP Implementation Plans is similar to implementation of watershed urban runoff management programs.

**Section I.5** (Long-Term Effectiveness Assessment) requires the Copermittees to conduct a Long-Term Effectiveness Assessment prior to their submittal of an application for reissuance of the Order. The Long-Term Effectiveness Assessment is necessary to provide support for the Copermittees’ proposed changes to their programs in their ROWD. It can also serve as the basis for changes to the Order’s requirements. The Copermittees recommend that the Order include a requirement for development of a Long-Term Effectiveness Assessment in their ROWD.<sup>230</sup>

## **J. Reporting**

The following legal authority applies to section J:

**Broad Legal Authority:** CWA sections 402(p)(3)(B)(ii-iii), CWC section 13377, and Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(B, C, E, and F) and 40 CFR 122.26(d)(2)(iv).

**Specific Legal Authority:** Federal NPDES regulation 40 CFR 122.42(c) requires that “The operator of a large or medium municipal separate storm sewer system or a municipal separate storm sewer system that has been designated by the director under § 122.26(a)(1)(v) of this part

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<sup>230</sup> San Diego County Copermittees, 2005. Report of Waste Discharge. P. D-82.

must submit an annual report by the anniversary of the date of the issuance of the permit for such system. The report shall include: (1) The status of implementing the components of the storm water management program that are established as permit conditions; (2) Proposed changes to the storm water management program that are established as permit condition. Such proposed changes shall be consistent with § 122.26(d)(2)(iii) of this part; (3) Revisions, if necessary, to the assessment of controls and the fiscal analysis reported in the permit application under § 122.26(d)(2)(iv) and (d)(2)(v) of this part; (4) A summary of data, including monitoring data, that is accumulated throughout the reporting year; (5) Annual expenditures and budget for year following each annual report; (6) A summary describing the number and nature of enforcement actions, inspections, and public education programs; (7) Identification of water quality improvements or degradation.”

California Water Code section 13267 provides that “the regional board may require than any person who has discharged [...] shall furnish, under penalty of perjury, technical or monitoring reports which the regional board requires.”

**Section J.1** (Jurisdictional Urban Runoff Management Plans) outlines the information to be included in the Copermittees’ JURMPs. It utilizes an approach similar to the approach used in Order No. 2001-01. The information to be included in the JURMP is listed in detail in Attachment D. Significant detail is included in the Order regarding what information should be in the JURMPs in order to provide certainty to the Copermittees when they develop and submit their JURMPs. By providing detail for what information should be included in the JURMP, time spent by the Copermittees and Regional Board on JURMP reporting, review, comment, and response is expected to be reduced.

It is important to note that in many cases, the requirements of the Order should not necessitate a complete rewrite of the JURMPs. Only sections of the Order which are new or have been significantly changed should warrant rewriting of JURMP sections. The Regional Board plans to work with the Copermittees and provide guidance regarding where JURMPs must be updated in accordance with the Order. This will help ensure that rewriting, reporting, and review efforts are minimized.

**Sections J.2 and J.3** (Watershed and Regional Urban Runoff Management Plans) include requirements for information to be included in the WURMPs and RURMP that are similar in scope to the requirements for information to be included in the JURMPs (section J.1). Please see the discussion for section J.1 for further information.

**Section J.4** (Hydromodification Plan) requires various submittals during the development of the HMP. These submittals are necessary to provide both the Copermittees and the Regional Board the opportunity to review progress being made on the HMP. Frequent review of the HMP as it develops is needed due to the complex nature of the issues the HMP will address. The HMP submittal process included in the Order is based on a successful HMP submittal process previously implemented in the San Francisco Bay Area.

The final HMP requires approval by the Regional Board. Final approval by the Regional Board is necessary because the HMP requirements are new and relatively complex. Full vetting of the HMP before the Regional Board will provide all interested parties the opportunity to participate on HMP development and help ensure a workable end product for the interested parties.

**Section J.6** (Report of Waste Discharge) requires submittal of a ROWD prior to the expiration of the Order. The section identifies the minimum information to be included in the ROWD, based

on USEPA's May 17, 1996 guidance "Interpretive Policy Memorandum on Reapplication Requirements for Municipal Separate Storm Sewer Systems."

#### **K. Modifications of Programs**

The following legal authority applies to section K:

**Broad Legal Authority:** CWA sections 402(p)(3)(B)(ii-iii), CWC section 13377, and Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(B, C, E, and F) and 40 CFR 122.26(d)(2)(iv).

**Section K** of the Order provides a process for the Copermittees to modify their urban runoff management programs. This process will be useful so that the Copermittees can continue to refine and improve their programs based on the findings of their annual program effectiveness assessments. The process allows for minor modifications to the Copermittees' programs where the Copermittees can exhibit that the modifications meet or exceed existing legal requirements under the Order. Such a process avoids lengthy and time consuming formal approvals of proposed modifications before the Regional Board, while still ensuring compliance with applicable legal standards and the Order. The Copermittees requested inclusion of a process in the Order to allow for minor modifications to their urban runoff management programs in their ROWD.<sup>231</sup> The process included in the Order is based on a process utilized by the San Francisco Bay Area Regional Water Quality Control Board in their MS4 permit for Alameda County.<sup>232</sup>

#### **L. All Copermittee Collaboration**

The following legal authority applies to section L:

**Broad Legal Authority:** CWA sections 402(p)(3)(B)(ii-iii), CWC section 13377, and Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(B, C, E, and F) and 40 CFR 122.26(d)(2)(iv).

**Specific Legal Authority:** Federal NPDES regulation 40 CFR 122.26(d)(2)(i)(D) provides that "[The Copermittee must demonstrate that it can control] through interagency agreements among coapplicants the contribution of pollutants from one portion of the municipal system to another portion of the municipal system."

No significant changes were made to this section.

#### **M. Principal Permittee Responsibilities**

The following legal authority applies to section M:

**Broad Legal Authority:** CWA sections 402(p)(3)(B)(ii-iii), CWC section 13377, and Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(B, C, E, and F) and 40 CFR 122.26(d)(2)(iv).

**Specific Legal Authority:** Federal NPDES regulation 40 CFR 122.26(a)(3)(iii)(C) provides that "A regional authority may be responsible for submitting a permit application."

Federal NPDES regulation 40 CFR 122.26(d)(2)(i)(D) provides that "[The Copermittee must demonstrate that it can control] through interagency agreements among coapplicants the

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<sup>231</sup> San Diego County Copermittees, 2005. Report of Waste Discharge. P. C-10.

<sup>232</sup> San Francisco Bay Area Regional Water Quality Control Board, 2003. Order No. R2-2003-0021. P. 45.

contribution of pollutants from one portion of the municipal system to another portion of the municipal system."

No significant changes were made to this section.

#### **N. Receiving Waters Monitoring and Reporting Program**

The following legal authority applies to section N:

**Broad Legal Authority:** CWA sections 402(p)(3)(B)(ii-iii), CWC section 13377, and Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(B, C, E, and F) and 40 CFR 122.26(d)(2)(iv).

**Specific Legal Authority:** Copermittees must conduct a comprehensive monitoring program as required under Federal NPDES regulations 40 CFR 122.26(d)(2)(iii).

See section V of this Fact Sheet/Technical Report for a discussion of changes to the Receiving Waters Monitoring and Reporting Program.

#### **O. Standard Provisions, Reporting Requirements, and Notifications**

The following legal authority applies to section O:

**Broad Legal Authority:** CWA sections 402(p)(3)(B)(ii-iii), CWC section 13377, and Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(B, C, E, and F) and 40 CFR 122.26(d)(2)(iv).

**Specific Legal Authority:** Standard provisions, reporting requirements, and notifications are consistent to all NPDES permits and are generally found in Federal NPDES regulation 40 CFR 122.41.

**Section O.2** of the Order has been changed to remove the statement that all plans and reports submitted in compliance with the Order are an enforceable part of the Order. This statement has been removed because it is unnecessary. The Order itself contains sufficient detailed requirements to ensure that compliance with discharge prohibitions, receiving water limits, and the narrative standard of MEP are achieved. Implementation by the Copermittees of programs in compliance with the Order's requirements, prohibitions, and receiving water limits is the pertinent compliance standard to be used under the Order, as opposed to assessing compliance by reviewing the Copermittees' implementation of their plans alone.

Rather than being substantive components of the Order itself, the Copermittees' urban runoff management plans are simply descriptions of their urban runoff management programs required under the Order. These plans serve as procedural correspondence which guides program implementation and aids the Copermittees and Regional Board in tracking implementation of the programs. In this manner, the plans are not functional equivalents of the Order. For these reasons, the Copermittees' urban runoff management plans need not be an enforceable part of the Order.

#### **P. Attachment A**

The following legal authority applies to Attachment A:

**Broad Legal Authority:** CWA sections 402(p)(3)(B)(ii-iii), CWC section 13377, and Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(B, C, E, and F) and 40 CFR 122.26(d)(2)(iv).

**Specific Legal Authority:** California Water Code Section 13243 provides that “A regional board, in a water quality control plan or in waste discharge requirements, may specify certain conditions or areas where the discharge of waste, or certain types of waste, will not be permitted.”

California Water Code Section 13263(a) provides that waste discharge requirements prescribed by the SDRWQCB implement the Basin Plan.

No significant changes were made to this attachment.

#### **Q. Attachment B**

The following legal authority applies to Attachment B:

**Broad Legal Authority:** CWA sections 402(p)(3)(B)(ii-iii), CWC section 13377, and Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(B, C, E, and F) and 40 CFR 122.26(d)(2)(iv).

**Specific Legal Authority:** Standard provisions, reporting requirements, and notifications are consistent to all NPDES permits and are generally found in Federal NPDES regulation 40 CFR 122.41.

**Attachment B** includes Standard Provisions which have been developed by the SWRCB. These Standard Provisions ensure that NPDES permits are consistent and compatible with USEPA’s federal regulations. Some Standard Provisions sections specific to publicly owned sewage treatment works are not included in Attachment B.

#### **R. Attachment C**

The following legal authority applies to Attachment C:

**Broad Legal Authority:** CWA sections 402(p)(3)(B)(ii-iii), CWC section 13377, and Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(B, C, E, and F) and 40 CFR 122.26(d)(2)(iv).

Attachment C contains definitions for new terms found in the Order. In addition, definitions for terms previously defined in Order No. 2001-01 Attachment D, but which are not found in the current Order, have been deleted.

#### **S. Attachment D**

The following legal authority applies to Attachment D:

**Broad Legal Authority:** CWA sections 402(p)(3)(B)(ii-iii), CWC section 13377, and Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(B, C, E, and F) and 40 CFR 122.26(d)(2)(iv).

**Specific Legal Authority:** California Water Code section 13267 provides that “the regional board may require that any person who has discharged [...] shall furnish, under penalty of perjury, technical or monitoring reports which the regional board requires.”

Please see the discussion for section J.1 for further information.

**T. Attachment E**

The following legal authority applies to Attachment E:

**Broad Legal Authority:** CWA sections 402(p)(3)(B)(ii-iii), CWC section 13377, and Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(B, C, E, and F) and 40 CFR 122.26(d)(2)(iv).

**Specific Legal Authority:** Federal NPDES regulation 40 CFR 122.42(c) requires that “The operator of a large or medium municipal separate storm sewer system or a municipal separate storm sewer system that has been designated by the director under § 122.26(a)(1)(v) of this part must submit an annual report by the anniversary of the date of the issuance of the permit for such system. The report shall include: (1) The status of implementing the components of the storm water management program that are established as permit conditions; (2) Proposed changes to the storm water management program that are established as permit condition. Such proposed changes shall be consistent with § 122.26(d)(2)(iii) of this part; (3) Revisions, if necessary, to the assessment of controls and the fiscal analysis reported in the permit application under § 122.26(d)(2)(iv) and (d)(2)(v) of this part; (4) A summary of data, including monitoring data, that is accumulated throughout the reporting year; (5) Annual expenditures and budget for year following each annual report; (6) A summary describing the number and nature of enforcement actions, inspections, and public education programs; (7) Identification of water quality improvements or degradation.”

California Water Code section 13267 provides that “the regional board may require than any person who has discharged [...] shall furnish, under penalty of perjury, technical or monitoring reports which the regional board requires.”

**Attachment E** to the Order outlines the information to be included in the Copermittees’ Jurisdictional Urban Runoff Management Program Annual Reports. Significant detail is included in the attachment regarding what information should be in the annual reports in order to provide certainty to the Copermittees when they develop and submit their annual reports. By providing detail for what information should be included in the annual reports, time spent by the Copermittees and Regional Board to generate, review, and comment on annual reports should be reduced.

**U. Attachment F**

The following legal authority applies to Attachment F:

**Broad Legal Authority:** CWA sections 402(p)(3)(B)(ii-iii), CWC section 13377, and Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(B, C, E, and F) and 40 CFR 122.26(d)(2)(iv).

**Specific Legal Authority:** Federal NPDES regulation 40 CFR 122.42(c) requires that “The operator of a large or medium municipal separate storm sewer system or a municipal separate storm sewer system that has been designated by the director under § 122.26(a)(1)(v) of this part must submit an annual report by the anniversary of the date of the issuance of the permit for such system. The report shall include: (1) The status of implementing the components of the storm water management program that are established as permit conditions; (2) Proposed changes to the storm water management program that are established as permit condition. Such proposed changes shall be consistent with § 122.26(d)(2)(iii) of this part; (3) Revisions, if necessary, to the assessment of controls and the fiscal analysis reported in the permit application under §

122.26(d)(2)(iv) and (d)(2)(v) of this part; (4) A summary of data, including monitoring data, that is accumulated throughout the reporting year; (5) Annual expenditures and budget for year following each annual report; (6) A summary describing the number and nature of enforcement actions, inspections, and public education programs; (7) Identification of water quality improvements or degradation.”

California Water Code section 13267 provides that “the regional board may require than any person who has discharged [...] shall furnish, under penalty of perjury, technical or monitoring reports which the regional board requires.”

**Attachment F** to the Order provides a table summary of scheduled submittals required by the Order. Unscheduled submittals are no longer added to the table, since there is no proper due date for such submittals. A task summary has not been created for the Order, since the previous task summary was found to be redundant, repeating information found in the submittal summary and elsewhere in the Order.

## V. Receiving Waters Monitoring and Urban Runoff Reporting Program

The following legal authority applies to the Receiving Waters Monitoring and Urban Runoff Reporting Program:

**Broad Legal Authority:** CWA sections 402(p)(3)(B)(ii-iii), CWC section 13377, and Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(B, C, E, and F) and 40 CFR 122.26(d)(2)(iv).

**Specific Legal Authority:** Copermittees must conduct a comprehensive monitoring program as required under Federal NPDES regulations 40 CFR 122.26(d)(2)(iii).

Federal NPDES regulation 40 CFR 122.42(c) requires that “The operator of a large or medium municipal separate storm sewer system or a municipal separate storm sewer system that has been designated by the director under § 122.26(a)(1)(v) of this part must submit an annual report by the anniversary of the date of the issuance of the permit for such system. The report shall include: (1) The status of implementing the components of the storm water management program that are established as permit conditions; (2) Proposed changes to the storm water management program that are established as permit condition. Such proposed changes shall be consistent with § 122.26(d)(2)(iii) of this part; (3) Revisions, if necessary, to the assessment of controls and the fiscal analysis reported in the permit application under § 122.26(d)(2)(iv) and (d)(2)(v) of this part; (4) A summary of data, including monitoring data, that is accumulated throughout the reporting year; (5) Annual expenditures and budget for year following each annual report; (6) A summary describing the number and nature of enforcement actions, inspections, and public education programs; (7) Identification of water quality improvements or degradation.”

California Water Code section 13267 provides that “the regional board may require than any person who has discharged [...] shall furnish, under penalty of perjury, technical or monitoring reports which the regional board requires.”

### 1. Purpose

According to USEPA, the benefits of sampling data include, but are not limited to:

1. Providing a means for evaluating the environmental risk of storm water discharges by identifying types and amounts of pollutants present;

2. Determining the relative potential for storm water discharges to contribute to water quality impacts or water quality standard violations;
3. Identifying potential sources of pollutants; and
4. Eliminating or controlling identified sources more specifically through permit conditions.<sup>233</sup>

Equally important, monitoring programs are an essential link in the improvement of urban runoff management efforts. Data collected from monitoring programs can be assessed to determine the effectiveness of management programs and practices, which is vital for the success of the iterative approach used to meet the MEP standard. Specifically, when data indicates that a particular BMP or program component is not effective, improved efforts can be selected and implemented. Also, when water quality data indicate that water quality standards or objectives are being exceeded, particular pollutants, sources, and drainage areas can be identified and targeted for specific urban runoff management efforts.

Considering the benefits described above, the Receiving Waters Monitoring and Reporting Program (MRP) has been designed to determine impacts to receiving water quality and beneficial uses from urban runoff and to use the results to refine the Copermittees' urban runoff management programs for the reduction of pollutant loadings to the MEP. The primary goals of the MRP include:

1. Assess compliance with Order No. R9-2007-0001;
2. Measure and improve the effectiveness of the Copermittees' urban runoff management programs;
3. Assess the chemical, physical, and biological impacts of receiving waters from urban runoff;
4. Characterize urban runoff discharges;
5. Identify sources of specific pollutants;
6. Prioritize drainage and sub-drainage areas that need management actions;
7. Detect and eliminate illicit discharges and illicit connections to the MS4; and
8. Assess the overall health of receiving waters.

Each of the components of the MRP is necessary to meet the objectives listed above. In addition, the MRP has been designed in accordance with the guidance provided by the Southern California Stormwater Monitoring Coalition's Model Monitoring Technical Committee in its August 2004 "Model Monitoring Program for Municipal Separate Storm Sewer Systems in Southern California." This guidance document was developed in response to Senate Bill 72 (Kuehl), which addressed the standardization of sampling and analysis protocols in municipal stormwater monitoring programs. The technical committee which developed the guidance included representatives from Southern California Regional Water Quality Control Boards (including San Diego), municipal storm water permittees (including the County of San Diego), Heal the Bay, and the Southern California Coastal Water Research Project.

As its title suggests, the guidance essentially developed a model municipal storm water monitoring program for use in Southern California. The model program is structured around five fundamental management questions, outlined below. The MRP is designed as an iterative step towards ensuring that the Copermittees' monitoring program can fully answer each of the five management questions.

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<sup>233</sup> USEPA, 1992. NPDES Storm Water Sampling Guidance Document. EPA/833-B-92-001.

1. Are conditions in receiving waters protective, or likely to be protective, of beneficial uses?
2. What is the extent and magnitude of the current or potential receiving water problems?
3. What is the relative urban runoff contribution to the receiving water problem(s)?
4. What are the sources of urban runoff that contribute to receiving water problem(s)?
5. Are conditions in receiving waters getting better or worse?

The justifications for each component of the monitoring program are discussed below.

## 2. Monitoring Program

### Summary of Order No. 2001-01 Monitoring Program and Results

The Copermittees' monitoring under Order No. 2001-01 includes several components: (a) wet weather mass loading station monitoring (including toxicity monitoring); (b) bioassessment monitoring; (c) dry weather field screening and analytical monitoring; (d) coastal storm drain monitoring; and (e) ambient bay and lagoon monitoring. Each of these is briefly summarized below with recent results briefly discussed. The Copermittees' most recent monitoring report is available at:

[http://www.projectcleanwater.org/html/wg\\_monitoring\\_04-05report.html](http://www.projectcleanwater.org/html/wg_monitoring_04-05report.html).

#### *Wet Weather Mass Loading Station Monitoring*

The Copermittees' wet weather mass loading station monitoring consists of water quality monitoring during three storm events annually within the main drainage at the base of each major watershed in San Diego County. There are currently 11 wet weather mass loading stations throughout San Diego County, where various constituents of concern, bacterial indicators, and toxicological impacts are measured. Using data collected from the wet weather mass loading stations, persistent wet weather constituents of concern have been identified by the Copermittees in their Baseline Long-Term Effectiveness Assessment document. Persistent wet weather constituents of concern are generally those constituents which have concentrations which persistently exceed water quality objectives. Increasing and decreasing trends in constituent concentrations have also been identified by the Copermittees.

#### Mass Loading Station Persistent Wet Weather Constituents and Trends<sup>234</sup>

Mass Loading Stations	Persistent Wet Weather Constituents of Concern	Significant Trends Observed
Santa Margarita	Fecal Coliform Total Suspended Solids Turbidity	
San Luis Rey	Total Dissolved Solids	
Agua Hedionda	Fecal Coliform Total Dissolved Solids Total Suspended Solids Turbidity	Increasing chemical oxygen demand Increasing total kjeldahl nitrogen Increasing total phosphorus Increasing total suspended solids Increasing turbidity
Escondido Creek	Fecal Coliform Total Dissolved Solids Turbidity	

<sup>234</sup> San Diego County Copermittees, 2005. Baseline Long-Term Effectiveness Assessment.

San Dieguito River	Total Dissolved Solids	
Penasquitos River	Total Dissolved Solids	
Tecolote Creek	Fecal Coliform Turbidity Diazinon	Increasing arsenic (still below water quality objective) Decreasing total suspended solids Decreasing total zinc
San Diego River	Fecal Coliform	
Chollas Creek	Fecal Coliform Total Suspended Solids Turbidity Diazinon Copper Zinc Toxicity (Ceriodaphnia and Hyalella)	Increasing nitrate Increasing lead Decreasing total suspended solids Decreasing total dissolved solids Decreasing nickel
Sweetwater River	Total Dissolved Solids Fecal Coliform Diazinon	
Tijuana River	Fecal Coliform Ammonia Biochemical Oxygen Demand Chemical Oxygen Demand Total Phosphorus Total Suspended Solids Turbidity Chlorpyrifos Diazinon Malathion Toxicity (Ceriodaphnia)	

### *Bioassessment Monitoring*

Bioassessment monitoring is conducted to provide site-specific information about the health and diversity of freshwater benthic communities within a specific reach of a creek. It consists of collecting samples of the benthic communities during dry weather and conducting a taxonomic identification to measure community abundance and diversity. Benthic community abundance and diversity is then compared to a reference creek to assess benthic community health. Under Order No. 2001-01, the Copermittees are required to conduct bioassessment monitoring on 23 stream reaches. The results from the Copermittees' bioassessment monitoring demonstrate that the beneficial uses of urban streams are being adversely impacted by urban runoff. The San Luis Rey, Carlsbad, San Dieguito, Penasquitos, Mission Bay, San Diego River, San Diego Bay, and Tijuana River watersheds all had Poor to Very Poor Index of Biotic Integrity ratings.<sup>235</sup>

### *Dry Weather Field Screening and Analytical Monitoring*

The Copermittees conduct dry weather field screening and analytical monitoring throughout their jurisdictions at various locations within their MS4s. While a principal purpose of the dry weather field screening and analytical monitoring is to identify illicit discharges and/or connections to the MS4, the data gathered also provides useful information regarding water quality within the Copermittees' MS4s during dry weather conditions. Data from dry weather field screening and

<sup>235</sup> San Diego County Municipal Copermittees, 2005. 2004-2005 Urban Runoff Monitoring Final Report. Executive Summary.

analytical monitoring is often used effectively to identify and abate illicit discharges, but it also indicates high levels of pollutants in the Copermittees' MS4s. The number of exceedances of water quality criteria for various constituents at dry weather field screening and analytical monitoring sites frequently exceeds the number monitoring site visits conducted.<sup>236</sup>

#### *Coastal Storm Drain Monitoring*

Coastal storm drain monitoring involves monitoring discharges from coastal storm drains and nearby receiving waters for bacterial indicators. Approximately 59 coastal storm drains are monitored year round on a weekly or monthly basis, depending on the season. For samples collected in receiving waters, total coliform, fecal coliform, and Enterococcus water quality standards were exceeded at a rate of 2.0%, 1.7%, and 4.4% respectively in 2003-2004. Counts of bacterial indicators in samples collected from coastal storm drain discharges greatly exceeded those of samples collected in receiving waters, but were not reported in relation to water quality standards.<sup>237</sup>

#### *Ambient Bay and Lagoon Monitoring*

To monitor ambient bay and lagoon conditions, the Copermittees focus on assessing bay and lagoon sediments where contaminants are most likely to be found. Monitoring is conducted in twelve coastal embayments for various constituents, toxicity, and benthic infauna. Most of the embayments monitored were found to contain toxic elements in their sediment. However, this monitoring did occur in embayment areas targeted because of their likelihood to contain contaminated sediment, essentially representing worst-case scenarios.<sup>238</sup>

#### Mass Loading Station Monitoring

**Section II.A.1** of the MRP requires mass loading and toxicity monitoring at monitoring stations located at the bottom of major watersheds within San Diego County. The mass loading monitoring will provide data representing event mean concentrations of pollutants, total pollutant loadings, and toxicity conditions from specific drainage areas. Mass loading monitoring stations are recommended by the Model Monitoring Technical Committee in order to answer management questions 1, 2, and 5.<sup>239</sup> The stations are also expected to contribute towards meeting MRP goals 1, 2, 3, 4, 6, and 8. The mass loading station monitoring included in the MRP is the same as the mass loading station monitoring proposed by the Copermittees in their ROWD.<sup>240</sup>

**Sections II.A.1.a and II.A.1.b** of the MRP identify the location of the mass loading stations and the frequency of the monitoring to be conducted at the mass loading stations. The locations of the stations are identical to the locations utilized under Order No. 2001-01, and match the locations proposed by the Copermittees in their ROWD.<sup>241</sup> These locations provide substantial coverage of the major watersheds within the San Diego Region portion of San Diego County.

The frequency of monitoring at the mass loading stations has been changed from monitoring each station for three wet weather events every year to monitoring each station for two wet weather

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<sup>236</sup> Ibid. Sections 4-12.

<sup>237</sup> Ibid. Attachment A.

<sup>238</sup> Ibid. Executive Summary.

<sup>239</sup> Model Monitoring Technical Committee, 2004. Model Monitoring Program for Municipal Separate Storm Sewer Systems in Southern California. Chapter 5.

<sup>240</sup> San Diego County Copermittees, 2005. Report of Waste Discharge. Attachment 3, p. 9.

<sup>241</sup> Ibid. Attachment 3, p. 9.

and two dry weather monitoring events every other year. While this is an overall reduced frequency of monitoring at the mass loading stations, it is replaced by the addition of new monitoring stations to be located in the upper watersheds (called temporary watershed assessment stations). The new information generated from the temporary watershed assessment stations, as well as from new monitoring of dry weather events, offsets the reduced amount of information gathered at mass loading stations resulting from the monitoring of fewer wet weather events.

In their ROWD, the Copermittees statistically compared the Order No. 2001-01 monitoring program with the proposed program in order to determine any loss in the ability to observe trends resulting from the reduced wet weather monitoring frequency. The Copermittees' statistical assessments utilized empirical data from the existing monitoring program and used existing trends to predict or model the future data sets to estimate when water quality objectives would be reached assuming that current trends continue. The Copermittees found that "depending upon the current rate of decrease in observed concentration and variability of constituents, the ability to observe trends will not change significantly with the recommended program."<sup>242</sup> Using an example worst case scenario of a data exhibiting a non-significant downward trend (copper in Tecolote Creek), it was estimated that the frequency of monitoring conducted under Order No. 2001-01 would not exhibit concentrations below the water quality objective with 95% confidence for 18 years. Using the frequency of monitoring included in the MRP, however, it would take 22 years to see the same results - a relatively modest increase. The Copermittees further considered the ability to identify statistically significant differences between watersheds or between years when data from only two wet weather events is collected, as opposed to three events. Again, the Copermittees found that results are similar whether two wet weather events or three are monitored.<sup>243</sup>

While the reduction in the frequency of monitoring of wet weather events will certainly impact the ability to observe statistically significant trends and differences to some extent, the new MRP will advance the understanding of conditions in San Diego County watersheds. Segmenting the watershed and adding new temporary watershed assessment stations will provide additional watershed information relative to magnitude and extent, as well as increased spatial coverage to focus management efforts. Moreover, the MRP provides a more comprehensive temporal view of the watershed with the addition of dry weather monitoring, which will improve the Copermittees' ability to complete the pollutant loading picture.<sup>244</sup>

**Sections II.A.1.c-f** of the MRP include requirements that standard sampling and analysis protocols are followed by the Copermittees during monitoring. These are generally the same requirements included in Order No. 2001-01.

**Section II.A.1.g** of the MRP lists the constituents to be monitored at mass loading stations and temporary watershed assessment stations. These constituents have not changed from the constituents monitored under Order No. 2001-01.

**Section II.A.1.h** of the MRP requires the analysis of several additional constituents at stations in the Chollas Creek watershed. These constituents are required for analysis to assess the contribution of urban runoff to the Toxic Hot Spot at the mouth of Chollas Creek. The requirement for this analysis is consistent with the SWRCB's June 1999 Consolidated Toxic Hot Spot Cleanup Plan.

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<sup>242</sup> Ibid. Attachment 3, p. 14.

<sup>243</sup> San Diego County Copermittees, 2005. Report of Waste Discharge. Attachment 3, Appendix A, p. 2-5.

<sup>244</sup> Ibid. Attachment 3, p. 18.

**Sections II.A.1.i-j** of the MRP identify the toxicity testing to be implemented and require that standard toxicity testing procedures be followed during the testing. These toxicity testing requirements have not changed for the toxicity testing requirements of Order No. 2001-01.

#### Temporary Watershed Assessment Station Monitoring

**Section II.A.2.a** of the MRP identifies the number of temporary watershed assessment stations to be monitored in a given year for each watershed. Temporary watershed assessment stations will serve to segment watersheds, providing information on sub-watersheds which have previously not been monitored extensively. This will aid in the identification of water quality problem areas and help identify sources. Temporary watershed assessment stations are recommended by the Model Monitoring Technical Committee in order to answer management questions 1, 2, 3, and 5.<sup>245</sup> The stations are also expected to contribute towards meeting MRP goals 1, 2, 3, 4, 5, 6, and 8.

The section allows for the number of stations within a watershed to change, as long as the total number of stations monitored is not reduced. The number and watershed location of the stations and the frequency that they are to be monitored matches the Copermittees' proposal in their ROWD.<sup>246</sup> However, the location of the stations within each watershed is critical in terms of determining the monitoring program's effectiveness. If correctly sited, the stations are expected to be very useful in answering the program's management questions and meeting the program's goals. For this reason, the MRP includes requirements to guide where the stations are located. This will help maximize the utility of the stations, while also providing the Copermittees with adequate flexibility to ultimately choose the locations of the stations. The requirements for locating the stations is based on recommendations made by USEPA's contractor Tetra Tech during its review of the Copermittees' monitoring program proposal.<sup>247</sup>

**Section II.A.2.b** of the MRP identifies the required frequency of monitoring of temporary watershed assessment stations in a given year. The stations will be monitored with the same frequency as the mass loading stations. This frequency was proposed by the Copermittees in their ROWD.<sup>248</sup> The frequency of monitoring is appropriate for the same reasons it is appropriate at the mass loading stations (see the discussion for sections II.A.1.a and II.A.1.b).

**Section II.A.2.c** of the MRP requires temporary watershed assessment stations to be monitored in the same manner as mass loading stations, in terms of procedures, protocols, analysis, etc.

#### Bioassessment Monitoring

**Section II.A.3** of the MRP requires the Copermittees to conduct bioassessment monitoring. Bioassessment monitoring is a cost-effective tool that measures the effects of water quality over time.<sup>249</sup> It is an important indicator of stream health and impacts from urban runoff. It can detect impacts that chemical and toxicity monitoring cannot. USEPA encourages permitting authorities to consider requiring biological monitoring methods to fully characterize the nature and extent of

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<sup>245</sup> Model Monitoring Technical Committee, 2004. Model Monitoring Program for Municipal Separate Storm Sewer Systems in Southern California. Chapter 5.

<sup>246</sup> San Diego County Copermittees, 2005. Report of Waste Discharge. Attachment 3, p. 12.

<sup>247</sup> Tetra Tech, Inc., 2006. Review of San Diego County MS4 Monitoring Program. P. 13.

<sup>248</sup> San Diego County Copermittees, 2005. Report of Waste Discharge. Attachment 3, p. 12.

<sup>249</sup> California Department of Fish and Game, 2002. California Regional Water Quality Control Board, San Diego Region 2002 Biological Assessment Report: Results of May 2001 Reference Site Study and Preliminary Index of Biotic Integrity.

impacts from urban runoff.<sup>250</sup> Therefore, the Regional Board commonly requires bioassessment monitoring in MS4 and other types of discharge permits.

Bioassessment is the direct measurement of the biological condition, physical condition, and attainment of beneficial uses of receiving waters (typically using benthic macroinvertebrates, periphyton, and fish). Bioassessment monitoring integrates the effects of both water chemistry and physical habitat impacts (e.g., sedimentation or erosion) of various discharges on the biological community native to the receiving waters. Moreover, bioassessment is a direct measurement of the impact of cumulative, sub-lethal doses of pollutants that may be below reasonable water chemistry detection limits, but that still have biological affects.

Because bioassessment focuses on communities of living organisms as integrators of cumulative impacts resulting from water quality or habitat degradation, it defines the ecological risks resulting from urban runoff. Bioassessment not only identifies that an impact has occurred, but also measures the effect of the impact and tracks recovery when control or restoration measures have been taken. These features make bioassessment a powerful tool to assess compliance, evaluate the effectiveness of BMPs, and to track both short and long-term trends (MRP goals 1,2,3, and 8). Bioassessment can also help answer management questions 1, 2, and 5.

**Section II.A.3.a** of the MRP specifies the number of bioassessment stations to be monitored and their watershed location. This specification is consistent with Order No. 2001-01's bioassessment requirements and the Copermittees' ROWD.<sup>251</sup> This section also identifies the most current established protocol to be used in identifying bioassessment reference stations. The protocol referenced in the Order is specified because it provides a qualitative and repeatable method for identifying reference sites. Moreover, the protocol is well established, since it has been peer reviewed and published.

**Section II.A.3.b** of the MRP requires bioassessment stations to be collocated with mass loading and temporary watershed assessment stations. This improves the accuracy of the conclusions of the triad approach for a particular area, since all data will be collected from one location within a watershed, instead of several areas. This approach is recommended by the Copermittees in their ROWD.<sup>252</sup>

**Section II.A.3.c** of the MRP requires bioassessment monitoring to be conducted in May and October, which is a continuation of the standard practice conducted under Order No. 2001-01. Timing of bioassessment monitoring is also required to coincide with dry weather monitoring at mass loading and temporary watershed assessment stations. This improves the accuracy of the conclusions of the triad approach for particular time periods, since all data will be collected at specific times within a watershed, instead of at different times. This approach is recommended by the Copermittees in their ROWD.<sup>253</sup>

**Section II.A.3.d** of the MRP requires bioassessment monitoring to utilize the targeted riffle composite approach, which is consistent with the SWRCB's Surface Water Ambient Monitoring Program (SWAMP) Quality Assurance Management Plan (QAMP), as amended. Through SWAMP, various bioassessment methods were evaluated and it was found that the targeted riffle

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<sup>250</sup> USEPA, 1999. Rapid Bioassessment Protocols for Use in Wadeable Streams and Rivers. EPA 841-B-99-002. P. 2-5.

<sup>251</sup> San Diego County Copermittees, 2005. Report of Waste Discharge. Attachment 3, p. 12.

<sup>252</sup> Ibid. Attachment 3, p. 10.

<sup>253</sup> Ibid. Attachment 3, p. 10.

composite approach was a particularly efficient method, providing accurate data in a cost efficient manner.

**Section II.A.3.e** of the MRP requires bioassessment monitoring to include assessment of periphyton (algae). Advantages of bioassessment using periphyton include: (1) they have rapid reproduction rates and very short life cycles, making them valuable indicators of short-term impacts; (2) as primary producers, they are most directly affected by physical and chemical factors; (3) sampling is easy and inexpensive; and (4) algal assemblages are sensitive to some pollutants which may not visibly affect other aquatic assemblages.<sup>254</sup>

**Section II.A.3.f** of the MRP specifies an approach for calculation of an Index of Biotic Integrity for all bioassessment stations. The specified approach is consistent with USEPA's procedures for developing an Index of Biotic Integrity. The approach is also specified because it is highly repeatable and robust. In addition, the specified approach has previously been utilized by the Copermittees under Order No. 2001-01's requirements.

**Section II.A.3.g** of the MRP includes a standard requirement for a professional laboratory to perform the bioassessment procedures.

#### Follow-Up Analysis and Actions

**Section II.A.4** of the MRP requires the Copermittees to use the results of the chemistry, toxicity, and bioassessment monitoring to determine if impacts from urban runoff are occurring and when follow-up actions are necessary. The triad approach allows a wide range of measurements to be combined to more efficiently identify pollutants, their sources, and appropriate follow-up actions. Results from the three types of monitoring shall be assessed to evaluate the extent and causes of pollution in receiving waters and to prioritize management actions to eliminate or reduce the sources. The framework provided in Table 3 is to be used to determine conclusions from the data and appropriate follow-up actions. The framework in Table 3 was derived from the Model Monitoring Program for Municipal Separate Storm Sewer Systems in Southern California.<sup>255</sup> These follow-up actions are expected to primarily help answer management questions 2 and 4, as well as address MRP goals 2, 4, 5, 6 and 7.

When, based on the framework in Table 3, data indicates the presence of toxic pollutants in runoff, the Copermittees are required to conduct a Toxicity Identification Evaluation (TIE). A TIE is a set of procedures used to identify the specific chemical(s) responsible for toxicity to aquatic organisms. When discharges are toxic to a test organism, a TIE must be conducted to confirm potential constituents of concern and rule out others, therefore allowing Copermittees to determine and prioritize appropriate management actions. If a sample is toxic to more than one species, it is necessary to determine the toxicant(s) affecting each species. If the type and source of pollutants can be identified based on the data alone and an analysis of potential sources in the drainage area, a TIE is not necessary.

When a TIE identifies a pollutant associated with urban runoff as a cause of toxicity, it is then necessary to conduct follow-up actions to identify the causative agents of toxicity, isolate the sources of toxicity, evaluate the effectiveness of toxicity control options, and then confirm the reduction in toxicity. Follow-up actions should analyze all potential source(s) causing toxicity,

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<sup>254</sup> USEPA, 1999. Rapid Bioassessment Protocols for Use in Wadeable Streams and Rivers. EPA 841-B-99-002. P. 3-3.

<sup>255</sup> Model Monitoring Technical Committee, 2004. Model Monitoring Program for Municipal Separate Storm Sewer Systems in Southern California. P. 5-61.

potential BMPs to eliminate or reduce the pollutants causing toxicity, and suggested monitoring to demonstrate that toxicity has been removed.

### Ambient Bay and Lagoon Monitoring

**Sections II.A.5.a-c** of the MRP requires the Copermittees to conduct monitoring of the ambient conditions of bays, lagoons, and similar waters. Focused monitoring on these resources is needed because of their uniqueness and the high value of their beneficial uses. Such monitoring is recommended by the Stormwater Monitoring Coalition's Model Monitoring Technical Committee.<sup>256</sup>

The MRP requires the Copermittees to assess the data collected for the bays and lagoons over the last three years and refocus the monitoring program based on the assessment conducted. If links between bay and lagoon conditions and mass loading stations are observed, monitoring is to be conducted in all bays and lagoons in order to gain a better understanding of this relationship. If such a linkage is not observed, special studies shall be conducted specific to the various bays and lagoons and the issues they face. The approach outlined in the MRP for the ambient bay and lagoon monitoring program is based on the proposal found in the Copermittees' ROWD.<sup>257</sup> It is expected to help answer management questions 1, 2, and 5, as well as address MRP goals 1, 2, 3, 6, and 8, with regards to bays and lagoons.

**Section II.A.5.d** of the MRP requires that ambient bay and lagoon monitoring utilize the triad approach for assessment of data. The triad approach links chemistry, toxicity, and bioassessment data to better identify and understand the causes of impacts to beneficial uses. This approach has previously been used by the Copermittees in their ambient bay and lagoon monitoring.<sup>258</sup>

**Section II.A.5.e** of the MRP requires monitoring of the water column in bays and lagoons as necessary to supply information needed for TMDLs. This requirement has been added to the MRP to better ensure that storm water and TMDL monitoring complement each other where possible. This is expected to improve the efficiency with which monitoring resources are used. The Copermittees support complementary storm water and TMDL efforts in their ROWD.<sup>259</sup>

### Coastal Storm Drain Monitoring

**Section II.A.6** of the MRP continues the Copermittees' coastal storm drain monitoring program in the same manner as it was conducted under Order No. 2001-01's receiving waters monitoring program. The coastal storm drain monitoring program outlined in the MRP is consistent with the Copermittees' proposal in their ROWD.<sup>260</sup> Coastal storm drain monitoring is critical because one of the primary impacts to coastal receiving waters is the loss of recreational beneficial uses resulting from high levels of bacteria in urban runoff. The coastal storm drain monitoring program is expected to help answer management questions 1, 2, 3, 4 and 5, as well as address MRP goals 1, 2, 3, 4, 5, 6, 7, and 8.

**Sections II.A.6.a and II.A.6.b.(1)** of the MRP require the Copermittees to identify all coastal storm drains and sample those that are flowing on a monthly basis. All coastal storm drains are

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<sup>256</sup> Ibid. P. 5-38.

<sup>257</sup> San Diego County Copermittees, 2005. Report of Waste Discharge. Attachment 3, p. 10-12.

<sup>258</sup> San Diego County Copermittees, 2005. San Diego County Copermittees 2004-2005 Urban Runoff Monitoring Final Report. P. ES-2.

<sup>259</sup> San Diego County Copermittees, 2005. Report of Waste Discharge. P. D-10.

<sup>260</sup> Ibid. Attachment 4.

required to be part of the program; skipping certain storm drains simply because they are near other storm drains is inappropriate, since each storm drain can have significantly different conditions within its drainage area. One purpose of coastal storm drain monitoring is to identify and abate sources of bacterial contamination. Since the sources of bacterial contamination at a storm drain are generally not known, the potential for a flowing coastal storm drain to be discharging urban runoff with high levels of bacteria cannot be known unless the storm drain is monitored.

The requirement that all coastal storm drains be part of the program is offset by the reduction in sampling frequency to a monthly basis year round, instead of weekly in the summer and monthly in the winter. Moreover, the MRP allows sampling frequency to be further reduced when monitoring results indicate bacteria levels are consistently below an identified criteria. These reductions in sampling frequency are allowed because the Copermittees have found monthly monitoring to typically be representative of storm drain conditions. Also, the Copermittees have identified some storm drains which consistently have low levels of bacteria and do not cause exceedances of standards in receiving waters. Reduction in monitoring frequency provides the Copermittees with more time and resources to investigate problem storm drains, as required in MRP sections II.A.6.b.3-5. The monitoring frequencies in the MRP are recommended by the Copermittees in their ROWD.<sup>261</sup>

**Section II.A.6.b.(2)** of the MRP requires the Copermittees to notify the Regional Board if they are going to reduce the monitoring frequency of a coastal storm drain. This will allow the Regional Board the opportunity to review the proposed reduction prior to the reduction being enacted by the Copermittee.

**Sections II.A.6.b.(3-5)** of the MRP identifies when follow-up investigations must be conducted based on results of coastal storm drain monitoring. Criteria to trigger investigations is needed to ensure that problem storm drains are investigated. Without criteria triggering investigations, there is the potential that sources causing high bacteria levels in storms drains and coastal receiving waters could go uninvestigated.

**Section II.A.6.b.(6)** of the MRP requires the Copermittees to provide notification of exceedances of public health standards so that proper action can be taken by public health agencies.

#### Toxic Hot Spot Monitoring

**Section II.A.7** of the MRP requires the Copermittees to develop and implement a monitoring program for Toxic Hot Spots in San Diego Bay. This requirement is identical to the requirement included in the receiving waters monitoring and reporting program for Order No. 2001-01, and is necessary to ensure the Order is consistent with the SWRCB's June 1999 Consolidated Toxic Hot Spot Cleanup Plan.

#### Pyrethroids Monitoring

**Section II.A.8** of the MRP requires the Copermittees to develop and implement a monitoring program which addresses pyrethroids. A program to monitor pyrethroids is needed because they are the leading insecticides sold to homeowners and have been found at toxic levels in suburban

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<sup>261</sup> San Diego County Copermittees, 2005. Report of Waste Discharge. Attachment 4.

stream sediments in California when investigated.<sup>262</sup> Moreover, their use is likely to increase as diazinon use decreases. Monitoring of pyrethroids will help guide efforts to ensure that the gains achieved by the phasing out of diazinon are not nullified by increased use of pyrethroids.

Since a monitoring program for pyrethroids is new, the Copermittees are provided significant leeway in the development and implementation of the program. The Copermittees can utilize the flexibility incorporated into the MRP to develop a program that is workable for them while providing the necessary information. Moreover, the MRP provides the Copermittees with over a year to develop the program.

### Trash Monitoring

**Section II.A.9** of the MRP requires the Copermittees to develop and implement a monitoring program which addresses trash. A program to monitor trash is needed because trash conditions impacting beneficial uses have frequently been observed within the Copermittees' jurisdictions. For example, the Regional Board directed the Copermittees within the watersheds of Chollas and Paleta Creeks to implement the "iterative process" to address violations of water quality standards due to trash conditions within the creeks.<sup>263</sup> The Regional Board also issued a Notice of Violation to the City of Escondido for trash conditions in Escondido Creek.<sup>264</sup> Moreover, the Copermittees have identified trash as a regional priority.<sup>265</sup>

Since a monitoring program for trash is new, the Copermittees are provided significant leeway in the development and implementation of the program. The Copermittees can utilize the flexibility incorporated into the MRP to develop program that is workable for them while providing the necessary information. Moreover, the MRP provides the Copermittees with over a year to develop the program.

### MS4 Discharge Monitoring

**Section II.A.10** of the MRP requires the Copermittees to develop and implement a program to monitor and characterize pollutant discharges from MS4 outfalls. After over 15 years of program implementation, most Copermittees have not monitored their MS4 discharges significantly and still do not know the quality of those discharges during various conditions. Such monitoring is critical, since it will provide for prioritization of areas for increased management efforts. It will also provide the Copermittees the ability to better assess and improve their jurisdictional programs and BMPs. For example, the Copermittees' assessment framework calls for assessing changes in load reductions and MS4 discharge quality.<sup>266</sup> Monitoring of MS4 discharges will enable the Copermittees to meet these program assessment goals. Without monitoring of MS4 discharges, it is unclear how these program assessment goals will be met. This type of monitoring is recommended for high priority outfalls by the Stormwater Monitoring Coalitions' Model Monitoring Technical Committee.<sup>267</sup> It is expected to help answer management questions

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<sup>262</sup> Science News Online, 2006. A Little Less Green? Studies Challenge the Benign Image of Pyrethroid Insecticides. [www.sciencenews.org/articles/20060204/bob9/asp](http://www.sciencenews.org/articles/20060204/bob9/asp).

<sup>263</sup> Regional Board, 2001. California Water Code Section 13267 Directives Issued to the City of San Diego, City of La Mesa, City of Lemon Grove, and City of National City.

<sup>264</sup> Regional Board, 2000. Notice of Violation No. 2000-181.

<sup>265</sup> San Diego County Copermittees, 2005. Report of Waste Discharge. P. C-3.

<sup>266</sup> San Diego Municipal Stormwater Copermittees, 2003. A Framework for Assessing the Effectiveness of Jurisdictional Urban Runoff Management Programs. P. 14.

<sup>267</sup> Model Monitoring Technical Committee, 2004. Model Monitoring Program for Municipal Separate Storm Sewer Systems in Southern California. P. 5-55.

3 and 4, which is consistent with Tetra Tech's review of the Copermittees' monitoring proposal, which stated "give substantially more attention of questions 3 and 4."<sup>268</sup> It will also address MRP goals 1, 2, 4, 5, 6, and 7.

Since a monitoring program for MS4 discharges is new, the Copermittees are provided significant leeway in the development and implementation of the program. The Copermittees can utilize the flexibility incorporated into the MRP to develop program that is workable for them while providing the necessary information. Moreover, the MRP provides the Copermittees with over a year to develop the program.

#### Source Identification Studies

**Section II.A.11** of the MRP requires the Copermittees to develop and implement a program to identify sources of discharges of pollutants causing the high priority water quality problems within each watershed. Identification of sources causing high priority water quality problems is a central purpose of urban runoff management programs. Monitoring which enables the Copermittees to identify sources of water quality problems aids the Copermittees in focusing their management efforts and improving their programs. In turn, the Copermittees' programs can abate identified sources, which will improve the quality of urban runoff discharges and receiving waters. This monitoring is needed to address management question 4 (What are the sources to urban runoff that contribute to receiving water problems?). Source identification monitoring is a key component of the Model Monitoring Program, which states "once it has been determined [...] that urban runoff is, or is likely to be, a significant source of one or more receiving water problems, then more intensive source identification efforts are called for."<sup>269</sup> Moreover, in its review of the Copermittees' monitoring proposal, Tetra Tech finds that "after some years of assessment monitoring, it is time to look more systematically at determining the relative urban contributions and the sources of urban runoff that contribute to identified receiving water problems."<sup>270</sup>

Since a monitoring program for source identification is mostly new, the Copermittees are provided significant leeway in the development and implementation of the program. The Copermittees can utilize the flexibility incorporated into the MRP to develop program that is workable for them while providing the necessary information. Moreover, the MRP provides the Copermittees with over a year to develop the program.

#### TMDL Monitoring

**Section II.A.12** of the MRP requires the Copermittees to continue to monitor for TMDLs in Chollas Creek as required in the Regional Board's Investigation Order No. R9-2004-0277.

#### Regional Monitoring Program

**Section II.B.1** of the MRP requires the Copermittees to conduct regional monitoring if directed by the Executive Officer. Such investigations may be required under CWC sections 13267 and 13383.

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<sup>268</sup> Tetra Tech Inc., 2006. Review of San Diego County MS4 Monitoring Program. P. 15.

<sup>269</sup> Model Monitoring Technical Committee, 2004. Model Monitoring Program for Municipal Separate Storm Sewer Systems in Southern California. P. 4-17.

<sup>270</sup> Tetra Tech Inc., 2006. Review of San Diego County MS4 Monitoring Program. P. 15.

**Section II.B.2** of the MRP allows the Copermittees to participate in Bight '08. This will provide the Copermittees and Regional Board with insight on the impact of urban runoff on a regional level in the Southern California Bight. Participation in Bight '08 was recommended by the Copermittees in their ROWD.<sup>271</sup> Since participation in Bight '08 is optional for the Copermittees, this section outlines the monitoring which must be conducted if the Copermittees do not participate in the study. The monitoring the Copermittees are to conduct if they do not participate in Bight '08 is consistent with the monitoring they are required to conduct in other years.

### Special Studies

**Section II.C** of the MRP requires the Copermittees to conduct special investigations if directed by the Executive Officer. Such investigations may be required under California Water Code sections 13267 and 13383.

### Dry Weather Field Screening and Analytical Monitoring

**Section II.D** of the MRP requires the Copermittees to conduct dry weather field screening and analytical monitoring. In general, the Order's requirements are the same as the dry weather monitoring requirements of Order No. 2001-01. Significant changes in the requirements are discussed below.

**Section II.D.1** of the MRP requires the Copermittees to select dry weather monitoring stations to cover the entire MS4 system, as well as be in compliance with minimum guidelines/criteria. These criteria require a minimum number of stations per square mile. Additional language has been added to provide the Copermittees flexibility in providing equivalent coverage of the MS4 with fewer stations.

In its October 29, 2004 letter to the Copermittees, as well as in subsequent meetings, the Regional Board notified the Copermittees that a process should be developed for determining the minimum number of dry weather sampling stations that should be required in each jurisdiction. The process was needed due to the apparent disparity in the number of sampling stations among the Copermittees. The Copermittees formed a subcommittee to address this issue, but were unable to develop a consensus process. As a result, the Copermittees have requested that a standardized method for determining number of dry monitoring stations not be included in the Order. In response, the Regional Board has relied on Order No. 2001-01's requirements and some additional clarifying language. This continues Order No. 2001-01's process for identifying the number of stations, while allowing the Regional Board to evaluate the adequacy of the each Copermittee's number of dry weather stations.

Order No. 2001-01's requirement for a monitoring map (Task 5) has been moved to the Illicit Discharge Detection and Elimination Component of Order No. R9-2007-0001. This has been done for clarification purposes, since map development is not expressly a monitoring effort.

**Section II.D.3** of the MRP requires the Copermittees to collect and analyze dry weather samples using laboratory or field screening methods. Language to has been added to this section to reflect that the Copermittees must collect samples for analytical laboratory analysis for at least 25% of dry weather monitoring stations.

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<sup>271</sup> San Diego County Copermittees, 2005. Report of Waste Discharge. Attachment 3, p. 12.

In the ROWD, the Copermittees requested field screening be allowed for surfactants and dissolved copper constituents. The Copermittees also requested that Colilert and Enterolert methods should be allowed for bacteria sampling. The Regional Board agrees with the Copermittees' proposed changes since they will expedite the turnaround time for sampling results for these constituents and assist the Copermittees in their IC/ID investigations. In response to the Copermittees' request, surfactants and dissolved copper have been added to the list of field screening constituents. A footnote has also been added allowing for use of Colilert and Enterolert methods for bacteria.

### Monitoring Provisions

**Section II.E** of the MRP includes monitoring provisions which are standard requirements for all municipal storm water permits.

## **3. Reporting Program**

**Section III.1** of the MRP discusses submittal of the Jurisdictional Urban Runoff Management Program Annual Reports. The section continues the approach utilized under the requirements of Order No. 2001-01, where Copermittees submit their reports to the Principal Permittee to be unified into one document. The section moves forward the due date for these annual reports from January 31 to September 30. This requires jurisdictional annual reports to be submitted closer to the end of the reporting period they address, which will result in earlier review by the Regional Board. Submittal will also be staggered with submittal of the watershed and regional annual reports, spreading out Regional Board review of annual reports, leading to faster review. Earlier and faster review is useful, because Regional Board comments can be received and responded to quicker by the Copermittees. In this manner, Copermittee programs can be modified and benefit from the jurisdictional annual report review, comment, response process at an earlier date, leading to more effective program over the long-term. In their ROWD, the Copermittees agree that separating due dates for jurisdictional and watershed annual reports would be helpful in spreading out the workload associated with their preparation.<sup>272</sup>

**Sections III.2.a and III.2.c** of the MRP continues the reporting approach utilized under the requirements of Order No. 2001-01, where Lead Permittees for each watershed submit their annual reports to the Principal Permittee to be unified into one document.

**Section III.2.b** of the MRP outlines the information to be included in the Copermittees' Watershed Urban Runoff Management Program Annual Reports. Significant detail is included regarding what information should be in the annual reports in order to provide certainty to the Copermittees when they develop and submit their annual reports. By providing detail for what information should be included in the annual reports, time spent by the Copermittees and Regional Board to generate, review, and comment on annual reports should be reduced.

**Section III.3** of the MRP outlines the information to be included in the Copermittees' RURMP Annual Reports. Significant detail is included regarding what information should be in the annual reports in order to provide certainty to the Copermittees when they develop and submit their annual reports. By providing detail for what information should be included in the annual reports, time spent by the Copermittees and Regional Board to generate, review, and comment on annual reports should be reduced.

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<sup>272</sup> San Diego County Copermittees, 2005. Report of Waste Discharge. P. D-81.

**Section III.4.a** of the MRP requires the Copermittees to annually submit a description of the monitoring that will be conducted prior to the start of each monitoring year. This is needed because of the changes the monitoring program frequently undergoes each year. For example, as monitoring programs develop, some monitoring components of the programs are added or dropped. In addition, requirements for conducting monitoring efforts such as TIEs may be applicable. A description of the monitoring to be conducted each year will aid the Regional Board and Copermittees in tracking monitoring activities and compliance with the MRP.

**Section III.4.b** of the MRP outlines the information to be included in the Copermittees' Receiving Waters Monitoring Annual Reports. The information required to be included in the reports is needed to meet the goals of the MRP and answer the MRP's management questions. The reporting requirements emphasize identifying and assessing the impact of urban runoff on receiving water quality, as well as the impact of the Copermittees' programs on urban runoff quality. Significant detail is included regarding what information should be in the annual reports in order to provide certainty to the Copermittees when they develop and submit their annual reports. By providing detail for what information should be included in the annual reports, time spent by the Copermittees and Regional Board to generate, review, and comment on annual reports should be reduced.

**Section III.4.c** of the MRP requires the Copermittees to submit a description of the new monitoring programs to be developed under the MRP. Submittal of such a document is necessary in order to identify the monitoring that will be conducted and provide the Regional Board the opportunity to review the monitoring programs.

**Section III.4.d** of the MRP requires the City of San Diego to report on the Shelter Island Yacht Basin TMDL in order to exhibit that the WLA can be expected to continue to be met. This report is necessary, since MS4 discharge monitoring is not required by the TMDL.

**Section III.4.e** of the MRP requires that monitoring programs comply with standard provisions, notifications, and reporting requirements.

**Section III.4.f** of the MRP requires that the Copermittees make data available to the Regional Board during report preparation, if requested. This is a necessary option since monitoring annual reports are not submitted for many months after much of the monitoring data is collected.

**Section III.5** of the MRP allows for the Copermittees to develop and submit a reporting format for annual report integration. In their ROWD, the Copermittees requested a requirement that annual reporting ultimately be integrated.<sup>273</sup> Rather than including annual report integration as a requirement in the Order, it is included as an option for the Copermittees to utilize. Annual report integration is left as an option because information addressing what such integration would encompass is largely unknown. Annual reporting is an important tool for the Regional Board for compliance assessment. Where the outcomes regarding compliance assessment are uncertain, it is more appropriate to incorporate such concepts into the Order as options, instead of requirements. However, nothing in the Order prevents the Copermittees from developing an annual report integration format for Regional Board review and approval. To clarify Regional Board expectations for an annual report integration format, minimum standards for the format are provided in the Order.

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<sup>273</sup> San Diego County Copermittees, 2005. Report of Waste Discharge. P. D-77.

**Section III.6** of the MRP includes universal reporting requirements, which have not changed from the requirements of Order No. 2001-01.

**Section III.7** of the MRP clarifies that reporting should continue as it is conducted under Order No. 2001-01 until reporting requirements under Order No. R9-2007-0001 begin.

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
SAN DIEGO REGION**

**ADDENDUM NO. 1 TO ORDER NO. R9-2007-0001  
NPDES PERMIT NO. CAS0108758**

**AN ADDENDUM EXTENDING SELECTED DUE DATES FOR ORDER NO.  
R9-2007-0001 AS A RESULT OF THE OCTOBER 2007 WILDFIRES  
IN SAN DIEGO COUNTY**

The California Regional Water Quality Control Board, San Diego Region  
(hereinafter Regional Board) finds that:

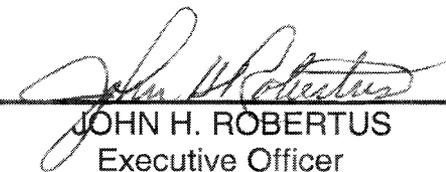
1. Regional Board Order No. R9-2007-0001 (NPDES Permit No. CAS0108758), *Waste Discharge Requirements for Discharges of Urban Runoff from the Municipal Separate Storm Sewer Systems (MS4s) Draining the Watersheds of the County of San Diego, the Incorporated Cities of San Diego County, the San Diego Unified Port District, and the San Diego County Regional Airport Authority*, prescribes requirements for the control of pollutant discharges from MS4s within San Diego County.
2. Order No. R9-2007-0001 requires the Copermittees to submit reports and plans on prescribed dates to ensure compliance with the directives of Order No. R9-2007-001.
3. On October 21, 2007, the Governor proclaimed a regional disaster area in the San Diego Region. As of November 13, 2007, wildfires had reportedly burned an estimated 400,000 acres, destroyed or damaged over 3,100 structures, and caused the evacuation of over 500,000 residents in San Diego County.
4. On November 13, 2007, the County of San Diego, on behalf of the San Diego Region Municipal Copermittees, provided the Regional Board with a written request for an extension of due dates for a period of up to eight weeks, for the submittal and implementation of selected deliverables, required by Order No. R9-2007-0001. The Copermittees emergency response to the wildfires has resulted in the reassignment of hundreds of staff whose expertise is needed to submit the deliverables by the prescribed due dates.
5. The Regional Board has notified all known interested parties of its intent to modify Order No. R9-2007-0001 to reflect the extension of due dates for selected required deliverables.
6. The Regional Board in a public hearing heard and considered all comments pertaining to the modification of Order No. R9-2007-0001.

**IT IS HEREBY ORDERED THAT**

1. Order No. R9-2007-0001 is modified as the following:
  - a. Jurisdictional Urban Runoff Management Program, Section D, page 15 – “Each Copermittee shall implement all requirements of section D of this Order no later than ~~365~~ **425** days after adoption of the Order, unless otherwise specified in this Order. Prior to ~~365~~ **425** days after adoption of the Order each Copermittee shall at a minimum implement is Jurisdictional URMP document, as the document was developed and amended to comply with the requirements of Order No. 2001-01.”
  - b. Construction Component Ordinance Update and Approval Process, Section D.2.a.(1), page 28 – “Within ~~365~~ **425** days of adoption of this Order, each Copermittee shall review and update its grading ordinances and other ordinances as necessary to achieve full compliance with this Order, including requirements for the implementation of all designated BMPs and other measures.”
  - c. Watershed Urban Runoff Management Program, Section E.1, page 46 – “Each Copermittee shall implement all requirements of section E of this Order no later than ~~365~~ **425** days after adoption of this Order, unless otherwise specified in this Order. Prior to ~~365~~ **425** days after adoption of this Order, each Copermittee shall collaborate with the other Copermittees within its Watershed Management Area(s) (WMA) to at a minimum implement its Watershed URMP document, as the document was developed and amended to comply with the requirements of Order No. 2001-01.”
  - d. Regional Urban Runoff Management Program, Section F, page 50 – “The Copermittees shall implement all requirements of section F of this Order no later than ~~365~~ **425** days after adoption of this Order, unless otherwise specified in this Order.”
  - e. Reporting, Urban Runoff Management Plans, Jurisdictional Urban Runoff Management Plans, Section J.1.a.(2), page 58 – “Principal Permittee – The Principal Permittee shall be responsible for collecting and assembling the individual JURMPs which cover the activities conducted by each individual Copermittee. The Principal Permittee shall submit the JURMPs to the Regional Board ~~365~~ **425** days after adoption of this Order.”
  - f. Reporting, Urban Runoff Management Plans, Watershed Urban Runoff Management Plans, Section J.1.b.(3), page 62 – “Principal Permittee – The Principal Permittee shall assemble and submit the WURMPs to the Regional Board ~~365~~ **425** days after adoption of this Order.”

- g. Reporting, Urban Runoff Management Plans, Regional Urban Runoff Management Plan, Section J.1.c.(2), page 64 – “The Principal Permittee shall be responsible for creating and submitting the RURMP. The Principal Permittee shall submit the RURMP to the Regional Board ~~365~~ 425 days after adoption of this Order.”

*I, John H. Robertus, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Addendum adopted by the California Regional Water Quality Control Board, San Diego Region, on December 12, 2007.*

  
\_\_\_\_\_  
JOHN H. ROBERTUS  
Executive Officer

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
SAN DIEGO REGION**

**ADDENDUM NO. 2 TO ORDER NO. R9-2007-0001  
NPDES PERMIT NO. CAS0108758**

**AN ADDENDUM EXTENDING THE DUE DATE FOR THE ILLICIT DISCHARGE  
DETECTION AND ELIMINATION REPORTING REQUIREMENT AND  
CHANGING THE BIOASSESSMENT MONITORING PROGRAM FOR  
ORDER NO. R9-2007-0001**

The California Regional Water Quality Control Board, San Diego Region (hereinafter Regional Board) finds that:

1. On January 24, 2007, the Regional Board adopted Order No. R9-2007-0001 (NPDES Permit No. CAS0108758), *Waste Discharge Requirements for Discharges of Urban Runoff from the Municipal Separate Storm Sewer Systems (MS4s) Draining the Watersheds of the County of San Diego, the Incorporated Cities of San Diego County, the San Diego Unified Port District, and the San Diego County Regional Airport Authority (Copermittees)*, which prescribes requirements for the control of pollutant discharges from MS4s within San Diego County.
2. Order No. R9-2007-0001 requires the Copermittees to submit reports and plans on prescribed dates to ensure compliance with the directives of Order No. R9-2007-001. As part of the reporting requirements, the Copermittees must submit Jurisdictional Urban Runoff Management Plan (JURMP) annual reports by September 30<sup>th</sup> each year. This includes reporting on the Illicit Discharge Detection and Elimination program component.
3. The Illicit Discharge Detection and Elimination program component involves extensive water quality sampling during the dry weather season. The dry weather season is defined as May 1 through September 30<sup>th</sup>.
4. More time is needed for reporting of the Illicit Discharge Detection and Elimination program component, since the current reporting requirement due date is on the same calendar day as the end of the dry weather season. A delayed reporting requirement for this specific program component is necessary to submit all dry season monitoring and program information together.
5. Order No. R9-2007-0001 requires the Copermittees to conduct bioassessment in May or June and September or October in accordance with the Receiving Waters and Urban Runoff Monitoring and Reporting Program No. R9-2007-0001.

6. Bioassessment in May or June is more effective in San Diego streams since some streams are ephemeral and only have flow during spring after winter storms.
7. The Stormwater Monitoring Coalition of Southern California designed a Storm Water Monitoring Coalition Regional Watershed Monitoring Program (SMC study). The goal of this project is to implement a large-scale, regional bioassessment monitoring program for southern California's coastal streams and rivers. The SMC study will use a probabilistic design (randomly selected sites) that provides an accurate assessment of stream health in southern California. The study is designed for continuous monitoring with samples taken over a five-year cycle.
8. Participation of the Copermitees in the SMC study would enhance their bioassessment monitoring efforts. The Regional Board and the Copermitees have agreed to share the costs of the implementation of the SMC study.
9. The Regional Board has notified all known interested parties of its intent to modify Order No. R9-2007-0001 to reflect the extension of the due date for the Illicit Discharge Detection and Elimination reporting requirement and the change of the bioassessment monitoring program.
10. The Regional Board in a public hearing heard and considered all comments pertaining to the modification of Order No. R9-2007-0001.
11. The modification of Order No. R9-2007-0001, an NPDES permit, is exempt from the requirement for preparation of environmental documents under the California Environmental Quality Act (CEQA) (Public Resources Code, Division 13, Chapter 3, section 21000 et seq.) in accordance with the CWC section 13389.

#### IT IS HEREBY ORDERED THAT

1. Order No. R9-2007-0001 is modified as follows:
  - a. Section J.3.a. JURISDICTIONAL URBAN RUNOFF MANAGEMENT PROGRAM ANNUAL REPORTS. Each Jurisdictional Urban Runoff Management Program Annual Report shall contain a comprehensive description of all activities conducted by the Copermitee to meet all requirements of section D, **with the exception of section D.4.** The reporting period for these annual reports shall be the previous fiscal year. ~~For example, the~~ The report submitted September 30, 2008 shall cover the reporting period July 1, 2007 to June 30, 2008. **For section D.4, the report shall be submitted December 15, 2008, and shall cover the dry weather season May 1, 2008 through September 30, 2008.**

(1) Copermittees—Each Copermittee shall generate individual Jurisdictional Urban Runoff Management Program Annual Reports which cover implementation of its jurisdictional activities during the past annual reporting period. Each Copermittee shall submit to the Principal Permittee its individual Jurisdictional Urban Runoff Management Program Annual Report by the date specified by the Principal Permittee. Each individual Jurisdictional Urban Runoff Management Program Annual Report shall be a comprehensive description of all activities conducted by the Copermittees to meet all requirements of each component of section D, **with the exception of section D.4,** of this order.

(2) Principal Permittee—The Principal Permittee shall submit Unified Jurisdictional Urban Runoff Management Program Annual Reports to the Regional Board by September 30 of each year, beginning on September 30, 2008. **The exception is section D.4, which shall be submitted by December 15 of each year, beginning on December 15, 2008.** The Unified Jurisdictional Urban Runoff Management Program Annual Report shall contain the twenty-one individual Jurisdictional Urban Runoff Management Program Annual Reports.

b. Attachment D, fourth row from bottom:

Principal Permittee submits unified Jurisdictional Urban Runoff Management Program Annual Report to Regional Board, **with the exception of section D.4.**

Add new row:

**Principal Permittee submits section D.4 of unified Jurisdictional Urban Runoff Management Program Annual Report.**  
**Permit Section: J.3.a.**

**Completion Date: December 15, 2008, and annually thereafter**  
**Frequency: Annually**

c. Receiving Waters and Urban Runoff Monitoring and Reporting Program No. R9-2007-0001, Section II.A.3.c:

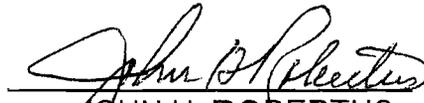
Bioassessment stations to be monitored in a given monitoring year shall be monitored in May or June (to represent the influence of wet weather on the communities) and September or October (to represent the influence of dry weather flows on the communities). **If the Copermittees participate in the Storm Water Monitoring Coalition Regional Watershed Monitoring Program, bioassessment stations only need to be monitored once per year in May or June.** The timing of monitoring of

bioassessment stations shall coincide with dry weather monitoring of mass loading and temporary watershed assessment stations.

- d. Receiving Waters and Urban Runoff Monitoring and Reporting Program No. R9-2007-0001, Section II.C.3:

**3. Storm Water Monitoring Coalition Regional Watershed Monitoring Program (SMC study) Starting in the monitoring year 2008-2009 (Permit Year 2), the Copermittees may participate in the SMC study. Any participation shall include the contribution of all funds not otherwise spent for the full implementation of the bioassessment monitoring. If the Copermittees do not participate in the SMC study, then the bioassessment monitoring in spring and fall shall be implemented. During Bight '08, the Copermittees are not required to spend funds from the bioassessment monitoring towards the SMC study. During Bight years subsequent to Bight '08, monitoring for the SMC study shall be implemented and shall not be exchanged for Bight monitoring. Data shall be submitted through the SMC's standardized data transfer formats.**

*I, John H. Robertus, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Addendum adopted by the California Regional Water Quality Control Board, San Diego Region, on September 10, 2008.*

  
JOHN H. ROBERTUS  
Executive Officer

**California Regional Water Quality Control Board  
San Diego Region**

**Waste Discharge Requirements for  
Discharges of Runoff from the  
Municipal Separate Storm Sewer Systems  
(MS4s)**

**Draining the Watershed of the County of Orange,  
The Incorporated Cities of Orange County, and  
The Orange County Flood Control District  
Within the San Diego Region**

**Order No. R9-2009-0002  
NPDES NO. CAS0108740**

*December 16, 2009*

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
SAN DIEGO REGION**

9174 Sky Park Court, Suite 100, San Diego, California 92123-4340

Phone • (858) 467-2952 • Fax (858) 571-6972

<http://www.waterboards.ca.gov/sandiego>

To request copies of the Orange County Municipal Storm Water Permit, please contact Ben Neill, Water Resources Control Engineer at (858) 467 – 2983, [bneill@waterboards.ca.gov](mailto:bneill@waterboards.ca.gov)

Documents also are available at: <http://www.waterboards.ca.gov/sandiego>

**WASTE DISCHARGE REQUIREMENTS FOR  
DISCHARGES OF RUNOFF FROM THE  
MUNICIPAL SEPARATE STORM SEWER SYSTEMS (MS4s)  
DRAINING THE WATERSHED OF  
THE COUNTY OF ORANGE, THE INCORPORATED CITIES OF  
ORANGE COUNTY, AND THE ORANGE COUNTY FLOOD  
CONTROL DISTRICT WITHIN THE SAN DIEGO REGION**

Adopted by the  
California Regional Water Quality Control Board  
San Diego Region  
on December 16, 2009

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
SAN DIEGO REGION  
9174 Sky Park Court, Suite 100  
San Diego, California 92123-4340  
Telephone (858) 467-2952**

**STATE OF CALIFORNIA**  
ARNOLD SCHWARZENEGGER, Governor  
LINDA S. ADAMS, Agency Secretary, California Environmental Protection Agency



**California Regional Water Quality Control Board  
San Diego Region**

David King	<i>Vice Chair</i>	Recreation / Wildlife
Eric Anderson		Irrigated Agriculture
Wayne Rayfield		Water Quality
Grant Destache		Industrial Water Use
George Loveland		Water Supply
Marc Luker		Undesignated (Public)

David W. Gibson, *Executive Officer*  
Michael P. McCann, *Assistant Executive Officer*

**This permit was prepared under the direction of**

David T. Barker P.E., *Chief, Water Resource Protection Branch*

**by**

Jimmy G. Smith, *Senior Environmental Scientist*  
Ben Neill, *Water Resource Control Engineer*  
Chad Loflen, *Environmental Scientist*

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Attachment A – Basin Plan Prohibitions

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Attachment E – Receiving Waters And MS4 Discharge Monitoring And Reporting  
Program No. R9-2009-0002

Attachment F – Data

The California Regional Water Quality Control Board, San Diego Region (hereinafter Regional Board), finds that:

#### **A. BASIS FOR THE ORDER**

1. This Order is based on the federal Clean Water Act (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 San Diego Basin adopted by the Regional Board, the California Toxics Rule, and the California Toxics Rule Implementation Plan.
2. This Order reissues National Pollutant Discharge Elimination System (NPDES) Permit No. CAS0108740, which was first adopted by the Regional Board on July 16, 1990 (Order No. 90-38), and then reissued on August 8, 1996 (Order No. 96-03) and February 13, 2002 (Order No. R9-2002-01). On August 21, 2006, in accordance with Order No. R9-2002-01, the County of Orange, as the Principal Copermittee, submitted a Report of Waste Discharge (ROWD) for reissuance of the municipal separate storm sewer system (MS4) Permit.
3. This Order is consistent with the following precedential Orders adopted by the State Water Resources Control Board (State Board) addressing MS4 NPDES Permits: Order 99-05, Order WQ-2000-11, Order WQ 2001-15, Order WQO 2002-0014, and Order WQ-2009-0008 (*SWRCB/OCC FILE A-1780*).
4. The Fact Sheet / Technical Report for the Order No. R9-2009-0002, NPDES No. CAS0108740, Waste Discharge Requirements for Discharges of Runoff from the Municipal Separate Storm Sewer Systems (MS4s) Draining the Watersheds of the County of Orange, the Incorporated Cities of Orange County, and the Orange County Flood Control District Within the San Diego Region includes cited regulatory and legal references and additional explanatory information and data in support of the requirements of this Permit. This information, including any supplements thereto, and any response to comments on the Tentative Orders, is hereby incorporated by reference into these findings.

#### **B. REGULATED PARTIES**

1. Each of the persons in Table 1 below, hereinafter called Copermittees or dischargers, owns or operates an MS4, through which it discharges runoff into waters of the United States within the San Diego Region. These MS4s fall 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) a small MS4 that is "interrelated" to a medium or large MS4; or (3) an MS4 which contributes to a

violation of a water quality standard; or (4) an MS4 which is a significant contributor of pollutants to waters of the United States (waters of the U.S).

Table 1. Municipal Copermitttees

1. City of Aliso Viejo	8. City of Mission Viejo
2. City of Dana Point	9. City of Rancho Santa Margarita
3. City of Laguna Beach	10. City of San Clemente
4. City of Laguna Hills	11. City of San Juan Capistrano
5. City of Laguna Niguel	12. County of Orange
6. City of Laguna Woods	13. Orange County Flood Control District
7. City of Lake Forest	

### C. DISCHARGE CHARACTERISTICS

1. Runoff discharged from an MS4 contains waste, as defined in the California Water Code (CWC), and pollutants that adversely affect the quality of the waters of the State. The discharge of runoff from an MS4 is a "discharge of pollutants from a point source" into waters of the U.S. as defined in the CWA.
2. MS4 storm water and non-storm water discharges are likely to contain pollutants that cause or threaten to cause a violation of water quality standards, as outlined in the Regional Board's Water Quality Control Plan for the San Diego Basin (Basin Plan). Storm water and non-storm water discharges from the MS4 are subject to the conditions and requirements established in the San Diego Basin Plan for point source discharges. These surface water quality standards must be complied with at all times, irrespective of the source and manner of discharge.
3. The most common categories of pollutants in 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); detergents; and trash.
4. The discharge of pollutants and/or increased flows from MS4s may cause or threaten to cause the concentration of pollutants to exceed applicable receiving water quality objectives and/or impair or threaten to impair designated beneficial uses resulting in a condition of pollution (i.e., unreasonable impairment of water quality for designated beneficial uses), contamination, or nuisance.
5. Pollutants in runoff can threaten and adversely affect human health. Human illnesses have been clearly linked to recreating near storm drains flowing to coastal waters. Also, runoff pollutants in receiving waters can bioaccumulate in the tissues of invertebrates and fish, which may be eventually consumed by humans.

6. Runoff discharges from MS4s often contain pollutants that cause toxicity to aquatic organisms (i.e., adverse responses of organisms to chemicals or physical agents ranging from mortality to physiological responses such as impaired reproduction or growth anomalies). Toxic pollutants impact the overall quality of aquatic systems and beneficial uses of receiving waters.
7. The Copermittes discharge runoff into lakes, drinking water reservoirs, rivers, streams, creeks, bays, estuaries, coastal lagoons, the Pacific Ocean, and tributaries thereto within one of the eleven hydrologic units (San Juan Hydrologic Unit) comprising the San Diego Region as shown in Tables 2a and 2b. Some of the receiving water bodies have been designated as impaired by the Regional Board and the United States Environmental Protection Agency (USEPA) in 2006 pursuant to CWA section 303(d). Also shown in the Tables are the watershed management areas (WMAs) as defined in the Regional Board report, Watershed Management Approach, January 2002.

Table 2a. Common Watersheds and CWA Section 303(d) Impaired Waters

<b>Regional Board Watershed Management Area (WMA)</b>	<b>Hydrologic Area (HA) or Hydrologic Subarea (HSA) of the San Juan Hydrologic Unit</b>	<b>Major Receiving Water Bodies</b>	<b>303(d) Pollutant(s)/stressor or Water Quality Effect<sup>1</sup></b>
Laguna Coastal Streams	Laguna HA, excluding Aliso HSA and Dana Point HSA	Laguna Canyon Creek, Pacific Ocean	Bacterial indicators Sediment toxicity
Aliso Creek	Aliso HSA	Aliso Creek, English Canyon, Pacific Ocean	Toxicity Phosphorus Bacterial indicators Benzo[b]fluoranthene Dieldrin Sediment Toxicity
Dana Point Coastal Streams	Dana Point HSA	Dana Point Harbor, Salt Creek, Pacific Ocean	Bacterial indicators
San Juan Creek	Mission Viejo HA	San Juan Creek, Trabuco Creek, Oso Creek, Canada Gobernadora, Bell Canyon, Verdugo Canyon, Pacific Ocean	Bacterial indicators DDE Chloride Sulfates Total dissolved solids

<sup>1</sup> The listed 303(d) pollutant(s) do not necessarily reflect impairment of the entire corresponding WMA or all corresponding major surface water bodies. The specific impaired portions of each WMA are listed in the State Water Resources Control Board's 2006 Section 303(d) List of Water Quality Limited Segments.

Table 2a. Common Watersheds and CWA Section 303(d) Impaired Waters

Regional Board Watershed Management Area (WMA)	Hydrologic Area (HA) or Hydrologic Subarea (HSA) of the San Juan Hydrologic Unit	Major Receiving Water Bodies	303(d) Pollutant(s)/stressor or Water Quality Effect <sup>1</sup>
San Clemente Coastal Streams	San Clemente HA	Prima Deshecha, Segunda Deshecha, Pacific Ocean	Bacterial indicators Phosphorus Turbidity
San Mateo Creek	San Mateo HA	San Mateo Creek, Christianitos Creek, Pacific Ocean	

Table 2b. Common Watersheds and Municipalities

Municipality	Laguna Coastal Streams	Aliso Creek	Dana Point Coastal Streams	San Juan Creek	San Clemente Coastal Streams	San Mateo Creek
Aliso Viejo	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				
Dana Point			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
Laguna Beach	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				
Laguna Hills *		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		
Laguna Niguel		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
Laguna Woods *		<input checked="" type="checkbox"/>				
Lake Forest *		<input checked="" type="checkbox"/>				
Mission Viejo		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		
Rancho Santa Margarita				<input checked="" type="checkbox"/>		
San Clemente					<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
San Juan Capistrano				<input checked="" type="checkbox"/>		
County of Orange *	<input checked="" type="checkbox"/>					
Orange County Flood Control District *	<input checked="" type="checkbox"/>					

\* Municipality also includes areas within watersheds of the Santa Ana Regional Board that are outside the scope of this Order

8. Trash is a persistent pollutant which can enter receiving waters from the MS4 resulting in accumulation and transport in receiving waters over time. Trash poses a serious threat to the Beneficial Uses of the receiving waters, including, but not limited to, human health, rare and endangered species, navigation and human recreation.
9. The Copermittees' water quality monitoring data submitted to date documents persistent violations of Basin Plan water quality objectives for various runoff-related pollutants (fecal coliform bacteria, total suspended solids, turbidity, metals, etc.) at

various watershed monitoring stations. Persistent toxicity has also been observed at some watershed monitoring stations. In addition, bioassessment data indicates that the majority of urbanized receiving waters have Poor to Very Poor Index of Biotic Integrity ratings. In sum, the above findings indicate that runoff discharges are causing or contributing to water quality impairments, and are a leading cause of such impairments in Orange County.

10. When natural vegetated pervious ground cover is converted to impervious surfaces such as paved highways, streets, rooftops, and parking lots, the natural absorption and infiltration abilities of the land are lost. Therefore, runoff leaving a developed area is significantly greater in runoff volume, velocity, and peak flow rate than pre-development runoff from the same area. Runoff durations can also increase as a result of flood control and other efforts to control peak flow rates. Increased volume, velocity, rate, and duration of runoff, and decreased natural clean sediment loads, greatly accelerate the erosion of downstream natural channels. Significant declines in the biological integrity and physical habitat of streams and other receiving waters have been found to occur with as little as a 3-5 percent conversion from natural to impervious surfaces. The increased runoff characteristics from new development must be controlled to protect against increased erosion of channel beds and banks, sediment pollutant generation, or other impacts to beneficial uses and stream habitat due to increased erosive force.
11. Development creates new pollution sources as human population density increases and brings with it proportionately higher levels of car emissions, car maintenance wastes, municipal sewage, pesticides, household hazardous wastes, pet wastes, trash, etc. which can either be washed or directly dumped into the MS4. As a result, the runoff leaving the developed urban area is significantly greater in pollutant load than the pre-development runoff from the same area. These increased pollutant loads must be controlled to protect downstream receiving water quality.
12. Development and urbanization especially threaten environmentally sensitive areas (ESAs), such as water bodies designated as supporting a RARE beneficial use (supporting rare, threatened or endangered species) and CWA 303(d)-impaired water bodies. Such areas have a much lower capacity to withstand pollutant shocks than might be acceptable in other areas. In essence, development that is ordinarily insignificant in its impact on the environment may become significant in a particularly sensitive environment. Therefore, additional control to reduce storm water pollutants from new and existing development may be necessary for areas adjacent to or discharging directly to an ESA.
13. Although dependent on several factors, the risks typically associated with properly managed infiltration of runoff (especially from residential land use areas) are not significant. The risks associated with infiltration can be managed by many techniques, including (1) designing landscape drainage features that promote infiltration of runoff, but do not "inject" runoff (injection bypasses the natural processes of filtering and transformation that occur in the soil); (2) taking reasonable

steps to prevent the illegal disposal of wastes; (3) protecting footings and foundations; (4) ensuring that each drainage feature is adequately maintained in perpetuity; and (5) pretreatment.

14. Non-storm water (dry weather) discharge from the MS4 is not considered a storm water (wet weather) discharge and therefore is not subject to regulation under the Maximum Extent Practicable (MEP) standard from CWA 402(p)(3)(B)(iii), which is explicitly for “Municipal ... *Stormwater Discharges* (emphasis added)” from the MS4. Non-storm water discharges, per CWA 402(p)(3)(B)(ii), are to be effectively prohibited. Such dry weather non-storm water discharges have been shown to contribute significant levels of pollutants and flow in arid, developed Southern California watersheds and are to be effectively prohibited under the Clean Water Act.
15. Non-storm water discharges to the MS4 granted an influent exception [i.e., which are exempt from the effective prohibition requirement set forth in CWA section 402(p)(3)(B)(ii)] under 40 CFR 122. 26 are included within this Order. Any exempted discharges identified by Copermittees as a source of pollutants are subsequently required to be *addressed* (emphasis added) as illicit discharges through prohibition and incorporation into existing IC/ID programs. The Copermittees have identified landscape irrigation, irrigation water and lawn water, previously exempted discharges, as a source of pollutants and conveyance of pollutants to waters of the United States.

## **D. RUNOFF MANAGEMENT PROGRAMS**

### **1. General**

- a. This Order specifies requirements necessary for the Copermittees to reduce the discharge of pollutants in storm water runoff to the maximum extent practicable (MEP). However, since MEP is a dynamic performance standard, which evolves over time as runoff management knowledge increases, the Copermittees’ runoff management programs must continually be assessed and modified to incorporate improved programs, control measures, best management practices (BMPs), etc. in order to achieve the evolving MEP standard. Absent evidence to the contrary, this continual assessment, revision, and improvement of runoff management program implementation is expected to ultimately achieve compliance with water quality standards in the Region.
- b. The Copermittees have generally been implementing the jurisdictional runoff management programs required pursuant to Order No. 2002-01 since February 13, 2003. Prior to that, the Copermittees were regulated by Order No. 96-03 since August 8, 1996. Runoff discharges, however, continue to cause or contribute to violations of water quality standards as evidenced by the Copermittees monitoring results.

- c. This Order contains new or modified requirements that are necessary to improve Copermittees' efforts to reduce the discharge of pollutants in storm water runoff to the MEP and achieve water quality standards. Some of the new or modified requirements, such as the revised Watershed Runoff Management Program section, are designed to specifically address high priority water quality problems. Other new or modified requirements address program deficiencies that have been noted during audits, report reviews, and other Regional Board compliance assessment activities.
- d. Updated Jurisdictional Runoff Management Plans (JRMPs) and Watershed Runoff Management Plans (WRMPs), which describe the Copermittees' runoff management programs in their entirety, are needed to guide the Copermittees' runoff management efforts and aid the Copermittees in tracking runoff management program implementation. It is practicable for the Copermittees to update the JRMPs and WRMPs within one year, since significant efforts to develop these programs have already occurred.
- e. Pollutants can be effectively reduced in storm water runoff by the application of a combination of pollution prevention, source control, and treatment control BMPs. Pollution prevention is the reduction or elimination of pollutant generation at its source and is the best "first line of defense." Source control BMPs (both structural and non-structural) minimize the contact between pollutants and flows (e.g., rerouting run-on around pollutant sources or keeping pollutants on-site and out of receiving waters). Treatment control BMPs remove pollutants that have been mobilized by wet-weather or dry-weather flows.
- f. Runoff needs to be addressed during the three major phases of urban development (planning, construction, and use) in order to reduce the discharge of pollutants from storm water to the MEP, effectively prohibit non-storm water discharges and protect receiving waters. Development which is not guided by water quality planning policies and principles can unnecessarily result in increased pollutant load discharges, flow rates, and flow durations which can negatively impact receiving water beneficial uses. Construction sites without adequate BMP implementation result in sediment runoff rates which greatly exceed natural erosion rates of undisturbed lands, causing siltation and impairment of receiving waters. Existing development generates substantial pollutant loads which are discharged in runoff to receiving waters.
- g. Annual reporting requirements included in this Order are necessary to meet federal requirements and to evaluate the effectiveness and compliance of the Copermittees' programs.
- h. This Order establishes Storm Water Action Levels (SALs) for selected pollutants based on USEPA Rain Zone 6 (arid southwest) Phase I MS4 monitoring data for pollutants in storm water. The SALs were computed as the 90<sup>th</sup> percentile of the data set, utilizing the statistical based population approach, one of three

approaches recommended by the California Water Board's Storm Water Panel in its report, 'The Feasibility of Numerical Effluent Limits Applicable to Discharges of Storm Water Associated with Municipal, Industrial and Construction Activities (June 2006). SALs are identified in Section D of this Order. Copermitees shall implement a timely, comprehensive, cost-effective storm water pollution control program to reduce the discharge of pollutants in storm water from the permitted areas so as not to exceed the SALs. Exceedance of SALs may indicate inadequacy of programmatic measures and BMPs required in this Order.

## 2. Development Planning

- a. The Standard Storm Water Mitigation Plan (SSMP) requirements contained in this Order are consistent with Order WQ-2000-11 adopted by the State Water Resources Control Board (State Board) on October 5, 2000. In the precedential order, the State Board found that the design standards, which essentially require that runoff generated by 85 percent of storm events from specific development categories be infiltrated or treated, reflect the MEP standard. The order also found that the SSMP requirements are appropriately applied to the majority of the Priority Development Project categories contained in Section D.1 of this Order. The State Board also gave Regional Water Quality Control Boards the needed discretion to include additional categories and locations, such as retail gasoline outlets (RGOs), in SSMPs.
- b. Controlling runoff pollution by using a combination of onsite source control and site design BMPs augmented with treatment control BMPs before the runoff enters the MS4 is important for the following reasons: (1) Many end-of-pipe BMPs (such as diversion to the sanitary sewer) are typically ineffective during significant storm events. Whereas, onsite source control BMPs can be applied during all runoff conditions; (2) End-of-pipe BMPs are often incapable of capturing and treating the wide range of pollutants which can be generated on a sub-watershed scale; (3) End-of-pipe BMPs are more effective when used as polishing BMPs, rather than the sole BMP to be implemented; (4) End-of-pipe BMPs do not protect the quality or beneficial uses of receiving waters between the pollutant source and the BMP; and (5) Offsite end-of-pipe BMPs do not aid in the effort to educate the public regarding sources of pollution and their prevention.
- c. Use of Low-Impact Development (LID) site design BMPs at new development, redevelopment and retrofit projects can be an effective means for minimizing the impact of storm water runoff discharges from the development projects on receiving waters. LID is a site design strategy with a goal of maintaining or replicating the pre-development hydrologic regime through the use of design techniques. LID site design BMPs help preserve and restore the natural hydrologic cycle of the site, allowing for filtration and infiltration which can greatly reduce the volume, peak flow rate, velocity, and pollutant loads of storm water runoff. Current runoff management, knowledge, practices and technology have

resulted in the use of LID BMPs as an acceptable means of meeting the storm water MEP standard.

- d. Retail Gasoline Outlets (RGOs) are significant sources of pollutants in storm water runoff. RGOs are points of convergence for motor vehicles for automotive related services such as repair, refueling, tire inflation, and radiator fill-up and consequently produce significantly higher loadings of hydrocarbons and trace metals (including copper and zinc) than other developed areas.
- e. Industrial sites are significant sources of pollutants in runoff. Pollutant concentrations and loads in runoff from industrial sites are similar or exceed pollutant concentrations and loads in runoff from other land uses, such as commercial or residential land uses. As with other land uses, LID site design, source control, and treatment control BMPs are needed at industrial sites in order to meet the MEP standard. These BMPs are necessary where the industrial site is larger than 10,000 square feet. The 10,000 square feet threshold is appropriate, since it is consistent with requirements in other Phase I NPDES storm water regulations throughout California.
- f. If not properly designed or maintained, certain BMPs implemented or required by municipalities for runoff management may create a habitat for vectors (e.g. mosquitoes and rodents). Proper BMP design and maintenance to avoid standing water, however, can prevent the creation of vector habitat. Nuisances and public health impacts resulting from vector breeding can be prevented with close collaboration and cooperative effort between municipalities, the Orange County Vector Control District, and the California Department of Public Health during the development and implementation of runoff management programs.
- g. The increased volume, velocity, frequency and discharge duration of storm water runoff from developed areas has the potential to greatly accelerate downstream erosion, impair stream habitat in natural drainages, and negatively impact beneficial uses. Development and urbanization increase pollutant loads in storm water runoff and the volume of storm water runoff. Impervious surfaces can neither absorb water nor remove pollutants and thus lose the purification and infiltration provided by natural vegetated soil. Hydromodification measures for discharges to hardened channels are needed for the future restoration of the hardened channels to their natural state, thereby restoring the chemical, physical, and biological integrity and Beneficial Uses of local receiving waters.

### **3. Construction and Existing Development**

- a. In accordance with federal NPDES regulations and to ensure the most effective oversight of industrial and construction site discharges, discharges of runoff from industrial and construction sites are subject to dual (State and local) storm water regulation. Under this dual system, each Copermitttee is responsible for enforcing its local permits, plans, and ordinances, and the Regional Board is

responsible for enforcing the General Construction Activities Storm Water Permit, State Board Order 99-08 DWQ, NPDES No. CAS000002 (General Construction Permit) and the General Industrial Activities Storm Water Permit, State Board Order 97-03 DWQ, NPDES No. CAS000001 (General Industrial Permit) and any reissuance of these permits. NPDES municipal regulations require that municipalities develop and implement measures to address runoff from industrial and construction activities. Those measures may require the implementation of additional BMPs than are required under the statewide general permits for activities subject to both State and local regulation.

- b. Identification of sources of pollutants in runoff (such as municipal areas and activities, industrial and commercial sites/sources, construction sites, and residential areas), development and implementation of BMPs to address those sources, and updating ordinances and approval processes are necessary for the Copermittees to ensure that discharges of pollutants from its MS4 in storm water are reduced to the MEP and that non-storm water discharges are not occurring. Inspections and other compliance verification methods are needed to ensure minimum BMPs are implemented. Inspections are especially important at high risk areas for pollutant discharges.
- c. Historic and current development makes use of natural drainage patterns and features as conveyances for runoff. Urban streams used in this manner are part of the municipalities MS4 regardless of whether they are natural, anthropogenic, or partially modified features. In these cases, the urban stream is both an MS4 and receiving water.
- d. As operators of the MS4s, the Copermittees cannot passively receive and discharge pollutants from third parties. By providing free and open access to an MS4 that conveys discharges to waters of the U.S., the operator essentially accepts responsibility for discharges into the MS4 that it does not prohibit or control. These discharges may cause or contribute to a condition of contamination or a violation of water quality standards.
- e. Waste and pollutants which are deposited and accumulate in MS4 drainage structures will be discharged from these structures to waters of the U.S. unless they are removed. These discharges may cause or contribute to, or threaten to cause or contribute to, a condition of pollution in receiving waters. For this reason, pollutant discharges from storm water into MS4s must be reduced using a combination of management measures, including source control, and an effective MS4 maintenance program must be implemented by each Copermittee.
- f. Enforcement of local runoff related ordinances, permits, and plans is an essential component of every runoff management program and is specifically required in the federal storm water regulations and this Order. Each Copermittee is individually responsible for adoption and enforcement of ordinances and/or policies, implementation of identified control measures/BMPs needed to prevent

or reduce pollutants in storm water runoff, and for the allocation of funds for the capital, operation and maintenance, administrative, and enforcement expenditures necessary to implement and enforce such control measures/BMPs under its jurisdiction. Education is an important aspect of every effective runoff management program and the basis for changes in behavior at a societal level. Education of municipal planning, inspection, and maintenance department staffs is especially critical to ensure that in-house staffs 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.

- g. Public participation during the development of runoff management programs is necessary to ensure that all stakeholder interests and a variety of creative solutions are considered.
- h. Retrofitting existing development with storm water treatment controls, including LID, is necessary to address storm water discharges from existing development that may cause or contribute to a condition of pollution or a violation of water quality standards. Although SSMP BMPs are required for redevelopment, the current rate of redevelopment will not address water quality problems in a timely manner. Cooperation with private landowners is necessary to effectively identify, implement and maintain retrofit projects for the preservation, restoration, and enhancement of water quality.

#### **4. Watershed Runoff Management**

- a. Since runoff within a watershed can flow from and through multiple land uses and political jurisdictions, watershed-based runoff management can greatly enhance the protection of receiving waters. Such management provides a means to focus on the most important water quality problems in each watershed. By focusing on the most important water quality problems, watershed efforts can maximize protection of beneficial use in an efficient manner. Effective watershed-based runoff management actively reduces pollutant discharges and abates pollutant sources causing or contributing to watershed water quality problems. Watershed-based runoff management that does not actively reduce pollutant discharges and abate pollutant sources causing or contributing to watershed water quality problems can necessitate implementation of the iterative process outlined in section A.3 of the Tentative Order. Watershed management of runoff does not require Copermittees to expend resources outside of their jurisdictions. Watershed management requires the Copermittees within a watershed to develop a watershed-based management strategy, which can then be implemented on a jurisdictional basis.

- b. Some runoff issues, such as general education and training, can be effectively addressed on a regional basis. Regional approaches to runoff management can improve program consistency and promote sharing of resources, which can result in implementation of more efficient programs.
- c. It is important for the Copermittes to coordinate their water quality protection and land use planning activities to achieve the greatest protection of receiving water bodies. Copermittie coordination with other watershed stakeholders, especially the State of California Department of Transportation, the United States Department of Defense, and water and sewer districts, is also important.

## E. STATUTE AND REGULATORY CONSIDERATIONS

1. The Receiving Water Limitations (RWL) language specified in this Order is consistent with language recommended by the USEPA and established in State Board Water Quality Order 99-05, *Own Motion Review of the Petition of Environmental Health Coalition to Review Waste Discharge Requirements Order No. 96-03, NPDES Permit No. CAS0108740*, adopted by the State Board on June 17, 1999. The RWL in this Order require compliance with water quality standards, which for storm water discharges is to be achieved through an iterative approach requiring the implementation of improved and better-tailored BMPs over time. Compliance with receiving water limits based on applicable water quality standards is necessary to ensure that MS4 discharges will not cause or contribute to violations of water quality standards and the creation of conditions of pollution.
2. The Water Quality Control Plan for the San Diego Basin (Basin Plan), identifies the following beneficial uses for surface waters in Orange County: Municipal and Domestic Supply (MUN)<sup>2</sup>, Agricultural Supply (AGR), Industrial Process Supply (PROC), Industrial Service Supply (IND), Ground Water Recharge (GWR), Contact Water Recreation (REC1), Non-contact Water Recreation (REC2), Warm Freshwater Habitat (WARM), Cold Freshwater Habitat (COLD), Wildlife Habitat (WILD), Rare, Threatened, or Endangered Species (RARE), Freshwater Replenishment (FRSH), Hydropower Generation (POW), and Preservation of Biological Habitats of Special Significance (BIOL). The following additional beneficial uses are identified for coastal waters of Orange County: Navigation (NAV), Commercial and Sport Fishing (COMM), Estuarine Habitat (EST), Marine Habitat (MAR), Aquaculture (AQUA), Migration of Aquatic Organisms (MIGR), Spawning, Reproduction, and/or Early Development (SPWN), and Shellfish Harvesting (SHELL).
3. This Order is in conformance with State Board Resolution No. 68-16, *Statement of Policy with Respect to Maintaining High Quality Waters in California*, and the federal Antidegradation Policy described in 40 CFR 131.12.

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<sup>2</sup> Subject to exceptions under the "Sources of Drinking Waters" Policy (Resolution No. 89-33)

4. Section 6217(g) of the Coastal Zone Act Reauthorization Amendments of 1990 (CZARA) requires coastal states with approved coastal zone management programs to address non-point pollution impacting or threatening coastal water quality. CZARA addresses five sources of non-point pollution: agriculture, silviculture, urban, marinas, and hydromodification. This NPDES permit addresses the management measures required for the urban category, with the exception of septic systems. The adoption and implementation of this NPDES permit relieves the Copermittee from developing a non-point source plan, for the urban category, under CZARA. The Regional Board addresses septic systems through the administration of other programs.
5. Section 303(d)(1)(A) of the CWA requires that “Each state must identify those waters within its boundaries for which the effluent limitations...are not stringent enough to implement any water quality standard (WQS) applicable to such waters.” The CWA also requires states to establish a priority ranking of impaired water bodies known as Water Quality Limited Segments and to establish Total Maximum Daily Loads (TMDLs) for such waters. This priority list of impaired water bodies is called the Section 303(d) List. The current Section 303(d) List was approved by the State Board on October 25, 2006. On June 28, 2007 the 2006 303(d) list for California was given final approval by the United States Environmental Protection Agency (USEPA).
6. This Order does not constitute an unfunded local government mandate subject to subvention under Article XIII B, 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. (33 U.S.C. § 1342(p)(3)(B).) Second, the local agency Copermittees’ obligations under this Order are similar to, and in many respects less stringent than, the obligations of non-governmental and new dischargers who are issued NPDES permits for storm water and non-storm water discharges. Third, the local agency Copermittees have the authority to levy service charges, fees, or assessments sufficient to pay for compliance with this Order. Fourth, the Copermittees 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 storm water discharges. 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 XIII B, Section (6) of the California Constitution. 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. sec. 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. sec. 122.44(d)(1)(vii)(B).)

7. Runoff treatment and/or mitigation must occur prior to the discharge of runoff into receiving waters. Treatment BMPs must not be constructed in waters of the U.S. or State unless the runoff flows are sufficiently pretreated to protect the values and functions of the water body. Federal regulations at 40 CFR 131.10(a) state that in no case shall a state adopt waste transport or waste assimilation as a designated use for any waters of the U.S. Authorizing the construction of an runoff treatment facility within a water of the U.S., or using the water body itself as a treatment system or for conveyance to a treatment system, would be tantamount to accepting waste assimilation as an appropriate use for that water body. Furthermore, the construction, operation, and maintenance of a pollution control facility in a water body can negatively impact the physical, chemical, and biological integrity, as well as the beneficial uses, of the water body. Without federal authorization (e.g., pursuant to Clean Water Act Section 404), waters of the U.S. may not be converted into, or used as, waste treatment or conveyance facilities. Similarly, waste discharge requirements pursuant to California Water Code Section 13260 are required for the conversion or use of waters of the State as waste treatment or conveyance facilities. Diversion from waters of the U.S./State to treatment facilities and subsequent return to waters of the U.S. is allowable, provided that the effluent complies with applicable NPDES requirements.
8. The issuance of waste discharge requirements and an NPDES permit for the discharge of runoff from MS4s to waters of the U.S. is exempt from the requirement for preparation of environmental documents under the California Environmental Quality Act (CEQA) (Public Resources Code, Division 13, Chapter 3, section 21000 et seq.) in accordance with the CWC section 13389.
9. Multiple water bodies in Orange County have been identified as impaired and placed on the 303(d) list. In 2004, Bacteria Impaired Waters TMDL Project II included six bacteria impaired shorelines in Dana Point Harbor and San Diego Bay: Baby Beach in Dana Point Harbor and Shelter Island Shoreline Park, B Street, G Street Pier, Tidelands Park, and Chula Vista Marina in San Diego Bay. Since then, only Baby Beach in Dana Point Harbor and Shelter Island Shoreline Park in San Diego Bay can be confirmed as still impaired by indicator bacteria. On June 11, 2008 the Regional Board adopted a Basin Plan amendment to incorporate *Bacteria Impaired Waters TMDL Project II for San Diego Bay and Dana Point Harbor Shorelines*. On June 16, 2009, the State Board approved the Basin Plan amendment. This action meets requirements of section 303(d) of the Clean Water Act (CWA). The Basin Plan amendment process is authorized under section 13240 of the Water Code. The State's Office of Administrative Law (OAL) approved the TMDLs on September 15, 2009. The effective date of the TMDLs is the date of OAL approval. USEPA approved the TMDLs on October 26, 2009.
10. Storm water discharges from developed and developing areas in Orange County are significant sources of certain pollutants that cause, may be causing, threatening to cause or contributing to water quality impairment in the waters of Orange County.

Furthermore, as delineated in the CWA section 303(d) list in Table 3, the Regional Board has found that there is a reasonable potential that municipal storm water and non-storm water discharges from MS4s cause or may cause or contribute to an excursion above water quality standards for the following pollutants: Indicator Bacteria, Phosphorous, Toxicity and Turbidity. In accordance with CWA section 303(d), the Regional Board is required to establish Total Maximum Daily Loads (TMDLs) for these pollutants to these waters to eliminate impairment and attain water quality standards. Therefore, certain early pollutant control actions and further pollutant impact assessments by the Copermittees are warranted and required pursuant to this Order.

**Table 3. 2006 Section 303(d) Listed Waterbodies in So. Orange County**

<b>Waterbody</b>	<b>Pollutant</b>
Aliso Creek	Indicator Bacteria, Phosphorus, Toxicity
Aliso Creek Mouth	Indicator Bacteria
Dana Point Harbor	Indicator Bacteria
English Canyon Creek	Benzo[b]fluoranthene, Dieldrin, Sediment Toxicity
Laguna Canyon Channel	Sediment Toxicity
Oso Creek (at Mission Viejo Golf Course)	Chloride, Sulfates, Total Dissolved Solids
Pacific Ocean Shoreline, Aliso HSA	Indicator Bacteria
Pacific Ocean Shoreline, Dana Point HSA	Indicator Bacteria
Pacific Ocean Shoreline, Laguna Beach HSA	Indicator Bacteria
Pacific Ocean Shoreline, Lower San Juan HSA	Indicator Bacteria
Pacific Ocean Shoreline, San Clemente HA	Indicator Bacteria
Pacific Ocean Shoreline, San Joaquin Hills HSA	Indicator Bacteria
Prima Deshecha Creek	Phosphorus, Turbidity
San Juan Creek	DDE, Indicator Bacteria
San Juan Creek (mouth)	Indicator Bacteria
Segunda Deshecha Creek	Phosphorus, Turbidity

11. This Order incorporates only those MS4 Waste Load Allocations (WLAs) developed in TMDLs that have been adopted by the Regional Water Board and have been approved by the State Board, Office of Administrative Law and U.S. EPA. Approved TMDL WLAs are to be addressed using water quality-based effluent limitations (WQBELs) calculated as numeric limitations (either in the receiving waters and/or at the point of MS4 discharge) and/or as BMPs. In most cases, the numeric limitation must be achieved to ensure the adequacy of the BMP program. Waste load

allocations for storm water and non-storm water discharges have been included within this Order only if the TMDL has received all necessary approvals. This Order establishes WQBELs and conditions consistent with the requirements and assumptions of the WLAs in the TMDLs as required by 40 CFR 122.44(d)(1)(vii)(B).

A TMDL is the total amount of a particular pollutant that a water body can receive and still meet Water Quality Standards (WQSS), which are comprised of Water Quality Objectives (WQOs), Beneficial Uses and the States Policy on Maintaining High Quality Waters<sup>3</sup>. The WQOs serve as the primary basis for protecting the associated Beneficial Use. The Numeric Target of a TMDL interprets and applies the numeric and/or narrative WQOs of the WQSS as the basis for the WLAs. This Order addresses TMDLs through Water Quality Based Effluent Limitations (WQBELs) that must be consistent with the assumptions and requirements of the WLA<sup>4</sup>. Federal guidance<sup>5</sup> states that when adequate information exists, storm water permits are to incorporate numeric water quality based effluent limitations. In most cases, the numeric target(s) of a TMDL are a component of the WQBELs. When the numeric target is based on one or more numeric WQOs, the numeric WQOs and underlying assumptions and requirements will be used in the WQBELs as numeric effluent limitations by the end of the TMDL compliance schedule, unless additional information is required. When the numeric target interprets one or more narrative WQOs, the numeric target may assess the efficacy and progress of the BMPs in meeting the WLAs and restoring the Beneficial Uses by the end of the TMDL compliance schedule.

This Order fulfills a component of the TMDL Implementation Plan adopted by this Regional Board on June 11, 2008 for indicator bacteria in Baby Beach by establishing WQBELs expressed as both BMPs to achieve the WLAs and as numeric limitations<sup>6</sup> for the City of Dana Point and the County of Orange. The establishment of WQBELs expressed as BMPs should be sufficient to achieve the WLA specified in the TMDL. The Waste Load Allocations (WLAs) and Numeric Targets are the necessary metrics to ensure that the BMPs achieve appropriate concentrations of bacterial indicators in the receiving waters.

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<sup>3</sup> State Water Resources Control Board, Resolution No. 68-16

<sup>4</sup> 40 CFR 122.44(d)(1)(vii)(B)

<sup>5</sup> USEPA, *Interim Permitting Approach for Water Quality-Based Effluent Limitations in Storm Water Permits*, 61 FR 43761, August 26, 1996

<sup>6</sup> The Waste Load Allocations are defined in Resolution No. R9-2008-0027, A Resolution to Adopt an Amendment to the *Water Quality Control Plan for the San Diego Basin (9)* to Incorporate Total Maximum Daily Loads for Indicator Bacteria, Baby Beach in Dana Point Harbor and Shelter Island Shoreline Park in San Diego Bay.

12. This Order requires each Copermitttee to effectively prohibit all types of unauthorized discharges of non-storm water into its MS4. However, historically pollutants have been identified as present in dry weather non-storm water discharges from the MS4s through 303(d) listings, monitoring conducted by the Copermitttees under Order No. R9-2002-0001, and there are others expected to be present in dry weather non-storm water discharges because of the nature of these discharges. This Order includes action levels for pollutants in non-storm water, dry weather, discharges from the MS4 designed to ensure that the requirement to effectively prohibit all types of unauthorized discharges of non-storm water in the MS4 is being complied with. Action levels in the Order are based upon numeric or narrative water quality objectives and criteria as defined in the Basin Plan, the Water Quality Control Plan for Ocean Waters of California (Ocean Plan), and the State Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (State Implementation Policy or SIP). An exceedance of an action level requires specified responsive action by the Copermitttees. This Order describes what actions the Copermitttees must take when an exceedance of an action level is observed. Exceedances of non-storm water action levels do not alone constitute a violation of this Order but could indicate non-compliance with the requirement to effectively prohibit all types of unauthorized non-storm water discharges into the MS4 or other prohibitions established in this Order. Failure to undertake required source investigation and elimination action following an exceedance of 2a non-storm water action level (NAL or action level) is a violation of this Order. The Regional Board recognizes that use of action levels will not necessarily result in detection of all unauthorized sources of non-storm water discharges because there may be some discharges in which pollutants do not exceed established action levels. However, establishing NALs at levels appropriate to protect water quality standards is expected to lead to the identification of significant sources of pollutants in dry weather non-storm water discharges.
13. In addition to federal regulations cited in the Fact Sheet / Technical Report for the Order NO. R9-2009-0002, monitoring and reporting required under Order No. R9-2009-0002 is required pursuant to authority under CWC section 13383.

## **F. PUBLIC PROCESS**

1. The Regional Board has notified the Copermitttees, all known interested parties, and the public of its intent to consider adoption of an Order prescribing waste discharge requirements that would serve to renew an NPDES permit for the existing discharge of runoff.
2. The Regional Board has held public hearings on April 11, 2007, February 13, 2008, July 1, 2009, and November 18, 2009 and heard and considered all comments pertaining to the terms and conditions of this Order.

**IT IS HEREBY ORDERED** that the Copermittees, in order to meet the provisions contained in Division 7 of the California Water Code (CWC) and regulations adopted thereunder, and the provisions of the Clean Water Act (CWA) and regulations adopted thereunder, must each comply with the following:

#### **A. PROHIBITIONS AND RECEIVING WATER LIMITATIONS**

1. Discharges into and from municipal separate storm sewer systems (MS4s) in a manner causing, or threatening to cause, a condition of pollution, contamination, or nuisance (as defined in CWC section 13050), in waters of the state are prohibited.
2. Storm water discharges from MS4s containing pollutants which have not been reduced to the maximum extent practicable (MEP) are prohibited.<sup>7</sup>
3. Discharges from MS4s that cause or contribute to the violation of water quality standards (designated beneficial uses, water quality objectives developed to protect beneficial uses, and the State policy with respect to maintaining high quality waters) are prohibited.
  - a. Each Copermittee must comply with section A.3 and section A.4 as it applies to Prohibition 5 in Attachment A of this Order through timely implementation of control measures and other actions to reduce pollutants in storm water discharges in accordance with this Order, including any modifications. If exceedance(s) of water quality standards persist notwithstanding implementation of this Order, the Copermittee must assure compliance with section A.3 and section A.4 as it applies to Prohibition 5 in Attachment A of this Order by complying with the following procedure:
    - (1) Upon a determination by either the Copermittee or the Regional Board that storm water MS4 discharges are causing or contributing to an exceedance of an applicable water quality standard, the Copermittee must notify the Regional Board within 30 days and thereafter submit a report to the Regional Board that describes best management practices (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 Report unless the Regional Board directs an earlier submittal. The report must include an implementation schedule. The Regional Board may require modifications to the report;

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<sup>7</sup> This prohibition does not apply to MS4 discharges which receive subsequent treatment to reduce pollutants to the MEP prior to entering receiving waters (e.g., low flow diversions to the sanitary sewer).

- (2) Submit any modifications to the report required by the Regional Board within 30 days of notification;
  - (3) Within 30 days following approval of the report described above by the Regional Board, the Copermittee must revise its Jurisdictional Runoff Management Program 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
  - (4) Implement the revised Jurisdictional Runoff Management Program and monitoring program in accordance with the approved schedule.
- b. The Copermittee must repeat the procedure set forth above to comply with the receiving water limitations for continuing or recurring exceedances of the same water quality standard(s) unless directed to do otherwise by the Regional Board Executive Officer.
  - c. Nothing in section A.3 must prevent the Regional Board from enforcing any provision of this Order while the Copermittee prepares and implements the above report.
4. In addition to the above prohibitions, discharges from MS4s are subject to all Basin Plan prohibitions cited in Attachment A to this Order.

## **B. NON-STORM WATER DISCHARGES**

1. Each Copermittee must effectively prohibit all types of non-storm water discharges into its MS4 unless such discharges are either authorized by a separate National Pollutant Discharge Elimination System (NPDES) permit; or not prohibited in accordance with sections B.2 and B.3 below.
2. The following categories of non-storm water discharges are not prohibited unless a Copermittee or the Regional Board identifies the discharge category as a source of pollutants to waters of the U.S. Where the Copermittee(s) have identified a category as a source of pollutants, the category shall be addressed as an illicit discharge and prohibited through ordinance, order or similar means. The Regional Board may identify categories of discharge that either requires prohibition or other controls. For such a discharge category, the Copermittee, under direction of the Regional Board, must either prohibit the discharge category or develop and implement appropriate control measures to prevent the discharge of pollutants to the MS4 and report to the Regional Board pursuant to Section K.1 and K.3 of this Order.
  - a. Diverted stream flows;
  - b. Rising ground waters;
  - c. Uncontaminated ground water infiltration [as defined at 40 CFR 35.2005(20)] to

- MS4s;
- d. Uncontaminated pumped ground water<sup>8</sup>;
  - e. Foundation drains<sup>8</sup>;
  - f. Springs;
  - g. Water from crawl space pumps<sup>8</sup>;
  - h. Footing drains<sup>8</sup>;
  - i. Air conditioning condensation;
  - j. Flows from riparian habitats and wetlands;
  - k. Water line flushing<sup>9,10</sup>;
  - l. Discharges from potable water sources not subject to NPDES Permit No. CAG679001, other than water main breaks;
  - m. Individual residential car washing; and
  - n. Dechlorinated swimming pool discharges<sup>11</sup>.
3. Emergency fire fighting flows (i.e., flows necessary for the protection of life or property) do not require BMPs and need not be prohibited. As part of the Jurisdictional Runoff Management Plan (JRMP), each Copermittee must develop and implement a program to address pollutants from non-emergency fire fighting flows (i.e., flows from controlled or practice blazes and maintenance activities) identified by the Copermittee to be significant sources of pollutants to waters of the United States.
- a. Building fire suppression system maintenance discharges (e.g. sprinkler line flushing) contain waste. Therefore, such discharges are to be prohibited by the Copermittees as illicit discharges through ordinance, order, or similar means.
4. Each Copermittee must examine all dry weather effluent analytical monitoring results collected in accordance with section F.4 of this Order and Receiving Waters and MS4 Discharge Monitoring and Reporting Program No. R9-2009-0002 to identify water quality problems which may be the result of any non-prohibited discharge category(ies) identified above in section B.2. Follow-up investigations must be conducted as necessary to identify and control, pursuant to section B.2, any non-prohibited discharge category(ies) listed above.

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<sup>8</sup> Requires enrollment under Order R9-2008-002. Discharges into the MS4 require authorization from the owner and operator of the MS4 system.

<sup>9</sup> This exemption does not include fire suppression sprinkler system maintenance and testing discharges. Those discharges may be regulated under Section B.3.

<sup>10</sup> Requires enrollment under Order R9-2002-0020.

<sup>11</sup> Including saline swimming pool discharges directly to a saline water body.

**C. NON-STORM WATER DRY WEATHER ACTION LEVELS**

1. Each Copermittee, beginning no later than May 1, 2011, shall implement the non-storm water dry weather action level (NAL) monitoring as described in Attachment E of this Order.
2. In response to an exceedance of an NAL, each Copermittee must investigate and identify the source of the exceedance in a timely manner. However, if any Copermittee identifies exceedances of NALs that prevent them from adequately conducting source investigations in a timely manner, then the Copermittees may submit a prioritization plan and timeline that identifies the timeframe and planned actions to investigate and report their findings on all of the exceedances. Following the source investigation and identification, the Copermittees must submit an action report dependant on the source of the pollutant exceedance as follows:
  - a. If the Copermittee identifies the source of the exceedance as natural (non-anthropogenically influenced) in origin and in conveyance into the MS4; then the Copermittee shall report their findings and documentation of their source investigation to the Regional Board within fourteen days of the source identification.
  - b. If the Copermittee identifies the source of the exceedance as an illicit discharge or connection, then the Copermittees must eliminate the discharge to their MS4 and report the findings, including any enforcement action(s) taken, and documentation of the source investigation to the Regional Board within fourteen days of the source identification. If the Copermittee is unable to eliminate the source of discharge within fourteen days, then the Copermittee must submit, as part of their action report, their plan and timeframe to eliminate the source of the exceedance. Those dischargers seeking to continue such a discharge must become subject to a separate NPDES permit prior to continuing any such discharge.
  - c. If the Copermittee identifies the source of the exceedance as an exempted category of non-storm water discharge, then the Copermittees must determine if this is an isolated circumstance or if the category of discharges must be addressed through the prevention or prohibition of that category of discharge as an illicit discharge. The Copermittee must submit their findings in including a description of the steps taken to address the discharge and the category of discharge, to the Regional Board for review with the next subsequent annual report. Such description shall include relevant updates to or new ordinances, orders, or other legal means of addressing the category of discharge. The Copermittees must also submit a summary of their findings with the Report of Waste Discharge.
  - d. If the Copermittee identifies the source of the exceedance as a non-storm water discharge in violation or potential violation of an existing separate NPDES permit

- (e.g. the groundwater dewatering permit), then the Copermittee must report, within three business days, the findings to the Regional Board including all pertinent information regarding the discharger and discharge characteristics.
- e. If the Copermittee is unable to identify the source of the exceedance after taking and documenting reasonable steps to do so, then the Copermittee must identify the pollutant as a high priority pollutant of concern in the tributary subwatershed, perform additional focused sampling and update their programs within a year to reflect this priority. The Copermittee's annual report shall include these updates to their programs including, where applicable, updates to their watershed workplans (Section G.2), retrofitting consideration (Section F.3.d) and program effectiveness work plans (Section J.4).
  - f. The Copermittees or any interested party, may evaluate existing NALs and propose revised NALs for future Board consideration.
3. An exceedance of an NAL does not alone constitute a violation of the provisions of this Order, but an exceedance of an NAL may indicate lack of compliance with the requirement that Copermittees effectively prohibit all types of unauthorized non-storm water discharges into the MS4 or other prohibitions set forth in Sections A and B of this Order. Failure to timely implement required actions specified in this Order following an exceedance of an NAL constitutes a violation of this Order. However, neither compliance with NALs nor compliance with required actions following observed exceedances, excuses any non-compliance with the requirement to effectively prohibit all types of unauthorized non-storm water discharges into the MS4s or any non-compliance with the prohibitions in Sections A and B of this Order. NALs provide an assessment of the effectiveness of the prohibition of non-storm water discharges and of the appropriateness of exempted non-storm water discharges. During any annual reporting period in which one or more exceedances of NALs have been documented the Copermittee must submit with their next scheduled annual report, a report describing whether and how the observed exceedances did or did not result in a discharge from the MS4 that caused, or threatened to cause or contribute to a condition of pollution, contamination, or nuisance in the receiving waters.
4. Monitoring of effluent will occur at the end-of-pipe prior to discharge into the receiving waters, with a focus on Major Outfalls, as defined in 40 CFR 122.26(B 5-6) and Attachment E of this Order. The Copermittees must develop their monitoring plans to sample a representative percentage of major outfalls and identified stations within each hydrologic subarea. At a minimum, outfalls that exceed any NALs once during any year must be monitored in the subsequent year. Any station that does not exceed an NAL for 3 years may be replaced with a different station.



Nickel (Total Recoverable) =  $\exp(.8460[\ln(\text{hardness})] + 0.0584)$   
 Silver (Total Recoverable) =  $\exp(1.72[\ln(\text{hardness})] - 6.52)$   
 Zinc (Total Recoverable) =  $\exp(0.8473[\ln(\text{hardness})] + 0.884)$

b. Action levels for discharges to bays, harbors and lagoons/estuaries:

Table 4.b: General Constituents

Parameter	Units	AMAL	MDAL	Instantaneous Maximum	Basis
Total Coliform	MPN/100 ml	1,000	-	10,000	BPO
Fecal Coliform	MPN/100 ml	200 <sup>A</sup> , 400 <sup>B</sup>	-		BPO
Enterococci	MPN/100 ml	35	-	104 <sup>C</sup>	BPO
Turbidity	NTU	75	-	225	OP
pH	Units	Within limit of 6.0 to 9.0 at all times			OP
Priority Pollutants	ug/L	See limitations in Table 4.a.2			

A – Based on a minimum of not less than five samples for any 30-day period  
 B – No more than 10 percent of total samples may exceed 400 per 100 ml during any 30 day period  
 C – Designated Beach Areas  
 OP – California Ocean Plan 2005  
 MDAL – Maximum Daily Action Level  
 BPO – Basin Plan Objective  
 AMAL – Average Monthly Action Level

c. Action levels for discharges to the surf zone:

Table 4.c: General Constituents

Parameter	Units	AMAL	MDAL	Instantaneous Maximum	Basis
Total Coliform	MPN/100 ml	1,000	-	10,000 1,000 <sup>A</sup>	OP
Fecal Coliform	MPN/100 ml	200 <sup>B</sup>	-	400	OP
Enterococci	MPN/100 ml	35	-	104 <sup>C</sup>	OP

A – Total coliform density shall not exceed 1,000 per 100 ml when the ratio of fecal/total coliform exceeds 0.1  
 B – During any 30 day period  
 C – Designated Beach Areas  
 OP – California Ocean Plan 2005

**D. STORM WATER ACTION LEVELS**

1. Beginning Year 3 after Order adoption date, a running average of twenty percent or greater of exceedances of any discharge of storm water from the MS4 to waters of the United States that exceed the Storm Water Action Levels (SALs) for the pollutants listed in Table 5 (below) will require each Copermitttee to affirmatively augment and implement all necessary storm water controls and measures to reduce the discharge of the associated class of pollutants(s) to the MEP standard. The Copermitttees must utilize the exceedance information when adjusting and executing annual work plans, as required by this Order. Copermitttees shall take the magnitude, frequency, and number of constituents exceeding the SAL(s), in addition to receiving water quality data and other information, into consideration when reacting to SAL exceedances in an iterative manner. Failure to appropriately consider and react to SAL exceedances in an iterative manner creates a presumption that the Copermitttee(s) have not complied with the MEP standard.

Table 5. Storm Water Action Levels

<b>Pollutant</b>	<b>Action Level</b>
Turbidity (NTU)	126
Nitrate & Nitrite total (mg/L)	2.6
P total (mg/L)	1.46
Cd total (µg/L)	3.0
Cu total (µg/L)	127
Pb total (µg/L)	250
Ni total (µg/L)	54
Zn total (µg/L)	976

2. The end-of-pipe assessment points for the determination of SAL compliance are all major outfalls, as defined in 40 CFR 122.26(b)(5) and (b)(6). The Copermitttees must develop their monitoring plans to sample a representative percent of the major outfalls within each hydrologic subarea. At a minimum, outfalls that exceed SALs must be monitored in the subsequent year. Any station that does not exceed an SAL for 3 years may be replaced with a different station. SAL samples must be 24 hour time weighted composites.
3. The absence of SAL exceedances does not relieve the Copermitttees from implementing all other required elements of this Permit.
4. This Permit does not regulate natural sources and conveyances of constituents listed in Table 5. To be relieved of the requirements to prioritize pollutant/watershed combinations for BMP updates and to continue monitoring a station, the Copermitttee must demonstrate that the likely and expected cause of the SAL exceedance is not anthropogenic in nature.
5. The SALs will be reviewed and updated at the end of every permit cycle. The data collected pursuant to D.2 above can be used to create SALs based upon local data.

It is the goal of the SALs, through the iterative and MEP process, to have outfall storm water discharges meet all applicable water quality standards.

## **E. LEGAL AUTHORITY**

1. Each Copermittee must establish, maintain, and enforce adequate legal authority to control pollutant discharges into and from its MS4 through ordinance, statute, permit, contract or similar means. Nothing herein shall authorize a Co-Permittee or other discharger regulated under the terms of this order to divert, store or otherwise impound water if such action is reasonably anticipated to harm downstream water right holders in the exercise of their water rights. This legal authority must, at a minimum, authorize the Copermittee to:
  - a. Control the contribution of pollutants in discharges of runoff associated with industrial and construction activity to its MS4 and control the quality of runoff from industrial and construction sites. This requirement applies both to industrial and construction sites which have coverage under the statewide general industrial or construction storm water permits, as well as to those sites which do not. Grading ordinances must be updated and enforced as necessary to comply with this Order;
  - b. Prohibit all identified illicit discharges not otherwise allowed pursuant to section B.2;
  - c. Prohibit and eliminate illicit connections to the MS4;
  - d. Control the discharge of spills, dumping, or disposal of materials other than storm water to its MS4;
  - e. Require compliance with conditions in Copermittee ordinances, permits, contracts or orders (i.e., hold dischargers to its MS4 accountable for their contributions of pollutants and flows);
  - f. Utilize enforcement mechanisms to require compliance with Copermittee storm water ordinances, permits, contracts, or orders;
  - g. Control the contribution of pollutants from one portion of the shared MS4 to another portion of the MS4 through interagency agreements among Copermittees. Control of the contribution of pollutants from one portion of the shared MS4 to another portion of the MS4 through interagency agreements with other owners of the MS4 such as the State of California Department of Transportation, the United States Department of Defense, or Native American Tribes is encouraged;
  - h. Carry out all inspections, surveillance, and monitoring necessary to determine compliance and noncompliance with local ordinances and permits and with this Order, including the prohibition on illicit discharges to the MS4. This means the Copermittee must have authority to enter, monitor, inspect, take measurements, review and copy records, and require regular reports from industrial facilities discharging into its MS4, including construction sites;
  - i. Require the use of BMPs to prevent or reduce the discharge of pollutants into MS4s from storm water to the MEP; and



## **F. JURISDICTIONAL RUNOFF MANAGEMENT PROGRAM (JRMP)**

Each Copermittee must implement all requirements of section F of this Order no later than 365 days after adoption of the Order, unless otherwise specified in this Order. Prior to 365 days after adoption of the Order, each Copermittee must at a minimum implement its Jurisdictional RMP document, as the document was developed and amended to comply with the requirements of Order No. R9-2002-001.

Each Copermittee must develop and implement an updated JRMP for its jurisdiction. Each updated JRMP must meet the requirements of section F of this Order, reduce the discharge of storm water pollutants from the MS4 to the MEP, and prevent runoff discharges from the MS4 from causing or contributing to a violation of water quality standards.

### **1. DEVELOPMENT PLANNING COMPONENT**

Each Copermittee must implement a program which meets the requirements of this section and (1) reduces Development Project discharges of storm water pollutants from the MS4 to the MEP; (2) prevents Development Project discharges from the MS4 from causing or contributing to a violation of water quality standards; (3) prevents illicit discharges into the MS4; and (4) manages increases in runoff discharge rates and durations from Development Projects that are likely to cause increased erosion of stream beds and banks, silt pollutant generation, or other impacts to beneficial uses and stream habitat due to increased erosive force.

#### **a. GENERAL PLAN**

Each Copermittee must revise as needed its General Plan or equivalent plan (e.g., Comprehensive, Master, or Community Plan) for the purpose of providing effective water quality and watershed protection principles and policies that direct land-use decisions and require implementation of consistent water quality protection measures for all development and redevelopment projects.

#### **b. ENVIRONMENTAL REVIEW PROCESS**

Each Copermittee must revise as needed its current environmental review processes to accurately evaluate water quality impacts and cumulative impacts and identify appropriate measures to avoid, minimize and mitigate those impacts for all Development Projects.

#### **c. APPROVAL PROCESS CRITERIA AND REQUIREMENTS FOR ALL DEVELOPMENT PROJECTS**

For all proposed Development Projects, each Copermittee during the planning process, and prior to project approval and issuance of local permits, must prescribe the necessary requirements so that Development Project discharges of storm water pollutants from the MS4 will be reduced to the MEP, will not cause or

contribute to a violation of water quality standards, and will comply with Copermittee's ordinances, permits, plans, and requirements, and with this Order. Performance Criteria: Discharges from each approved development project must be subject to the following management measures:

- (1) Source control BMPs that reduce storm water pollutants of concern in runoff, including prevention of illicit discharges into the MS4; prevention of irrigation runoff; storm drain system stenciling or signage; properly designed outdoor material storage areas; properly designed outdoor work areas; and properly designed trash storage areas;
- (2) The following LID BMPs listed below shall be implemented at all Development Projects where applicable and feasible.
  - (a) Conserve natural areas, including existing trees, other vegetation, and soils.
  - (b) Construct streets, sidewalks, or parking lot aisles to the minimum widths necessary, provided that public safety is not compromised.
  - (c) Minimize the impervious footprint of the project.
  - (d) Minimize soil compaction to landscaped areas.
  - (e) Minimize disturbances to natural drainages (e.g., natural swales, topographic depressions, etc.)
  - (f) Disconnect impervious surfaces through distributed pervious areas.
- (3) Buffer zones for natural water bodies, where feasible. Where buffer zones are infeasible, require project proponent to implement other buffers such as trees, access restrictions, etc;
- (4) Measures necessary so that grading or other construction activities meet the provisions specified in section F.2 of this Order; and
- (5) Submittal of proof of a mechanism under which ongoing long-term maintenance of all structural post-construction BMPs will be conducted.
- (6) Infiltration and Groundwater Protection

To protect groundwater quality, each Copermittee must apply restrictions to the use of treatment control BMPs that are designed to primarily function as centralized infiltration devices (such as large infiltration trenches and infiltration basins). Such restrictions must be designed so that the use of such infiltration treatment control BMPs must not cause or contribute to an exceedance of groundwater quality objectives. At a minimum, each treatment control BMP designed to primarily function as a centralized infiltration device must meet the restrictions below, unless it is demonstrated that a restriction is not necessary to protect groundwater quality. The Copermittees may collectively or individually develop alternative restrictions on the use of

treatment control BMPs which are designed to primarily function as centralized infiltration devices. Alternative restrictions developed by the Copermittees can partially or wholly replace the restrictions listed below. The restrictions are not intended to be applied to small infiltration systems dispersed throughout a development project.

- (a) Runoff must undergo pretreatment such as sedimentation or filtration prior to infiltration;
  - (b) All dry weather flows containing significant pollutant loads must be diverted from infiltration devices and treated through other BMPs;
  - (c) Pollution prevention and source control BMPs must be implemented at a level appropriate to protect groundwater quality at sites where infiltration treatment control BMPs are to be used;
  - (d) Infiltration treatment control BMPs must be adequately maintained so that they remove storm water pollutants to the MEP;
  - (e) The vertical distance from the base of any infiltration treatment control BMP to the seasonal high groundwater mark must be at least 10 feet. Where groundwater basins do not support beneficial uses, this vertical distance criteria may be reduced, provided groundwater quality is maintained;
  - (f) The soil through which infiltration is to occur must have physical and chemical characteristics (such as appropriate cation exchange capacity, organic content, clay content, and infiltration rate) which are adequate for proper infiltration durations and treatment of runoff for the protection of groundwater beneficial uses;
  - (g) Infiltration treatment control BMPs must not be used for areas of industrial or light industrial activity; areas subject to high vehicular traffic (25,000 or greater average daily traffic on main roadway or 15,000 or more average daily traffic on any intersecting roadway); automotive repair shops; car washes; fleet storage areas (bus, truck, etc.); nurseries; and other high threat to water quality land uses and activities as designated by each Copermittee unless first treated or filtered to remove pollutants prior to infiltration and a comprehensive site-specific evaluation has been conducted; and
  - (h) Infiltration treatment control BMPs must be located a minimum of 100 feet horizontally from any water supply wells.
- (7) Where feasible, landscaping with native or low water species shall be preferred in areas that drain to the MS4 or to waters of the United States.

**d. STANDARD STORM WATER MITIGATION PLANS (SSMPs) – APPROVAL PROCESS  
CRITERIA AND REQUIREMENTS FOR PRIORITY DEVELOPMENT PROJECTS**

Within two years of adoption of this Order, the Copermittees must submit an updated model SSMP, to the Regional Board's Executive Officer for a 30 day public review and comment period. The Regional Board's Executive Officer has the discretion to determine the necessity of a public hearing. Within 180 days of determination that the Model SSMP is in compliance with this Permit's provisions, each Copermittee must update their own local SSMP, and amended ordinances consistent with the model SSMP, and shall submit both (local SSMP and amended ordinances) to the Regional Board. The model SSMP must meet the requirements of section F.1.d of this Order to (1) reduce Priority Development Project discharges of storm water pollutants from the MS4 to the MEP, and (2) prevent Priority Development Project runoff discharges from the MS4 from causing or contributing to a violation of water quality standards.<sup>12</sup>

**(1) Definition of Priority Development Project (PDP):**

Priority Development Projects are:

- (a) All new Development Projects that fall under the project categories or locations listed in section F.1.d.(2), and
- (b) Those redevelopment projects that create, add, or replace at least 5,000 square feet of impervious surfaces on an already developed site and the existing development and/or the redevelopment project falls under the project categories or locations listed in section F.1.d.(2). 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 SSMP requirements, the numeric sizing criteria discussed in section F.1.d.(6) applies only to the addition or replacement, and not to the entire development. Where redevelopment results in an increase of more than fifty percent of the impervious surfaces of a previously existing development, the numeric sizing criteria applies to

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<sup>12</sup> Updated SSMP and hydromodification requirements must apply to all priority projects or phases of priority projects which have not yet begun grading or construction activities at the time any updated SSMP or hydromodification requirement commences. If lawful prior approval of a project exists, whereby application of an updated SSMP or hydromodification requirement to the project is illegal, the updated SSMP or hydromodification requirement need not apply to the project. Updated Development Planning requirements set forth in Sections F.1. (a) through (h) of this Order must apply to all projects or phases of projects, unless, at the time any updated Development Planning requirement commences, the projects or project phases meet any one of the following conditions: (i) the project or phase has begun grading or construction activities; or (ii) a Copermittee determines that lawful prior approval rights for a project or project phase exist, whereby application of the Updated Development Planning requirement to the project is legally infeasible. Where feasible, the Permittees must utilize the SSMP and hydromodification update periods to ensure that projects undergoing approval processes include application of the updated SSMP and hydromodification requirements in their plans.

the entire development.

- (c) One acre threshold: In addition to the Priority Development Project Categories identified in section F.1.d.(2), Priority Development Projects must also include all other pollutant-generating Development Projects that result in the disturbance of one acre or more of land within three years of adoption of this Order.<sup>13</sup> As an alternative to this one-acre threshold, the Copermittees may collectively identify a different threshold, provided the Copermittees' threshold is at least as inclusive of Development Projects as the one-acre threshold.

## (2) Priority Development Project Categories

Where a new Development Project feature, such as a parking lot, falls into a Priority Development Project Category, the entire project footprint is subject to SSMP requirements.

- (a) New development projects that create 10,000 square feet or more of impervious surfaces (collectively over the entire project site) including commercial, industrial, residential, 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 Copermittees.
- (b) Automotive repair shops. This category is defined as a facility that is categorized in any one of the following Standard Industrial Classification (SIC) codes: 5013, 5014, 5541, 7532-7534, or 7536-7539.
- (c) Restaurants. This category is defined as a facility that sells prepared foods and drinks for consumption, including stationary lunch counters and refreshment stands selling prepared foods and drinks for immediate consumption (SIC code 5812), where the land area for development is greater than 5,000 square feet. Restaurants where land development is less than 5,000 square feet must meet all SSMP requirements except for structural treatment BMP and numeric sizing criteria requirement F.1.d.(6) and hydromodification requirement F.1.h.
- (d) All hillside development greater than 5,000 square feet. This category is defined as any development which creates 5,000 square feet of impervious surface which is located in an area with known erosive soil conditions, where the development will grade on any natural slope that is twenty-five percent or greater.
- (e) Environmentally Sensitive Areas (ESAs). All development located within or directly adjacent to or discharging directly to an ESA (where discharges

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<sup>13</sup> Pollutant generating Development Projects are those projects that generate pollutants at levels greater than natural background levels.

from the development or redevelopment will enter receiving waters within the ESA), which either creates 2,500 square feet of impervious surface on a proposed project site or increases the area of imperviousness of a proposed project site to 10 percent or more of its naturally occurring condition. "Directly adjacent" means situated within 200 feet of the ESA. "Discharging directly to" means outflow from a drainage conveyance system that is composed entirely of flows from the subject development or redevelopment site, and not commingled with flows from adjacent lands.

- (f) Parking lots 5,000 square feet or more or with 15 or more parking spaces and potentially exposed to runoff. Parking lot is defined as a land area or facility for the temporary parking or storage of motor vehicles used personally, for business, or for commerce.
- (g) Street, roads, highways, and freeways. This category includes any paved surface that is 5,000 square feet or greater used for the transportation of automobiles, trucks, motorcycles, and other vehicles.
- (h) Retail Gasoline Outlets (RGOs). This category includes RGOs that meet the following criteria: (a) 5,000 square feet or more or (b) a projected Average Daily Traffic (ADT) of 100 or more vehicles per day.

### (3) Pollutants of Concern

As part of its local SSMP, each Copermittee must implement an updated procedure for identifying pollutants of concern for each Priority Development Project. The procedure must address, at a minimum: (1) Receiving water quality (including pollutants for which receiving waters are listed as impaired under CWA section 303(d)); (2) Land-use type of the Development Project and pollutants associated with that land use type; and (3) Pollutants expected to be present on site.

### (4) Low Impact Development BMP Requirements

Each Copermittee must require each Priority Development Project to implement LID BMPs which will collectively minimize directly connected impervious areas, limit loss of existing infiltration capacity, and protect areas that provide important water quality benefits necessary to maintain riparian and aquatic biota, and/or are particularly susceptible to erosion and sediment loss.

(a) The following LID BMPs must be implemented:

- (i) Each Copermittee must require LID BMPs or make a finding of infeasibility for each Priority Development Project in accordance with the LID waiver program in Section F.1.d.(8);

- (ii) Each Copermittee must incorporate formalized consideration, such as thorough checklists, ordinances, and/or other means, of LID BMPs into the plan review process for Priority Development Projects;
  - (iii) The review of each Priority Development Project must include an assessment of potential collection of storm water for on-site or off-site reuse opportunities;
  - (iv) The review of each Priority Development Project must include an assessment of techniques to infiltrate, filter, store, evaporate, or retain runoff close to the source of runoff; and
  - (v) Within 2 years after adoption of this Order, each Copermittee must review its local codes, policies, and ordinances and identify barriers therein to implementation of LID BMPs. Following the identification of these barriers to LID implementation, where feasible, the Copermittee must take, by the end of the permit cycle, appropriate actions to remove such barriers.
- (b) The following LID BMPs must be implemented at all Priority Development Projects where technically feasible as required below:
- (i) Maintain or restore natural storage reservoirs and drainage corridors (including depressions, areas of permeable soils, swales, and ephemeral and intermittent streams.
  - (ii) Projects with landscaped or other pervious areas must, where feasible, drain runoff from impervious areas (rooftops, parking lots, sidewalks, walkways, patios, etc) into pervious areas prior to discharge to the MS4. The amount of runoff from impervious areas that is to drain to pervious areas shall not exceed the total capacity of the project's pervious areas to infiltrate or treat runoff, taking into consideration the pervious areas' geologic and soil conditions, slope, and other pertinent factors.
  - (iii) Projects with landscaped or other pervious areas must, where feasible, properly design and construct the pervious areas to effectively receive and infiltrate or treat runoff from impervious areas, prior to discharge to the MS4. Soil compaction for these areas shall be minimized. The amount of the impervious areas that are to drain to pervious areas must be based upon the total size, soil conditions, slope, and other pertinent factors.
  - (iv) Projects with low traffic areas and appropriate soil conditions must construct walkways, trails, overflow parking lots, alleys, or other low-traffic areas with permeable surfaces, such as pervious concrete, porous asphalt, unit pavers, and granular materials.
- (c) To protect ground water resources any infiltration LID BMPs must comply with Section F.1.(c)(6).

(d) LID BMPs sizing criteria:

- (i) LID BMPs shall be sized and designed to ensure onsite retention without runoff, of the volume of runoff produced from a 24-hour 85<sup>th</sup> percentile storm event, as determined from the County of Orange's 85<sup>th</sup> Percentile Precipitation Map<sup>14</sup> ("design capture volume");
- (ii) If onsite retention LID BMPs are technically infeasible per section F.1.d.(7)(b), LID biofiltration BMPs may treat any volume that is not retained onsite by the LID BMPs. The LID biofiltration BMPs must be designed for an appropriate surface loading rate to prevent erosion, scour and channeling within the BMP. Due to the flow through design of biofiltration BMPs, the total volume of the BMP, including pore spaces and prefilter detention volume, must be sized to hold at least 0.75 times the design storm volume that is not retained onsite by LID retention BMPs;
- (iii) If it is shown to be technically infeasible to treat the remaining volume up to and including the design capture volume using LID BMPs (retention or biofiltration), the project must implement conventional treatment control BMPs in accordance with Section F.1.d.(6) below and must participate in the LID waiver program in Section F.1.d.(7).

- (e) All LID BMPs shall be designed and implemented with measures to avoid the creation of nuisance or pollution associated with vectors, such as mosquitoes, rodents, and flies.

(5) Source Control BMP Requirements

Each Copermittee must require each Priority Development Project to implement source control BMPs. The source control BMPs to be required must:

- (a) Prevent illicit discharges into the MS4;
- (b) Minimize storm water pollutants of concern in runoff;
- (c) Eliminate irrigation runoff;
- (d) Include storm drain system stenciling or signage;
- (e) Include properly designed outdoor material storage areas;
- (f) Include properly designed outdoor work areas;
- (g) Include properly designed trash storage areas;
- (h) Include water quality requirements applicable to individual priority project categories.

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<sup>14</sup> The isopluvial map is available from the County of Orange. The map can also be found as Figure A-1 Exhibit 7.II in the Model WQMP (September 2003), page 5 of 57 at [http://www.ocwatersheds.com/documents/2003\\_DAMP\\_Exhibit\\_7\\_II\\_Model\\_WQMP\\_Attachments.pdf](http://www.ocwatersheds.com/documents/2003_DAMP_Exhibit_7_II_Model_WQMP_Attachments.pdf)

## (6) Treatment Control BMP Requirements<sup>15</sup>

Each Copermittee must require each Priority Development Project to implement treatment control BMPs that meet the following requirements:

- (a) All treatment control BMPs for a single Priority Development Project must collectively be sized to comply with the following numeric sizing criteria:
  - (i) Volume-based treatment control BMPs must be designed to mitigate (infiltrate, filter, or treat) the volume of runoff produced from a 24-hour 85<sup>th</sup> percentile storm event, as determined from the County of Orange's 85<sup>th</sup> Percentile Precipitation Isopluvial Map<sup>16</sup>; or
  - (ii) Flow-based treatment control BMPs must be designed to mitigate (infiltrate, filter, or treat) either: a) 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 b) the maximum flow rate of runoff produced by the 85<sup>th</sup> percentile hourly rainfall intensity (for each hour of a storm event), as determined from the local historical rainfall record, multiplied by a factor of two.
- (b) Treatment control BMPs for all Priority Development Projects must mitigate (treat through infiltration, settling, filtration or other unit processes) the required volume or flow of runoff from all developed portions of the project, including landscaped areas.
- (c) All treatment control BMPs must be located so as to remove pollutants from runoff prior to its discharge to any waters of the U.S. Multiple Priority Development Projects may use shared treatment control BMPs as long as construction of any shared treatment control BMP is completed prior to the use or occupation of any Priority Development Project from which the treatment control BMP will receive runoff.
- (d) All treatment control BMPs for Priority Development Projects must, at a minimum:
  - (i) Be ranked with high or medium pollutant removal efficiency for the project's most significant pollutants of concern, as the pollutant removal efficiencies are identified in the Copermittees' Model

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<sup>15</sup> This section only applies to those PDPs not implementing LID capable of meeting the design storm criteria for the entire site and meeting technical infeasibility eligibility. Low-Impact Development (LID) and other site design BMPs that are correctly designed to effectively remove pollutants from runoff are considered treatment control BMPs.

<sup>16</sup> The isopluvial map is available from the County of Orange. The map can also be found as Figure A-1 Exhibit 7.II in the Model WQMP (September 2003), page 105 of 157 at [http://www.ocwatersheds.com/StormWater/PDFs/2003\\_DAMP/2003\\_DAMP\\_Section\\_7\\_New\\_Development\\_Significant\\_Redevelopment.pdf](http://www.ocwatersheds.com/StormWater/PDFs/2003_DAMP/2003_DAMP_Section_7_New_Development_Significant_Redevelopment.pdf).

SSMP. Treatment control BMPs with a low removal efficiency ranking must only be approved by a Copermittee when a feasibility analysis has been conducted which exhibits that implementation of treatment control BMPs with high or medium removal efficiency rankings are infeasible for a Priority Development Project or portion of a Priority Development Project.

- (ii) Be correctly sized and designed so as to remove storm water pollutants to the MEP.
- (e) Target removal of pollutants of concern from runoff.
- (f) Be implemented close to pollutant sources, and prior to discharging into waters of the U.S.
- (g) Not be constructed within a waters of the U.S. or waters of the State.
- (h) Include proof of a mechanism under which ongoing long-term maintenance will be conducted to ensure proper maintenance for the life of the project. The mechanisms may be provided by the project proponent or Copermittee.
- (i) Be designed and implemented with measures to avoid the creation of nuisance or pollution associated with vectors, such as mosquitoes, rodents, and flies.

(7) Low Impact Development (LID) BMP Waiver Program

The Copermittees must develop, collectively or individually, a LID waiver program for incorporation into local SSMPs, which would allow a Priority Development Project to substitute implementation of all or a portion of required LID BMPs in section F.1.d(4) with implementation of treatment control BMPs and a mitigation project, payment into an in-lieu funding program, and/or watershed equivalent BMP(s) consistent with Section F.1.d.(11). The Copermittees shall submit the LID waiver program as part of their updated model SSMP. At a minimum, the program must meet the requirements below:

- (a) Prior to implementation, the LID waiver program must clearly exhibit that it will not allow PDPs to result in a net impact (after consideration of any mitigation and in-lieu payments) from pollutant loadings over and above the impact caused by projects meeting LID requirements;
- (b) For each PDP participating, a technical feasibility analysis must be included demonstrating that it is technically infeasible to implement LID BMPs that comply with the requirements of Section F.1.(d)(4). The

Copermittee(s) must develop criteria for the technical feasibility analysis including a cost benefit analysis, examination of LID BMPs considered and alternatives chosen. Each PDP participating must demonstrate that LID BMPs were implemented as much as feasible given the site's unique conditions. Analysis must be made of the pollutant loading for each project participating in the LID substitution program. The estimated impacts from not implementing the required LID BMPs in section F.1.d.(4) must be fully mitigated. Technical infeasibility may result from conditions including, but not limited to:

- (i) Locations that cannot meet the infiltration and groundwater protection requirements in section F.1.c.(6). Where infiltration is technically infeasible, the project must still examine the feasibility of other onsite retention LID BMPs;
  - (ii) Smart growth and infill or redevelopment locations where the density and/or nature of the project would create significant difficulty for compliance with the onsite volume retention requirements; and
  - (iii) Other site, geologic, soil or implementation constraints identified in the Copermittees updated local SSMP document.
- (c) The LID waiver program must include mechanisms to verify that each Priority Development Project participating in the program is in compliance with all applicable SSMP requirements;
- (d) The LID waiver program must develop and implement a review process verifying that the BMPs to be implemented meet the designated design criteria. The review process must also verify that each Priority Development Project participating in the program is in compliance with all applicable SSMP requirements.
- (e) The LID waiver program must include performance standards for treatment control BMPs specified in compliance with section F.1.(d)(6).
- (f) Each PDP that participates in the LID waiver program must mitigate for the pollutant loads expected to be discharged due to not implementing the LID BMPs in section F.1.d.(4). Mitigation projects must be implemented within the same hydrologic subarea as the PDP. Mitigation projects outside of the hydrologic subarea but within the same hydrologic unit may be approved provided that the project proponent demonstrates that mitigation projects within the same hydrologic subarea are infeasible and that the mitigation project will address similar beneficial use impacts as expected from the PDPs pollutant load types and amount. Offsite mitigation projects may include green streets projects, existing development retrofit projects, retrofit incentive programs, regional BMPs and stream restoration. Project applicants seeking to utilize these

alternative compliance provisions may propose other offsite mitigation projects, which the Copermittees may approve if they meet the requirements of this subpart.

- (g) A Copermittee may choose to implement a pollutant credit system as part of the LID waiver program provided that such a credit system clearly exhibits that it will not allow PDPs to result in a net impact from pollutant loadings over and above the impact caused by projects meeting LID requirements. Any credit system that a Copermittee chooses to implement must be submitted to the Executive Officer for review and approval as part of the waiver program.
- (h) The LID waiver program shall include a storm water mitigation fund developed by the Copermittee(s) to be used for water quality improvement projects which may serve in lieu of the PDP's required mitigation in section F.1.d.(8)(e). The LID waiver program's storm water mitigation fund shall, at a minimum, identify;
  - (i) The entity or entities that will manage the storm water mitigation fund (i.e., assume full responsibility);
  - (ii) The range and types of acceptable projects for which storm water mitigation funds may be expended;
  - (iii) The entity or entities that will assume full responsibility for each water quality improvement project, including its successful completion; and
  - (iv) How the dollar amount of storm water mitigation fund contributions will be determined. In-lieu payments must be proportional to the additional pollutant load discharged by not fully implementing LID.
- (i) Each Copermittee must notify the Regional Board in their annual report of each PDP choosing to participate in the LID waiver program. The annual report must include the following information:
  - (i) Name of the developer of the participating PDP;
  - (ii) Site location;
  - (iii) Reason for LID waiver including technical feasibility analysis;
  - (iv) Description of BMPs implemented;
  - (v) Total amount deposited, if any, into the storm water mitigation fund described in section F.1.d.(8)(f);
  - (vi) Water quality improvement project(s) proposed to be funded; and
  - (vii) Timeframe for implementation of water quality improvement projects.

(8) Site Design and Treatment Control BMP Design Standards

As part of its local SSMP, each Copermittee must develop and require Priority

Development Projects to implement siting, design, and maintenance criteria for each site design and treatment control BMP listed in its local SSMP to determine feasibility and applicability and so that implemented site design and treatment control BMPs are constructed correctly and are effective at pollutant removal, runoff control, and vector minimization. LID techniques, such as soil amendments, must be incorporated into the criteria for appropriate treatment control BMPs. Development of BMP design worksheets which can be used by project proponents is encouraged.

(9) Implementation Process

As part of its local SSMP, each Copermittee must implement a process to verify compliance with SSMP requirements. The process must identify at what point in the planning process Priority Development Projects will be required to meet SSMP requirements and at a minimum, the Priority Development Project must implement the required post-construction BMPs prior to occupancy and/or the intended use of any portion of that project. The process must also include identification of the roles and responsibilities of various municipal departments in implementing the SSMP requirements, as well as any other measures necessary for the implementation of SSMP requirements.

(10) Treatment BMP Review

- (a) The Copermittees must review and update the BMPs that are listed in their local SSMPs as options for treatment control during the third year of implementation of this Order. At a minimum, the update must include removal of obsolete or ineffective BMPs and addition of LID BMPs that can be used for treatment, such as bioretention cells, bioretention swales, etc. The update must also add appropriate LID BMPs to any tables or discussions in the local SSMPs addressing pollutant removal efficiencies of treatment control BMPs. In addition, the update must include review and revision where necessary of treatment control BMP pollutant removal efficiencies.
  - (b) The update must incorporate findings from BMP effectiveness studies conducted by the Copermittees for projects funded wholly or in part by the State Board or Regional Board.
  - (c) Each Copermittee must implement a mechanism for annually incorporating findings from local treatment BMP effectiveness studies (e.g., ones conducted by, or on-behalf of, public agencies in Orange County) into SSMP project reviews and permitting
- (11) Where a development project, greater than 100 acres in total project size or smaller than 100 acres in size yet part of a larger common plan of

development that is over 100 acres, has been prepared using watershed and/or sub-watershed based water quality, hydrologic, and fluvial geomorphologic planning principles that implement regional LID BMPs in accordance with the sizing and location criteria of this Order and acceptable to the Regional Board, such standards shall govern review of projects with respect to Section F.1 of this Order and shall be deemed to satisfy this Order's requirements for LID site design, buffer zone, infiltration and groundwater protection standards, source control, treatment control, and hydromodification control standards. Regional BMPs must clearly exhibit that they will not result in a net impact from pollutant loadings over and above the impact caused by capture and retention of the design storm. Regional BMPs may be used provided that the BMPs capture and retain the volume of runoff produced from the 24-hour 85<sup>th</sup> percentile storm event as defined in section F.1.d.(6)(a)(i) and that such controls are located upstream of receiving waters. Any volume that is not retained by the LID BMPs, up to the design capture volume, must be treated using LID biofiltration. Where regional LID implementation has been shown to be technically infeasible (per section F.1.d.7.b) any volume up to and including the design capture volume, not retained by LID BMPs, nor treated by LID biofiltration, must be treated using conventional treatment control BMPs in accordance with Section F.1.d.(6) and participation in the LID waiver program in Section F.1.d.(7).

**e. BMP CONSTRUCTION VERIFICATION**

Prior to occupancy and/or intended use of any portion of the Priority Development Project subject to SSMP requirements, each Copermittee must inspect the constructed site design, source control, and treatment control BMPs to verify that they have been constructed and are operating in compliance with all specifications, plans, permits, ordinances, and this Order.

**f. BMP MAINTENANCE TRACKING**

- (1) Each Copermittee must develop and maintain a watershed-based database to track and inventory all approved post-construction BMPs and BMP maintenance within its jurisdiction since July 2001. LID BMPs implemented on a lot by lot basis at a single family residential home, such as rainbarrels, are not required to be tracked or inventoried. At a minimum, the database must include information on BMP type, location, watershed, date of construction, party responsible for maintenance, maintenance certifications or verifications, inspections, inspection findings, and corrective actions, including whether the site was referred to the Vector Control District.
- (2) Each Copermittee must establish a mechanism not only to track post-construction BMPs, but also to ensure that appropriate easements and ownerships are properly recorded in public records and the information is

conveyed to all appropriate parties when there is a change in project or site ownership.

- (3) Each Copermittee must verify that approved post-construction BMPs are operating effectively and have been adequately maintained by implementing the following measures:
- (a) An annual inventory of all approved BMPs within the Copermittee's jurisdiction. LID BMPs implemented on a lot by lot basis at a single family residential home, such as rainbarrels, are not required to be tracked or inventoried. The inventory must also include all BMPs approved for Priority Development Projects since July 2001;
  - (b) The designation of high priority BMPs. High-priority designation must include consideration of BMP size, recommended maintenance frequency, likelihood of operational and maintenance issues, location, receiving water quality, and other pertinent factors;
  - (c) Verify implementation, operation, and maintenance of BMPs by inspection, self-certification, surveys, or other equally effective approaches with the following conditions:
    - (i) The implementation, operation, and maintenance of at least 90 percent of approved and inventoried final project public and private SSMPs (a.k.a. WQMPs) must be verified annually. All post-construction BMPs shall be verified within every four year period;
    - (ii) Operation and maintenance verifications must be required prior to each rainy season;
    - (iii) All (100 percent) projects with BMPs that are high priority must be inspected by the Copermittee annually prior to each rainy season;
    - (iv) All (100 percent) public agency projects with BMPs must be inspected by the Copermittee annually;
    - (v) At least 50 percent of projects with drainage insert treatment control BMPs must be inspected by the Copermittee annually;
    - (vi) Appropriate follow-up measures (including re-inspections, enforcement, maintenance, etc.) must be conducted to ensure the treatment BMPs continue to reduce storm water pollutants as originally designed;
    - (vii) All inspections must verify effective operation and maintenance of the treatment control BMPs, as well as compliance with all ordinances, permits, and this Order; and
    - (viii) Inspections must note observations of vector conditions, such as mosquitoes. Where conditions are identified as contributing to mosquito production, the Copermittee must notify the Orange County Vector Control District.

**g. ENFORCEMENT OF DEVELOPMENT SITES**

Each Copermittee must enforce its storm water ordinance for all Development Projects and at all development sites as necessary to maintain compliance with this Order. Copermittee ordinances or other regulatory mechanisms must include appropriate sanctions to achieve compliance. Sanctions must include the following or their equivalent: Non-monetary penalties, fines, bonding requirements, and/or permit or occupancy denials for non-compliance.

**h. HYDROMODIFICATION – LIMITATIONS ON INCREASES OF RUNOFF DISCHARGE RATES AND DURATIONS<sup>17</sup>**

Each Copermittee shall collaborate with the other Copermittees to develop and implement a Hydromodification Management Plan (HMP) to manage increases in runoff discharge rates and durations from all Priority Development Projects. The HMP shall be incorporated into the local SSMP and implemented by each Copermittee so that estimated post-project runoff discharge rates and durations shall not exceed pre-development discharge rates and durations. Where the proposed project is located on an already developed site, the pre-project discharge rate and duration shall be that of the pre-developed, naturally occurring condition. The HMP shall be submitted to the Executive Officer within 2 years of permit adoption. The HMP will be made available for public review and comment and the Executive Officer will determine the need for a public hearing.

(1) The HMP must:

- (a) Identify a method for assessing susceptibility of channel segments which receive runoff discharges from Priority Development Projects. The geomorphic stability within the channel shall be assessed. A performance standard shall be created that ensures that the geomorphic stability within the channel not be compromised as a result of receiving runoff discharges from Priority Development Projects.
- (b) Utilize continuous simulation of the entire rainfall record (or other analytical method proposed by the Copermittees and deemed acceptable

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<sup>17</sup> Updated SSMP and hydromodification requirements shall apply to all priority projects or phases of priority projects which have not yet begun grading or construction activities at the time any updates SSMP or hydromodification requirement commences. If a Copermittee determines that lawful prior approval of a project exists, whereby application of an updated SSMP or hydromodification requirement to the project is legally infeasible, the updated SSMP or hydromodification requirement need not apply to the project. The Copermittees shall utilize the SSMP and hydromodification update periods to ensure that projects undergoing approval processes include application of the updated SSMP and hydromodification requirements in their plans.

by the Regional Board) to identify a range of runoff flows<sup>18</sup> for which priority Development Project post-project runoff flow rates and durations shall not exceed pre-development (naturally occurring) runoff flow rates and durations by more than 10 percent, where the increased flow rates and durations will result in increased potential for erosion or other significant adverse impacts to beneficial uses. In addition, the identified range of runoff flow rates and durations must compensate for the loss of sediment supply due to the development. The lower boundary of the range of runoff flows identified shall correspond with the critical channel flow that produces the critical shear stress that initiates channel bed movement or that erodes the toe of channel banks. The identified range of runoff flows may be different for specific watersheds, channels, or channel reaches. In the case of an artificially hardened (concrete lined, rip rap, etc.) channel, the lower boundary of the range of runoff flows identified shall correspond with the critical channel flow that produces the critical shear stress that initiates channel bed movement or that erodes the toe of channel banks of a comparable soft-bottomed channel.

- (c) Require Priority Development Projects to implement hydrologic control measures so that Priority Development Projects' post-project runoff flow rates and durations (1) do not exceed pre-project (naturally occurring) runoff flow rates and durations by more than 10 percent for the range of runoff flows identified under section F.1.h.(1)(b), where the increased flow rates and durations will result in increased potential for erosion or other significant adverse impacts to beneficial uses; (2) do not result in channel conditions which do not meet the channel standard developed under section F.1.h.(1)(a) for channel segments downstream of Priority Development Project discharge points; and (3) compensate for the loss of sediment supply due to development.
- (d) Include other performance criteria (numeric or otherwise) for Priority Development Projects as necessary to prevent runoff from the projects from increasing and/or continuing unnatural rates of erosion of channel beds and banks, silt pollutants generation, or other impacts to beneficial uses and stream habitat due to increased erosive force.
- (e) Include a review of pertinent literature.
- (f) Identify areas within the San Juan Hydrologic Unit where historic hydromodification has resulted in a negative impact to benthic macroinvertebrate and benthic periphyton by identifying areas with low or very low Index of Biotic Integrity (IBI) scores.

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<sup>18</sup> The identified range of runoff flows to be controlled should be expressed in terms of peak flow rates of rainfall events, such as "10% of the pre-development 2-year runoff event up to the pre-project 10-year runoff event."

- (g) Include a protocol to evaluate potential hydrograph change impacts to downstream watercourses from Priority Development Projects. This protocol must include the use of the IBI score as a metric for assessing impacts and improvements to downstream watercourses.
  - (h) Include a description of how the Copermitttees will incorporate the HMP requirements into their local approval processes.
  - (i) Include criteria on selection and design of management practices and measures (such as detention, retention, and infiltration) to control flow rates and durations and address potential hydromodification impacts.
  - (j) Include technical information supporting any standards and criteria proposed.
  - (k) Include a description of inspections and maintenance to be conducted for management practices and measures to control flow rates and durations and address potential hydromodification impacts.
  - (l) Include a description of pre- and post-project monitoring and other program evaluation, including IBI score, to be conducted to assess the effectiveness of implementation of the HMP.
  - (m) Include mechanisms for assessing and addressing cumulative impacts within a watershed on channel morphology.
  - (n) Include information on evaluation of channel form and condition, including slope, discharge, vegetation, underlying geology, and other information, as appropriate.
- (2) In addition to the hydrologic control measures that must be implemented per section F.1.h.(1)(c), the HMP must include a suite of management measures to be used on Priority Development Projects to protect and restore downstream beneficial uses and prevent or further prevent adverse physical changes to downstream channels. The measures must be based on a prioritized consideration of the following elements in this order:
- (a) Hydrologic control measures;
  - (b) On-site management controls;
  - (c) Regional controls located upstream of receiving waters; and
  - (d) In-stream controls.

Where stream channels are adjacent to, or are to be modified as part of a Priority Development Project, management measures must include buffer zones and setbacks. Under no circumstances will in-stream controls include the use of non-naturally occurring hardscape materials such as concrete,

- riprap, gabions, etc. The suite of management measures shall also include stream restoration as a viable option to achieve the channel standard in section F.1.h.(1)(a).
- (3) Each individual Copermitee has the discretion to not require Section F.1.h. at Priority Development Projects where the project:
- (a) Discharges storm water runoff into underground storm drains discharging directly to bays or the ocean; or
  - (b) Discharges storm water runoff into conveyance channels whose bed and bank are concrete lined all the way from the point of discharge to ocean waters, enclosed bays, estuaries, or water storage reservoirs and lakes.
- (4) HMP Reporting and Implementation
- (a) Within 2 years of adoption of the Order, the Copermitees shall submit to the Regional Board a draft HMP that has been reviewed by the public, including the analysis that identifies the appropriate limiting range of flow rates per section F.1.h.(1)(b).
  - (b) Within 180 days of receiving Regional Board comments on the draft HMP, the Copermitees shall submit a final HMP that addressed the Regional Board's comments.
  - (c) Within 90 days of receiving a finding of adequacy from the Executive Officer, each Copermitee shall incorporate and implement the HMP for all Priority Development Projects.
  - (d) Prior to approval of the HMP by the Regional Board, the early implementation measures likely to be included in the HMP shall be encouraged by the Copermitees.
- (5) Interim Hydromodification Criteria

Within one year of adoption of this Order, each Copermitee must ensure that all Priority Development Projects are implementing the following criteria by comparing the pre-development (naturally occurring) and post-project flow rates and durations using a continuous simulation hydrologic model such as US EPA's Hydrograph Simulation Program-Fortran (HSPF):

- (a) For flow rates from 10 percent of the 2-year storm event to the 5 year storm event, the post-project peak flows shall not exceed pre-development (naturally occurring) peak flows.
- (b) For flow rates from the 5 year storm event to the 10 year storm event the post-project peak flows may exceed pre-development (naturally

occurring) flows by up to 10 percent for a 1-year frequency interval.

The interim hydromodification criteria do not apply to Priority Development Projects where the project discharges (1) storm water runoff into underground storm drains discharging directly to bays or the ocean, or (2) storm water runoff into conveyance channels whose bed and bank are concrete lined all the way from the point of discharge to ocean waters, enclosed bays, estuaries, or water storage reservoirs and lakes.

Within one year of adoption of this Order, each Copermitttee must submit a signed, certification statement to the Regional Board verifying implementation of the interim hydromodification criteria.

- (6) No part of section F.1.h shall alleviate the Copermitttees responsibilities for implementing Low Impact Development BMPs as required under section F.1.d.(4).

#### **i. TRAINING AND EDUCATION**

##### (1) Municipal Departments and Personnel Education

Municipal Development Planning: Each Copermitttee must implement an education program so that its planning and development review staffs and contractors (and Planning Boards and Elected Officials, if applicable) have an understanding of:

- (a) Federal, State, and local water quality laws and regulations applicable to Development Projects;
- (b) The connection between land use decisions and short and long-term water quality impacts (i.e., impacts from land development and urbanization); and
- (c) Methods of minimizing impacts to receiving water quality resulting from development, including:
  - (i) Storm water management plan development and review;
  - (ii) Local sensitive water bodies, including 303(d)-impairments and ESAs;
  - (iii) Methods to control downstream erosion impacts;
  - (iv) Identification of pollutants of concern;
  - (v) Site design BMP techniques;
  - (vi) Source control BMPs;
  - (vii) Selection of the most effective treatment control BMPs for the pollutants of concern; and
  - (viii) Public health concerns related to storm water management infrastructure.

(2) Project Applicants, Developers, Contractors, Property Owners, and other Responsible Parties

- (a) Each Copermittee must implement a New Development / Redevelopment education program using all media as appropriate to:
- (i) Measurably increase the knowledge of the target communities regarding MS4s, impacts of runoff on receiving waters, and potential BMP solutions for the target audience; and
  - (ii) To measurably change the behavior of target communities and thereby reduce pollutant releases to MS4s and the environment.
- (b) Each Copermittee must educate each target community on the following topics where appropriate:
- (i) The importance of educating all construction workers in the field about storm water issues and BMPs through formal or informal training;
  - (ii) Federal, State, and local water quality laws and regulations applicable to new development and redevelopment activities;
  - (iii) Site design, source control, pollution prevention, and treatment BMPs;
  - (iv) General runoff concepts; and
  - (v) Other topics of local importance, including local water quality conditions, impaired waterbodies and environmentally sensitive areas.

## 2. CONSTRUCTION COMPONENT

Each Copermittee must implement a construction program which meets the requirements of this section, prevents illicit discharges into the MS4, implements and maintains structural and non-structural BMPs to reduce pollutants in storm water runoff from construction sites to the MS4, reduces construction site discharges of storm water pollutants from the MS4 to the MEP, and prevents construction site discharges from the MS4 from causing or contributing to a violation of water quality standards.

### a. ORDINANCE UPDATE

Within 365 days of adoption of this Order, each Copermittee must review and update its grading ordinances and other ordinances as necessary to achieve full compliance with this Order, including requirements for the implementation of all designated BMPs and other measures.

### b. SOURCE IDENTIFICATION

Each Copermittee must maintain an updated watershed based inventory of all construction sites within its jurisdiction. The use of an automated database system, such as Geographical Information Systems (GIS) is required.

**c. SITE PLANNING AND PROJECT APPROVAL PROCESS**

Each Copermittee must incorporate consideration of potential water quality impacts prior to approval and issuance of construction and grading permits.

- (1) Each construction and grading permit must require proposed construction sites to implement designated BMPs and other measures so that illicit discharges into the MS4 are prevented and storm water pollutants discharged from the site will be reduced to the maximum extent practicable and will not cause or contribute to a violation of water quality standards.
- (2) Prior to permit issuance, the project proponent's runoff management plan (or equivalent construction BMP plan) must be required to comply, and reviewed to verify compliance, with the local grading ordinance, other applicable local ordinances, and this Order.
- (3) Prior to permit issuance, each Copermittee must verify that project proponents subject to California's statewide General NPDES Permit for Storm Water Discharges Associated With Construction Activities, (hereinafter General Construction Permit), have existing coverage under the General Construction Permit.

**d. BMP IMPLEMENTATION**

- (1) Designate BMPs: Each Copermittee must designate a minimum set of BMPs and other measures to be implemented at all construction sites. The designated minimum set of BMPs must include:
  - (a) Management Measures:
    - (i) Pollution prevention, where appropriate;
    - (ii) Development and implementation of a site-specific runoff management plan;
    - (iii) Minimization of areas that are cleared and graded to only the portion of the site that is necessary for construction;
    - (iv) Minimization of exposure time of disturbed soil areas;
    - (v) Minimization of grading during the wet season and correlation of grading with seasonal dry weather periods to the extent feasible;
    - (vi) Limitation of grading to a maximum disturbed area as determined by each Copermittee before either temporary or permanent erosion controls are implemented to prevent storm water pollution. The Copermittee has the option of temporarily increasing the size of

disturbed soil areas by a set amount beyond the maximum, if the individual site is in compliance with applicable storm water regulations and the site has adequate control practices implemented to prevent storm water pollution;

- (vii) Temporary stabilization and reseeded of disturbed soil areas as rapidly as feasible;
- (viii) Wind erosion controls;
- (ix) Tracking controls;
- (x) Non-stormwater management measures to prevent illicit discharges and control storm water pollution sources;
- (xi) Waste management measures;
- (xii) Preservation of natural hydrologic features where feasible;
- (xiii) Preservation of riparian buffers and corridors where feasible;
- (xiv) Evaluation and maintenance of all BMPs, until removed; and
- (xv) Retention, reduction, and proper management of all storm water pollutant discharges on site to the MEP standard.

(b) Erosion and Sediment Controls:

- (i) Erosion prevention. Erosion prevention is to be used as the most important measure for keeping sediment on site during construction;
- (ii) Sediment controls. Sediment controls are to be used as a supplement to erosion prevention for keeping sediment on-site during construction;
- (iii) Slope stabilization must be used on all active slopes during rain events regardless of the season and on all inactive slopes during the rainy season and during rain events in the dry season; and
- (iv) Permanent revegetation or landscaping as early as feasible.

(c) Designate enhanced BMPs<sup>19</sup> for 303(d) impairments and ESAs: Each Copermitttee must implement, or require implementation of, enhanced measures to address the exceptional threat to water quality posed by all construction sites tributary to CWA section 303(d) water body segments impaired for sediment or turbidity. Each Copermitttee must also implement, or require implementation of, enhanced, site-specific measures for construction sites within or adjacent to or discharging directly to coastal lagoons, the ocean, or other receiving waters within environmentally sensitive areas (as defined in Attachment C of this Order).

- (i) Active Sediment Treatment (AST): Each Copermitttee must require implementation of advanced treatment for sediment at construction

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<sup>19</sup> Enhanced BMPs are control actions specifically targeted to the pollutant or condition of concern and of higher quality and effectiveness than the minimum control measures otherwise required. Enhanced in this Order means better, not simply more, BMPs.

sites (or portions thereof) that are determined by the Copermittee to be an exceptional threat to water quality. In evaluating the threat to water quality, the following factors must be considered by the Copermittee:

- [a] Soil erosion potential or soil type;
- [b] The site's slopes;
- [c] Project size and type;
- [d] Sensitivity of receiving water bodies;
- [e] Proximity to receiving water bodies;
- [f] Non-storm water discharges;
- [g] Ineffectiveness of other BMPs;
- [h] Proximity and sensitivity of aquatic threatened and endangered species of concern;
- [i] Known effects of AST chemicals; and
- [j] Any other relevant factors.

- (d) Implement BMPs: Each Copermittee must implement, or require the implementation of, the designated minimum BMPs and any additional measures necessary to comply with this Order at each construction site within its jurisdiction year round. BMP implementation requirements, however, can vary based on wet and dry seasons. Dry season BMP implementation must plan for and address unseasonal rain events that may occur during the dry season (May 1 through September 30).

**e. INSPECTION OF CONSTRUCTION SITES**

Each Copermittee must conduct construction site inspections for compliance with its ordinances (grading, storm water, etc.), permits (construction, grading, etc.), and this Order. Priorities for inspecting sites must consider the nature and size of the construction activity, topography, and the characteristics of soils and receiving water quality.

- (1) During the wet season, each Copermittee must inspect at least biweekly (every two weeks), all construction sites within its jurisdiction meeting any of the following criteria:
- (a) All sites 30 acres or more in size with rough grading or active slopes occurring during the wet season;
  - (b) All sites one acre or more, and tributary to a CWA section 303(d) water body segment impaired for sediment or within or directly adjacent to, or discharging directly to, the ocean or a receiving water within an ESA; and
  - (c) Other sites determined by the Copermittees or the Regional Board as a significant threat to water quality. In evaluating threat to water quality, the following factors must be considered: (1) soil erosion potential; (2) site

slope; (3) project size and type; (4) sensitivity of receiving water bodies; (5) proximity to receiving water bodies; (6) non-storm water discharges; (7) past record of non-compliance by the operators of the construction site; and (8) any other relevant factors.

- (2) During the wet season, each Copermittee must inspect at least monthly, all construction sites with one acre or more of soil disturbance not meeting the criteria specified above in section F.2.e.(1).
- (3) During the wet season, each Copermittee must inspect construction sites less than one acre in size as needed to ensure compliance with its ordinances and this Order.
- (4) Each Copermittee must inspect all construction sites as needed during the dry season. Sites meeting the criteria in section F.2.e.(1) must be inspected at least once in August or September each year.
- (5) Re-inspections: Based upon site inspection findings, each Copermittee must implement all follow-up actions (i.e., re-inspection, enforcement) necessary to comply with this Order. Reinspection frequencies must be determined by each Copermittee based upon the severity of deficiencies, the nature of the construction activity, and the characteristics of soils and receiving water quality.
- (6) Inspections of construction sites must include, but not be limited to:
  - (a) Check for coverage under the General Construction Permit (Notice of Intent (NOI) and/or Waste Discharge Identification No.) during initial inspections;
  - (b) Assessment of compliance with Copermittee ordinances and permits related to runoff, including the implementation and maintenance of designated minimum BMPs;
  - (c) Assessment of BMP effectiveness;
  - (d) Visual observations for non-storm water discharges, potential illicit connections, and potential discharge of pollutants in storm water runoff;
  - (e) Education and outreach on storm water pollution prevention, as needed; and
  - (f) Creation of a written or electronic inspection report.
- (7) The Copermittees must track the number of inspections for each inventoried construction site throughout the reporting period to verify that each site is inspected at the minimum frequencies required.

**f. ENFORCEMENT OF CONSTRUCTION SITES**

- (1) Each Copermittee must develop and implement an escalating enforcement

process that achieves prompt corrective actions at construction sites for violations of the Copermittee's water quality protection permit requirements and ordinances. This enforcement process must include authorizing the Copermittee's construction site inspectors to take immediate enforcement actions when appropriate and necessary. The enforcement process must include appropriate sanctions such as stop work orders, non-monetary penalties, fines, bonding requirements, and/or permit denials for non-compliance.

- (2) Each Copermittee must be able to respond to complaints received from third-parties and to ensure the Regional Board that corrective actions have been implemented.

**g. REPORTING OF NON-COMPLIANT SITES**

- (1) In addition to the notification requirements in Attachment B, each Copermittee must notify the Regional Board when the Copermittee issues a stop work order or other high level enforcement to a construction site in its jurisdiction as a result of storm water violations.
- (2) Each Copermittee shall annually notify the Regional Board, prior to the commencement of the wet season, of all construction sites with alleged violations. Information may be provided as part of the JRMP annual report if submitted prior to the rainy season. Information provided shall include, but not be limited to, the following:
  - (a) WDID number if enrolled under the General Construction Permit
  - (b) Site Location, including address
  - (c) Current violations or suspected violations

**h. TRAINING AND EDUCATION**

- (1) Municipal Staff and Contractors: Requirements for municipal staff and contractors are described in the Municipal Component section of this Order.
- (2) Construction Site Owner / Operator Responsibilities:

As early in the planning and development process as possible and all through the permitting and construction process, each Copermittee must implement a program to educate project applicants, developers, contractors, property owners, and other responsible parties. The education program must provide an understanding of the topics listed below, as appropriate for the audience being educated.

- (a) The importance of educating all construction workers in the field about storm water issues and BMPs through formal or informal training;

- (b) Federal, State, and local water quality laws and regulations applicable to construction and grading activities;
- (c) Site design, source control, pollution prevention, and treatment BMPs;
- (d) General runoff concepts; and
- (e) Other topics of local importance, including local water quality conditions, impaired waterbodies and environmentally sensitive areas.

### **3. EXISTING DEVELOPMENT COMPONENT**

#### **a. MUNICIPAL**

Each Copermittee must implement a municipal program which meets the requirements of this section, prevents illicit discharges into the MS4, reduces municipal discharges of storm water pollutants from the MS4 to the MEP, and prevents municipal discharges from the MS4 from causing or contributing to a violation of water quality standards.

##### (1) Source Identification / Inventory

Each Copermittee must maintain an updated watershed-based inventory of municipal areas and activities. The inventory must include the name, address (if applicable), and a description of the area/activity; which pollutants are potentially generated by the area/activity; whether the area/activity is adjacent to an ESA; and identification of whether the area/activity is tributary to a CWA section 303(d) water body segment and generates pollutants for which the water body segment is impaired. The use of an automated database system, such as Geographical Information Systems (GIS) is required when applicable.

##### (2) General BMP Implementation

- (a) Pollution Prevention: Each Copermittee must implement pollution prevention methods in its municipal program and must require their use by appropriate municipal departments, personnel, and contractors, where appropriate.
- (b) Designate Minimum BMPs: Each Copermittee must designate a minimum set of BMPs for all municipal areas and activities. The designated minimum BMPs for municipal areas and activities must be area or activity specific as appropriate. BMPs must be designated for special events that are expected to generate significant trash and litter.
- (c) Designate BMPs for ESAs and 303(d) Impairments: Each Copermittee must designate enhanced measures for municipal areas and activities tributary to CWA section 303(d) impaired water body segments when an area or activity generates pollutants for which the water body segment is

impaired. Each Copermittee must also designate additional controls for municipal areas and activities within or directly adjacent to or discharging directly to coastal lagoons, the ocean, or other receiving waters within environmentally sensitive areas (as defined in Attachment C of this Order).

- (d) Implement BMPs: Each Copermittee must implement, or require the implementation of, the designated minimum and enhanced BMPs and any additional measures necessary based on its inventory to comply with this Order for each municipal area or activity within its jurisdiction.

(3) BMP Implementation for Management of Pesticides, Herbicides, and Fertilizers

Each Copermittee must implement BMPs to reduce the contribution of storm water pollutants associated with the application, storage, and disposal of pesticides, herbicides and fertilizers from municipal areas and activities to MS4s and receiving waters. Such BMPs must include, at a minimum:

- (a) Educational activities, permits, certifications and other measures for municipal applicators and distributors;
- (b) Integrated Pest Management (IPM) measures that rely on non-chemical solutions;
- (c) The use of native vegetation;
- (d) Schedules for irrigation and chemical application; and
- (e) The collection and proper disposal of unused pesticides, herbicides, and fertilizers.

(4) BMP implementation for Flood Control Structures

- (a) Each Copermittee must implement procedures to assure that flood management projects assess the impacts on the water quality of receiving water bodies.
- (b) Each Copermittee must include water quality protection measures, where feasible, when retrofitting existing flood control structural devices.
- (c) Each Copermittee must evaluate its existing flood control devices, identify devices causing or contributing to a condition of pollution, identify measures to reduce or eliminate the structure's effect on pollution, and evaluate the feasibility of retrofitting the structural flood control device. The inventory and evaluation must be completed by and submitted to the Regional Board in the 2<sup>nd</sup> year JRMP Annual Report.

(5) BMP Implementation for Sweeping of Municipal Areas

Where municipal area sweeping is implemented as an MS4 BMP for municipal roads, streets, highways, and parking facilities, each Copermittee must design and implement the program based on the following criteria:

- (a) Optimize pickup of trash and debris based on land uses, trash collection schedules, seasonal factors (e.g., special events, tourism, etc.) and inspections of municipal areas/activities.

(6) Operation and Maintenance of Municipal Separate Storm Sewer System (MS4) and Structural Controls

- (a) Treatment Controls: Each Copermittee must implement a schedule of inspection and maintenance activities to verify proper operation of all municipal structural treatment controls designed to reduce storm water pollutant discharges to or from its MS4s and related drainage structures.
- (b) MS4 and Facilities: Each Copermittee must implement a schedule of maintenance activities for the MS4 and MS4 facilities (catch basins, storm drain inlets, open channels, etc). The maintenance activities must, at a minimum, include:
  - (i) Inspection and removal of accumulated waste at least once a year between May 1 and September 30 of each year for all MS4 facilities;
  - (ii) Additional cleaning as necessary between October 1 and April 30 of each year for facilities that receive or collect high volumes of trash and debris;
  - (iii) Following two years of inspections, any MS4 facility that requires inspection and cleaning less than annually may be inspected as needed, but not less than every other year;
  - (iv) Open channels must be cleaned of observed anthropogenic litter in a timely manner;
  - (v) Record keeping of the maintenance and cleaning activities including the overall quantity of waste removed;
  - (vi) Proper disposal of waste removed pursuant to applicable laws; and
  - (vii) Measures to eliminate waste discharges during MS4 maintenance and cleaning activities.

(7) Infiltration From Sanitary Sewer to MS4/Provide Preventive Maintenance of Both

- (a) Each Copermittee must implement controls and measures to prevent and eliminate infiltration of seepage from municipal sanitary sewers to MS4s through thorough, routine preventive maintenance of the MS4. Each Copermittee that operates both a municipal sanitary sewer system and a MS4 must implement controls and measures to prevent and eliminate infiltration of seepage from the municipal sanitary sewers to the MS4s that must include overall sanitary sewer and MS4 surveys and thorough, routine preventive maintenance of both.

(b) Each Copermittee must implement controls to limit infiltration of seepage from municipal sanitary sewers to municipal separate storm sewer systems where necessary. Such controls must include:

- (i) Adequate plan checking for construction and new development,
- (ii) Incident response training for municipal employees that identify sanitary sewer spills;
- (iii) Code enforcement inspections;
- (iv) MS4 maintenance and inspections;
- (v) Interagency coordination with sewer agencies; and
- (vi) Proper education of municipal staff and contractors conducting field operations on the MS4 or municipal sanitary sewer (if applicable).

(8) Inspection of Municipal Areas and Activities

(a) At a minimum, each Copermittee must inspect the following high priority municipal areas and activities annually:

- (i) Roads, Streets, Highways, and Parking Facilities;
- (ii) Flood Management Projects and Flood Control Devices;
- (iii) Areas and activities tributary to a CWA section 303(d) impaired water body segment, where an area or activity generates pollutants for which the water body segment is impaired.
- (iv) Areas and activities within or adjacent to or discharging directly to coastal lagoons, the ocean, or other receiving waters within environmentally sensitive areas (as defined in Attachment C of this Order);
- (v) Municipal Facilities:
  - [a] Active or closed municipal landfills;
  - [b] Publicly owned treatment works (including water and wastewater treatment plants) and sanitary sewage collection systems;
  - [c] Solid waste transfer facilities;
  - [d] Land application sites;
  - [e] Corporate yards including maintenance and storage yards for materials, waste, equipment and vehicles; and
  - [f] Household hazardous waste collection facilities.
- (vi) Municipal airfields;
- (vii) Parks and recreation facilities;
- (viii) Special event venues following special events (festivals, sporting events, etc.);
- (ix) Power washing; and
- (x) Other municipal areas and activities that the Copermittee determines may contribute a significant pollutant load to the MS4.

(b) Other municipal areas and activities must be inspected as needed and in response to water quality data, valid public complaints, and findings from

municipal or contract staff.

- (c) Based upon site inspection findings, each Copermittee must implement all follow-up actions necessary to comply with this Order.

(9) Enforcement of Municipal Areas and Activities

Each Copermittee must enforce its storm water ordinance for all municipal areas and activities as necessary to maintain compliance with this Order.

(10) Training and Education

Each Copermittee must ensure that all municipal personnel and contractors that have responsibilities for selecting, implementing, and evaluating BMPs for municipal areas and activities are adequately trained and educated to perform such tasks.

(a) Municipal Departments and Personnel Education

- (i) Municipal Construction Activities: Each Copermittee must implement an education program that includes annual training prior to the rainy season so that its construction, building, code enforcement, and grading review staffs, inspectors, and other responsible construction staff have, at a minimum, an understanding of the following topics, as appropriate for the target audience:
- [a] Federal, State, and local water quality laws and regulations applicable to construction and grading activities;
  - [b] The connection between construction activities and water quality impacts (i.e., impacts from land development and urbanization and impacts from construction material such as sediment);
  - [c] Proper implementation of erosion and sediment control and other BMPs to minimize the impacts to receiving water quality resulting from construction activities;
  - [d] The Copermittee's inspection, plan review, and enforcement policies and procedures to verify consistent application;
  - [e] Current advancements in BMP technologies;
  - [f] SSMP Requirements including treatment options, site design, source control, and applicable tracking mechanisms; and
  - [g] Other topics of local importance, including local water quality conditions, impaired water bodies, environmentally sensitive areas, and public health and disease vector issues associated with runoff.
- (ii) Municipal Industrial/Commercial Activities: Each Copermittee must train staff responsible for conducting storm water compliance inspections and enforcement of industrial and commercial facilities at

least once a year. Training must cover inspection and enforcement procedures, BMP implementation, and review of monitoring data

- (iii) Municipal Other Activities: Each Copermittee must implement an education program so that municipal personnel and contractors performing activities which generate pollutants have an understanding of the activity specific BMPs for each activity to be performed.

**b. COMMERCIAL / INDUSTRIAL**

Each Copermittee must implement a commercial / industrial program that meets the requirements of this section, prevents illicit discharges into the MS4, reduces commercial / industrial discharges of storm water pollutants from the MS4 to the MEP, and prevents commercial / industrial discharges from the MS4 from causing or contributing to a violation of water quality standards.

(1) Source Identification

- (a) Each Copermittee must maintain an updated watershed-based inventory of all industrial and commercial sites/sources within its jurisdiction (regardless of ownership) that could contribute a significant pollutant load to the MS4. The inventory must include the following minimum information for each industrial and commercial site/source: name; address; pollutants potentially generated by the site/source; and identification of whether the site/source is tributary to a Clean Water Act section 303(d) water body segment and generates pollutants for which the water body segment is impaired; and a narrative description including SIC codes which best reflects the principal products or services provided by each facility.

At a minimum, the following sites/sources must be included in the inventory:

- (i) Commercial Sites/Sources:
  - [a] Automobile repair, maintenance, fueling, or cleaning;
  - [b] Airplane repair, maintenance, fueling, or cleaning;
  - [c] Boat repair, maintenance, fueling, or cleaning;
  - [d] Equipment repair, maintenance, fueling, or cleaning;
  - [e] Automobile and other vehicle body repair or painting;
  - [f] Mobile automobile or other vehicle washing;
  - [g] Automobile (or other vehicle) parking lots and storage facilities;
  - [h] Retail or wholesale fueling;
  - [i] Pest control services;
  - [j] Eating or drinking establishments, including food markets;

[k] Mobile carpet, drape or furniture cleaning;  
[l] Cement mixing or cutting;  
[m] Masonry;  
[n] Painting and coating;  
[o] Botanical or zoological gardens and exhibits;  
[p] Landscaping;  
[q] Nurseries and greenhouses;  
[r] Golf courses, parks and other recreational areas/facilities;  
[s] Cemeteries;  
[t] Pool and fountain cleaning;  
[u] Marinas;  
[v] Portable sanitary services;  
[w] Building material retailers and storage;  
[x] Animal facilities;  
[y] Mobile pet services;  
[z] Power washing services; and  
[aa] Other sites and sources with a history of un-authorized discharges to the MS4.

(ii) Industrial Sites/Sources:

[a] Industrial Facilities, as defined at 40 CFR § 122.26(b)(14), including those subject to the General Industrial Permit or other individual NPDES permit;  
[b] Operating and closed landfills;  
[c] Facilities subject to SARA Title III; and  
[d] Hazardous waste treatment, disposal, storage and recovery facilities.

(iii) ESAs and 303(d) Listed Waterbodies: All other commercial or industrial sites/sources tributary to a CWA Section 303(d) impaired water body segment, where the site/source generates pollutants for which the water body segment is impaired. All other commercial or industrial sites/sources within or directly adjacent to or discharging directly to coastal lagoons, the ocean, or other receiving waters within environmentally sensitive areas (as defined in Attachment C of this Order).

(iv) All other commercial or industrial sites/sources that the Copermitttee determines may contribute a significant pollutant load to the MS4.

(2) General BMP Implementation

(a) Pollution Prevention: Each Copermitttee must require the use of pollution prevention methods by industrial and commercial sites/sources.

- (b) Designate / Update Minimum BMPs: Each Copermittee must designate a minimum set of BMPs for all industrial and commercial sites/sources. Where BMPs have already been designated, each Copermittee must review its existing BMPs for adequacy. The designated minimum BMPs must be specific to facility types and pollutant-generating activities, as appropriate.
- (c) Designate Enhanced BMPs for ESAs and 303(d) Impairments: Each Copermittee must designate enhanced measures for industrial and commercial sites/sources tributary to CWA section 303(d) impaired water body segments (where a site/source generates pollutants for which the water body segment is impaired). Each Copermittee must also designate additional controls for industrial and commercial sites/sources within or directly adjacent to or discharging directly to coastal lagoons, the ocean, or other receiving waters within environmentally sensitive areas (as defined in Attachment C of this Order).
- (d) Implement BMPs: Each Copermittee must implement, or require the implementation of, the designated minimum and enhanced BMPs and any additional measures necessary based on inspections, incident responses, and water quality data to comply with this Order at each industrial and commercial site/source within its jurisdiction.

### (3) BMP Implementation for Mobile Businesses

- (a) Each Copermittee must develop and implement a program to reduce the discharge of storm water pollutants from mobile businesses to the MEP and to prohibit non-storm water discharges pursuant to Section B of this Order. Each Copermittee must keep as part of their commercial source inventory a listing of mobile businesses known to operate within its jurisdiction. The program must include:
  - (i) Development and implementation of minimum standards and BMPs to be required for each of the various types of mobile businesses;
  - (ii) Development and implementation of an enforcement strategy which specifically addresses the unique characteristics of mobile businesses;
  - (iii) Notification of those mobile businesses known to operate within the Copermittee's jurisdiction of the minimum standards and BMP requirements and local ordinances;
  - (iv) Development and implementation of an outreach and education strategy; and
  - (v) Inspection of mobile businesses as needed to implement the program.
- (b) If they choose to, the Copermittees may cooperate in developing and implementing their programs for mobile businesses, including sharing of mobile business inventories, BMP requirements, enforcement action

information, and education.

(4) Inspection of Industrial and Commercial Sites/Sources

Each Copermittee must conduct industrial and commercial site inspections for compliance with its ordinances, permits, and this Order.

(a) Inspection Procedures: Inspections must include but not be limited to:

- (i) Review of BMP implementation plans, if the site uses or is required to use such a plan;
- (ii) Review of facility monitoring data, if the site monitors its runoff;
- (iii) Check for coverage under the General Industrial Permit (Notice of Intent (NOI) and/or Waste Discharge Identification Number), if applicable;
- (iv) Assessment of compliance with Copermittee ordinances and permits related to runoff;
- (v) Assessment of BMP implementation, maintenance and effectiveness;
- (vi) Visual observations for non-storm water discharges, potential illicit connections, and potential discharge of pollutants in storm water runoff; and
- (vii) Education and training on storm water pollution prevention, as conditions warrant.

(b) Each Copermittee shall annually notify the Regional Board, prior to the commencement of the wet season, of all Industrial Sites and Industrial Facilities subject to the General Industrial Permit or other individual NPDES permit with alleged violations. Information may be provided as part of the JRMP annual report if submitted prior to the rainy season. Information provided shall include, but not be limited to, the following:

- (i) WDID number if enrolled under the General Industrial Permit;
- (ii) Site Location, including address;
- (iii) Current violations or suspected violations; and
- (iv) Past Violation history.

(c) Frequencies: At a minimum, 20 percent of the sites inventoried as required in section F.3.b.(1) above (excluding mobile sources and food facilities) must be inspected each year. Mobile businesses must be

inspected pursuant to the enforcement strategy developed pursuant to section F.3.b.(3). Other inspection frequencies must be based upon findings of the Copermittee's existing program and the following factors:

- (i) Type of activity (SIC code);
  - (ii) Materials used at the facility;
  - (iii) Wastes generated;
  - (iv) Pollutant discharge potential;
  - (v) Non-storm water discharges;
  - (vi) Size of facility;
  - (vii) Proximity to receiving water bodies;
  - (viii) Sensitivity of receiving water bodies;
  - (ix) Whether the facility is subject to the General Industrial Permit or an individual NPDES permit;
  - (x) Whether the facility has filed a No Exposure Certification/Notice of Non-Applicability;
  - (xi) Facility design;
  - (xii) Total area of the site, area of the site where industrial or commercial activities occur, and area of the site exposed to rainfall and runoff;
  - (xiii) The facility's compliance history; and
  - (xiv) Any other relevant factors.
- (d) Food Facilities: Each food facility must be inspected annually for compliance with the Copermittee's water quality ordinances and this Order. Each inspection of a food facility must, at a minimum, address the following concerns:
- (i) Trash storage and disposal;
  - (ii) Grease storage and disposal;
  - (iii) Washwater discharges to the MS4 (e.g., from floor mats, driveways, sidewalks, etc.);
  - (iv) Identification of outdoor sewer and MS4 connections; and
  - (v) Education of property managers when grease and/or trash facilities are shared by multiple facilities.
- (e) Third-Party Inspections: Each Copermittee may develop and implement a third party inspection program for verifying industrial and commercial site/source compliance with its ordinances, permits, and this Order. To the extent that third party inspections are conducted to fulfill the requirements of this Order, the Copermittee will be responsible for conducting and documenting quality assurance and quality control of the third-party inspections.
- (i) Each inspection conducted by a third-party must, at a minimum, result in the following:

- [a] Photo documentation of potential storm water violations identified during the third party inspection;
  - [b] Reporting to the Copermittee of identified significant potential violations, including imminent or observed illegal discharges, within 24 hours of the third party inspection;
  - [c] Reporting to the Copermittee of all inspection findings within one week of the inspection being conducted; and
  - [d] Copermittee follow-up and/or enforcement actions for identified potential storm water violations within two business days of the inspection or potential violation report receipt.
- (f) Based upon site inspection findings, each Copermittee must implement all follow-up actions and enforcement necessary to comply with this Order.
- (g) To the extent that the Regional Board has conducted an inspection of an industrial site during a particular year, the requirement for the responsible Copermittee to inspect this facility during the same year will be satisfied.
- (h) The Copermittees must track the number of inspections for the inventoried industrial and commercial sites/sources throughout the reporting period to verify that the sites/sources are inspected at the minimum frequencies listed in this Order.

(5) Enforcement of Industrial and Commercial Sites/Sources

Each Copermittee must enforce its storm water ordinance for all industrial and commercial sites/sources as necessary to maintain compliance with this Order. Copermittee ordinances or other regulatory mechanisms must include appropriate sanctions to achieve compliance. Sanctions must include the following or their equivalent: Non-monetary penalties, fines, bonding requirements, and/or permit denials for non-compliance.

(6) Training and Education for Owners and Operators of Commercial and Industrial Activities

- (a) Each Copermittee must implement an education program using all media as appropriate to (1) measurably increase the knowledge of owners and operators of commercial and industrial activities regarding MS4s, impacts of runoff on receiving waters, and potential BMP solutions for the target audience; and (2) to measurably change the behavior of target communities and thereby reduce storm water pollutant releases and eliminate prohibited non-storm water discharges to MS4s and the environment. At a minimum, the education program must meet the requirements of this section and address the following issues:
- (i) Laws, regulations, permits, & requirements;

- (ii) Best management practices;
- (iii) General runoff concepts; and
- (iv) Other topics, including public reporting mechanisms, water conservation, low-impact development techniques.

(b) BMP Notification: At least twice during the five-year period of this Order, each Copermittee must notify the owner/operator of each inventoried industrial and commercial site/source of the BMP requirements applicable to the site/source.

### **c. RESIDENTIAL**

Each Copermittee must implement a residential program which meets the requirements of this section, prevents illicit discharges into the MS4, reduces residential discharges of storm water pollutants from the MS4 to the MEP, and prevents residential discharges from the MS4 from causing or contributing to a violation of water quality standards.

#### (1) Threat to Water Quality Prioritization

Each Copermittee must identify residential areas and activities that pose a high threat to water quality. At a minimum, these must include:

- (a) Automobile repair, maintenance, washing, and parking;
- (b) Home and garden care activities and product use (pesticides, herbicides, and fertilizers);
- (c) Disposal of trash, pet waste, green waste, and household hazardous waste (e.g., paints, cleaning products);
- (d) Any other residential source that the Copermittee determines may contribute a significant pollutant load to the MS4;
- (e) Any residential areas tributary to a CWA section 303(d) impaired water body, where the residence generates pollutants for which the water body is impaired; and
- (f) Any residential areas within or directly adjacent to or discharging directly to a coastal lagoon, the ocean, or other receiving waters within an environmentally sensitive area (as defined in Attachment C of this Order).

#### (2) BMP Implementation

- (a) Pollution Prevention: Each Copermittee must actively encourage the use of pollution prevention methods by residents.
- (b) Designate BMPs: Each Copermittee must designate minimum BMPs for high-threat-to-water quality residential areas and activities. The designated minimum BMPs for high-threat-to-water quality residential

areas and activities must be area or activity specific.

- (c) Hazardous Waste BMPs: Each Copermittee must facilitate the proper management and disposal of used oil, toxic materials, and other household hazardous wastes. Such facilitation must include educational activities, public information activities, and establishment of collection sites operated by the Copermittee or a private entity. Curbside collection of household hazardous wastes is encouraged.
- (d) Implement BMPs: Each Copermittee must implement, or require implementation of, the designated minimum BMPs and any additional measures necessary to comply with Sections A and B of this Order.
- (e) Each Copermittee must implement, or require implementation of, BMPs for residential areas and activities that have not been designated a high threat to water quality, as necessary.

### (3) Enforcement of Residential Areas and Activities

Each Copermittee must enforce its storm water ordinance for all residential areas and activities as necessary to maintain compliance with this Order.

### (4) Evaluation of Oversight of Residential Areas and Activities

Each Copermittee must annually review the effectiveness of efforts to reduce residential discharges of storm water pollutants from the MS4 and eliminate illicit residential discharges into the MS4. The evaluation must consider findings from monitoring data, municipal employee comments, inspections, complaints, and other appropriate sources.

### (5) Common Interest Areas (CIA) / Home Owner Association (HOA) Areas

Each Copermittee must implement measures specifically to ensure that runoff within common interest developments, including areas managed by associations, meets the objectives of this section and Order.

- (a) BMP Implementation: Each Copermittee must implement management measures based on a review of pertinent factors, including:
  - (i) Current maintenance duties and procedures used by CIA/HOA maintenance associations within its jurisdiction;
  - (ii) Whether streets and storm drains are publicly or privately owned within the CIA/HOA;
  - (iii) Whether the CIA/HOA area has been identified as a high priority residential area;
  - (iv) Proximity to 303(d)-listed waterbodies, the ocean, environmentally

- sensitive areas;
- (v) Evaluation of water quality monitoring data;
- (vi) Evaluation of existing illegal discharge/illicit connection activities;
- (vii) Other activities conducted or authorized by the HOA that may pose a significant risk to inland or coastal receiving waters.

- (b) Legal Authority and Enforcement: Within one year of adoption of this Order, each Copermittee must review its Municipal Code to determine the most appropriate method to implement and enforce runoff management measures within CIA/HOA areas.

#### (6) Residential Education Program

- (a) Each Copermittee must implement a Residential Education Program using all media as appropriate to (1) measurably increase the knowledge regarding MS4s, impacts of runoff on receiving waters, and potential BMP solutions for the target audience; and (2) to measurably change the behavior of target communities and thereby reduce storm water and eliminate prohibited non-storm water pollutant releases to MS4s and the environment.
- (b) Copermittee educational programs must emphasize underserved target audiences, residents and managers of CIA/HOA areas, high-risk behaviors, and “allowable” behaviors and discharges. At a minimum, the education program must meet the requirements of this section and address the following issues:
  - (i) Laws, regulations, permits, and requirements;
  - (ii) Best management practices;
  - (iii) General runoff concepts;
  - (iv) Existing water quality, including local water quality conditions, impaired waterbodies and environmentally sensitive areas; and
  - (v) Other topics, including public reporting mechanisms, water conservation, low-impact development techniques, and public health and disease vector issues associated with runoff.

#### **d. Retrofitting Existing Development**

Each Copermittee must develop and implement a retrofitting program which meets the requirements of this section. The goals of the existing development retrofitting program are to reduce impacts from hydromodification, promote LID, support riparian and aquatic habitat restoration, reduce the discharges of storm water pollutants from the MS4 to the MEP, and prevent discharges from the MS4 from causing or contributing to a violation of water quality standards. Where feasible, at the discretion of the Copermittee, the existing development retrofitting program may be coordinated with flood control projects and infrastructure

improvement programs.

(1) Source Identification

The Copermittee must identify and inventory existing developments (i.e. municipal, industrial, commercial, residential) as candidates for retrofitting. Potential retrofitting candidates must include but are not limited to:

- (a) Development that contributes pollutants of concern to a TMDL or a ESA;
- (b) Receiving waters channelized or otherwise hardened;
- (c) Development tributary to receiving waters that are channelized or otherwise hardened;
- (d) Developments tributary to receiving waters that are significantly eroded;
- (e) Developments tributary to an ASBS or SWQPA; and
- (f) Development that causes hydraulic constriction.

(2) Each Copermittee shall evaluate and rank the inventoried existing developments to prioritize retrofitting. Criteria for evaluation must include but is not limited to:

- (a) Feasibility;
- (b) Cost effectiveness;
- (c) Pollutant removal effectiveness;
- (d) Impervious area potentially treated;
- (e) Maintenance requirements;
- (f) Landowner cooperation;
- (g) Neighborhood acceptance;
- (h) Aesthetic qualities; and
- (i) Efficacy at addressing concern.

(3) Each Copermittee must consider the results of the evaluation in prioritizing work plans for the following year. Highly feasible projects expected to benefit water quality should be given a high priority to implement source control and treatment control BMPs. Where feasible, the retrofit projects should be designed in accordance with the SSMP requirements within sections F.1.d.(3) through F.1.d.(8). In addition, the Copermittee shall encourage retrofit projects to implement where feasible the Hydromodification requirements in Section F.1.h.

(4) When requiring retrofitting on existing development, the Copermittees will cooperate with private landowners to encourage retrofitting projects. The Copermittee may consider the following practices in cooperating and encouraging private landowners to retrofit their existing development:

- (a) Demonstration retrofit projects;
- (b) Retrofits on public land and easements;

- (c) Education and outreach;
  - (d) Subsidies for retrofit projects;
  - (e) Requiring retrofit projects as mitigation or ordinance compliance;
  - (f) Public and private partnerships; and
  - (g) Fees for existing discharges to the MS4.
- (5) The completed retrofit BMPs shall be tracked and inspected in accordance with section F.1.f.
- (6) Where constraints on retrofitting preclude effective BMP deployment on existing developments at locations critical to protect receiving waters, a Copermittee may propose a regional mitigation project to improve water quality. Such regional projects may include but are not limited to:
- (a) Regional water quality treatment BMPs;
  - (b) Urban creek or wetlands restoration and preservation;
  - (c) Daylighting and restoring underground creeks;
  - (d) Localized rainfall storage and reuse to the extent such projects are fully protective of downstream water rights;
  - (e) Hydromodification project; and
  - (f) Removal of invasive plant species.
- (7) A retrofit project or regional mitigation project may qualify as a Watershed Water Quality Activity provided it meets the requirements in section G. Watershed Runoff Management Program.

#### **4. ILLICIT DISCHARGE DETECTION AND ELIMINATION**

Each Copermittee must implement a program which meets the requirements of this section to actively detect and eliminate illicit discharges and disposal into the MS4. The program must address all types of illicit discharges and connections excluding those non-storm water discharges not prohibited by the Copermittee in accordance with section B of this Order.

##### **a. PREVENT AND DETECT ILLICIT DISCHARGES AND CONNECTIONS**

Each Copermittee must implement measures to prevent and detect illicit discharges to the MS4.

- (1) Legal Authority: Each Copermittee must retain legal authority to prevent and eliminate illicit discharges and connections to the MS4.
- (2) Inspections: Each Copermittee must include use of appropriate municipal personnel and contractors to assist in identifying illicit discharges and connections during their daily activities.

- (a) Inspections for illegal discharges and connections must be conducted during routine maintenance of all MS4 facilities.
- (b) Municipal staff and contractors conducting non-MS4 field operations must be trained to report suspected illegal discharges and connections to proper municipal staff.

**b. MAINTAIN MS4 MAP**

Each Copermittee must maintain an updated map of its entire MS4 and the corresponding drainage areas within its jurisdiction. The use of GIS is required. The accuracy of the MS4 map must be confirmed during dry weather field screening and analytical monitoring and must be updated at least annually. The GIS layers of the MS4 map must be submitted with the updated Jurisdictional Runoff Management Plan within 365 days after adoption of this Order.

**c. FACILITATE PUBLIC REPORTING OF ILLICIT DISCHARGES AND CONNECTIONS - PUBLIC HOTLINE**

Each Copermittee must promote, publicize and facilitate public reporting of illicit discharges or water quality impacts associated with discharges into or from MS4s. Each Copermittee must facilitate public reporting through development and operation of a public hotline. Public hotlines can be Copermittee-specific or shared by Copermittees. All storm water hotlines must be capable of receiving reports in both English and Spanish 24 hours per day and seven days per week.

**d. DRY WEATHER FIELD SCREENING AND ANALYTICAL MONITORING**

Each Copermittee must conduct dry weather field screening and analytical monitoring of MS4 outfalls and other portions of its MS4 within its jurisdiction to detect illicit discharges and connections in accordance with Receiving Waters and MS4 Discharge Monitoring and Reporting Program No. R9-2009-0002 in Attachment E of this Order.

**e. INVESTIGATION / INSPECTION AND FOLLOW-UP**

Each Copermittee must implement procedures to investigate and inspect portions of the MS4 that, based on the results of field screening, analytical monitoring, or other appropriate information, indicate a reasonable potential of containing illicit discharges, illicit connections, or other sources of pollutants in non-storm water.

- (1) Develop response criteria for data: Each Copermittee must develop, update, and use numeric criteria action levels (or other actions level criteria where appropriate) to determine when follow-up investigations will be performed in response to water quality monitoring. The criteria must include required

non-storm water action levels (see Section C) and a consideration of 303(d)-listed waterbodies and environmentally sensitive areas (ESAs) as defined in Attachment C.

- (2) Respond to data: Each Copermittee must investigate portions of the MS4 for which water quality data or conditions indicates a potential illegal discharge or connection.
  - (a) Obvious illicit discharges (i.e. color, odor, or significant exceedances of action levels) must be investigated immediately.
  - (b) Field screen data: Within two business days of receiving dry weather field screening results that exceed action levels, the Copermittees must either initiate an investigation to identify the source of the discharge or document the rationale for why the discharge does not pose a threat to water quality and does not need further investigation. This documentation shall be included in the Annual Report.
  - (c) Analytical data: Within five business days of receiving analytical laboratory results that exceed action levels, the Copermittees must either initiate an investigation to identify the source of the discharge or document the rationale for why the discharge does not pose a threat to water quality and does not need further investigation. This documentation shall be included in the Annual Report.
- (3) Respond to notifications: Each Copermittee must respond to and resolve each reported incident (e.g., public hotline, staff notification, etc.) in a timely manner. Criteria may be developed to assess the validity of, and prioritize the response to, each report.

**f. ELIMINATION OF ILLICIT DISCHARGES AND CONNECTIONS**

Each Copermittee must take immediate action to initiate steps necessary to eliminate all detected illicit discharges, illicit discharge sources, and illicit connections after detection. Elimination measures may include an escalating series of enforcement actions for those illicit discharges that are not a serious threat to public health or the environment. Illicit discharges that pose a serious threat to the public's health or the environment must be eliminated immediately.

**g. ENFORCE ORDINANCES**

Each Copermittee must implement and enforce its ordinances, orders, or other legal authority to prevent illicit discharges and connections to its MS4 and to eliminate detected illicit discharges and connections to its MS4.

**h. PREVENT AND RESPOND TO SEWAGE SPILLS (INCLUDING FROM PRIVATE LATERALS AND FAILING SEPTIC SYSTEMS) AND OTHER SPILLS**

(1) Each Copermittee must implement management measures and procedures to prevent, respond to, contain and clean up all sewage (see below) and other spills that may discharge into its MS4 from any source (including private laterals and failing septic systems). Copermittees must coordinate with spill response teams to prevent entry of spills into the MS4 and contamination of surface water, ground water and soil. Each Copermittee must coordinate spill prevention, containment and response activities throughout all appropriate departments, programs and agencies so that maximum water quality protection is available at all times.

(2) Each Copermittee must develop and implement a mechanism whereby it is notified of all sewage spills from private laterals and failing septic systems into its MS4. Each Copermittee must implement management measures and procedures to prevent, respond to, and coordinate a response to contain and clean up sewage from any such notification.

**i. EDUCATION AND TRAINING**

Each Copermittee must implement educational activities, public information activities, and other appropriate activities to facilitate the proper management and disposal of used oil and toxic materials.

**5. PUBLIC PARTICIPATION COMPONENT**

Each Copermittee must incorporate a mechanism for public participation in the updating, development, and implementation of the Jurisdictional Runoff Management Program.

## **G. WATERSHED RUNOFF MANAGEMENT PROGRAM**

### **1. Lead Watershed Copermittee Identification**

Watershed Copermittees shall identify the Lead Watershed Copermittee for their Watershed Management Area (WMA). The Lead Watershed Copermittees shall serve as liaisons between the Permittees and Regional Board, where appropriate.

### **2. Watershed Water Quality Workplan (Watershed Workplan)**

The Watershed Workplan shall describe the Permittees' development and implementation of a collective watershed strategy to assess and prioritize the water quality problems within the watershed's receiving waters, identify and model sources of the highest priority water quality problem(s), develop a watershed-wide BMP implementation strategy to abate highest priority water quality problems, and a monitoring strategy to evaluate BMP effectiveness and changing water quality prioritization in the WMA.

The work plan shall, at a minimum:

- a.** Characterize the receiving water quality in the WMA. Characterization shall include use of regularly collected water quality data, reports, monitoring and analysis generated in accordance with the requirements of the Receiving Waters Monitoring and Reporting Program, as well as applicable information available from other public and private organizations.
- b.** Identify the highest priority water quality problem(s), in terms of constituents by location, in the WMA's receiving waters. Identified water quality problem(s) shall, at a minimum, give consideration to; TMDLs, receiving waters listed on the CWA section 303(d) list, waters with persistent violations of water quality standards, toxicity, or impacts to beneficial uses, and other pertinent conditions.
- c.** Identify the sources of the highest water quality problem(s) within the WMA. Efforts to determine such sources shall include, but not be limited to: use of information from the construction, industrial/commercial, municipal, and residential source identification programs required within the Jurisdictional Runoff Program (JRMP) of this Order; specific actions to model pollutant transport to receiving waters for the sake of identifying the source(s) point(s) of origin; water quality monitoring data collected as part of the Receiving Water Monitoring and Reporting Program required by this Order, and additional focused water quality monitoring to identify specific sources within the watershed.
- d.** Develop a watershed BMP implementation strategy to attain receiving water quality objectives in the identified highest priority water quality problem(s). The BMP implementation strategy shall include a schedule for implementation of the BMP projects to abate specific receiving water quality problems. BMPs not

contributing to measured pollutant reductions or improvements to water quality must be removed and replaced with alternative BMPs. Identified watershed water quality problems may be the result of jurisdictional discharges that will need to be addressed with BMPs applied in a specific jurisdiction in order to generate a benefit to the watershed.

- e. Develop a strategy to model and monitor improvements in receiving water quality directly resulting from implementation of the BMPs described in the Watershed Workplan. The modeling and monitoring strategy shall generate the necessary data to report on the measured pollutant reduction that results from proper BMP implementation. Monitoring shall, at a minimum, be conducted in the receiving water to demonstrate reduction in pollutant concentrations and progression towards attainment of receiving water quality objectives.
  - f. Establish a schedule for development and implementation of the Watershed strategy outlined in the Workplan. The schedule shall, at a minimum, include forecasted dates of planned actions to address Provisions E.2(a) through E.2(e) and dates for watershed review meetings through the remaining portion of this Permit cycle. Annual watershed workplan review meetings must be open to the public and appropriately publically noticed such that interested parties may come and provide comments on the watershed program.
- 3. Watershed Workplan Implementation** – Watershed Copermittee’s shall begin implementing the Watershed Workplan within 60-days of acceptance by the Regional Board Executive Officer. If within 30 days of submittal, the Regional Board has not taken an action, the Workplan shall be deemed acceptable.
- 4. Copermittee Collaboration** – Watershed Copermittees shall collaborate to develop and implement the Watershed Workplan. Watershed Copermittee collaboration shall include frequent regularly scheduled meetings.
- 5. Public Participation** – Watershed Copermittees shall implement a watershed-specific public participation mechanism within each watershed. A required component of the watershed-specific public participation shall be a minimum 30-day public review of the Watershed Workplan prior to submittal for acceptance by the Regional Board Executive Officer. Opportunity for the public to review and comment on the Watershed Workplan must occur before the workplan is implemented.
- 6. Watershed Workplan Review and Updates** – Watershed Copermittees shall review and update the Watershed Workplan annually to identify needed changes to the prioritized water quality problem(s) listed in the workplan. All updates to the Watershed Workplan shall be presented during an Annual Watershed Review Meeting. Annual Watershed Review Meetings shall occur once every calendar year and be conducted by the Watershed Copermittees. Annual Watershed Review Meetings shall be open to the public and adequately noticed. Individual Watershed Copermittees shall also review and modify their jurisdictional programs and JRMP

Annual Reports, as necessary, so that they are consistent with the updated Watershed Workplan.

## 7. Aliso Creek Watershed Runoff Management Plan (WRMP) Provisions

The following provisions apply to the Aliso Creek WRMP. Requirements in this subsection must supersede requirements prescribed by the Regional Board on October 18, 2005.<sup>20</sup>

- a. Each Copermittee within the Aliso Creek Watershed must implement the monitoring and reporting program described in *Aliso Creek 13325 Directive, Revised Monitoring Program Design – Integration with NPDES Program*, December 2004 (Revised Aliso Creek Program).
- b. Each Copermittee must provide annual reports by March 1 of each year beginning in 2011 for the preceding annual period of January through December. The annual reports must contain the following information:
  - (1) Water quality data and assessment from the Revised Aliso Creek Program. Each municipality must implement the monitoring and reporting program described in the Revised Aliso Creek Program. All information submitted in the report must conform to a SWAMP-Compatible Quality Assurance Project Plan<sup>21</sup>. The report must contain an assessment of compliance with applicable water quality standards for each monitoring station. The report must include data in tabular and graphical form, and electronic data must be submitted to the Regional Board.
  - (2) Program Assessment. A description and assessment of each municipality's program implemented within the high-priority storm drain locations (as identified Revised Aliso Creek Program) to reduce discharges of indicator fecal bacteria/pathogens. Monitoring alone is not sufficient to assess progress of the municipal programs. Municipalities must demonstrate each year that their programs are effective and resulting in a reduction of bacteria sources.
    - (i) For structural and nonstructural management practices implemented, the assessment must contain a description of the

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<sup>20</sup> On October 12, 2005, the Regional Board accepted proposed changes to the bacteria monitoring program that had been conducted since spring 2001 pursuant to an Investigative Order from the Regional Board's executive officer. The October 18, 2005, letter from the Regional Board's executive officer revised the Investigative Order and instituted the new monitoring and reporting requirements.

<sup>21</sup> The State Water Resource Control Board (State Board) has prepared an electronic template for Quality Assurance Project Plans (QAPP) to assist in QAPP development, to provide a common format that will allow for review to be expedited, and to provide information on Surface Water Ambient Monitoring (SWAMP) consistency. Additional information and the template are available on-line at <http://www.waterboards.ca.gov/swamp/qapp.html>.

practice, capital and maintenance costs, expectations for effectiveness, date implemented, and any observed results.

(ii) For structural and nonstructural management practices evaluated, the assessment must contain a description of the practice(s), conclusions from the evaluation, and whether and when the practice is planned for implementation by the municipality or group of municipalities.

(3) Status Reports. Updates on high-priority storm drain areas. Status reports must be provided by each municipality that discuss the causes of impairment and subsequent management activities implemented within the reporting period in the high priority areas and the planned activities for the next reporting period.

(4) Certification Statement. The technical reports submitted to the Regional Board must include the following certification statement signed by either the principal executive officer, ranking elected official, or duly authorized representative of that person:

*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(s) directly responsible for gathering the information, the information 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.*

- c. The annual reports must be submitted until the Regional Board determines they are no longer warranted. If requested by a municipality, the monitoring program may be modified or reduced by the Regional Board. The monitoring program and annual reporting may be modified in response to adopted TMDLs and additional Clean Water Act 303(d) listings for impairment.
- d. Municipalities must continue meeting on a quarterly basis to discuss efforts to reduce bacteria in the Aliso Creek watershed.

**H. FISCAL ANALYSIS**

1. **Secure Resources:** Each Copermittee must secure the resources necessary to meet all requirements of this Order.
2. **Annual Analysis:** Each Copermittee must conduct an annual fiscal analysis of the necessary capital and operation and maintenance expenditures necessary to accomplish the activities of the programs required by this Order. The analysis must include estimated expenditures for the reporting period, the preceding period, and the next reporting period.
  - a. Each analysis must include a description of the source of funds that are proposed to meet the necessary expenditures, including legal restrictions on the use of such funds.
  - b. Each analysis must include a narrative description of circumstances resulting in a 25 percent or greater annual change for any budget line items.
3. **Annual Reporting:** Each Copermittee must submit its annual fiscal analysis with the annual JRMP report.

**I. TOTAL MAXIMUM DAILY LOADS**

The waste load allocations (WLAs) of fully approved and adopted TMDLs are incorporated as Water Quality Based Effluent Limitations on a pollutant by pollutant, watershed by watershed basis. Early TMDL requirements, including monitoring, may be required and inserted into this Order pursuant to Finding E.10

**1. Baby Beach Bacterial Indicator TMDL Water Quality Based Effluent Limitations**

- a. The Copermitees in the Baby Beach watershed shall implement BMPs capable of achieving the interim and final Bacterial Indicator Waste Load Allocations (WLAs) in discharges to Baby Beach as described in Table 6.

Table 6: TMDL Waste Load Reduction Milestones

<u>Action</u>	<u>Date</u>
Meet 50% wasteload reductions	3 years after effective date for dry weather
	7 years after effective date for wet weather
Meet 100% wasteload reductions	5 years after effective date for dry weather
	10 years after effective date for wet weather

- b. The Copermitees shall conduct necessary monitoring, as described in Attachment A to Resolution No. R9-2008-0027, and submit annual progress reports as part of their yearly reports.
- c. The following WLAs (Table 7) are to be met in Baby Beach receiving water by the end of the year 2019 for wet weather and 2014 for dry weather:

Table 7: Final Bacterial Indicator Waste Load Allocations for Baby Beach

<u>Bacterial Indicator</u>	<u>Waste Load Allocation</u>	
	Dry Weather (Billion MPN / Day)	Wet Weather (Billion MPN / 30 Days)
Total Coliform	0.86	3,254
Fecal Coliform	0.17	112
<i>Enterococcus</i>	0.03	114

MPN: Most Probable Number

- d. The Copermitees must meet the following Numeric Targets (Table 8) in Baby Beach receiving waters in order to meet the underlying assumptions of the TMDL. The Numeric Targets are to be met once 100 percent of the WLA reductions have been achieved (see Table 7 above).

Table 8: Final Bacterial Indicator Numeric Targets for Baby Beach

<u>Bacterial Indicator</u>	30-day geo mean (MPN / 100mL)	Single Sample Max (MPN / 100mL)
	Dry Weather only	Dry and Wet Weather
Total Coliform	1,000	10,000
Fecal Coliform	200	400
<i>Enterococcus</i>	35	104

MPN: Most Probable Number

## J. PROGRAM EFFECTIVENESS ASSESSMENT AND REPORTING

### 1. Jurisdictional Program Effectiveness Assessments

#### a. OBJECTIVES OF EFFECTIVENESS ASSESSMENTS

Beginning with the Annual Report due in 2011, each Copermittee must annually assess the effectiveness of its Jurisdictional Runoff Management Program (JRMP) implementation at meeting the following objectives:

- (1) Objective for 303(d) Waterbodies: Reduce storm water pollutant loadings.
  - (a) Each Copermittee must establish annual assessment measures or methods specifically for reducing discharges of storm water pollutants from its MS4 into each downstream 303(d)-listed water body for which that waterbody is impaired. Assessment measures must be developed for each of the six outcome levels described by CASQA.<sup>22</sup>
  - (b) Each Copermittee must annually conduct each established assessment measure or method and evaluate the outcome. Each outcome must then be used to assess the effectiveness of implemented management measures toward reducing MS4 discharges of the specific pollutants causing or contributing to conditions of impairment.
  - (c) The assessment measures must target both water quality outcomes and the results of municipal enforcement activities.
- (2) Objective for Environmentally-Sensitive Areas: Prevent storm water MS4 discharges from causing or contributing to conditions of pollution, nuisance, or contamination.
  - (a) Each Copermittee must establish annual measures or methods specifically for assessing the effectiveness of its management measures for protecting downstream ESAs from adverse effects caused by discharges from its MS4. Assessment measures must be developed for each of the six outcome levels described by CASQA.
  - (b) Each Copermittee must annually implement each established assessment measure or method and evaluate the outcome. Each outcome must be used to assess the effectiveness of implemented management measures toward reducing MS4 discharges of the specific pollutants causing or contributing to conditions of impairment.
  - (c) The assessment measures must target both water quality outcomes and the results of municipal enforcement activities.
- (3) Objectives for major program component outcomes: Determined by Each

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<sup>22</sup> Effectiveness assessment outcome levels as defined by CASQA are defined in Attachment C of this Order. See "*Municipal Stormwater Program Effectiveness Assessment Guidance*" (CASQA, May 2007) for guidance for assessing program activities at the various outcome levels.

Copermittee.

- (a) Each Copermittee must annually develop objectives for each program component in Section F and the overall JRMP. The objectives must be established as appropriate in response to program implementation and evaluation of water quality and management practices.
  - (b) Assessment approaches for program implementation must include a mix of specific activities, general program components, and water quality data.
  - (c) The assessment measures must target both water quality outcomes and the results of municipal enforcement activities.
- (4) Objectives for actions taken to protect receiving water limitations in accordance with this Order.
- (a) Each Copermittee must develop and implement an effectiveness assessment strategy for each measure conducted in response to a determination to implement the “iterative” approach to prevent or reduce any storm water pollutants that are causing or contributing to the exceedance of water quality standards as outlined in this Order

#### **b. ASSESSMENT REVIEW**

- (1) Based on the results of the effectiveness assessments, each Copermittee must annually review its jurisdictional activities and BMPs to identify modifications and improvements needed to maximize JRMP effectiveness, as necessary to achieve compliance with this Order.
- (2) Each Copermittee must develop and annually conduct an Integrated Assessment<sup>23</sup> of each effectiveness assessment objective above (Section J.1.a) and the overall JRMP using a combination of outcomes as appropriate to the objectives.<sup>24</sup>

## **2. Program Modifications**

- a. Each Copermittee must develop and implement a plan and schedule to address program modifications and improvements identified during annual effectiveness assessments.
- b. Jurisdictional activities/BMPs that are ineffective or less effective than other comparable jurisdictional activities/BMPs must be replaced or improved upon by implementation of more effective jurisdictional activities/BMPs. Where monitoring data exhibits persistent water quality problems that are caused or

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<sup>23</sup> Integrated assessment is defined in Attachment C. It is the process of evaluating whether program implementation is resulting in the protection or improvement of water quality. Integrated assessment combines assessments of program implementation and water quality.

<sup>24</sup> Not all program components need be addressed at each of the six outcome levels.

contributed to by MS4 discharges, jurisdictional activities or BMPs applicable to the water quality problems must be modified and improved to correct the water quality problems.

### **3. Effectiveness Assessment and Program Response Reporting**

- a. Each Copermittee must include a description and summary of its annual and long-term effectiveness assessments within each Annual Report. Beginning with the Annual Report due in 2011, the Program Effectiveness reporting must include:
- (1) 303(d) waterbodies: A description and results of the annual assessment measures or methods specifically for reducing discharges of storm water pollutants from its MS4 into each 303(d)-listed waterbody;
  - (2) ESAs: A description and results of the annual assessment measures or methods specifically for managing discharges of pollutants from its MS4 into each downstream ESA;
  - (3) Other Program Components: A description of the objectives and corresponding assessment measures and results used to evaluate the effectiveness of each general program component. The results must include findings from both program implementation and water quality assessment where applicable;
  - (4) Receiving water protection: A description and results of the annual assessment measures or methods employed specifically for actions taken to protect receiving water limitations in accordance with Section A.3 of this Order;
  - (5) A description of the steps taken to use dry-weather and wet-weather monitoring data to assess the effectiveness of the programs for 303(d) impairments, ESAs, and general program components;
  - (6) A description of activities conducted in response to investigations of illicit discharge and illicit connection activities, including how each investigation was resolved and the pollutant(s) involved;
  - (7) Responses to effectiveness assessments: A description of each program modification, made in response to the results of effectiveness assessments conducted pursuant to Section J.1.a, and the basis for determining (pursuant to Section J.2.b.) that each modified activity and/or BMP represents an improvement with respect to reducing the discharge of storm water pollutants from the MS4.
  - (8) A description of the steps that will be taken to improve the Copermittee's ability to assess program effectiveness using measurable targeted outcomes, assessment measures, assessment methods, and outcome levels 1-6. Include a time schedule for when improvement will occur; and
  - (9) A description of the steps that will be taken to identify aspects of the Copermittee's Jurisdictional Runoff Management Program that will be changed based on the results of the effectiveness assessment.

#### **4. Work Plan**

Each Copermittee must develop a work plan to address their high priority water quality problems in an iterative manner over the life of the permit. The goal of the work plan is to demonstrate a responsive and adaptive approach for the judicious and effective use of available resources to attack the highest priority problems. The work plan shall include, at a minimum, the following:

- a.** The problems and priorities identified during the assessment;
- b.** A list of priority pollutants and known or suspected sources;
- c.** A brief description of the strategy employed to reduce, eliminate or mitigate the negative impacts;
- d.** A description and schedule for new and/or modified BMPs. The schedule is to include dates for significant milestones;
- e.** A description of how the selected activities will address an identified high priority problem. This will include a description of the expected effectiveness and benefits of the new and/or modified BMPs;
- f.** A description of implementation effectiveness metrics;
- g.** A description of how efficacy results will be used to modify priorities and implementation; and
- h.** A review of past activities implemented, progress in meeting water quality standards, and planned program adjustments.

The Copermittee shall submit the work plan to the Regional Board within 365 days of adoption of the Order. Annual updates are also required and shall be included with the annual JRMP report. The Regional Board will assess the work plan for compliance with the specific and overall requirements of the Order. To increase effectiveness and efficiencies, Copermittees may combine their implementation efforts and work plans within a hydrologic area or sub area. Each Copermittee, however, maintains individual responsibility for developing and implementing an acceptable work plan.

**K. REPORTING**

The Copermittees may propose alternate reporting criteria and schedules, as part of their updated JRMP, for the Executive Officer's acceptance. The Copermittees shall submit the updated JRMP within 365 days after adoption of this Order.

**1. Runoff Management Plans****a. JURISDICTIONAL RUNOFF MANAGEMENT PLANS**

- (1) Copermittees: The written account of the overall program to be conducted by each Copermittee to meet the jurisdictional requirements of section F of this Order is referred to as the Jurisdictional Runoff Management Plan (JRMP). Each Copermittee must revise and update its existing JRMP so that it describes all activities the Copermittee will undertake to implement the requirements of this Order. Each Copermittee must submit its updated and revised JRMP to the Regional Board 365 days after adoption of this Order.
- (2) At a minimum, each Copermittee's JRMP must be updated and revised to demonstrate compliance with each applicable section of this Order.

**b. WATERSHED WORKPLANS**

- (1) Copermittees: The written account of the program conducted by each watershed group of Copermittees is referred to as the Watershed Workplan. Copermittees within each watershed shall be responsible for updating and revising each Watershed Workplan. Each Watershed Workplan shall be updated and revised to describe any changes in water quality problems or priorities in the WMAs, and any necessary change to actions Copermittees will take to implement jurisdictional or watershed BMPs to address those identified.
- (2) Lead Watershed Copermittee: Each Lead Watershed Permittee shall be responsible for coordinating the production of the Watershed Workplan, as well as coordinating Annual Watershed Review Meetings and public participation/public noticing in accordance with the requirements of this Order. The Lead Watershed Permittee shall submit the Watershed Workplan to the Principal.
- (3) Principal Copermittee: The Principal Permittee shall assemble and submit the Watershed Workplan to the Regional Board no later than 365 days after adoption of this Order, and shall be prepared to implement the workplan within 60 days of the Regional Board Executive Officer deeming the workplan acceptable.

- (4) Each Watershed Workplan shall, at a minimum, include:
- (a) Identification of the Lead Watershed Permittee for the watershed.
  - (b) An updated watershed map.
  - (c) Identification and description of all applicable water quality data, reports, analyses, and other information to be used to assess receiving water quality.
  - (d) Assessment and analysis of the watershed's water quality data, reports, analyses, and other information, used during identification and prioritization of the watershed's water quality problems.
  - (e) A prioritized list of water quality problems within the WMA including rationale explaining the method/logic used to determine prioritization.
  - (f) Identification of the likely sources, pollutant discharges, and/or other factors causing the high priority water quality problems within the WMA.
  - (g) A description of the strategy to be used to guide Copermittee implementation of BMPs either jurisdictionally or on a watershed-wide basis to abate the highest water quality problems
  - (h) A list of criteria used to evaluate BMP effectiveness and how it was applied.
  - (i) A GIS map of BMPs implemented and BMPs scheduled for implementation.
  - (j) A description of the public participation mechanisms to be used and the parties anticipated to be involved during the development and implementation of the Watershed Workplan.
  - (k) A description of Copermittee collaboration to accomplish development of the Watershed Workplan, including a schedule for Watershed meetings.
  - (l) A description of how TMDLs and 303(d)-listed water bodies were considered during prioritization of watershed water quality problems
  - (m) A description of the strategy to model and monitor improvement in receiving water quality directly resulting from implementation of the BMPs described in the Watershed Workplan.
  - (n) A scheduled annual Watershed Workplan Review Meeting once every calendar year. This meeting shall be open to the public.

## 2. Other Required Reports and Plans

### a. SSMP UPDATES

- (1) Copermittees must submit their updated model SSMP in accordance with the applicable requirements of section F.1 with the JRMP two years after adoption of this Order.
- (2) Within 180 days of determination that the Model SSMP is in compliance with this Permit's provisions, each Copermittee must update their own local SSMP, and amended ordinances consistent with the model SSMP, and shall submit both (local SSMP and amended ordinances) to the Regional Board.
- (3) For SSMP-related requirements of Section F.1 with subsequent

implementation due dates, updated SSMPs must be submitted with the JRMP annual report covering the applicable reporting period.

#### **b. REPORT OF WASTE DISCHARGE**

The Principal Copermittee must submit to the Regional Board, no later than 210 days in advance of the expiration date of this Order, a Report of Waste Discharge (ROWD) as an application for issuance of new waste discharge requirements. The fourth annual report for this Order may serve as the ROWD, provided it contains the minimum information below.

At a minimum, the ROWD must include the following: (1) Proposed changes to the Copermittees' runoff management programs; (2) Proposed changes to monitoring programs; (3) Justification for proposed changes; (4) Name and mailing addresses of the Copermittees; (5) Names and titles of primary contacts of the Copermittees; and (6) Any other information necessary for the reissuance of this Order.

### **3. Annual Reports**

#### **a. JURISDICTIONAL RUNOFF MANAGEMENT PROGRAM (JRMP) ANNUAL REPORTS**

- (1) Copermittees: Each Copermittee must generate individual JRMP Annual Reports which cover implementation of its jurisdictional activities during the past annual reporting period. Each Annual Report must verify and document compliance with this Order as directed in this section. Each Copermittee must retain records through 2015, available for review, that document compliance with each requirement of this Order. Each Copermittee must submit to the Principal Copermittee its individual JRMP Annual Report by the date specified by the Principal Copermittee. The reporting period for these annual reports must be the previous fiscal year. For example, the report submitted September 30, 2010 must cover the reporting period July 1, 2009 to June 30, 2010.
- (2) Principal Copermittee: The Principal Copermittee is responsible for collecting and assembling each Copermittee's individual JRMP Annual Report. The Principal Copermittee must submit Unified JRMP Annual Reports to the Regional Board by September 30 of each year, beginning on September 30, 2011. The Unified JRMP Annual Report must contain the 13 individual JRMP Annual Reports.
- (3) Each JRMP Annual Report must contain, at a minimum, the following information:
  - (a) Information required to be reported annually in Section H (Fiscal Analysis) of this Order;

- (b) Information required to be reported annually in Section J (Program Effectiveness) of this Order;
- (c) The completed Reporting Checklist found in Attachment D, and
- (d) Information for each program component by watershed as described in the following Table 9:

Table 9. Annual Reporting Requirements

<b>Program Component</b>	<b>Reporting Requirement</b>
New Development	1. Updated relevant sections of the General Plan and environmental review process and a description of planned updates within the next annual reporting period, if applicable
	2. Revisions to the local SSMP, including where applicable: <ul style="list-style-type: none"> <li>(a) Identification and summary of where the SSMP fails to meet the requirements of this Order;</li> <li>(b) Updated procedures for identifying pollutants of concern for each Priority Development Project;</li> <li>(c) Updated treatment BMP ranking matrix; and</li> <li>(d) Updated site design and treatment control BMP design standards;</li> </ul>
	3. Verification that site design, source control, and treatment BMPs were required on all applicable Priority Development Projects;
	4. Description of the application of LID and site design BMPs in the planning and approval process;
	5. Description of projects subject to the local waiver provision for numeric sizing of treatment control BMP requirements;
	6. Description and summary of the LID site design BMP substitution program, if applicable;
	7. Description and summary of the process to verify compliance with SSMP requirements;
	8. Updates to the BMPs that are listed in the local SSMP as options for treatment control;
	9. Description of the treatment control maintenance tracking process and verification that the requirements of this Order were met during the reporting period; <ul style="list-style-type: none"> <li>(a) Updated watershed-based database of approved treatment control BMPs and treatment control BMP maintenance within its jurisdiction, including updates to the list of high-priority treatment BMPs;</li> </ul>
	10. Description of the process for identifying and evaluating hydrologic conditions of concern and requiring a suite of management measures within all Priority Development Projects to protect downstream beneficial uses and prevent adverse physical changes to downstream stream channels;
	11. Description of enforcement activities applicable to the new development and redevelopment component and a summary of the effectiveness of those activities;

Program Component	Reporting Requirement
Construction	1. Updated relevant ordinances and description of planned ordinance updates within the next annual reporting period, if applicable;
	2. A description of procedures used for identifying priorities for inspecting sites and enforcing control measures which consider the nature of the construction activity, topography, and the characteristics of soils and receiving water quality;
	3. Designated minimum and enhanced BMPs;
	4. Summary of the inspection program, including the following information: (a) Number and date of inspections conducted at each facility, including the facility address; (b) Number of facilities lacking adequate BMPs; (c) The BMP violations identified during the inspection by facility; (d) Number, date, and types of enforcement actions by facility; (e) Narrative description of inspection findings and follow-up activities for each facility;
Municipal	1. Updated source inventory;
	2. Changes to the designated municipal BMPs;
	3. Descriptions of procedures to assure that flood management projects assess the impacts on the water quality of receiving water bodies;
	4. Summary and assessment of BMPs implemented at retrofitted flood control structures, including: (a) List of projects with BMP retrofits; and (b) List and description of structures retrofitted without BMPs;
	5. Description and assessment of the municipal structural treatment control operations and maintenance activities, including: (a) Number of inspections and types of facilities; and (b) Summary of findings;
	6. Description of the municipal areas/facilities operations and maintenance activities, including: (a) Number and types of facilities maintained; (b) Amount of material removed and how that material was disposed; and (c) List of facilities planned for bi-annual inspections and the justification;
	7. Description of the municipal areas/programs inspection activities, including: (a) Number and date of inspections conducted at each facility; (b) Number of facilities lacking adequate BMPs; (c) The BMP violations identified during the inspection by facility; (d) Number, date and types of enforcement actions by facility; (e) Narrative description of inspection findings and follow-up activities for each facility;

Program Component	Reporting Requirement
	8. Description of activities implemented to address sewage infiltration into the MS4;
Commercial / Industrial	1. Annual inventory of commercial / industrial sources; 2. Summary of the inspection program, including the following information: (a) Number and date of inspections conducted at each facility including the facility address; (b) Number of facilities lacking adequate BMPs; (c) The BMP violations identified during the inspection by facility; (d) Number, date, and types of enforcement actions by facility; (e) Narrative description of inspection findings and follow-up activities for each facility; 3. Changes to designated minimum and enhanced BMPs; 4. A list of industrial sites, including each name, address, and SIC code, that the Copermittee suspects may require coverage under the General Industrial Permit, but has not submitted an NOI;
Residential	1. Updated minimum BMPs required for residential areas and activities;
	2. Quantification and summary of applicable runoff and storm water enforcement actions within residential areas and activities;
	3. Description of efforts to manage runoff and storm water pollution in common interest areas;
Illicit Discharge Detection and Elimination	1. Changes to the legal authority to implement Illicit Discharge Detection and Elimination activities; 2. Changes to the established investigation procedures; 3. Public reporting mechanisms, including phone numbers and web pages; 4. All data and assessments from the Dry Weather Effluent Analytical Monitoring activities; 5. Response criteria developed for water quality data and notifications; 6. Summaries of illicit discharges (including spills and water quality data events) and how each significant case was resolved; 7. A description of instances when field screening and analytical data exceeded action levels, but for which no investigation was conducted; 8. A description of enforcement actions taken in response to investigations of illicit discharges and a description of the effectiveness of those enforcement measures; 9. A description of controls to prevent infiltration of seepage from municipal sanitary sewers to municipal separate storm sewer systems;
Work Plan	Priorities, strategy, implementation schedule and effectiveness evaluation;

(4) Each JRMP Annual Report must also include the following information

regarding non-storm water discharges (see Section B.2. of this Order):

- (a) Identification of non-storm water discharge categories identified as a source of pollutants to waters of the U.S;
- (b) A description of ordinances, orders, or similar means to prohibit non-storm water discharge categories identified under section B.2 above ;
- (c) Identification of any control measures to be required and implemented for non-storm water discharge categories identified as needing said controls by the Regional Board; and
- (d) A description of a program to address pollutants from non-emergency fire fighting flows identified by the Copermittee to be significant sources of pollutants.

#### **4. Interim Reporting Requirements**

For the July 2009-June 2010 reporting period, the Jurisdictional RMP must be submitted on January 31, 2011. Each Jurisdictional RMP Annual Report submitted for this reporting period must, at a minimum, include comprehensive descriptions of all activities conducted to fully implement the Copermittees' Jurisdictional RMP documents, as those documents were developed to comply with the requirements of Order No. 2002-01. The Principal Copermittee must submit these documents in a unified manner, consistent with the unified reporting requirements of Order No. 2002-01.

#### **5. Universal Reporting Requirements**

All submittals must include an executive summary, introduction, conclusion, recommendations, and signed certified statement. Each Copermittee must submit a signed certified statement covering its responsibilities for each applicable submittal. The Principal Copermittee must submit a signed certified statement covering its responsibilities for each applicable submittal and the sections of the submittals for which it is responsible.

## **L. MODIFICATION OF PROGRAMS**

Modifications of Jurisdictional Runoff Management Programs and/or Watershed Runoff Management Programs may be initiated by the Executive Officer of the Regional Board or by the Copermittees. Requests by Copermittees must be made to the Executive Officer, and must be submitted during the annual review process. Requests for modifications should be incorporated, as appropriate, into the Annual Reports or other deliverables required or allowed under this Order.

1. Minor Modifications: Minor modifications to Jurisdictional Runoff Management Programs, and/or Watershed Runoff Management Programs, may be accepted by the Executive Officer where the Executive Officer finds the proposed modification complies with all discharge prohibitions, receiving water limitations, and other requirements of this Order.
2. Modifications Requiring an Amendment to this Order: Proposed modifications that are not minor require amendment of this Order in accordance with this Order's rules, policies, and procedures.

## **M. PRINCIPAL COPERMITTEE RESPONSIBILITIES**

Within 180 days of adoption of this Order, the Copermittees must designate the Principal Copermittee and notify the Regional Board of the name of the Principal Copermittee. The Principal Copermittee must, at a minimum:

1. Serve as liaison between the Copermittees and the Regional Board on general permit issues, and when necessary and appropriate, represent the Copermittees before the Regional Board.
2. Coordinate permit activities among the Copermittees and facilitate collaboration on the development and implementation of programs required under this Order.
3. Integrate individual Copermittee documents and reports into single unified documents and reports for submittal to the Regional Board as required under this Order.
4. Produce and submit documents and reports as required by section K of this Order and Receiving Waters and MS4 Discharge Monitoring and Reporting Program No. R9-2009-0002 in Attachment E of this Order.

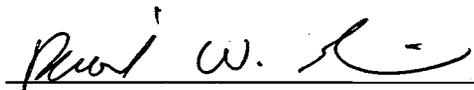
## **N. RECEIVING WATERS AND MS4 DISCHARGE MONITORING AND REPORTING PROGRAM**

Pursuant to CWC section 13267, the Copermittees must comply with all the requirements contained in Receiving Waters and MS4 Discharge Monitoring and Reporting Program No. R9-2009-0002 in Attachment E of this Order.

**O. STANDARD PROVISIONS, REPORTING REQUIREMENTS, AND NOTIFICATIONS**

1. Each Copermitttee must comply with Standard Provisions, Reporting Requirements, and Notifications contained in Attachment B of this Order. This includes 24 hour/5 day reporting requirements for any instance of non-compliance with this Order as described in section 5.e of Attachment B.
2. All plans, reports and subsequent amendments submitted in compliance with this Order must be implemented immediately (or as otherwise specified). All submittals by Copermitttees must be adequate to implement the requirements of this Order.

I, David W. Gibson, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Diego Region, on December 16, 2009.



David W. Gibson  
Executive Officer

**ATTACHMENT A****BASIN PLAN PROHIBITIONS**

California Water Code Section 13243 provides that a Regional Board, in a water quality control plan, may specify certain conditions or areas where the discharge of waste or certain types of waste is not permitted. The following discharge prohibitions are applicable to any person, as defined by Section 13050(c) of the California Water Code, who is a citizen, domiciliary, or political agency or entity of California whose activities in California could affect the quality of waters of the state within the boundaries of the San Diego Region.

1. The discharge of waste to waters of the state in a manner causing, or threatening to cause a condition of pollution, contamination or nuisance as defined in California Water Code Section 13050, is prohibited.
2. The discharge of waste to land, except as authorized by waste discharge requirements or the terms described in California Water Code Section 13264 is prohibited.
3. The discharge of pollutants or dredged or fill material to waters of the United States except as authorized by a NPDES permit or a dredged or fill material permit (subject to the exemption described in California Water Code Section 13376) is prohibited.
4. Discharges of recycled water to lakes or reservoirs used for municipal water supply or to inland surface water tributaries thereto are prohibited, unless this Regional Board issues a NPDES permit authorizing such a discharge; the proposed discharge has been approved by the State Department of Health Services and the operating agency of the impacted reservoir; and the discharger has an approved fail-safe long-term disposal alternative.
5. The discharge of waste to inland surface waters, except in cases where the quality of the discharge complies with applicable receiving water quality objectives, is prohibited. Allowances for dilution may be made at the discretion of the Regional Board. Consideration would include streamflow data, the degree of treatment provided and safety measures to ensure reliability of facility performance. As an example, discharge of secondary effluent would probably be permitted if streamflow provided 100:1 dilution capability.
6. The discharge of waste in a manner causing flow, ponding, or surfacing on lands not owned or under the control of the discharger is prohibited, unless the discharge is authorized by the Regional Board.
7. The dumping, deposition, or discharge of waste directly into waters of the state, or adjacent to such waters in any manner which may permit its being transported into the waters, is prohibited unless authorized by the Regional Board.
8. Any discharge to a storm water conveyance system that is not composed entirely of "storm water" is prohibited unless authorized by the Regional Board. [The federal regulations, 40 CFR 122.26(b)(13), define storm water as storm water

- runoff, snow melt runoff, and surface runoff and drainage. 40 CFR 122.26(b)(2) defines an illicit discharge as any discharge to a storm water conveyance system that is not composed entirely of storm water except discharges pursuant to a NPDES permit and discharges resulting from fire fighting activities. [§122.26 amended at 56 FR 56553, November 5, 1991; 57 FR 11412, April 2, 1992].
9. The unauthorized discharge of treated or untreated sewage to waters of the state or to a storm water conveyance system is prohibited.
  10. The discharge of industrial wastes to conventional septic tank/subsurface disposal systems, except as authorized by the terms described in California Water Code Section 13264, is prohibited.
  11. The discharge of radioactive wastes amenable to alternative methods of disposal into the waters of the state is prohibited.
  12. The discharge of any radiological, chemical, or biological warfare agent into waters of the state is prohibited.
  13. The discharge of waste into a natural or excavated site below historic water levels is prohibited unless the discharge is authorized by the Regional Board.
  14. The discharge of sand, silt, clay, or other earthen materials from any activity, including land grading and construction, in quantities which cause deleterious bottom deposits, turbidity or discoloration in waters of the state or which unreasonably affect, or threaten to affect, beneficial uses of such waters is prohibited.
  15. The discharge of treated or untreated sewage from vessels to Mission Bay, Oceanside Harbor, Dana Point Harbor, or other small boat harbors is prohibited.

**ATTACHMENT B****STANDARD PROVISIONS, REPORTING REQUIREMENTS, AND NOTIFICATIONS****1. STANDARD PROVISIONS – PERMIT COMPLIANCE [40 CFR 122.41]****(a) *Duty to comply* [40 CFR 122.41(a)].**

- (1) The Copermitttee must comply with all of the conditions of this Order. Any noncompliance constitutes a violation of the Clean Water Act (CWA) and the California Water Code (CWC) and is grounds for enforcement action, for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application.
- (2) The Copermitttee shall comply with effluent standards or prohibitions established under section 307(a) of the CWA toxic pollutants and with standards for sewage sludge use or disposal established under section 405(d) of the CWA within the time provided in the regulations that establish these standards or prohibitions or standards for sewage sludge use or disposal, even if the Order has not yet been modified to incorporate the requirement.

**(b) *Need to halt or reduce activity not a defense* [40 CFR 122.41(c)].** It shall not be a defense for the Copermitttee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this Order.**(c) *Duty to mitigate* [40 CFR 122.41(d)].** The Copermitttee shall take all reasonable steps to minimize or prevent any discharge or prevent any discharge or sludge use or disposal in violation of this Order that has a reasonable likelihood of adversely affecting human health or the environment.**(d) *Proper operation and maintenance* [40 CFR 122.41(e)].** The Copermitttee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Copermitttee to achieve compliance with the conditions of this Order. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems that are installed by the Copermitttee only when necessary to achieve compliance with the conditions of this Order.**(e) *Property rights* [40 CFR 122.41(g)].**

- (1) This Order does not convey any property rights of any sort or any exclusive privilege.
- (2) 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.

**(f) *Inspection and entry* [40 CFR 122.41(i)].** The Copermitttee shall allow the Regional Water Quality Control Board, San Diego Region (Regional Board), State Water

Resources Control Board (SWRCB), United States Environmental Protection Agency (USEPA), and/or their authorized representatives (including an authorized contractor acting as their representative), upon presentation of credentials and other documents as may be required by law, to:

- (1) Enter upon the Copermittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this Order;
- (2) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Order;
- (3) Inspect and photograph, at reasonable times, any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order; and
- (4) Sample or monitor, at reasonable times, for the purpose of assuring Order compliance or as otherwise authorized by the CWA or the CWC, any substances or parameters at any location.

(g) *Bypass* [40 CFR 122.41(m)]

(1) Definitions:

- i) "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility.
  - ii) "Severe property damage" means substantial physical damage to property, damage to the treatment facilities, which causes them to become inoperable, or substantial and permanent loss of natural resources that can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.
- (2) Bypass not exceeding limitations - The Copermittee may allow any bypass to occur which does not cause exceedances of effluent limitations, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions listed in Standard Provisions – Permit Compliance (g)(3), (g)(4) and (g)(5) below.
- (3) Prohibition of Bypass - Bypass is prohibited, and the Regional Board may take enforcement action against a Copermittee for bypass, unless:
- i) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
  - ii) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and
  - iii) The Copermittee submitted notice as required under Standard Provisions – Permit Compliance (g)(3) above.

(4) Notice

- i) Anticipated bypass. If the Copermittee knows in advance of the need for a bypass, it shall submit a notice, if possible at least ten days before the date of the bypass.
  - ii) Unanticipated bypass. The Copermittee shall submit notice of an unanticipated bypass as required in Standard Provisions 5(e) below (24-hour notice).
- (h) *Upset* [40 CFR 122.41(n)] Upset means an exceptional incident in which there is unintentional and temporary noncompliance with technology based effluent limitations because of factors beyond the reasonable control of the Copermittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.
- (1) Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of Standard Provisions – Permit Compliance (h)(2) below are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.
- (2) Conditions necessary for a demonstration of upset. A Copermittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:
- i) An upset occurred and that the Copermittee can identify the cause(s) of the upset;
  - ii) The permitted facility was at the time being properly operated;
  - iii) The Copermittee submitted notice of the upset as required in Standard Provisions – Permit Compliance (5)(e)(ii)(B) below (24-hour notice); and
  - iv) The Copermittee complied with any remedial measures required under Standard Provisions – Permit Compliance 1(c) above.
- (3) Burden of Proof. In any enforcement proceeding, the Copermittee seeking to establish the occurrence of an upset has the burden of proof.

## 2. STANDARD PROVISIONS – PERMIT ACTION

- (a) *General* [40 CFR 122.41(f)] This Order may be modified, revoked and reissued, or terminated for cause. The filing of a request by the Copermittee for modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any Order condition.
- (b) *Duty to reapply* [40 CFR 122.41(b)]. If the Copermittee wishes to continue an activity regulated by this Order after the expiration date of this Order, the Copermittee must apply for and obtain new permit.

- (c) *Transfers*. This Order is not transferable to any person except after notice to the Regional Board. The Regional Board may require modification or revocation and reissuance of the Order to change the name of the Copermittee and incorporate such other requirements as may be necessary under the CWA and the CWC.

### 3. STANDARD PROVISIONS – MONITORING

- (a) Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. [40 CFR Section 122.41 (j) (1)]
- (b) Monitoring results must be conducted according to test procedures under 40 CFR Part 136, or in the case of sludge use or disposal, approved under 40 CFR Part 136 unless otherwise specified in 40 CFR Part 503 unless other test procedures have been specified in this Order [40 CFR Section 122.41(j)(4)][40 CFR Section 122.44(i)(1)(iv)].

### 4. STANDARD PROVISIONS – RECORDS

- (a) Except for records of monitoring information required by this Order related to the Copermittee's sewage sludge use and disposal activities, which shall be retained for a period of at least five years (or longer as required by 40 CFR Part 503), the Copermittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this Order, and records of all data used to complete the application for this Order, for a period of at least three (3) years from the date of the sample, measurement, report or application, This period may be extended by request of the Regional Water Board Executive Officer at any time [40 CFR Section 122.41(j)(2)].
- (b) *Records of monitoring information* [40 CFR 122.41(j) (3)] shall include:
- (1) The date, exact place, and time of sampling or measurements;
  - (2) The individual(s) who performed the sampling or measurements;
  - (3) The date(s) analyses were performed;
  - (4) The individual(s) who performed the analyses;
  - (5) The analytical techniques or methods used; and
  - (6) The results of such analyses.
- (c) *Claims of confidentiality* [40 CFR Section 122.7(b)] of the following information will be denied:
- (1) The name and address of any permit applicant or Copermittee; and
  - (2) Permit applications and attachments, permits and effluent data.

### 5. STANDARD PROVISIONS – REPORTING

- (a) *Duty to provide information* [40 CFR 122.41(h)]. The Copermittee shall furnish to the Regional Board, SWRCB, or USEPA within a reasonable time, any information which

the Regional Board, SWRCB, or USPEA may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Order or to determine compliance with this Order. Upon request, the Copermitttee shall also furnish to the Regional Board, SWRCB, or USEPA, copies of records required to be kept by this Order.

(b) *Signatory and Certification Requirements* [40 CFR 122.41(k)]

- (1) All applications, reports, or information submitted to the Regional Board, SWRCB, or USEPA shall be signed and certified in accordance with Standard Provisions – Reporting 5(b)ii), 5(b)iii), 5(b)iv), and 5(b) (see 40 CFR 122.22)
- (2) *Applications* [40 CFR 122.22(a)(3)] All permit applications shall be signed by either a principal executive officer or ranking elected official.
- (3) *Reports* [40 CFR 122.22(b)]. All reports required by this Order, and other information requested by the Regional Board, SWRCB, or USEPA shall be signed by a person described in Standard Provisions – Reporting 5(b)(2) above, or by a duly authorized representative of that person. A person is a duly authorized representative only if:
  - i) The authorization is made in writing by a person described in Standard Provisions-Reporting 5(b)(2) above;
  - ii) The authorization specifies 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,
  - iii) The written authorization is submitted to the Regional Water Board and State Water Board.
- (4) *Changes to authorization* [40 CFR Section 122.22(c)] If an authorization under Standard Provisions – Reporting 5(b)(3) of this reporting requirement is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of Standard Provisions – Reporting 5(b)(3) above must be submitted to the Regional Water Board and State Water Board prior to or together with any reports, information, or applications to be signed by an authorized representative.
- (5) *Certification* [40 CFR Section 122.22(d)] Any person signing a document under Standard Provisions – Reporting 5(b)(2), or 5(b)(3) above shall 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.”

(c) *Monitoring reports.* [40 CFR 122.41(l)(4)]

- (1) Monitoring results shall be reported at the intervals specified in the Receiving Waters and Runoff Monitoring and Reporting Program No. R9-2009-0002.
- (2) Monitoring results must be reported on a Discharge Monitoring Report (DMR) form or forms provided or specified by the Regional Board or SWRCB for reporting results of mentoring of sludge use or disposal practices.
- (3) If the Copermittee monitors any pollutant more frequently than required by this Order using test procedures approved under 40 CFR Part 136 or, in the case of sludge use or disposal, approved under 40 CFR Part 136 unless otherwise specified in 40 CFR Part 503, or as specified in this Order, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR or sludge reporting form specified by the Regional Board.
- (4) Calculations for all limitations, which require averaging of measurements, shall utilize an arithmetic mean unless otherwise specified in this Order.

(d) *Compliance schedules.* [40 CFR Section 122.41(l)(5)] Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this Order shall be submitted no later than 14 days following each schedule date.

(e) *Twenty-four hour reporting* [40 CFR Section 122.41(l)(6)]

- (1) The Copermittee shall report any noncompliance that may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the Copermittee becomes aware of the circumstances. A written submission shall also be provided within five (5) days of the time the Copermittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.
- (2) The following shall be included as information, which must be reported within 24 hours under this paragraph:
  - i) Any unanticipated bypass that exceeds any effluent limitation in the Order (See 40 CFR 122.41(g)).
  - ii) Any upset which exceeds any effluent limitation in this Order.
- (3) The Regional Board may waive the above-required written report under this

provision on a case-by-case basis if the oral report has been received within 24 hours.

- (f) *Planned changes.* [40 CFR Section 122.41(l)(1)] The Copermittee shall give notice to the Regional Board as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required under this provision only when:
- (1) The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 CFR 122.29(b); or
  - (2) The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants, which are not subject to effluent limitations in this Order.
  - (3) The alteration or addition results in a significant change in the Copermittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing Order, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan.
- (g) *Anticipated noncompliance.* [40 CFR Section 122.41(l)(7)] The Copermittee shall give advance notice to the Regional Board or SWRCB of any planned changes in the permitted facility or activity, which may result in noncompliance with Order requirements.
- (h) *Other noncompliance* [40 CFR Section 122.41(l) 7)] The Copermittee shall report all instances of noncompliance not reported under Standard Provisions 5(c), 5(d), and 5(e) above, at the time monitoring reports are submitted. The reports shall contain the information listed in Standard Provision – Reporting 5(e) above.
- (i) *Other information* [40 CFR Section 122.41(l)(8)] When the Copermittee becomes 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 Board, SWRCB, or USEPA, the Copermittee shall promptly submit such facts or information.

## **6. STANDARD PROVISIONS – ENFORCEMENT**

- (a) 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.

## **7. ADDITIONAL STANDARD PROVISIONS**

- (a) *Municipal separate storm sewer systems* [40 CFR 122.42(c)]. The operator of a large or medium municipal separate storm sewer system or a municipal separate storm sewer that has been designated by the Director under 40 CFR 122.26(a)(1)(v) must submit an annual report by the anniversary of the date of the issuance of the

permit for such system. The report shall include:

- (1) The status of implementing the components of the storm water management program that are established as permit conditions;
  - (2) Proposed changes to the storm water management programs that are established as permit conditions. Such proposed changes shall be consistent with 40 CFR 122.26(d)(2)(iii); and
  - (3) Revisions, if necessary, to the assessment of controls and the fiscal analysis reported in the permit application under 40 CFR 122.26(d)(2)(iv) and 40 CFR 122.26(d)(2)(v);
  - (4) A summary of data, including monitoring data, that is accumulated throughout the reporting year;
  - (5) Annual expenditures and budget for year following each annual report;
  - (6) A summary describing the number and nature of enforcement actions, inspections, and public education programs; and
  - (7) Identification of water quality improvements or degradation.
- (b) *Storm water discharges* [40 CFR 122.42(d)]. The initial permits for discharges composed entirely of storm water issued pursuant to 40 CFR 122.26(e)(7) shall require compliance with the conditions of the permit as expeditiously as practicable, but in no event later than three years after the date of issuance of the permit.
- (c) *Other Effluent Limitations and Standards* [40 CFR 122.44(b)(1)]. If any toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is promulgated under Section 307(a) of the CWA for a toxic pollutant which is present in the discharge and that standard or prohibition is more stringent than any limitation on the pollutant in this Order, the Regional Board may institute proceedings under these regulations to modify or revoke and reissue the Order to conform to the toxic effluent standard or prohibition.
- (d) *Discharge is a privilege* [CWC section 13263(g)]. No discharge of waste into the waters of the State, whether or not such discharge is made pursuant to waste discharge requirements, shall create a vested right to continue such discharge. All discharges of waste into waters of the State are privileges, not rights.
- (e) *Review and revision of Order* [CWC section 13263(e)]. Upon application by any affected person, or on its own motion, the Regional Board may review and revise this permit.
- (f) *Termination or modification of Order* [CWC section 13381]. This permit may be terminated or modified for causes, including, but not limited to, all of the following:
- (1) Violation of any condition contained in this Order.
  - (2) Obtaining this Order by misrepresentation, or failure to disclose fully all relevant facts.
  - (3) A change in any condition that requires either a temporary or permanent reduction or elimination of the permitted discharge.

- (g) *Transfers*. When this Order is transferred to a new owner or operator, such requirements as may be necessary under the CWC may be incorporated into this Order.
- (h) *Conditions not stayed*. The filing of a request by the Copermittee for modification, revocation and reissuance, or termination of this Order, or a notification of planned change in or anticipated noncompliance with this Order does not stay any condition of this Order.
- (i) *Availability*. A copy of this Order shall be kept at a readily accessible location and shall be available to on-site personnel at all times.
- (j) *Duty to minimize or correct adverse impacts*. The Copermittees shall take all reasonable steps to minimize or correct any adverse impact on the environment resulting from noncompliance with this Order, including such accelerated or additional monitoring as may be necessary to determine the nature and impact of the noncompliance.
- (k) *Interim Effluent Limitations*. The Copermittee shall comply with any interim effluent limitations as established by addendum, enforcement action, or revised waste discharge requirements which have been, or may be, adopted by this Regional Board.
- (l) *Responsibilities, liabilities, legal action, penalties* [CWC sections 13385 and 13387]. The Porter-Cologne Water Quality Control Act provides for civil and criminal penalties comparable to, and in some cases greater than, those provided for under the CWA.

Nothing in this Order shall be construed to protect the Copermittee from its liabilities under federal, state, or local laws.

Except as provided for in 40CFR 122.41(m) and (n), nothing in this Order shall be construed to relieve the Copermittee from civil or criminal penalties for noncompliance.

Nothing in this Order shall be construed to preclude the institution of any legal action or relieve the Copermittee from any responsibilities, liabilities, or penalties to which the Copermittee is or may be subject to under Section 311 of the CWA.

Nothing in this Order shall be construed to preclude institution of any legal action or relieve the Copermittee from any responsibilities, liabilities, or penalties established pursuant to any applicable state law or regulation under authoring preserved by Section 510 of the CWA.

- (m) *Noncompliance*. Any noncompliance with this Order constitutes violation of the CWC and is grounds for denial of an application for modification of the Order (also see 40 CFR 122.41(a)).
- (n) *Director*. For purposes of this Order, the term "Director" used in parts of 40 CFR

incorporated into this Order by reference and/or applicable to this Order shall have the same meaning as the term "Regional Board" used elsewhere in this Order, except that in 40 CFR 122.41(h) and (l), "Director" shall mean "Regional Board, SWRCB, and USEPA."

- (o) The Regional Board has, in prior years, issued a limited number of individual NPDES permits for non-storm water discharges to MS4s. The Regional Board or SWRCB may in the future, upon prior notice to the Copermittee(s), issue an NPDES permit for any non-storm water discharge (or class of non-storm water discharges) to a MS4. Copermittees may prohibit any non-storm water discharge (or class of non-storm water discharges) to a MS4 that is authorized under such separate NPDES permits.
- (p) *Effective date.* This Order shall become effective on the date of its adoption provided the USEPA has no objection. If the USEPA objects to its issuance, this Order shall not become effective until such objection is withdrawn. This Order supersedes Order No. 2001-01 upon the effective date of this Order.
- (q) *Expiration.* This Order expires five years after adoption.
- (r) *Continuation of expired order* [23 CCR 2235.4]. After this Order expires, the terms and conditions of this Order are automatically continued pending issuance of a new permit if all requirements of the federal NPDES regulations on the continuation of expired permits (40 CFR 122.6) are complied with.
- (s) *Applications.* Any application submitted by a Copermittee for reissuance or modification of this Order shall satisfy all applicable requirements specified in federal regulations as well as any additional requirements for submittal of a Report of Waste Discharge specified in the CWC and the California Code of Regulations.
- (t) *Confidentiality.* Except as provided for in 40 CFR 122.7, no information or documents submitted in accordance with or in application for this Order will be considered confidential, and all such information and documents shall be available for review by the public at the Regional Board office.
- (u) *Severability.* The provisions of this Order are severable, and if any provision of this Order, or the application of any provisions of this Order to any circumstance, is held invalid, the application of such provision to other circumstances and the remainder of this Order shall not be affected thereby.
- (v) *Report submittal.* The Copermittee shall submit reports and provide notifications as required by this Order to the following:

NORTHERN WATERSHED UNIT  
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
SAN DIEGO REGION  
9174 SKY PARK COURT, SUITE 100  
SAN DIEGO CA 92123-4340  
Telephone: (858) 467-2952 Fax: (858) 571-6972

EUGENE BROMLEY  
US ENVIRONMENTAL PROTECTION AGENCY  
REGION IX  
PERMITS ISSUANCE SECTION (W-5-1)  
75 HAWTHORNE STREET  
SAN FRANCISCO CA 94105

Unless otherwise directed, the Copermittee shall submit one hard copy for the official record and one electronic copy of each report required under this Order to the Regional Board and one electronic copy to the EPA.

**ATTACHMENT C****ACRONYMS AND ABBREVIATIONS**

ADT	Average Daily Traffic
AMAL	Average Monthly Action Level
ASBS	Area of Special Biological Significance
AST	Active Sediment Treatment
BMP	Best Management Practice
Basin Plan	Water Quality Control Plan for the San Diego Basin
BU	Beneficial Use
CASQA	California Stormwater Quality Association
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CWA	Clean Water Act
CWC	California Water Code
CZARA	Coastal Zone Act Reauthorization Amendments of 1990
DAMP	Drainage Area Management Plan
DNQ	Detected, but not Quantified
EIA	Effective Impervious Area
ESAs	Environmentally Sensitive Areas
GIS	Geographic Information System
HMP	Hydromodification Management Plan
IBI	Index of Biotic Integrity
JRMP	Jurisdictional Runoff Management Plan
LID	Low Impact Development
MDAL	Maximum Daily Action Level
MEP	Maximum Extent Practicable
ML	Minimum Level
MS4	Municipal Separate Storm Sewer System
NOI	Notice of Intent
NPDES	National Pollutant Discharge Elimination System
OCVCD	Orange County Vector Control District
Copermittees	County of Orange, the 11 incorporated cities within the County of Orange in the San Diego Region, and the Orange County Flood Control District
Regional Board	California Regional Water Quality Control Board, San Diego Region
RGOs	Retail Gasoline Outlets
ROWD	Orange County Copermittees' Report of Waste Discharge (application for NPDES reissuance)
RWLs	Receiving Water Limitations
SAL	Storm Water Action Level
SIC	Standard Industrial Classification Code
SSMP	Standard Urban Storm Water Mitigation Plan
State Board	State Water Resources Control Board
SWQPA	State Water Quality Protected Area
TMDL	Total Maximum Daily Load

USEPA	United States Environmental Protection Agency
WLA	Waste Load Allocation
WQMP	Water Quality Management Plan
WRMP	Watershed Runoff Management Plan

## DEFINITIONS

**Active Sediment Treatment** - Using mechanical or chemical means to flocculate and remove suspended sediment from runoff from construction sites prior to discharge.

**Anthropogenic Litter** – Trash generated from human activities, not including sediment.

**Average Monthly Action Level** – the highest allowable average of daily discharges over a calendar month, calculated as the sum of all daily discharges measured during a calendar month divided by the number of daily discharges measured during that month.

**Basin Plan** – Water Quality Control Plan, San Diego Basin, Region 9, and amendments, developed by the Regional Board.

**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 tangible and intangible economic, social, and environmental goals. “Beneficial Uses” of the waters of the State 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 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 Management Practices (BMPs)** - 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.

**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.

**Biocriteria** - Under the CWA, numerical values or narrative expressions that define a desired biological condition for a water body that are legally enforceable. The USEPA defines biocriteria as: “numerical values or narrative expressions that describe the

reference biological integrity of aquatic communities inhabiting waters of a given designated aquatic life use... (that)...describe the characteristics of water body segments least impaired by human activities.”

**Biofiltration** - refers to practices that use vegetation and amended soils to detain and treat runoff from impervious areas. Treatment is through filtration, infiltration, adsorption, ion exchange, and biological uptake of pollutants.

**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)]** - The federal statute requiring municipal and industrial dischargers to obtain NPDES permits for their discharges of storm water.

**Clean Water Act Section 303(d) Water Body** - 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 runoff to these water bodies by the Copermitees 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 State are affected.”

**Critical Channel Flow (Qc)** – The channel flow that produces the critical shear stress that initiates bed movement or that erodes the toe of channel banks. When measuring Qc, it should be based on the weakest boundary material – either bed or bank.

**CWA** – Federal Clean Water Act

**CWC** – California Water Code

**Daily Discharge** – Daily Discharge is defined as either: (1) the total mass of the constituent discharged over the calendar day or any 24 hour period that reasonably represents a calendar day for purposes of sampling (as specified in the permit), for a constituent with limitations expressed in units of mass or; (2) the unweighted arithmetic mean measurement of the constituent over the day for a constituent with limitations expressed in other units of measurement (e.g. concentration.)

The Daily Discharge may be determined by the analytical results of a composite sample taken over the course of one day (a calendar day, or other 24 hour period other than a day), or by the arithmetic mean of analytical results from one or more grab samples taken over the course of a day.

**Detected, but not Quantified** – those sample results less than the reporting level, but greater than or equal to the laboratory's Method of Detection Limit (MDL.)

**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.

**Dilution Credit** – the amount of dilution granted to a discharger in the calculation of a WQBEL, based on the allowance of a specific mixing zone. It is calculated from the dilution ratio, or determined through conducting of a mixing zone study, or modeling of the discharge and receiving water.

**Dry Season** – May 1 through September 30 of each year.

**Dry Weather** – weather is considered dry if the preceding 72 hours has been without precipitation.

**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 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.

**Enclosed Bays** – Enclosed bays are indentations along the coast that enclose an area of oceanic water within distinct headlands or harbor works. Enclosed bays include all bays where the narrowest distance between the headlands or outermost bay works is less than 75 percent of the greatest dimension of the enclosed portion of the bay. Enclosed bays do not include inland surface waters or ocean waters.

**Erosion** – When land is diminished or worn away due to 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.

**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 San Diego Basin (1994) and amendments); State Water Quality Protected Areas; water bodies designated with the RARE beneficial use by the State Water Resources Control Board (Water Quality Control Plan for the San Diego Basin (1994) and amendments); areas designated as preserves or their equivalent under the Natural Communities Conservation Program within the Cities and County of Orange; and any other equivalent environmentally sensitive areas which have been identified by the Copermitttees.

**Estuaries** – waters, including coastal lagoons, located at the mouth of streams that serve as areas of mixing fresh and ocean waters. Coastal lagoons and mouths of streams that are temporarily separated from the ocean by sandbars shall be considered estuaries. Estuarine waters shall be considered to extend from a bay or the open ocean to a point upstream where there is no significant mixing of fresh water and ocean water. Estuaries do not include inland surface waters or ocean waters.

**Feasibility Analysis** – Detailed description of the selection process for the treatment control BMPs for a Priority Development Project, including justification of why one BMP is selected over another. For a Priority Development Project where a treatment control BMP with a low removal efficiency ranking (as identified by the Model SUSMP) is proposed, the analysis shall include a detailed and adequate justification exhibiting the reasons implementation of a treatment control BMP with a higher removal efficiency is infeasible for the Priority Development Project or portion of the Priority Development Project.

**Flow Duration** – The long-term period of time that flows occur above a threshold that causes significant sediment transport and may cause excessive erosion damage to creeks and streams (not a single storm event duration). The simplest way to visualize this is to consider a histogram of pre- and post-project flows using long-term records of hourly data. To maintain pre-project flow duration means that the total number of hours (counts) within each range of flows in a flow-duration histogram cannot increase between the pre- and post-project condition. Flow duration within the range of geomorphologically significant flows is important for managing erosion.

**GIS** – Geographic Information System

**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 USEPA in 40 CFR 116 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** - Hazardous waste is 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, Article 1].

**Household Hazardous Waste** – Paints, cleaning products, and other wastes generated during home improvement or maintenance activities.

**Hydromodification** – 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 result in increased stream flows and sediment transport. In addition, alteration of stream and river channels, installation of dams and water impoundments, and excessive streambank and shoreline erosion are also considered hydromodification, due to their disruption of natural watershed hydrologic processes.

**Illicit Connection** – Any connection to the MS4 that conveys an illicit discharge.

**Illicit Discharge** - Any discharge to the MS4 that is not composed entirely of storm water except discharges pursuant to a NPDES permit and discharges resulting from fire fighting activities [40 CFR 122.26(b)(2)].

**Implementation Assessment** – Assessment conducted to determine the effectiveness of Copermittee programs and activities in achieving measurable targeted outcomes, and in determining whether priority sources of water quality problems are being effectively addressed.

**Inactive Slopes** – Slopes on which no grading or other soil disturbing activities are conducted for 10 or more days.

**Inland Surface Waters** – all surface waters of the State that do not include the ocean, enclosed bays, or estuaries.

**Integrated Assessment** – Assessment to be conducted to evaluate whether program implementation is properly targeted to and resulting in the protection and improvement of water quality.

**Jurisdictional Runoff Management Plan (JRMP)** – A written description of the specific jurisdictional runoff management measures and programs that each Copermittee will implement to comply with this Order and ensure that storm water pollutant discharges in runoff are reduced to the MEP and do not cause or contribute to a violation of water quality standards.

**Low Impact Development (LID)** – A storm water management and land development strategy that emphasizes conservation and the use of on-site natural features integrated

with engineered, small-scale hydrologic controls to more closely reflect pre-development hydrologic functions.

**Maximum Daily Action Level (MDAL)** – is the highest allowable daily discharge of a pollutant, over a calendar day (or 24 hour period). For pollutants with action levels expressed in units of mass, the daily discharge is calculated as the total mass of the pollutant discharged over the day. For pollutants with action levels expressed in other units of measurement, the daily discharge is calculated as the arithmetic mean measurement of the pollutant over the day.

**Maximum Extent Practicable (MEP)** – The technology-based standard established by Congress in CWA section 402(p)(3)(B)(iii) for storm water 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 runoff management programs. Their total collective and individual activities conducted pursuant to the 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 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.”*

**Minimum Level** – the concentration at which the entire analytical system must give a recognizable signal and acceptable calibration point. The ML is the concentration in a sample that is equivalent to the concentration of the lowest calibration standard analyzed by a specific analytical procedure, assuming that all the method sample weights, volumes and processing steps have been followed.

**Municipal Separate Storm Sewer System (MS4)** – A conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains): (i) Owned or operated by a State, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State law) 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 or 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 122.26.

**National Pollutant Discharge Elimination System (NPDES)** - The national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits, and imposing and enforcing pretreatment requirements, under Sections 307, 318, 402, and 405 of the CWA.

**NOI** – Notice of Intent

**Non-Storm Water** - All discharges to and from a MS4 that do not originate from precipitation events (i.e., all discharges from a MS4 other than storm water). Non-storm water includes illicit discharges, non-prohibited discharges, and NPDES permitted discharges.

**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.”

**Ocean Waters** – the territorial marine waters of the State as defined by California law to the extent these waters are outside of enclosed bays, estuaries, and coastal lagoons. Discharges to ocean waters are regulated in accordance with the State Board’s California Ocean Plan.

**Order** – Order No. R9-2009-0002 (NPDES No. CAS0108740)

**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. 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.

**Pollution** - As defined in the Porter-Cologne Water Quality Control Act: “the alteration of the quality of the waters of the State by waste, to a degree that unreasonably affects the either of the following: 1) The waters for beneficial uses; or 2) Facilities that serve these beneficial uses.” Pollution may include contamination.

**Pollutants of Concern** – 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 runoff. Pollutants commonly associated with 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 Prevention** - Pollution prevention is defined as practices and processes that reduce or eliminate the generation of pollutants, in contrast to source control BMPs, treatment control BMPs, 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 developments.

**Pre-Project or Pre-Development Runoff Conditions (Discharge Rates, Durations, Etc.)** – Runoff conditions that exist onsite immediately before the planned development activities occur. This definition is not intended to be interpreted as that period before any human-induced land activities occurred. This definition pertains to redevelopment as well as initial development.

**Principal Copermittee** – County of Orange

**Priority Development Projects** - New development and redevelopment project categories listed in Section F.1.d(2) of Order No. R9-2009-0002.

**Receiving Waters** – Waters of the United States.

**Receiving Water Limitations (RWLs)** - Waste discharge requirements issued by the Regional Board 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 existing roadways; new sidewalk construction, pedestrian ramps, or bikelane on existing roads; and routine replacement of damaged pavement, such as pothole repair.

**Retain** – to keep or hold in a particular place, condition, or position without discharge to surface waters.

**Runoff** - All flows in a storm water conveyance system that consists of the following components: (1) storm water (wet weather flows) and (2) non-storm water including dry weather flows.

**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.

**Shared Treatment Control BMP** - BMPs used by multiple developments to infiltrate, filter, or treat the required volume or flow prior to discharge to a receiving water. This could include, for example, a treatment BMP at the end of an enclosed storm drain that collects runoff from several commercial developments.

**Source Control BMP** – Land use or site planning practices, or structural or nonstructural measures that aim to prevent runoff pollution by reducing the potential for contamination at the source of pollution. Source control BMPs minimize the contact between pollutants and runoff.

**State Water Quality Protection Area** – A nonterrestrial marine or estuarine area designated to protect marine species or biological communities from an undesirable alteration in natural water quality, including, but not limited to, areas of special biological significance that have been designated by the State Water Resources Control Board through its water quality control planning process. Areas of special biological significance are a subset of State Water Quality Protection Areas, and require special protection as determined by the State Water Resources Control Board pursuant to the California Ocean Plan adopted and reviewed pursuant to Article 4 (commencing with Section 13160) of Chapter 3 of Division 7 of the California Water Code and pursuant to the Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Waters and Enclosed Bays and Estuaries of California (California Thermal Plan) adopted by the state board.

**Storm Water** – Per 40 CFR 122.26(b)(13), means storm water runoff, snowmelt runoff and surface runoff and drainage. Surface runoff and drainage pertains to runoff and drainage resulting from precipitation events.

**Standard Storm Water Mitigation Plan (SSMP)** – A plan developed to mitigate the impacts of runoff from Priority Development Projects.

**Third Party Inspectors** - Industrial and commercial facility inspectors who are not contracted or employed by a regulatory agency or group of regulatory agencies, such as the Regional Board or Copermittees. The third party inspector is not a regular facility employee self-inspecting their own facility. The third party inspector could be a contractor or consultant employed by a facility or group of businesses to conduct inspections.

**Total Maximum Daily Load (TMDL)** - 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). The water quality objectives for toxicity provided in the Water Quality Control Plan, San Diego Basin, Region 9, (Basin Plan), state in part...“All waters shall be free of toxic substances in concentrations that are toxic to, or that produce detrimental physiological responses in human, plant, animal, or aquatic life....The survival of aquatic life in surface waters subjected to a waste discharge or other controllable water quality factors, shall not be less than that for the same water body in areas unaffected by the waste discharge”.

**Treatment Control BMP** – Any engineered system designed to remove pollutants by simple gravity settling of particulate pollutants, filtration, biological uptake, media absorption or any other physical, biological, or chemical process.

**Waste** - As defined in CWC 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, 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, non-hazardous solid waste, and inert waste.

**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 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 and Regional Water Boards in the Water Quality Control Plans. 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 CWA.)

**Water Quality Standards** - 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 State** - Any water, surface or underground, including saline waters within the boundaries of the State [CWC section 13050 (e)]. The definition of the Waters of the State is broader than that for the Waters of the United States in that all water in the State is considered to be a Waters of the State regardless of circumstances or condition. Under this definition, a MS4 is always considered to be a Waters of the State.

**Waters of the United States** - As defined in the 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).

**Watershed Runoff Management Plan (WRMP)** – A written description of the specific watershed runoff management measures and programs that each watershed group of Copermittees will implement to comply with this Order and ensure that storm water pollutant discharges in runoff are reduced to the MEP and do not cause or contribute to a violation of water quality standards.

**WDRs** – Waste Discharge Requirements

**Wet Season** – October 1 through April 30 of each year.

**ATTACHMENT D****SCHEDULED SUBMITTALS SUMMARY**

<b>Submittal</b>	<b>Permit Section</b>	<b>Completion Date</b>	<b>Frequency</b>
Prohibitions on dry-weather discharges listed in Section B.2	B.2	365 days after adoption and in annual reports	Annual
Submit Certified Statement of Adequate Legal Authority	E.2	365 days after adoption of the Order	One time
Flood Control Structure BMP Inventory and Evaluation	F.3.a.(4)	2 <sup>nd</sup> year JRMP Annual Report	One time
Fiscal Analysis	H.3	With annual JRMP report	Annual
Updated Jurisdictional Runoff Management Plans	K.1.a	365 days after adoption of the Order	One time
Updated Watershed Workplans	K.1.b	365 days after adoption of the Order	One time
Updated model SSMP	F.1.d, K.2.a	Two years after adoption of the Order	One time
Updated local SSMPs and amended ordinances and certified statement of adequate legal authority to implement LID and hydromodification requirements	E.2, F.1.d, K.2.a	180 days after RB determination that Model SSMP is in compliance	One time
Identify and remove barriers to LID implementation	F.1.d.(4)(a)(v)	2 <sup>nd</sup> year JRMP Annual Report	One time
Report of Waste Discharge	K.2.b	At least 210 days prior to expiration of this Order	One time
Submit to Principal Copermittee(s) individual JRMP Annual Reports	K.3.a.(1)	Prior to September 30, 2011 and annually thereafter (Principal Copermittee specifies date of submittal)	Annual
Principal Copermittee submits JRMP Annual Reports to Regional Board	K.3.a.(2)	September 30, 2011 and annually thereafter	Annual
Principal Copermittee submits Notification of Principal Copermittee	M	180 days after adoption of the Order	One Time
Principal Copermittee submits description of Receiving Waters Monitoring Program	Monitoring and Reporting Program (M&R Program), III.A.1	September 1, 2010 and annually thereafter	Annual
Receiving Waters and Runoff Monitoring Annual Reports	M&R Program, III.A.2	October 1, 2011 and annually thereafter	Annual
Principal Copermittee submits interim Receiving Waters Monitoring Program Annual Report	M&R Program, III.B	January 31, 2011	One Time
Hydromodification Management Plan	F.1.h.4	Draft within 2 years of adoption of the Order	One Time for Draft
Trash and Litter Impairment Special Study	M&R Program II.D.5	Draft Monitoring Protocol and Locations within 365 days of Order adoption	One Time

**Jurisdictional Runoff Management Program Annual Report Checklist**

In the JRMP Annual Report each Copermitttee shall provide an Annual Report Checklist. The Annual Report Checklist must be no longer than 2 pages, be current as of the 1<sup>st</sup> day of the rainy season of that year, and include a signed certification statement. The Annual Report Summary Checklist must provide the following information:

Order Requirements

Were All Requirements of this Order Met?

Construction

Number of Active Sites  
Number of Inactive Sites  
Number of Sites Inspected  
Number of Inspections  
Number of Violations  
Number of Construction Enforcement Actions Taken

New Development

Number of Development Plan Reviews  
Number of Grading Permits Issued  
Number of Projects Exempted from Interim/Final Hydromodification Requirements

Post Construction Development

Number of Priority Development Projects  
Number of SUSMP Required Post-Construction BMP Inspections  
Number of SUSMP Required Post-Construction BMP Violations  
Number of SUSMP Required Post-Construction BMP Enforcement Actions Taken

Illicit Discharges and Connections

Number of IC/ID Inspections  
Number of IC/ID Detections by Staff  
Number of IC/ID Detections from the Public  
Number of IC/ID Eliminations  
Number of IC/ID Violations  
Number of IC/ID Enforcement Actions Taken

MS4 Maintenance

Number of Inspections Conducted  
Amount of Waste Removed  
Total Miles of MS4 Inspected

Municipal/Commercial/Industrial

Number of Facilities  
Number of Inspections Conducted  
Number of Facilities Inspected  
Number of Violations  
Number of Enforcement Actions Taken

**Attachment E**

**RECEIVING WATERS AND MS4 DISCHARGE MONITORING AND REPORTING PROGRAM NO. R9-2009-0002**

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## **I. PURPOSE**

- A. This Receiving Waters and MS4 Discharge Monitoring and Reporting Program is intended to meet the following goals:
1. Assess compliance with Order No. R9-2009-002;
  2. Measure and improve the effectiveness of the Copermittees' runoff management programs;
  3. Assess the chemical, physical, and biological impacts to receiving waters resulting from MS4 discharges;
  4. Characterize storm water discharges;
  5. Identify sources of specific pollutants;
  6. Prioritize drainage and sub-drainage areas that need management actions;
  7. Detect and eliminate illicit discharges and illicit connections to the MS4; and
  8. Assess the overall health of receiving waters.
  9. Provide information to implement required BMP improvements
- B. In addition, this Receiving Waters and MS4 Discharges Monitoring and Reporting Program is designed to answer the following core management questions<sup>1</sup>:
1. Are conditions in receiving waters protective, or likely to be protective, of beneficial uses?
  2. What is the extent and magnitude of the current or potential receiving water problems?
  3. What is the relative MS4 discharge contribution to the receiving water problem(s)?
  4. What are the sources of MS4 discharge that contribute to receiving water problem(s)?
  5. Are conditions in receiving waters getting better or worse?

## **II. MONITORING PROGRAM**

### **A. Receiving Waters Monitoring Program**

Each Copermittee must collaborate with the other Copermittees to develop, conduct, and report on a year-round watershed based Receiving Waters Monitoring Program. The monitoring program design, implementation, analysis, assessment, and reporting must be conducted

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<sup>1</sup> Core management questions from "Model Monitoring Program for Municipal Separate Storm Sewer Systems in Southern California: A report from the Stormwater Monitoring Coalition's Model Monitoring Technical Committee." Technical Report No. 419. August 2004.

on a watershed basis for each of the watershed management areas. The monitoring program must be designed to meet the goals and answer the questions listed in section I above. The monitoring program must include the following components:

**1. MASS LOADING STATION (MLS) MONITORING**

- a. Locations: The following existing mass loading stations must continue to be monitored: Laguna Canyon, Aliso Creek, San Juan Creek, Trabuco Creek, Prima Deshecha Channel, and Segunda Deshecha Channel.
- b. Frequency: Each mass loading station to be monitored in a given year must be monitored twice during wet weather events and twice during dry weather flow conditions.
- c. Timing: Each mass loading station must be monitored for the first wet weather event of the season which meets the USEPA's criteria as described in 40 CFR 122.21(g)(7). Monitoring of the second wet weather event must be conducted after February 1. Dry weather mass loading monitoring events must be sampled at least three months apart between May and October. If flows are not evident in September or October for the second event, then sampling must be conducted during non-rain events in the wet weather season.
- d. Protocols: Protocols for mass loading sampling and analysis must be SWAMP comparable. At a minimum, analytical methods, target reporting limits, and data reporting formats should be SWAMP comparable. If the mass loading sampling and analysis are determined to be impracticable with the SWAMP standards, the Copermitees must provide explanation and discussion to this effect in the Receiving Waters and MS4 Discharge Monitoring Annual Report. Wet weather samples may be time-weighted composites, collected for the duration of the entire runoff event, where practical, consistent with methods used by the Copermitees during for the Receiving Waters Monitoring Program conducted for Regional Board Order No. R9-2002-01. Where such monitoring is not practical, such as for large watersheds with significant groundwater recharge flows, composites must be collected at a minimum during the first 3 hours of flow. Dry weather event sampling may be time-weighted composites composed of 24 discrete hourly samples, whereby the mass loads of pollutants are calculated as the product of the composite sample concentration and the total volume of water discharged past the monitoring point during the time of

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sample collection.

- (1) Automatic samplers must be used to collect samples from mass loading stations.
  - (2) Grab samples must be analyzed for temperature, pH, specific conductance, biochemical oxygen demand, oil and grease, total coliform, fecal coliform, enterococcus and for total petroleum hydrocarbons whenever a sheen is observed.
- e. Copermittees must measure or estimate flow rates and volumes for each mass loading station sampling event in order to determine mass loadings of pollutants. Data from nearby USGS gauging stations may be utilized, or flow rates may be estimated in accordance with the USEPA Storm Water Sampling Guidance Document (EPA-833-B-92-001), Section 3.2.1.
- f. In the event that the required number of events is not sampled during one monitoring year at any given station, the Copermittees must submit, with the subsequent Receiving Waters Monitoring Annual Report, a written explanation for a lack of sampling data, including streamflow data from the nearest USGS gauging station.
- g. The following constituents must be analyzed for each monitoring event at each station:

Table 1. Analytical Testing for Mass Loading, Urban Stream Bioassessment (excluding bacteriological), and Ambient Coastal Receiving Waters Stations

<b>Conventionals, Nutrients, Hydrocarbons</b>	<b>Pesticides</b>	<b>Metals (Total and Dissolved)</b>	<b>Bacteriological</b>
<ul style="list-style-type: none"> <li>• Total Dissolved Solids</li> <li>• Total Suspended Solids</li> <li>• Turbidity</li> <li>• Total Hardness</li> <li>• pH</li> <li>• Specific Conductance</li> <li>• Temperature</li> <li>• Dissolved Oxygen</li> <li>• Total Phosphorus</li> <li>• Dissolved Phosphorus</li> <li>• Nitrite °</li> <li>• Nitrate °</li> <li>• Total Kjeldahl Nitrogen</li> <li>• Ammonia</li> </ul>	<ul style="list-style-type: none"> <li>Diazinon</li> <li>Chlorpyrifos</li> <li><i>Malathion</i></li> <li><i>Carbamates*</i></li> <li><i>Pyrethroids*</i></li> </ul>	<ul style="list-style-type: none"> <li>Arsenic</li> <li>Cadmium</li> <li>Chromium</li> <li>Copper</li> <li>Lead</li> <li>Nickel</li> <li>Selenium</li> <li>Zinc</li> </ul>	<ul style="list-style-type: none"> <li>Total Coliform</li> <li>Fecal Coliform</li> <li>Enterococcus</li> </ul>

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<ul style="list-style-type: none"> <li>• Biological Oxygen Demand, 5-day</li> <li>• Chemical Oxygen Demand</li> <li>• Total Organic Carbon</li> <li>• Dissolved Organic Carbon</li> <li>• Methylene Blue Active Substances</li> <li>• Oil and Grease</li> </ul>			
<p>° Nitrate and nitrite may be combined and reported as nitrate + nitrite. * Carbamate and Pyrethroid pesticides must initially be monitored in Prima Deshecha and Segunda Deshecha watersheds. If carbamate and/or pyrethroid pesticides are found to correlate with observed acute or chronic toxicity, then that pesticide must be added to all stations displaying toxicity.</p>			

h. Toxicity testing must be conducted for each monitoring event at each station according to the following Table 2:

Table 2. Toxicity Testing for Mass Loading, Urban Stream Bioassessment, and Ambient Coastal Receiving Waters Stations

Program Component	Dry Weather Flows		Storm Water Flows	
	Freshwater Organisms	Estuarine & Marine Organisms	Freshwater Organisms	Estuarine & Marine Organisms
Mass Loading	2 chronic 2 acute	1 chronic**	2 acute	2 chronic 1 acute
Urban Stream Bioassessment	2 chronic* 2 acute*	n/a	n/a	n/a
Ambient Coastal Receiving Waters	n/a	2 chronic 1 acute	n/a	2 chronic 1 acute
Sediment Toxicity Special Study	1 chronic 1 acute 1	n/a	n/a	n/a

Table Notes  
\* Urban Stream Bioassessment on Aliso Creek must also include use of *Pimephales promelas* (fathead minnow) for chronic and acute toxicity testing.  
\*\* Dry weather toxicity monitoring at a mass loading station may be omitted if either (a) the channel flows are diverted year-round in dry weather conditions to the sanitary sewer for treatment; or (b) dry weather toxicity with marine species is occurring at an Ambient Coastal Waters Receiving station where that channel reaches the Pacific Ocean.

Species Notes:  
1. Freshwater acute toxicity testing must include *Hyalella azteca*.

2. Acute toxicity may be determined during the course of chronic toxicity monitoring per U.S. EPA protocols.  
3. *Americamysis bahia* may be used as a marine test organism if *Holmesimysis costata* cannot reasonably be obtained. The use of, and justification for, of *A. bahia* must be clearly reported in each Monitoring Report.

- i. The presence of acute toxicity must be determined in accordance with USEPA protocol (EPA-821-R-02-012). The presence of chronic freshwater toxicity must be determined in accordance with USEPA protocol (EPA-821-R-02-013). The presence of chronic marine toxicity must be determined in accordance with USEPA guidance EPA 600/R95/136, except for chronic mysid tests that must be conducted in accordance with USEPA protocol EPA-821-R-02-014.

## **2. Urban Stream Bioassessment (BA) Monitoring**

Copermittees must conduct Urban Stream Bioassessment Monitoring using a triad of indicators to assess the condition of biological communities in freshwater, urban receiving waters.

- a. Locations: At a minimum, the program shall consist of station identification, sampling, monitoring, and analysis of data for six bioassessment stations in order to determine the biological and physical integrity of urban streams within the County of Orange. At least one urban bioassessment station shall be located within each watershed management area. In addition to the urban stream bioassessment stations, three reference bioassessment stations shall be identified, sampled, monitored, and analyzed. Locations of reference stations must be identified according to protocols outlined in "A Quantitative Tool for Assessing the Integrity of Southern Coastal California Streams," by Ode, et al. 2005.<sup>2</sup>
- b. Frequency: Bioassessment stations which have year round flow conditions must be monitored in May or June (to represent the influence of wet weather on the communities) or September or October (to represent the influence of dry weather flows on the communities). Copermittees shall determine when the annual sampling for stations with year round flow will occur in accordance with the purposes of sampling, as outlined in Section I of

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<sup>2</sup> Ode, et al. 2005. "A Quantitative Tool for Assessing the Integrity of Southern Coastal California Streams." Environmental Management. Vol. 35, No. 1, pp. 1-13.

Attachment E. Those stations that do not have year round flow shall continue to be monitored twice per year. The timing of monitoring of bioassessment stations must coincide with dry weather monitoring of mass loading stations and Inland Aquatic Habitat stations.

- c. Parameters / Methods: The triad of indicators for urban stream bioassessment monitoring must include bioassessment, aquatic chemistry, and aqueous toxicity.
- (1) Aquatic chemistry and aqueous toxicity must be conducted using the same parameters and methods as the mass loading station monitoring, with the addition of pyrethroid pesticides.
  - (2) Bioassessment analysis procedures must include calculation of the Index of Biotic Integrity (IBI) for benthic macroinvertebrates for all bioassessment stations, as outlined in "A Quantitative Tool for Assessing the Integrity of Southern Coastal California Streams," by Ode, et al. 2005.
  - (3) Monitoring of bioassessment stations must be conducted according to bioassessment procedures developed by the Surface Water Ambient Monitoring Program (SWAMP), as amended.<sup>3</sup>
  - (4) Monitoring of bioassessment stations must incorporate assessment of algae in addition to macroinvertebrates, using the USEPA's 1999 Rapid Bioassessment Protocols for Use in Wadeable Streams and Rivers<sup>4</sup> and SWAMP's Incorporating bioassessment using freshwater algae into California's Surface Water Ambient Monitoring Program (SWAMP)<sup>5</sup>. Assessment of freshwater algae must include algal taxonomic composition (diatoms and soft algae) and algal biomass. Future bioassessment shall incorporate algal IBI scores, when developed.

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<sup>3</sup> Ode, P.R.. 2007. Standard operating procedures for collecting macroinvertebrate samples and associated physical and chemical data for ambient bioassessments in California. California State Water Resources Control Board Surface Water Ambient Monitoring Program (SWAMP) Bioassessment SOP 001.

<sup>4</sup> USEPA, 1999. *Rapid Bioassessment Protocols for Use in Wadeable Streams and Rivers*. EPA-841-B-99-002.

<sup>5</sup> Fetscher, E. A., and K. McLaughlin. 2008. Incorporating bioassessment using freshwater algae into California's Surface Water Ambient Monitoring Program (SWAMP). Southern California Coastal Water Research Project. Costa Mesa, CA

- d. A qualified professional environmental laboratory must perform all sampling, laboratory, quality assurance, and analytical procedures.

### **3. FOLLOW-UP ANALYSIS AND ACTIONS**

When results from the required monitoring indicate MS4 discharge induced degradation at a mass loading station, bioassessment, or dry weather discharge station, Copermittees within the watershed must evaluate the extent and causes of MS4 discharge pollution in receiving waters and prioritize and implement management actions to eliminate or reduce sources. Toxicity Identification Evaluations (TIEs) must be conducted to determine the cause of toxicity as outlined in Table 3 below. Other follow-up activities, which must be conducted by the Copermittees, are also identified in Table 3. Once the cause of toxicity has been identified by a TIE, the Copermittees must perform source identification projects as needed and implement the measures necessary to reduce or eliminate the pollutant discharges and abate the sources causing the toxicity.

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Table 3. Triad Approach to Determining Follow-Up Actions<sup>6</sup>

Chemistry	Toxicity	Benthic Alteration	Example Conclusions	Possible Actions or Decisions
1. Exceedance of water quality objectives	Evidence of toxicity	Indications of alteration	Strong evidence of pollution-induced degradation	Use TIE to identify contaminants of concern, based on TIE metric Initiate upstream source identification as a high priority
2. No persistent exceedances of water quality objectives	No evidence of toxicity	No indications of alteration	No evidence of current pollution-induced degradation Potentially harmful pollutants not yet concentrated enough to cause visible impact	No immediate action necessary Conduct periodic broad scans for new and/or potentially harmful pollutants
3. Exceedance of water quality objectives	No evidence of toxicity	No indications of alteration	Contaminants are not bioavailable Test organisms not sensitive to problem pollutants	TIE would not provide useful information with no evidence of toxicity Continue monitoring for toxic and benthic impacts Initiate upstream source identification as a low priority Consider whether different or additional test organisms should be evaluated
4. No persistent exceedances of water quality objectives	Evidence of toxicity	No indications of alteration	Unmeasured contaminant(s) or conditions have the potential to cause degradation Pollutant causing toxicity at very low levels	Recheck chemical analyses; verify toxicity test results Consider additional advanced chemical analyses Use TIE to identify contaminants of concern, based on TIE metric Initiate upstream source identification as a medium priority
5. No persistent exceedances of water quality objectives	No evidence of toxicity	Indications of alteration	Alteration may not be due to toxic contamination Test organisms not sensitive to problem pollutants	No action necessary due to toxic chemicals Initiate upstream source identification (for physical sources) as a high priority Consider whether different or additional test organisms should be evaluated
6. Exceedance of water quality objectives	Evidence of toxicity	No indications of alteration	Toxic contaminants are bioavailable, but in situ effects are not demonstrable Benthic analysis not sensitive enough to detect impact Potentially harmful pollutants not yet concentrated enough to change community	Determine if chemical and toxicity tests indicate persistent degradation Recheck benthic analyses; consider additional data analyses If recheck indicates benthic alteration, perform TIE to identify contaminants of concern, based on TIE metric Initiate upstream source identification as a high priority If recheck shows no effect, use TIE to identify contaminants of concern, based on TIE metric Initiate upstream source identification as a medium priority
7. No persistent exceedances of water quality objectives	Evidence of toxicity	Indications of alteration	Unmeasured toxic contaminants are causing degradation Pollutant causing toxicity at very low levels Benthic impact due to habitat disturbance, not toxicity	Recheck chemical analyses and consider additional advanced analyses Use TIE to identify contaminants of concern, based on TIE metric Initiate upstream source identification as a high priority Consider potential role of physical habitat disturbance
8. Exceedance of water quality objectives	No evidence of toxicity	Indications of alteration	Test organisms not sensitive to problem pollutants Benthic impact due to habitat disturbance, not toxicity	TIE would not provide useful information with no evidence of toxicity Initiate upstream source identification as a high priority Consider whether different or additional test organisms should be evaluated Consider potential role of physical habitat disturbance

#### 4. AMBIENT COASTAL RECEIVING WATERS MONITORING (ACRW)

Copermittees must continue to conduct the Ambient Coastal Receiving Waters Monitoring (ACRW) program to assess the impact of MS4 discharge to ecologically-sensitive coastal areas by analyzing water chemistry and aqueous toxicity in both dry and wet weather and the magnitude of storm water discharge plumes to these areas. Copermittees must prioritize locations for further study and conduct special investigations.

<sup>6</sup> Orange County Storm Water Program, 2006. Report of Waste Discharge (San Diego Region), Section 11.

- a. Locations: Copermittees must assess the existing Ambient Coastal Receiving Waters Monitoring (ACRW) stations to determine whether all ecologically-sensitive areas are represented. Stations must be established within all Areas of Special Biological Significance (ASBS) and Marine Life Refuges that receive significant MS4 discharges.

- (1) Dana Point Harbor must continue to be monitored. ACRW monitoring in Dana Point Harbor may be suspended as long as the Harbor is being monitored pursuant to the Regional Harbor Monitoring Program<sup>7</sup> and follow-up investigations are conducted when appropriate based on guidance from the Storm Water Monitoring Coalition.

- b. Parameters: Aquatic chemistry and aqueous toxicity must be conducted using the same parameters and methods as the mass loading station monitoring.
- c. ACRW monitoring must be concurrent with the mass loading station monitoring whenever feasible.
- d. Special investigations Ambient Coastal Receiving Waters: Special investigations must be designed and conducted to most effectively answer each of questions 1-5 of section I.B above, with an emphasis on answering question 4.

## **5. REGIONAL MONITORING PROGRAMS**

- a. Regional Bacteria Monitoring

The Copermittees shall participate in the development and implementation of monitoring for the collaborative regional bacteria monitoring program. It is expected that the regional monitoring will allow for a more effective and efficient bacteria monitoring program. The regional monitoring plan must be submitted to the Executive Officer for review and approval. Documentation of participation and monitoring shall be included in the annual report.

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<sup>7</sup> On July 24, 2003, the Regional Board required the County of Orange to participate in an Investigative Order to comprehensively assess the receiving water conditions of Dana Point Harbor. The Regional Harbor Monitoring Program is described in the *Regional Technical Report: Harbor Monitoring Program for San Diego Region San Diego Bay, Mission Bay, Oceanside Harbor, and Dana Point Harbor*, MEC Analytical Systems and Brock Bernstein, February 2004.

b. Regional Monitoring Programs

The Regional Board recognizes the importance and advantages of participation by Copermittees in Regional Monitoring Programs. As such, the Copermittees may propose participation in additional regional monitoring programs to supplement and/or replace existing monitoring requirements. The regional monitoring plan must be submitted to the Executive Officer for review and approval. Documentation of participation and monitoring shall be included in the annual report.

**B. Wet Weather MS4 Discharge Monitoring**

Each Copermittee must collaborate with the other Copermittees to develop, conduct, and report on a year-round watershed based Wet Weather MS4 Discharge Monitoring Program. The monitoring program design, implementation, analysis, assessment, and reporting must be conducted on a watershed basis for each of the hydrologic units. The monitoring program must be designed to meet the goals and answer the questions listed in section I above. The monitoring program must include the following components;

1. MS4 OUTFALL MONITORING

The Copermittees must collaborate to develop and implement a monitoring program to characterize pollutant discharges from MS4 outfalls in each watershed during wet weather. The program must include rationale and criteria for selection of outfalls to be monitored. The program must, at a minimum, include collection of samples for those pollutants causing or contributing to violations of water quality standards within the watershed. This monitoring program must be implemented within each watershed and must begin no later than the 2010-2011 monitoring year.

a. The program must comply with Section D of the Order for Storm Water Action Levels (SALs). Samples must be collected during the first 24 hours of the storm water discharge or for the entire storm water discharge if it is less than 24 hours.

1. Grab samples may be utilized only for pH, indicator bacteria, DO, temperature and hardness.

2. All other constituents must be sampled using 24 hour composite samples or for the entire storm water discharge if the storm event is less than 24 hours.
- b. Sampling to compare MS4 outfall discharges with total metal SALs must include a measurement of receiving water hardness at each outfall. If a total metal concentration exceeds a SAL, that concentration must be compared to the California Toxic Rule criteria and the USEPA 1 hour maximum concentration for the detected level of receiving water hardness associated with that sample. If it is determined that the sample's total metal concentration for that specific pollutant exceeds the SAL but does not exceed the applicable 1 hour criteria for the measured level of hardness, then the SAL shall be considered not exceeded for that measurement.

## 2. SOURCE IDENTIFICATION MONITORING

The Copermittees must collaborate to develop and implement a monitoring program to identify sources of pollutants causing the priority water quality problems within each watershed. The monitoring program must include focused monitoring which moves upstream into each watershed as necessary to identify sources. This monitoring program must be implemented within each watershed and must begin no later than the 2010-2011 monitoring year.

### **C. Non-Storm Water Dry Weather Action Levels**

Each Copermittee must collaborate with the other Copermittees to conduct, and report on a year-round watershed based Dry Weather Non-storm Water MS4 Discharge Monitoring Program. The monitoring program implementation, analysis, assessment, and reporting must be conducted on a watershed basis for each of the hydrologic units. The monitoring program must be designed to assess compliance with non-storm water dry weather action levels in section C of this Order, adopted dry weather Total Maximum Daily Loads Waste Load Allocations and assessment of the contribution of dry weather flows to 303(d) listed impairments. The monitoring program must include the following components;

Each Copermittee's program must be designed to determine levels of pollutants in effluent discharges from the MS4 into receiving waters. Each Copermittee must conduct the following dry weather field screening and analytical monitoring tasks:

a. Dry Weather Non-storm Water Effluent Analytical Monitoring Stations

- (1) Stations must be major outfalls. Major outfalls chosen must include outfalls discharging to inland surface waters; to bays, harbors and lagoons/estuaries; and to the surf zone. Other outfall points (or any other point of access such as manholes) identified by the Copermittees as potential high risk sources of polluted effluent or as identified under Section C.3.e shall be sampled.
- (2) Each Copermittee must clearly identify each dry weather effluent analytical monitoring station on its MS4 Map as either a separate GIS layer or a map overlay hereafter referred to as a Dry Weather Non-storm Water Effluent Analytical Stations Map.

b. Develop Dry Weather Non-storm Water Effluent Analytical Monitoring Procedures

Each Copermittee must develop and/or update written procedures for effluent analytical monitoring (these procedures must be consistent with 40 CFR part 136), including field observations, monitoring, and analyses to be conducted. At a minimum, the procedures must meet the following guidelines and criteria:

- (1) Determining Sampling Frequency: Effluent analytical monitoring must be conducted at major outfalls and identified stations. The Copermittees must sample a representative number of major outfalls and identified stations. The sampling must be done to assess compliance with dry weather non-storm water action levels pursuant to section C of this Order. All monitoring conducted must be preceded by a minimum of 72 hours of dry weather.
- (2) If ponded MS4 discharge is observed at a monitoring station, make observations and collect at least one (1) grab sample. If flow is evident a 1 hour composite sample may be taken. Record flow estimation (i.e., width of water surface, approximate depth of water, approximate flow velocity, flow rate).

- (3) Effluent samples shall undergo analytical laboratory analysis for constituents in: *Table 1. Analytical Testing for Mass Loading, Urban Stream Bioassessment, and Ambient Coastal Receiving Waters Stations* and for those constituents with action levels under Section C of this Order. Effluent samples must also undergo analysis for Chloride, Sulfate and Total Dissolved Solids.
  - (4) If the station is dry (no flowing or ponded MS4 discharge), make and record all applicable observations.
  - (5) Develop and/or update criteria for dry weather non-storm water effluent analytical monitoring results:
    - (a) Criteria must include action levels in Section C of this Order.
    - (b) Criteria must include evaluation of LC<sub>50</sub> levels for toxicity to appropriate test organisms
  - (6) Develop and/or update procedures for source identification follow up investigations in the event of exceedance of dry weather non-storm water effluent analytical monitoring result criteria. These procedures must be consistent with procedures required in section F.4.d and F.4.e. of this Order.
  - (7) Develop and/or update procedures to eliminate detected illicit discharges and connections. These procedures must be consistent with the non-storm water dry weather action levels in Section C and with each Copermittees' Illicit Discharge and Elimination component of its Jurisdictional Runoff Management Plan as discussed in section F.4 and F.4.e. of this Order.
- c. Conduct Dry Weather Non-storm Water Effluent Analytical Monitoring

The Copermittees must commence implementation of dry weather effluent analytical monitoring under the requirements of this Order no later than May 1, 2011. If monitoring indicates an illicit connection or illegal discharge, conduct the follow-up investigation and elimination activities as described in submitted dry weather field screening and analytical monitoring procedures and found in sections C, F.4.d and F.4.e of Order No. R9-2009-0002.

- (a) Until the dry weather non-storm water effluent analytical monitoring program is implemented under the requirements of this Order, each Copermitee must continue to implement dry weather field screening and analytical monitoring as it was most recently implemented pursuant to Order No. 2002-01.

#### **D. Special Studies**

1. Aliso Creek bacteria investigation: Each Copermitee within the Aliso Creek watershed must implement the Aliso Creek 13225 Directive Revised Monitoring Program Design – Integration with NPDES Program<sup>8</sup> (December 2004). The Copermitees must include that monitoring program into the overall monitoring and reporting program.
2. The Copermitees must conduct special studies, including any monitoring required for TMDL development and implementation, as directed by the Executive Officer. A TMDL Monitoring Plan must be developed to comply with TMDL Resolution No. R9-2008-0027. The monitoring plan must be submitted within 365 days of Order adoption.
3. Stormwater Monitoring Coalition Regional Monitoring of Southern California's Coastal Watersheds:

The Copermitees must implement the monitoring program developed by the Stormwater Monitoring Coalition for Regional Monitoring of the Southern California's Coastal Watersheds within the San Juan Hydrologic Unit. Each Copermitee must evaluate the results of the monitoring program within and downstream of its jurisdiction and integrate the results into program assessments and modifications.

4. Sediment Toxicity Study

Copermitees must develop, submit to the Regional Board for review, and implement an approved special study which will investigate the toxicity of sediment in urban streams. The Study must be submitted within 24 months of adoption of Order R9-2009-0002. After Regional

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<sup>8</sup> On October 12, 2005, the Regional Board accepted the revised Aliso Creek watershed bacteria monitoring plan proposal from the MS4 Copermitees. The Regional Board concluded that the scope of the current bacteria monitoring in the watershed was no longer warranted and that the proposed changes would constitute an effective interim program until adoption in the future of a Total Maximum Daily Load, requiring a bacteria reduction and assessment program for the watershed. In addition, the Regional Board recognized that as a result of reduced monitoring costs, the municipalities expect to direct additional resources toward implementation of management practices to reduce indicator bacteria and pathogens.

Board review, the Sediment Toxicity Study must be implemented in conjunction with the Urban Stream Bioassessment Monitoring and, at a minimum, contain the following:

- a. Locations: At a minimum, 4 bioassessment locations must be sampled, including 1 reference site.
- b. Frequency: At a minimum, sampling must occur once per year at each site for at least 2 years. Sampling must be done in conjunction with the bioassessment sampling required under Section II.A.2 of the Monitoring and Reporting Program of this Order.
- c. Parameters/Methods: At a minimum, sediment toxicity analysis shall include the measurement of metals, pyrethroids and organochlorine pesticides. Analysis must include estimates of bioavailability based upon sediment grain size, organic carbon and receiving water temperature. Acute and chronic toxicity testing must be done using *Hyalella azteca* in accordance with Table 2.
- d. Results: Results and a Discussion shall be included in the Monitoring Annual Report. The Discussion must include an assessment of the relationship between observed IBI scores under Section II.A.2 and all variables measured.

#### 5. Trash and Litter Impairment Investigation

Copermittees must develop and implement a special investigation beginning no later than 2 years following the adoption of this Order to assess trash (including litter) as a pollutant within receiving waters on a watershed based scale. Litter is defined in California Government Code 68055.1g as "litter means all improperly discarded waste material, including, but not limited to, convenience food, beverage, and other product packages or container constructed of steel, aluminum, glass, paper, plastic and other natural and synthetic materials, thrown or deposited on lands and waters of the state, but not including the properly discarded waste of the primary processing of agriculture, mining, logging, sawmilling, or manufacturing." A lead Copermittee may be selected for each watershed, and will be responsible for the following:

- a. Locations: The lead Copermittee will identify suitable sampling locations within each watershed.

- b. Frequency: Trash at each location shall be monitored a minimum of twice during the wet season following a qualified monitoring storm event (minimum of 0.1 inches preceded by 72 hours of dry weather) and twice during the dry season.
- c. Protocol: The lead Copermittee for each watershed shall use the Final Monitoring Workplan for the Assessment of Trash in San Diego County Watersheds and A Rapid Trash Assessment Method Applied to Waters of the San Francisco Bay Region to develop a monitoring protocol for each Watershed. The draft monitoring protocol, including sampling locations and frequency, shall be submitted to the Regional Board for review no later than 365 days following the adoption of this Order. Although sampling must occur on a watershed basis, a County-wide protocol may be developed that incorporates each individual watershed.
- d. Results and Discussion from the Trash and Litter Impairment Study shall be included in the Monitoring Annual Report.

#### **E. Monitoring Provisions**

All monitoring activities must meet the following requirements:

1. Where procedures are not otherwise specified in this Receiving Waters Monitoring and Reporting Program, sampling, analysis and quality assurance/quality control must be conducted in accordance with the Quality Assurance Management Plan (QAMP) for the State of California's Surface Water Ambient Monitoring Program (SWAMP), adopted by the State Water Resources Control Board (SWRCB).
2. Samples and measurements taken for the purpose of monitoring must be representative of the monitored activity [40 CFR 122.41(j)(1)].
3. The Copermittees must retain records of all monitoring information, including all calibration and maintenance of monitoring instrumentation, copies of all reports required by this Order, and records of all data used to complete the Report of Waste Discharge and application for this Order, for a period of at least five (5) 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 must be extended during the course of any unresolved litigation regarding this discharge. [40 CFR 122.41(j)(2), CWC section 13383(a)]

4. Records of monitoring information must 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.
5. All sampling, sample preservation, and analyses must be conducted according to test procedures approved under 40 CFR part 136, unless other test procedures have been specified in this Receiving Waters Monitoring and Reporting Program or approved by the Executive Officer [40 CFR 122.41(j)(4)].
6. 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 must, 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)]
7. Calculations for all limitations which require averaging of measurements must utilize an arithmetic mean unless otherwise specified in this Receiving Waters Monitoring and Reporting Program. [40 CFR 122.41(l)(4)(iii)]
8. All chemical, bacteriological, and toxicity analyses must be conducted at a laboratory certified for such analyses by the California Department of Health Services or a laboratory approved by the Executive Officer.
9. For priority toxic pollutants that are identified in the California Toxics Rule (CTR) (65 Fed. Reg. 31682), the Copermittees must instruct its laboratories to establish calibration standards that are equivalent to or lower than 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). If a Copermittee 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 Copermittee must submit documentation from the laboratory to the Regional Board for approval prior to raising the ML for any priority toxic pollutant.

10. The Regional Board Executive Officer or the Regional Board may make revisions to this Receiving Waters and MS4 Discharge Monitoring and Reporting Program at any time during the term of Order No. R9-2009-002 and may include a reduction or increase in the number of parameters to be monitored, locations monitored, the frequency of monitoring, or the number and size of samples collected.
11. 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 must, 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)]
12. Monitoring must be conducted according the USEPA test procedures approved under 40 CFR 136, "Guidelines Establishing Test Procedures for Analysis of Pollutants under the Clean Water Act" as amended, unless other test procedures have been specified in this Receiving Waters and MS4 Discharge Monitoring and Reporting Program, in Order No. R9-2009-002, or by the Executive Officer.
13. If the discharger monitors any pollutant more frequently than required by the permit using test procedures approved under 40 CFR part 136, unless otherwise specified in the Order, the results of this monitoring must be included in the calculation and reporting of the data submitted in the reports requested by the Regional Board. [40 CFR 122.41(l)(4)(ii)]

### **III. REPORTING PROGRAM**

#### **A. Monitoring Reporting**

1. Planned Monitoring Program: The Principal Copermittee must submit a description of the Receiving Waters and MS4 Discharge Monitoring Program to be implemented for every monitoring year. The submittals must begin on September 1, 2010, and continue every year thereafter.

The submittals must describe all monitoring to be conducted during the upcoming monitoring year. For example, the September 1, 2010. submittal must describe the monitoring to be conducted from October 1, 2010 through September 30, 2011.

2. Monitoring Annual Report: The Principal Copermittee must submit the Receiving Waters and MS4 Discharge Monitoring Annual Report to the Regional Board on October 1 of each year, beginning on October 1, 2011. Receiving Waters and MS4 Discharge Monitoring Annual Reports must meet the following requirements:
  - a. Annual monitoring reports must include the data/results, methods of evaluating the data, graphical summaries of the data, and an explanation/discussion of the data for each monitoring program component.
  - b. Annual monitoring reports must include a watershed-based analysis of the findings of each monitoring program component. Each watershed-based analysis must include:
    - (1) Identification and prioritization of water quality problems within each watershed.
    - (2) Identification and description of the nature and magnitude of potential sources of the water quality problems within each watershed.
    - (3) Exhibition of pollutant load and concentration increases or decreases at each mass loading and temporary watershed assessment station.
    - (4) Evaluation of pollutant loads and concentrations at mass loading and temporary watershed assessment stations with respect to land use, population, sources, and other characteristics of watersheds using tools such as multiple linear regression, factor analysis, and cluster analysis.
    - (5) Identification of links between source activities/conditions and observed receiving water impacts.
    - (6) Identification of recommended future monitoring to identify and address sources of water quality problems.
    - (7) Results and discussion of any TIE conducted, together with actions that will be implemented to reduce the discharge of pollutants and abate the sources causing the toxicity.
  - c. Aliso Creek Bacteria Investigation: Annual monitoring reports for the Aliso Creek Bacteria Investigation must contain the following information:

- (1) Water quality data and assessment. The report must contain all data collected and an assessment of compliance with applicable water quality standards for each monitoring station;
- (2) Program Assessment. A description and assessment of each municipality's program implemented within the high-priority storm drain locations to reduce storm water discharges of indicator fecal bacteria/pathogens. Water quality monitoring alone is not sufficient to assess progress of the municipal programs. Municipalities must demonstrate each year that their programs are effective and resulting in a reduction of bacteria sources.
  - (a) For structural and nonstructural management practices implemented, the assessment must contain a description of the practice, capital and maintenance costs, expectations for effectiveness, date implemented, and any observed results.
  - (b) For structural and nonstructural management practices implemented, the assessment must contain a description of the practice, capital and maintenance costs, expectations for effectiveness, date implemented, and any observed results
- d. Annual monitoring reports must include discussions for each watershed which answer each of the management questions listed in section I.B of this Receiving Waters Monitoring and Reporting Program.
- e. Annual monitoring reports must identify how each of the goals listed in section I.A of this Receiving Waters Monitoring and Reporting Program has been addressed by the Copermittees' monitoring.
- f. Annual monitoring reports must include identification and analysis of any long-term trends in storm water or receiving water quality. Trend analysis must use nonparametric approaches, such as the Mann-Kendall test, including exogenous variables in a multiple regression model, and/or using a seasonal nonparametric trend model, where applicable.
- g. Annual monitoring reports must provide an estimation of total pollutant loads (wet weather loads plus dry weather loads) due to MS4 Discharge for each of the watersheds specified in Table 3 of Order No. R9-2009-0002.

- h. Annual monitoring reports must, for each monitoring program component listed above, include an assessment of compliance with applicable water quality standards.
  - i. Annual monitoring reports must describe monitoring station locations by latitude and longitude coordinates, frequency of sampling, quality assurance/quality control procedures, and sampling and analysis protocols.
  - j. Annual monitoring reports must use a standard report format and must include the following:
    - (1) A stand alone comprehensive executive summary addressing all sections of the monitoring report;
    - (2) Comprehensive interpretations and conclusions; and
    - (3) Recommendations for future actions.
  - k. All monitoring reports submitted to the Principal Copermittee or the Regional Board must contain the certified perjury statement described in Attachment B of this Order No. R9-2009-0002.
  - l. Annual monitoring reports must be reviewed prior to submittal to the Regional Board by a committee of the Copermittees (consisting of no less than three members).
  - m. Annual monitoring reports must be submitted in both electronic and paper formats. Electronic formats must be CEDEN or SWAMP-uploadable.<sup>9</sup>
3. The Principal Copermittee must submit by July 1, 2010, a detailed description of the monitoring programs to be implemented under requirement II.B.1 of Receiving Waters and MS4 Discharge Monitoring and Reporting Program No. R9-2009-002. The description must identify and provide the rationale for the constituents monitored, locations of monitoring, frequency of monitoring, and analyses to be conducted with the data generated.
4. Monitoring programs and reports must comply with section II.D of Receiving Waters and MS4 Discharge Monitoring and Reporting Program No. R9-2009-002 and Attachment B of Order No. R9-2009-002.

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<sup>9</sup> For updates to the SWAMP templates and formats, see <http://www.waterboards.ca.gov/swamp>.

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5. Following completion of an annual cycle of monitoring in October, the Copermittees must make the monitoring data and results available to the Regional Board at the Regional Board's request.

## **B. Interim Reporting Requirements**

For the October 2009 to October 2010 monitoring period, the Principal Copermittee must submit the Receiving Waters Monitoring Annual Report by January 31, 2011. The Receiving Waters Monitoring Annual Report must address the monitoring conducted to comply with the requirements of Order No. 2002-001.

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**Attachment F**

**SOURCE DATA**

I. STORM WATER ACTION LEVELS.....2

II. NON-STORM WATER NUMERIC ACTION LEVELS .....9

**I. STORM WATER ACTION LEVELS**

<b>N02+NO3 (mg/l)</b>	<b>Phosphorous Total (mg/l)</b>	<b>Cadmium Total (ug/l)</b>	<b>Copper Total (ug/l)</b>	<b>Lead Total (ug/l)</b>	<b>Nickel Total (ug/l)</b>	<b>Zinc Total (ug/l)</b>	<b>Turbidity (NTU)</b>
4.70	7.90	9.80	800.00	660.00	120.00	22500.00	10
4.20	7.19	6.00	340.00	620.00	110.00	18000.00	15
3.90	4.96	6.00	320.00	540.00	100.00	11000.00	15
3.90	4.50	6.00	270.00	520.00	100.00	9970.00	16
3.60	4.40	6.00	244.00	460.00	95.00	9100.00	22
3.60	4.24	6.00	230.00	450.00	89.00	8800.00	23
3.60	2.59	5.30	220.00	450.00	87.00	6500.00	23
3.50	2.59	5.00	220.00	440.00	84.00	5500.00	24
3.30	2.50	4.10	210.00	430.00	81.00	5000.00	24
3.30	2.50	4.00	210.00	400.00	75.00	4900.00	30
3.10	2.50	4.00	209.00	380.00	71.00	4600.00	31
3.00	2.27	4.00	209.00	360.00	69.00	4300.00	33
2.96	2.00	4.00	200.00	350.00	68.00	3800.00	36
2.90	2.00	4.00	200.00	330.00	68.00	3800.00	36
2.70	2.00	4.00	200.00	320.00	64.00	3400.00	39
2.70	2.00	3.90	200.00	320.00	63.00	3390.00	40
2.60	1.90	3.80	200.00	320.00	60.00	3100.00	45
2.60	1.90	3.40	180.00	310.00	60.00	2500.00	50
2.60	1.80	3.40	180.00	310.00	59.00	2200.00	50
2.50	1.80	3.20	166.00	310.00	59.00	2100.00	60
2.50	1.70	3.10	163.00	310.00	58.00	1829.00	61
2.32	1.70	3.00	160.00	300.00	54.00	1700.00	62
2.30	1.70	3.00	150.00	290.00	54.00	1500.00	65
2.20	1.60	3.00	140.00	280.00	54.00	1400.00	65
2.20	1.60	3.00	140.00	270.00	54.00	1300.00	66
2.10	1.60	3.00	140.00	270.00	53.00	1300.00	69
2.10	1.53	3.00	140.00	270.00	53.00	1285.00	70
2.10	1.50	3.00	140.00	270.00	52.00	1200.00	72
2.10	1.50	3.00	130.00	260.00	52.00	1100.00	80
2.00	1.47	3.00	130.00	260.00	47.00	1054.00	84
2.00	1.46	3.00	128.00	250.00	47.00	1000.00	97
2.00	1.40	3.00	120.00	250.00	45.00	980.00	111
2.00	1.40	3.00	120.00	250.00	44.00	960.00	140
1.90	1.40	3.00	120.00	245.00	44.00	850.00	151
1.90	1.30	2.90	120.00	230.00	42.00	850.00	157
1.90	1.30	2.80	120.00	230.00	42.00	850.00	590
1.90	1.30	2.70	111.00	225.00	40.00	850.00	
1.90	1.30	2.60	111.00	220.00	39.00	840.00	
1.80	1.30	2.50	110.00	220.00	36.00	780.00	
1.80	1.30	2.40	110.00	210.00	35.00	768.00	
1.70	1.24	2.40	110.00	210.00	35.00	760.00	
1.70	1.20	2.30	110.00	200.00	34.00	750.00	

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1.70	1.20	2.20	110.00	200.00	33.00	740.00	
1.70	1.20	2.10	110.00	190.00	33.00	740.00	
1.70	1.20	2.00	100.00	190.00	33.00	730.00	
1.70	1.10	2.00	100.00	190.00	33.00	720.00	
1.70	1.10	2.00	100.00	190.00	32.00	710.00	
1.60	1.10	2.00	100.00	170.00	32.00	710.00	
1.60	1.10	2.00	100.00	170.00	32.00	700.00	
1.60	1.06	2.00	100.00	170.00	32.00	700.00	
1.60	1.00	2.00	99.00	160.00	32.00	690.00	
1.60	0.96	2.00	94.00	160.00	30.00	690.00	
1.60	0.96	2.00	91.00	150.00	29.00	680.00	
1.60	0.94	2.00	91.00	150.00	28.00	680.00	
1.53	0.94	2.00	90.00	150.00	27.00	670.00	
1.50	0.92	2.00	90.00	150.00	27.00	660.00	
1.50	0.91	2.00	89.00	150.00	27.00	660.00	
1.50	0.85	2.00	87.00	140.00	27.00	660.00	
1.50	0.85	2.00	87.00	140.00	27.00	650.00	
1.50	0.85	2.00	84.00	140.00	26.00	630.00	
1.50	0.83	2.00	83.00	130.00	26.00	610.00	
1.40	0.83	2.00	82.00	130.00	25.00	610.00	
1.40	0.83	2.00	81.00	130.00	24.50	597.00	
1.40	0.81	2.00	81.00	130.00	24.00	590.00	
1.40	0.81	2.00	77.00	130.00	24.00	590.00	
1.40	0.81	2.00	77.00	123.00	24.00	576.00	
1.40	0.80	2.00	76.00	120.00	24.00	570.00	
1.40	0.80	2.00	74.00	120.00	23.00	570.00	
1.32	0.78	2.00	72.00	120.00	23.00	560.00	
1.30	0.78	1.90	72.00	120.00	23.00	560.00	
1.30	0.77	1.90	72.00	120.00	23.00	540.00	
1.30	0.77	1.90	72.00	115.00	23.00	540.00	
1.30	0.76	1.80	72.00	110.00	23.00	520.00	
1.30	0.76	1.80	71.00	110.00	22.00	520.00	
1.30	0.75	1.80	70.00	110.00	22.00	520.00	
1.30	0.75	1.70	70.00	110.00	22.00	510.00	
1.29	0.75	1.60	67.00	102.00	22.00	500.00	
1.20	0.74	1.60	66.00	100.00	21.00	500.00	
1.20	0.73	1.60	66.00	100.00	21.00	490.00	
1.20	0.72	1.60	66.00	100.00	21.00	480.00	
1.20	0.72	1.60	65.00	100.00	21.00	475.00	
1.20	0.72	1.60	65.00	100.00	21.00	470.00	
1.20	0.71	1.50	63.00	99.00	20.00	470.00	
1.20	0.71	1.50	63.00	97.00	20.00	462.00	
1.20	0.69	1.40	62.00	97.00	20.00	460.00	
1.20	0.68	1.30	62.00	97.00	19.00	460.00	
1.20	0.68	1.30	60.00	95.00	19.00	450.00	
1.20	0.68	1.20	60.00	91.00	19.00	440.00	
1.10	0.68	1.20	59.00	90.00	19.00	440.00	
1.10	0.68	1.20	56.59	90.00	19.00	440.00	

Source Data

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1.10	0.67	1.20	55.00	87.00	19.00	430.00	
1.10	0.66	1.10	55.00	86.00	19.00	430.00	
1.10	0.66	1.10	54.00	86.00	19.00	430.00	
1.10	0.65	1.10	54.00	84.00	18.40	420.00	
1.10	0.65	1.10	54.00	82.00	18.00	420.00	
1.10	0.65	1.10	53.00	82.00	18.00	410.00	
1.10	0.65	1.00	53.00	81.00	18.00	409.00	
1.00	0.63	1.00	52.00	78.00	18.00	400.00	
1.00	0.62	1.00	51.00	78.00	18.00	400.00	
1.00	0.61	1.00	50.00	78.00	17.00	400.00	
1.00	0.60	1.00	50.00	77.00	16.00	390.00	
1.00	0.60	1.00	50.00	76.00	16.00	390.00	
1.00	0.59	1.00	50.00	76.00	15.40	390.00	
0.99	0.57	1.00	50.00	69.00	15.00	390.00	
0.99	0.57	1.00	50.00	69.00	15.00	390.00	
0.98	0.56	1.00	50.00	67.00	15.00	370.00	
0.97	0.56	1.00	50.00	66.00	15.00	370.00	
0.96	0.55	1.00	49.00	66.00	14.00	370.00	
0.96	0.55	1.00	49.00	66.00	14.00	360.00	
0.95	0.55	1.00	49.00	65.00	14.00	360.00	
0.95	0.53	1.00	48.00	64.00	14.00	360.00	
0.93	0.53	1.00	48.00	61.00	14.00	360.00	
0.93	0.53	1.00	47.00	57.00	14.00	350.00	
0.93	0.52	1.00	46.08	57.00	14.00	350.00	
0.93	0.52	1.00	46.00	56.00	14.00	350.00	
0.92	0.52	1.00	46.00	56.00	13.00	340.00	
0.90	0.52	1.00	44.25	53.00	13.00	340.00	
0.88	0.51	1.00	44.00	53.00	13.00	340.00	
0.87	0.51	1.00	44.00	52.60	13.00	340.00	
0.86	0.50	1.00	44.00	52.00	13.00	340.00	
0.85	0.49	1.00	44.00	51.00	13.00	340.00	
0.84	0.49	1.00	43.00	51.00	13.00	334.00	
0.83	0.48	1.00	43.00	50.00	13.00	330.00	
0.81	0.48	1.00	43.00	50.00	13.00	330.00	
0.81	0.48	1.00	42.00	50.00	12.02	330.00	
0.80	0.47	1.00	42.00	50.00	12.00	330.00	
0.80	0.47	1.00	42.00	50.00	12.00	330.00	
0.78	0.47	1.00	41.00	50.00	12.00	330.00	
0.78	0.46	1.00	40.00	50.00	12.00	330.00	
0.77	0.46	1.00	40.00	50.00	12.00	320.00	
0.77	0.46	1.00	40.00	50.00	12.00	320.00	
0.77	0.45	1.00	40.00	50.00	11.40	320.00	
0.74	0.45	1.00	40.00	50.00	11.00	320.00	
0.73	0.44	1.00	39.00	49.00	11.00	310.00	
0.72	0.44	1.00	39.00	47.00	11.00	310.00	
0.69	0.44	1.00	39.00	46.00	11.00	310.00	
0.69	0.44	1.00	39.00	46.00	11.00	308.00	
0.69	0.44	1.00	39.00	44.00	11.00	300.00	

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0.67	0.44	1.00	39.00	44.00	11.00	300.00	
0.67	0.44	1.00	37.00	43.00	11.00	300.00	
0.66	0.43	1.00	37.00	42.00	11.00	300.00	
0.66	0.42	1.00	37.00	41.00	10.50	290.00	
0.65	0.42	1.00	37.00	41.00	10.20	285.00	
0.63	0.41	1.00	37.00	41.00	10.20	280.00	
0.62	0.41	1.00	36.00	41.00	10.10	280.00	
0.62	0.41	1.00	36.00	41.00	10.00	280.00	
0.62	0.40	1.00	36.00	40.10	10.00	280.00	
0.60	0.40	1.00	36.00	40.00	10.00	280.00	
0.59	0.40	1.00	35.00	39.30	10.00	280.00	
0.59	0.40	1.00	35.00	39.00	10.00	280.00	
0.58	0.40	1.00	34.00	39.00	10.00	280.00	
0.57	0.40	1.00	34.00	39.00	10.00	280.00	
0.57	0.40	1.00	33.40	38.00	10.00	270.00	
0.55	0.40	1.00	33.00	38.00	10.00	270.00	
0.52	0.40	1.00	33.00	38.00	10.00	270.00	
0.50	0.40	1.00	33.00	37.00	9.70	270.00	
0.50	0.39	1.00	33.00	36.00	9.30	270.00	
0.46	0.39	1.00	33.00	36.00	9.20	270.00	
0.42	0.39	1.00	32.26	36.00	9.03	260.00	
0.42	0.38	1.00	32.01	36.00	9.00	260.00	
0.35	0.38	1.00	32.00	35.00	9.00	260.00	
0.10	0.38	1.00	32.00	34.00	9.00	260.00	
0.06	0.37	1.00	32.00	34.00	9.00	260.00	
	0.36	1.00	32.00	33.00	9.00	250.00	
	0.36	1.00	32.00	33.00	8.90	250.00	
	0.36	1.00	32.00	33.00	8.79	250.00	
	0.36	1.00	31.00	33.00	8.60	250.00	
	0.35	1.00	31.00	32.00	8.50	247.00	
	0.35	1.00	31.00	32.00	8.50	242.13	
	0.35	1.00	31.00	31.94	8.47	240.00	
	0.35	1.00	30.00	30.00	8.26	240.00	
	0.34	1.00	30.00	30.00	8.00	240.00	
	0.34	1.00	30.00	30.00	8.00	240.00	
	0.34	1.00	30.00	30.00	8.00	240.00	
	0.34	1.00	30.00	30.00	8.00	230.00	
	0.34	1.00	29.00	30.00	8.00	230.00	
	0.34	1.00	29.00	30.00	8.00	220.00	
	0.33	1.00	28.00	29.00	8.00	220.00	
	0.33	1.00	28.00	29.00	8.00	220.00	
	0.33	0.98	28.00	29.00	8.00	210.00	
	0.33	0.94	28.00	29.00	8.00	210.00	
	0.33	0.94	27.19	28.00	8.00	210.00	
	0.33	0.92	27.00	28.00	7.80	210.00	
	0.32	0.90	27.00	28.00	7.70	210.00	
	0.32	0.90	27.00	27.00	7.60	210.00	
	0.32	0.86	26.00	27.00	7.60	210.00	

	0.32	0.80	26.00	26.31	7.42	205.00	
	0.32	0.80	26.00	26.00	7.40	202.79	
	0.31	0.71	25.00	26.00	7.31	202.00	
	0.31	0.70	25.00	25.00	7.20	200.00	
	0.30	0.70	25.00	25.00	7.10	200.00	
	0.30	0.60	24.00	25.00	7.00	200.00	
	0.30	0.60	24.00	24.60	7.00	200.00	
	0.30	0.59	23.00	24.00	6.90	200.00	
	0.30	0.59	23.00	24.00	6.70	200.00	
	0.30	0.52	23.00	24.00	6.00	200.00	
	0.30	0.50	23.00	24.00	6.00	194.49	
	0.29	0.50	23.00	23.00	6.00	190.00	
	0.29	0.50	22.00	23.00	6.00	190.00	
	0.29	0.50	22.00	23.00	6.00	190.00	
	0.29	0.50	21.00	23.00	6.00	190.00	
	0.29	0.50	21.00	23.00	6.00	184.13	
	0.29	0.50	21.00	23.00	6.00	180.00	
	0.28	0.50	21.00	22.20	6.00	180.00	
	0.28	0.50	20.36	22.00	5.92	180.00	
	0.28	0.50	20.00	22.00	5.90	180.00	
	0.27	0.50	20.00	22.00	5.40	180.00	
	0.27	0.50	20.00	22.00	5.13	180.00	
	0.27	0.50	20.00	21.20	5.10	180.00	
	0.26	0.50	20.00	21.10	5.00	170.00	
	0.26	0.40	19.00	21.00	5.00	170.00	
	0.26	0.40	19.00	20.00	5.00	170.00	
	0.26	0.40	18.00	19.10	5.00	170.00	
	0.25	0.30	18.00	19.00	5.00	160.00	
	0.25	0.30	18.00	19.00	5.00	160.00	
	0.25	0.30	18.00	19.00	5.00	160.00	
	0.25	0.30	18.00	19.00	5.00	160.00	
	0.25	0.30	17.00	18.50	5.00	160.00	
	0.25	0.30	17.00	18.00	5.00	160.00	
	0.24	0.20	17.00	18.00	5.00	160.00	
	0.24	0.20	17.00	18.00	5.00	160.00	
	0.24	0.20	17.00	18.00	5.00	160.00	
	0.23	0.04	17.00	17.00	4.80	160.00	
	0.23		17.00	17.00	4.74	150.00	
	0.23		17.00	17.00	4.70	150.00	
	0.23		17.00	17.00	4.60	150.00	
	0.22		16.00	17.00	4.55	150.00	
	0.22		16.00	17.00	4.38	150.00	
	0.22		16.00	17.00	4.16	146.00	
	0.22		16.00	17.00	4.00	145.00	
	0.22		16.00	17.00	4.00	140.00	
	0.22		15.00	16.90	4.00	140.00	
	0.22		15.00	16.00	3.64	140.00	
	0.21		15.00	15.00	3.60	140.00	

	0.21		15.00	15.00	3.50	140.00	
	0.21		15.00	15.00	3.00	140.00	
	0.21		14.50	15.00	3.00	140.00	
	0.21		14.00	15.00	2.80	140.00	
	0.21		14.00	14.00	2.00	140.00	
	0.20		14.00	14.00	1.00	140.00	
	0.20		14.00	14.00	1.00	136.55	
	0.20		14.00	13.00		135.60	
	0.20		14.00	13.00		130.00	
	0.20		13.00	13.00		130.00	
	0.20		13.00	13.00		130.00	
	0.20		13.00	13.00		130.00	
	0.20		13.00	12.00		130.00	
	0.20		13.00	12.00		130.00	
	0.19		13.00	12.00		130.00	
	0.19		12.00	12.00		127.00	
	0.19		12.00	12.00		124.00	
	0.19		12.00	12.00		122.05	
	0.19		12.00	11.00		120.00	
	0.19		11.00	11.00		120.00	
	0.19		11.00	11.00		120.00	
	0.18		10.00	10.00		120.00	
	0.18		10.00	10.00		112.11	
	0.18		10.00	10.00		110.00	
	0.18		10.00	10.00		110.00	
	0.18		9.60	10.00		110.00	
	0.18		9.60	10.00		110.00	
	0.17		9.10	10.00		110.00	
	0.17		9.10	10.00		110.00	
	0.17		9.00	10.00		110.00	
	0.17		8.30	9.60		110.00	
	0.17		8.20	9.40		110.00	
	0.16		8.00	9.10		108.00	
	0.15		8.00	9.00		100.00	
	0.15		7.70	9.00		100.00	
	0.15		7.70	9.00		100.00	
	0.15		7.00	9.00		100.00	
	0.15		7.00	8.00		100.00	
	0.15		6.80	8.00		100.00	
	0.14		6.80	8.00		99.00	
	0.14		6.80	8.00		98.00	
	0.14		6.50	8.00		97.00	
	0.14		6.50	8.00		93.40	
	0.14		6.30	8.00		92.00	
	0.14		6.30	7.60		92.00	
	0.14		6.10	7.50		90.00	
	0.13		5.60	7.00		90.00	
	0.13		5.40	7.00		90.00	

	0.13		5.20	6.00		86.00	
	0.13		5.00	6.00		83.00	
	0.13		4.90	6.00		81.00	
	0.12		4.50	5.90		81.00	
	0.12		4.10	5.80		80.00	
	0.12		4.10	5.40		80.00	
	0.11		3.90	5.00		80.00	
	0.11		3.40	5.00		80.00	
	0.11		2.60	5.00		80.00	
	0.11		2.60	5.00		79.00	
	0.10		2.60	5.00		73.00	
	0.10		2.30	5.00		72.00	
	0.10		2.00	4.80		70.00	
	0.10		2.00	4.80		70.00	
	0.09		1.70	4.70		70.00	
	0.08		1.50	4.60		70.00	
	0.06		1.50	4.00		64.00	
	0.03		1.50	4.00		63.00	
			1.40	3.80		61.00	
			1.40	3.00		60.00	
				3.00		56.00	
				2.30		44.00	
				2.00		40.00	
				1.60		37.00	
						35.00	
						30.00	
						26.00	
						24.00	
						20.00	
						10.00	
						5.00	

## II. NON-STORM WATER ACTION LEVELS

Site	Chromium	Nickel	Copper	Zinc	Silver	Cadmium	Lead	Total Coliform	Fecal Coliform	Enterococcus	Dissolved Oxygen	pH	Turbidity	Nitrate as N	Surfactants (MBAS)	Reactive Phosphorus
	µg/L							CFU/100mL			mg/L		NTU	mg/L		
AVJ01P26	<8.00	4.7	7.3	230	<2.00	<1.00	<2.00	41,000	21,000	5,100	7.92	7.5	12.2	3.9	0.4	2.88
AVJ01P26	<8.00	5.4	11	22	<2.00	<1.00	<2.00	30,000	21,000	45,000	9.73	7.52	2.79	8.3	0.3	2.98
AVJ01P26	<8.00	<4.00	13	45	<2.00	<1.00	<2.00	10,300	8,200	8,400	4.3	8.3	2.8	2.8		1.11
AVJ01P26	<8.00	5.6	8.3	44	<2.00	<1.00	<2.00	44,000	19,400	18,400	8.04	7.91	6.02	2.9		2.55
AVJ01P26	<8.00	32	39	140	<2.00	1.4	7.5	67,000	46,000	32,000	7.76	7.72	9.24	2.7		1.88
AVJ01P26	1.1	6.7	8	28	<0.50	0.51	<0.50	330,000	22,000	24,000	6.48	8.17	2.53	3.9	0.1	1.72
AVJ01P26	2.3	8.3	7.3	25	0.79	2	1.6	410,000	20,000	16,000	7.85	7.82	6.03	5.6	<0.05	2.87
AVJ01P26	<0.50	4.2	2.5	9.6	<0.50	<0.50	<0.50	130,000	21,000	6,000	7.8	7.85	2.5	4.1	<0.04	1.96
AVJ01P26	0.89	7	8.5	28	<0.50	<0.50	<0.50	NR	NR	NR	7.76	7.78	4.26	8.6	0.17	3.87
AVJ01P26	<0.50	5.3	5.1	21	<0.50	<0.50	<0.50	160,000	38,000	11,000	5.83	7.55	2.36	4.4	0.14	4.33
AVJ01P26	<0.50	4.3	7.8	11	<0.50	<0.50	<0.50	25,000	6,000	22,000	7.15	8	40.4	3.6	0.11	1.98
AVJ01P26	0.66	3.2	6.7	14	<0.50	<0.50	<0.50	28,000	3,100	760	9.51	8.07	3.91	5.4	0.05	2.79
AVJ01P26	<0.50	3.9	6.3	23	<0.50	1.2	<0.50	57,000	3,000	3,600	6.45	8.03	3.31	5.6	0.07	3.26
AVJ01P26	<0.50	4.1	3.6	17	<0.50	<0.50	<0.50	150,000	11,000	11,000	6.59	8.07	6.06	6.7	0.1	3.3
AVJ01P26	<0.50	3	4.3	25	<0.50	<0.50	<0.50	>24,000	220	2,500	8.48	7.95	3.25	5.3	0.23	1.67
AVJ01P26	0.54	3.4	23	15	<0.50	<0.50	<0.50	44,000	7,100	14,700	8.85	8.01	3.02	4.1	0.11	1.82
AVJ01P26	<0.50	4.6	4.4	12	<0.50	<0.50	<0.50	>45,000	10,000	30,000	11.45	7.87	4.36	5.9	0.1	2.7
AVJ01P26	0.57	4.9	3.3	16	<0.50	<0.50	<0.50	56,000	4,100	10,800	8.55	8.03	3.09	11.3	0.1	3.67
AVJ01P27	<8.00	8.5	7.4	55	<2.00	1.8	<2.00				10.67	7.85	23.7	7.6	0.3	4.03
AVJ01P27	<8.00	6.2	14	50	<2.00	1.8	<2.00	89,000	67,000	36,000	8.55	8.08	12.4	6	0.1	3.15
AVJ01P27	<8.00	6	7.7	46	<2.00	1.5	<2.00	88,000	31,000	71,000	7.38	6.97	7.72	8.5	0.15	3.14

AVJ01P27	<8.00	6.9	8.5	44	<2.00	1.5	<2.00	107,000	48,000	8,600	8.65	7.68	14.3	1.5	0.12	0.58
AVJ01P27	<8.00	7	10	130	<2.00	1.5	<2.00	80,000	31,000	33,000	4.73	7.66	11.5	1.9	3.34	2.5
AVJ01P27	<40.00	<20.00	27	91	<10.00	<5.00	<10.00	147,000	104,000	128,000	7.6	7.7	10.8	0.6		<0.06
AVJ01P27	<8.00	19	40	130	<2.00	2.1	<2.00	>200,000	>200,000	50,000	6.88	7.55	11.2	5.6		2.12
AVJ01P27	<8.00	5.2	7.9	47	<2.00	<1.00	<2.00	54,000	44,000	31,000	6.94	7.51	18.7	8.8		3.87
AVJ01P27	<8.00	29	39	130	<2.00	1.5	5.3	53,000	36,000	12,600	12.2	7.5	10.6	5.1		1.31
AVJ01P27	<8.00	28	38	74	<2.00	<1.00	<2.00	148,000	69,000	13,200	7.05	8.27	7.03	5.8	<0.05	2.34
AVJ01P27	2	18	5.6	18	<0.50	1.8	<0.50	350,000	9,000	23,000	5.9	7.9	3.77	6.6	0.2	1.78
AVJ01P27	1.1	11	6	24	<0.50	0.83	<0.50	430,000	>120,000	13,000	8	7.27	4.22	6.2	0.06	2.22
AVJ01P27	2.2	15	16	42	<0.50	2.3	2.8	410,000	120,000	59,000	7.3	7.43	18.9	5.1	0.06	5.3
AVJ01P27	0.94	9.2	4.7	21	<0.50	0.72	<0.50	250,000	58,000	22,000	7.89	7.6	4.33	7.9	<0.05	2.75
AVJ01P27	<0.50	8.5	3.4	23	<0.50	0.77	<0.50	120,000	82,000	20,000	6.68	7.72	3.5	8.2	<0.05	4.27
AVJ01P27	1.6	13	7.1	26	<0.50	1.2	<0.50	73,000	47,000	4,600	9.42	7.61	3.15	7.2	0.06	2.44
AVJ01P27	0.65	8.4	7.6	27	<0.50	0.82	<0.50	150,000	600	6,800	9.1	7.7	5.48	4.8	0.15	2.36
AVJ01P27	0.63	11	4.9	32	<0.50	0.86	<0.50	160,000	70,000	28,000	6.89	7.47	4.47	6.8	0.13	3.85
AVJ01P27	0.97	8.9	5.5	46	<0.50	0.71	<0.50	46,000	11,000	7,000	6.88	7.49	7.25	7.4	0.12	7.55
AVJ01P27	<0.50	5.7	2.6	10	<0.50	<0.50	<0.50	60,000	27,000	19,000	0	7.94	19.6	5.7	0.35	3.04
AVJ01P27	1	8.1	7.1	26	<0.50	1.5	<0.50	86,000	32,000	6,700	8.63	7.62	16.1	8.6	0.08	4.81
AVJ01P27	0.9	6	5.5	19	<0.50	0.84	<0.50	64,000	3,200	1,000	8.15	7.91	6.64	7.6	0.07	3.49
AVJ01P27	0.85	7.2	6.3	51	<0.50	0.87	<0.50	730,000	120,000	230,000	6.03	7.78	15.4	4.9	0.75	3.29
AVJ01P27	0.5	4.1	1.9	4.6	<0.50	<0.50	<0.50	34,000	5,800	5,500	6.17	7.79	7.1	3.5	0.05	1.78
AVJ01P27	<0.50	4.6	1.8	5.7	<0.50	<0.50	<0.50	190,000	7,600	7,000	0	8.25	5.35	4	0.05	2.39
AVJ01P27	1.1	7.3	3.5	15	<0.50	0.87	<0.50	90,000	20,000	10,700	9.61	7.76	4.79	7.2	1.05	2.17
AVJ01P27	1.1	11	5.4	20	<0.50	1.1	<0.50	>96,000	5,200	6,800	8.16	7.91	4.77	11.5	0.1	3.15
AVJ01P27	0.71	7.4	2.9	16	<0.50	0.56	<0.50	>84,000	11,000	29,000	6.09	7.89	5.25	7.9	0.1	2.78
AVJ01P27	0.87	8.8	3.1	8.4	<0.50	0.51	<0.50	>50,000	9,000	7,400	5.36	7.51	4.24	6.1	0.12	3.03
AVJ01P27	0.73	6.9	3	8.2	<0.50	<0.50	<0.50	70,000	3,800	9,100	5.94	7.85	7.92	7.8	0.1	2.18
AVJ01P27	0.72	7.4	4.7	16	<0.50	0.69	<0.50	72,000	6,800	16,700	8.63	7.76	5.53	8	0.1	3.92
AVJ01P27											8.66	7.71	6.33	11.7	0.1	4.03
AVJ01P28	<8.00	9.1	9.8	79	<2.00	<1.00	<2.00				5.14	7.89	22.3	4.6	0.6	3.54
AVJ01P28	<8.00	7.7	19	78	<2.00	<1.00	<2.00	83,000	26,000	6,600	7.22	7.97	7.98	6.5	0.5	4.3

AVJ01P28	<8.00	6.8	8.8	44	<2.00	<1.00	<2.00	94,000	44,000	52,000	8.1	7.11	9.69	8.4	0.35	3.81
AVJ01P28	<8.00	9.5	13	54	<2.00	<1.00	<2.00	119,000	31,000	23,000	10.7	7.89	24.2	2	0.26	0.87
AVJ01P28	<8.00	7.8	9.5	49	<2.00	<1.00	<2.00	101,000	33,000	26,000	4.76	7.98	15.3	2.2	0.5	1.12
AVJ01P28																
AVJ01P28	<8.00	11	12	140	<2.00	<1.00	<2.00	181,000	104,000	48,000	3.06	7.37		5.8	0.65	3.29
AVJ01P28	<8.00	8.9	10	95	<2.00	<1.00	<2.00	>200,000	>200,000	36,000	3.95	7.56	11.1	5.4	0.4	5.34
AVJ01P28																
AVJ01P28	<8.00	10	6.5	55	<2.00	<1.00	<2.00	<200,000	76,000	<200,000	8.63	7.78	20.7	7.4	0.07	5.16
AVJ01P28	<8.00	23	58	98	<2.00	<1.00	<2.00	<200,000	<200,000	44,000	7.05	8.15	67.6	6	0.2	3.44
AVJ01P28	<8.00	9.9	17	52	<2.00	<1.00	<2.00	<200,000	<200,000	54,000	5.09	8.32	27	7.3	0.26	4.84
AVJ01P28	0.52	9.1	11	34	<0.50	0.59	<0.50	>1,200,000	>120,000	15,000	4.58	7.6	4.8	5.4	1	4.91
AVJ01P28	<0.50	11	25	34	<0.50	<0.50	<0.50	840,000	>120,000	8,000	4.51	7.19	5.4	6.3	0.1	4.07
AVJ01P28	0.57	15	6.7	30	<0.50	3.1	0.92	660,000	60,000	13,000	4.91	7.49	5.54	6.6	0.06	4.92
AVJ01P28	<0.50	8.8	6.2	24	<0.50	<0.50	<0.50	>120,000	330,000	29,000	3.62	7.52	8.71	7.2	0.17	5.73
AVJ01P28	<0.50	9.3	8	50	<0.50	0.64	<0.50	770,000	260,000	250,000	7.03	7.75	18.1	8.4	0.12	4.5
AVJ01P28	0.59	13	9.8	47	<0.50	0.83	<0.50	1,010,000	530,000	3,800	4.61	7.63	9.01	5.6	0.4	4.98
AVJ01P28	<0.50	13	8.8	45	<0.50	0.83	<0.50	1,300,000	10,000	19,000	3.55	7.5	9.76	7.2	0.4	5.6
AVJ01P28	0.92	13	9.9	56	<0.50	0.67	<0.50	1,040,000	330,000	63,000	5.6	7.45	12.9	7.8	0.13	7.75
AVJ01P28	0.71	9.2	8.9	39	<0.50	0.57	<0.50	>1,200,000	290,000	8,000	3.13	7.6	10.2	4.8	0.17	5.36
AVJ01P28	<0.50	9	7.7	26	<0.50	0.86	<0.50	770,000	76,000	15,000	0	7.72	9.8	8.9	0.25	5.03
AVJ01P28	<0.50	8.8	11	44	<0.50	0.71	<0.50	530,000	21,000	8,200	5.9	7.62	14.5	9.3	0.45	6.58
AVJ01P28	1.5	11	16	34	<0.50	0.98	<0.50	320,000	11,000	1,700	8.35	7.97	5.96	10.8	3.6	4.26
AVJ01P28	0.51	14	8.6	27	<0.50	1	<0.50	800,000	30,000	16,000	8.01	7.98	11.9	9.2	0.45	3.19
AVJ01P28	<0.50	6.8	4.1	17	<0.50	<0.50	<0.50	310,000	7,000	2,500	7.19	7.87	23.1	7.4	0.15	3.89
AVJ01P28	<0.50	8.1	4.8	20	<0.50	<0.50	<0.50	910,000	38,000	6,000	0	7.87	63.3	9.4	0.3	4.2
AVJ01P28	1.1	11	22	22	<0.50	<0.50	<0.50	2,700,000	23,000	5,800	9.39	8.03	3.86	10.1	0.4	2.19
AVJ01P28	0.84	12	7.9	31	<0.50	0.72	<0.50	280,000	19,000	10,500	8.59	7.78	29.3	7.6	0.42	4.31
AVJ01P28	<0.50	8	5.9	18	<0.50	<0.50	<0.50	930,000	37,000	2,800	8.21	7.97	2.09	6.9	0.1	2.82
AVJ01P28	<0.50	2.7	2.1	7.6	<0.50	<0.50	<0.50	1,230,000	34,000	3,400	8.28	7.82	9.43	2.1	0.22	1.13
AVJ01P28	<0.50	7.8	5.1	20	<0.50	<0.50	<0.50	1,000,000	27,000	6,200	8.59	7.85	7.45	10	0.25	3.85
AVJ01P28								180,000	20,000	5,200	7.25	7.75	18.7	10	0.21	5.8
AVJ01P28											8	7.86	11.5	8.2	0.17	3.98

AVJ01P33	<8.00	6.1	3	15	<2.00	<1.00	<2.00	11,000	3,000	6,100	10.3	7.97	1.49	2.4	<0.05	2
AVJ01P33	<8.00	14	11	39	<2.00	1.5	<2.00	151,000	71,000	72,000	7.17	7.48	260	4.4	<0.05	9.84
AVJ01P33	<8.00	4.2	3.3	17	<2.00	<1.00	<2.00	37,000	14,600	9,700	8.65	7.33	1.81	3.8	<0.05	1.86
AVJ01P33	<8.00	9.1	6.8	69	<2.00	<1.00	<2.00	7,900	1,240	1,630	10.2	7.7	7.34	2.6		1.97
AVJ01P33	<8.00	9.2	15	160	<2.00	<1.00	2.4	199,000	177,000	29,000	8.22	8.38	17.2	8.3	1.4	2.59
AVJ01P33	<8.00	11	8	27	<2.00	<1.00	<2.00	86,000	67,000	123,000	10.23	8.47	1.85	2.3		2.17
AVJ01P33	<0.50	9.4	2.3	10	<0.50	<0.50	<0.50	43,000	3,800	7,000	9.34	7.84	4.75	3.8	0.08	1.91
AVJ01P33	1.7	6.3	15	8.9	<0.50	<0.50	<0.50	110,000	12,000	38,000	8.82	8.34	3.39	2.3	<0.05	2.53
AVJ01P33	<0.50	12	1.2	7.2	<0.50	<0.50	<0.50	19,000	4,300	600	9.36	8.24	0.7	3.3	<0.02	1.77
AVJ01P33	0.65	20	10	52	<0.50	1.2	<0.50	NR	NR	NR	8.65	7.89	6.01	10.3	0.1	13.35
AVJ01P33	<0.50	15	12	21	<0.50	1.1	<0.50	210,000	88,000	29,000	7.46	7.81	376	6.5	0.08	5.16
AVJ01P33	1.1	16	1.7	6.4	<0.50	0.92	<0.50	210,000	5,000	7,000	8.64	8.07	0.79	5.9	0.1	1.43
AVJ01P33	0.95	6.3	4.3	4.4	<0.50	<0.50	<0.50	2,200	400	4,300	10.19	8.3	2.7	4.9	0.07	1.48
AVJ01P33	0.64	14	2.3	6.8	<0.50	0.81	<0.50	33,000	2,700	6,500	7.32	8.21	1.01	5.4	0.05	1.93
AVJ01P33	<0.50	11	1.6	3.3	<0.50	<0.50	<0.50	12,000	1,700	900	8.64	8.19	0.47	5.6	0.05	1.59
AVJ01P33	0.58	4.8	3.5	12	<0.50	<0.50	<0.50	>4,800	160	1,000	10.02	8.16	3.76	3.9	0.1	1.42
AVJ01P33	1	7.5	2.4	11	<0.50	<0.50	<0.50	26,000	700	2,500	11.67	8.09	0.47	4	0.1	1.39
AVJ01P33	0.51	9.2	6	24	<0.50	3	<0.50	>135,000	36,000	7,400	11.04	7.66	2.48	4.7	0.1	6.15
AVJ01P33	0.68	5.8	3.8	7.1	<0.50	<0.50	<0.50	47,000	320	1,170	9.86	8.13	4.23	5.9	0.1	2.17
AVJ02P05	<8.00	6.2	50	120	<2.00	<1.00	3.4	17,650	6,850	20,600	9.21	8.17	3.35	2.1	0.15	0.96
AVJ02P05	<8.00	5.6	11	42	<2.00	<1.00	<2.00	82,000	17,000	33,000	9.2	7.57	15.7	9.1	<0.05	4.2
AVJ02P05	<8.00	<4.00	22	21	<2.00	<1.00	<2.00	92,000	31,000	38,000	9.22	7.54	9.45	4.2	0.65	1.17
AVJ02P05	<8.00	9.9	13	53	<2.00	<1.00	<2.00	38,000	15,800	12,800	9.18	8.23	2.49	7.2	<0.05	1.64
AVJ02P05	<8.00	8.8	14	67	<2.00	1	<2.00	>200,000	124,000	166,000	8.52	8.2	28.2	7.8	0.2	3.75
AVJ02P05	<8.00	12	8.6	40	<2.00	<1.00	<2.00	<200,000	<200,000	164,000	9.02	7.92	6.46	10.6	0.08	4.82
AVJ02P05	1	9.7	9.4	41	<0.50	<0.50	<0.50	50,000	9,000	9,000	9.8	7.85	1.25	4.4	0.06	0.61
AVJ02P05	0.65	8.8	9.1	32	<0.50	<0.50	<0.50	280,000	60,000	11,000	8.8	7.99	4.93	7.8	0.08	3.3
AVJ02P05	1.1	8.5	9	38	<0.50	<0.50	<0.50	22,000	20,000	6,300	8.9	7.9	0.9	5.5	<0.05	0.94
AVJ02P05	0.7	10	6.8	33	<0.50	<0.50	<0.50	NR	NR	NR	9.75	8.06	1.28	5.1	<0.05	0.95
AVJ02P05	0.6	6.3	9.1	29	<0.50	<0.50	<0.50	41,000	7,300	6,600	9.14	8.06	1.28	3.7	<0.05	3.06

AVJ02P05	1.3	3.4	5.9	29	<0.50	<0.50	<0.50	34,000	15,000	6,000	0	7.71	1.34	6.7	<0.01	1.04
AVJ02P05	1.1	8.7	9.4	96	<0.50	1.8	<0.50	9,300	1,300	11,000	9.66	8.04	3.44	7	0.05	3.59
AVJ02P05	1.5	5.8	9.6	36	<0.50	<0.50	<0.50	26,000	4,000	500	6.67	8.09	173	8.4	0.1	2.31
AVJ02P05	0.84	6.9	5.2	19	<0.50	1.2	<0.50	200,000	410,000	48,000	9.07	8.06	5.42	9.7	0.05	3.62
AVJ02P05	0.99	5.7	3.4	30	<0.50	<0.50	<0.50	>2,600	40	160	9.44	8.22	1.41	5.2	0.11	0.99
AVJ02P05	1.4	7.8	7.6	31	<0.50	0.57	<0.50	20,000	340	1,190	11.7	8.25	3.52	10	0.21	1.92
AVJ02P05	1.3	6.4	4.4	9.8	<0.50	0.84	<0.50	>43,000	430	6,200	12.63	7.68	33.8	10.8	0.22	2.03
AVJ02P05	1	5.7	14	28	<0.50	0.63	<0.50	47,000	4,100	15,000	9.87	8.07	6.34	5.1	0.1	0.9
COL02P50	<8.00	<4.00	2.8	55	<2.00	<1.00	<2.00	4,350	3,100	2,400	8.86	7.91	2.66	0.9	<0.05	2.24
COL02P50	<8.00	<4.00	<2.00	18	<2.00	<1.00	<2.00	620	130	280	6.92	7.5	2.24	1.1	<0.05	2.22
COL02P50	<8.00	<4.00	4.8	27	<2.00	<1.00	<2.00	1,490	130	870	6.93	7.07	7.38	1.2	<0.05	2.54
COL02P50	<8.00	5	<2.00	71	<2.00	<1.00	<2.00	530	380	590	8.84	7.55	1.02	1.1	0.13	1.48
COL02P50	<8.00	280	8.9	120	<2.00	88	<2.00	16,400	6,300	11,100	8.5	7.82	10.6	4	0.1	1.24
COL02P50																
COL02P50	<8.00	8.4	<2.00	38	<2.00	<1.00	<2.00	6,300	4,200	3,100	8.91	7.31	0.89	1.1		2.76
COL02P50	<0.50	12	0.97	6.6	<0.50	<0.50	<0.50	6,000	40	50	9.1	7.16	0.45	1.5	<0.05	0.89
COL02P50	<0.50	7.9	0.54	4.8	<0.50	<0.50	<0.50	4,500	20	90	8.39	7.31	0.63	1.9	<0.05	1.76
COL02P50	<0.50	7.5	0.59	4.7	<0.50	<0.50	<0.50	30	20	<10	8.87	7.27	0.4	1.2	<0.05	1.27
COL02P50	<0.50	12	0.8	7.4	<0.50	<0.50	<0.50	3,000	210	80	8.8	7.48	0.67	2.3	0.08	1.6
COL02P50	<0.50	11	<0.50	5.6	<0.50	<0.50	<0.50	190	60	140	10.14	7.19	1.51	1.4	0.1	2.55
COL02P50	<0.50	7.1	1.1	5.8	<0.50	<0.50	<0.50	8,000	600	400	8.52	7.7	0.78	1	0.13	1.48
COL02P50	<0.50	5.8	0.76	12	<0.50	<0.50	<0.50	280	10	<10	9.18	7.54	1.41	1.1	0.05	1.32
COL02P50	<0.50	5.7	1.2	8.6	<0.50	<0.50	<0.50	570	<10	200	8.3	7.67	1.01	1.4	0.05	1.39
COL02P50	<0.50	6	1	6.8	<0.50	<0.50	<0.50	2,300	200	500	8.23	7.65	0.78	1.3	0.05	1.61
COL02P50	<0.50	9.6	3.9	15	<0.50	0.83	<0.50	33,000	50	2,300	8.22	7.41	3.21	3.8	0.1	1.56
COL02P50	<0.50	7.1	2.2	8	<0.50	0.6	<0.50	>6,300	>380	840	9.22	8.04	0.92	2.5	0.12	1.3
COL02P50	<0.50	7.8	1.6	7	<0.50	<0.50	<0.50	>6,600	640	690	7.11	7.75	1.36	3.6	0.1	1.29
COL02P50	<0.50	5.7	1.9	9.2	<0.50	<0.50	<0.50	6,900	60	140	9.1	7.47	1.25	2.5	0.1	1.01
COL02P50											9.73	7.47	0.86	2.4	0.1	1.33
COL02P55	<8.00	61	4.1	33	<2.00	16	<2.00	27,000	18,000	13,000	7.38	8.09	3.98	1.7	<0.05	0.86

COL02P55	<8.00	230	5.9	75	<2.00	75	<2.00	18,700	3,600	5,800	6.86	8.2	8.05	5.2	<0.05	1.15
COL02P55	<8.00	290	4.3	87	<2.00	110	<2.00	6,800	4,100	5,400	7.52	7.42	4.92	6	<0.05	0.4
COL02P55	<8.00	210	5.2	120	<2.00	68	<2.00	16,800	3,900	10,400	9.59	7.95	15.9	3.9	<0.05	2.13
COL02P55	<8.00	6.6	3.2	35	<2.00	<1.00	<2.00	1,140	630	620	8.36	7.6	0.91	0.5	0.08	1.43
COL02P55																
COL02P55	0.61	210	4.8	73	<0.50	49	<0.50	470,000	43,000	113,000	6.83	7.65	15.6	3.8	0.12	1.84
COL02P55	<0.50	75	3.9	18	<0.50	18	<0.50	440,000	200,000	28,000	8.19	7.63	13.6	4	<0.05	2.01
COL02P55	<0.50	61	3.7	22	<0.50	12	<0.50	180,000	80,000	37,000	8.4	7.27	18.8	4.1	0.06	2.62
COL02P55	0.96	220	8.9	66	<0.50	61	<0.50	550,000	110,000	9,000	8.55	7.85	8.43	6.5	0.1	1.99
COL02P55	<0.50	88	6.5	39	<0.50	11	<0.50	640,000	26,000	47,000	6	7.5	8.57	4.6	0.18	2.74
COL02P55	0.63	71	5.1	30	<0.50	5.2	<0.50	67,000	27,000	16,000	7	7.8	5.46	4.5	0.18	2.43
COL02P55	0.51	140	8.1	59	<0.50	34	<0.50	260,000	16,000	11,000	6.24	7.62	7.73	3.8	0.14	1.6
COL02P55	<0.50	100	5.6	35	<0.50	13	<0.50	63,000	28,000	7,200	6.65	7.92	18.9	6.6	0.11	1.94
COL02P55	<0.50	69	4.5	24	<0.50	3.6	<0.50	80,000	30,000	26,000	6.01	8	12.2	4.2	0.05	2.28
COL02P55	<0.50	65	7.8	34	<0.50	4.6	<0.50	>143,000	3,000	23,000	7.2	7.57	14.2	5.1	0.12	2.7
COL02P55	<0.50	93	5	36	<0.50	8.6	<0.50	>86,000	2,100	10,700	6.62	8.04	5.16	5.3	0.12	0.91
COL02P55	<0.50	71	4.5	37	<0.50	3.9	<0.50	370,000	22,000	54,000	4.88	7.73	17.2	6.6	0.23	1.72
COL02P55	<0.50	100	4.8	53	<0.50	6.2	<0.50	76,000	>2,100	5,600	5.52	7.66	7.53	7.9	0.24	0.9
COL02P55											8.78	7.78	19.5	3.9	0.1	0.94
DPK01P04								>200,000	>200,000	35,000	9	7.93	6.91	3.3		0.95
DPK01P04	<8.00	98	7.4	58	<2.00	4.7	<2.00	86,000	16,000	89,000	9.01	7.85	6.57	3.2	0.1	1.65
DPK01P04	<0.50	100	45	35	<0.50	9.3	<0.50	240,000	74,000	11,600	5.91	7.96	8.74	3.5	0.07	1.43
DPK01P04	0.57	79	7.5	28	<0.50	4.5	<0.50	22,000	3,200	3,200	9.04	7.8	19.7	5.1	0.1	1.87
DPK01P04	<0.50	82	5.1	29	<0.50	3.7	<0.50	100,000	19,000	17,000	8.71	7.89	4.79	3.8	0.12	1.85
DPK01P04	3.8	59	7.2	45	<0.50	5.1	<0.50	420,000	690	5,000	8.43	7.83	4.74	24.3	0.11	3.06
DPK01P04	<0.50	93	8.6	32	<0.50	7.1	<0.50	1,200	270	150	9.47	7.53	4.24	3.8	0.14	3.12
DPK01P04	<0.50	90	9.1	26	<0.50	8.9	<0.50	30,000	6,900	9,000	8.45	7.79	6.2	4.2	0.08	1.65
DPK01P04	<0.50	140	5	130	<0.50	12	<0.50	34,000	14,000	5,800	9.39	7.92	5.55	3.4	0.12	1.45
DPK01P04	<0.50	88	9.1	36	<0.50	6.6	<0.50	49,000	11,000	17,000	8.89	7.89	3.47	3.5	0.1	1.76
DPK01P04	0.56	72	6.7	38	<0.50	3.3	<0.50	720,000	28,000	58,000	8.68	7.93	15.3	3.7	0.15	2.03
DPK01P04	0.5	86	7.5	33	<0.50	8.6	<0.50	>22,000	3,300	6,300	8.63	7.85	17.8	3.9	0.12	2.15

DPK01P04	<0.50	93	5.7	20	<0.50	1.4	<0.50	>28,000	1,800	3,300	9.66	8.21	5.2	4.1	0.1	1.06
DPK01P04	<0.50	83	4.6	15	<0.50	1.2	<0.50	86,000	7,400	20,000	8.24	7.94	7.69	4.5	0.1	0.93
DPK01P04											10.23	7.87	4.82	4.1	0.1	1.46
DPL01S02	<8.00	180	4.6	90	<2.00	13	<2.00	69,000	18,000	8,100	7.87	7.8	3.63	4.1	0.33	0.49
DPL01S02	<8.00	170	3	66	<2.00	20	<2.00	21,000	16,000	28,000	11.17	7.27	6.9	2.1	<0.05	<0.06
DPL01S02	<8.00	140	5	71	<2.00	6.5	<2.00	126,000	57,000	8,600	8.97	7.48	4.46	4.3	<0.05	0.24
DPL01S02	<8.00	140	4.7	63	<2.00	5.3	<2.00	46,000	23,000	33,000	4.59	7.58	3.74	1.5	0.18	0.08
DPL01S02	<8.00	170	3.2	100	<2.00	13	<2.00	73,000	22,000	47,000	9.02	7.55	3.63	4.1	0.3	0.29
DPL01S02	12	190	8.4	110	<2.00	12	4.5	10,600	6,300	4,300	13.36	7.75	2.32	4.7	0.08	0.34
DPL01S02	<8.00	150	5.5	92	<2.00	8.1	<2.00	28,000	20,000	12,400	8.08	7.77	2.94	3.8		0.44
DPL01S02	<8.00	160	10	56	<2.00	9.2	<2.00	2,900	2,200	810	11.34	7.66	2.82	4.7		0.28
DPL01S02	<8.00	250	3.7	68	<2.00	26	<2.00	4,600	3,300	4,100	14.7	7.8	2.1	5		0.4
DPL01S02	<8.00	220	2.9	88	<2.00	16	<2.00	76,000	44,000	66,000	13.1	7.9	2.7	5.4	0.1	0.45
DPL01S02	0.66	400	3.8	200	<0.50	48	<0.50	49,000	5,200	1,900	8.6	7.96	1.73	8	0.25	0.33
DPL01S02	0.71	510	6.4	220	<0.50	54	<0.50	120,000	20,000	1,400	8.54	8.27	2.26	9.9	0.09	0.39
DPL01S02	1.1	460	21	230	<0.50	54	<0.50	25,000	5,000	3,200	8.05	7.59	1.36	10.5	0.06	0.37
DPL01S02	0.74	410	4.2	160	<0.50	43	<0.50	33,000	17,000	2,600	8.47	7.75	1.88	9.4	0.1	0.31
DPL01S02	1.1	480	5.6	150	<0.50	34	<0.50	190,000	74,000	7,400	8.59	7.79	2	10.1	0.1	0.24
DPL01S02	0.64	470	4.4	210	<0.50	57	<0.50	3,200	1,190	560	10.27	7.66	1.06	9	0.07	0.27
DPL01S02	0.53	340	4.5	140	<0.50	34	<0.50	33,000	10,000	9,200	8.6	7.83	3.81	7.8	0.2	0.55
DPL01S02	0.75	260	3.9	84	<0.50	23	<0.50	32,000	40	2,300	7.98	7.9	1.46	6.3	0.07	0.45
DPL01S02	0.55	230	4.4	62	<0.50	19	<0.50	33,000	4,200	3,400	9.24	7.49	0.99	7.6	0.07	0.4
DPL01S02	0.66	360	6.7	110	<0.50	35	<0.50	>1,200,000	210,000	48,000	8.81	7.61	2.24	10.3	0.13	0.39
DPL01S02	0.73	300	4.4	140	<0.50	37	<0.50	77,000	5,500	600	9	7.87	1.38	8.8	0.15	0.51
DPL01S02	0.53	280	3.9	98	<0.50	33	<0.50	3,800	300	1,200	9.26	7.81	0.87	7.9	0.06	0.4
DPL01S02	0.51	230	3.1	71	<0.50	30	<0.50	7,500	500	1,400	8.89	7.42	1.33	7.2	0.1	0.32
DPL01S02	0.6	260	3	71	<0.50	35	<0.50	32,000	5,600	3,700	10.81	7.72	3.65	9.9	0.1	0.3
DPL01S02	0.62	320	3	98	<0.50	39	<0.50	42,000	5,200	1,900	8	7.81	1.17	11.1	0.05	0.42
DPL01S02	0.59	320	9.1	130	<0.50	40	<0.50	163,000	3,600	1,110	9.28	7.72	3.02	9.7	0.12	0.23
DPL01S02	0.56	340	3.4	140	<0.50	41	<0.50	36,000	490	860	6.63	8.03	2.77	8.8	0.1	0.3
DPL01S02	0.72	400	4.1	100	<0.50	14	<0.50	49,000	5,300	8,500	7.74	7.85	2.02	8.1	0.09	0.17

DPL01S02	<1.00	250	3	55	<1.00	5.7	<1.00	136,000	3,100	3,500	8.45	8.09	3	7.1	0.12	0.3
DPL01S02	0.52	210	3.7	60	<0.50	11	<0.50	78,000	4,100	3,700	8.09	8.31	2.77	7.8	0.1	0.3
DPL01S02	<1.00	310	5	130	<1.00	24	<1.00	31,000	4,400	3,100	7.96	7.75	2.25	8	0.11	0.3
DPL01S02	0.54	260	5.4	93	<1.00	30	<1.00	>7,500	220	470	9.44	7.73	2.52	7.3	0.1	0.32
DPL01S03	<8.00	5	5	82	<2.00	<1.00	<2.00	61,000	14,300	1,130	11.38	8.02	2.63	7.8	0.15	0.66
DPL01S03	<8.00	8.1	7.1	23	<2.00	<1.00	<2.00	30,000	22,000	42,000	7.93	8.22	3.37	6.1	<0.05	0.62
DPL01S03	<8.00	4.5	9.4	38	<2.00	<1.00	<2.00	19,900	10,500	14,900	1.13	8.25	4.29	2.1	0.19	0.11
DPL01S03	<8.00	5.9	3.4	17	<2.00	<1.00	<2.00	44,000	14,400	14,200	9.87	8.3	4.46	8.6	0.07	0.24
DPL01S03	<8.00	9.9	7.9	35	<2.00	<1.00	2.9	1,590	860	460	7.6	8.1	0.56	8.5	0.1	0.42
DPL01S03	<8.00	11	6.5	31	<2.00	<1.00	<2.00	21,400	16,000	6,300	8.37	8.19	1.79	7.8	<0.05	0.45
DPL01S03	<8.00	11	6.7	20	<2.00	<1.00	<2.00	6,300	4,400	1,670	11.33	7.95	2.84	7.6	0.1	0.2
DPL01S03	<8.00	13	3.3	<10.00	<2.00	<1.00	<2.00	14,200	11,000	5,500	15.2	8.4	2.9	7		0.47
DPL01S03	<8.00	14	4.2	22	<2.00	<1.00	<2.00	46,000	38,000	9,950	15.9	8.55	1.41	7.1	0.2	0.4
DPL01S03	1.2	24	3.1	7.5	<0.50	<0.50	1.6	27,000	6,300	2,100	8.69	8.23	0.66	13.3	<0.05	0.55
DPL01S03	<0.50	29	3.8	4.9	<0.50	<0.50	<0.50	20,000	10,000	3,000	9.41	7.65	1.03	12.7	0.1	0.28
DPL01S03	<0.50	26	4	12	<0.50	<0.50	<0.50	22,000	9,000	3,000	9.46	7.95	2.83	12.1	<0.05	0.47
DPL01S03	<0.50	13	7.6	12	<0.50	<0.50	<0.50	19,000	14,000	5,400	8.52	8.18	4.06	12.1	0.3	0.48
DPL01S03																
DPL01S03	<0.50	13	6.5	2.3	<0.50	<0.50	<0.50	4,000	3,200	480	8.94	8.13	0.8	13.1	<0.05	0.25
DPL01S03	<0.50	23	3.1	7.4	<0.50	<0.50	<0.50	8,400	5,300	560	9.4	8.07	3.53	11.4	<0.05	0.28
DPL01S03	<0.50	15	4.3	5	<0.50	<0.50	<0.50	8,600	6,000	2,300	9.95	8.07	1.67	8.5	<0.05	0.35
DPL01S03	<0.50	19	4	4.4	<0.50	<0.50	<0.50	21,000	100	360	7.72	7.98	1.4	11.8	0.13	0.4
DPL01S03	<0.50	4.7	3.5	2	<0.50	<0.50	<0.50	9,000	7,200	1,400	9.2	7.86	1.22	12.9	0.07	0.46
DPL01S03	0.94	17	9.4	5.2	<0.50	<0.50	<0.50	13,000	10,300	5,300	9.65	7.98	0.93	5.9	<0.05	0.39
DPL01S03	<0.50	8.5	3.2	5.6	<0.50	<0.50	<0.50	8,600	3,500	2,700	9.22	8.17	1.24	12.6	0.06	0.59
DPL01S03	<0.50	5.8	3.8	4.1	<0.50	<0.50	<0.50	9,000	6,100	690	9.25	8.19	4.41	12	0.07	0.61
DPL01S03	<0.50	5	3.7	4	<0.50	<0.50	<0.50	38,000	6,300	1,300	8.52	7.93	6.85	11.1	0.08	0.46
DPL01S03	<0.50	16	4.8	7.5	<0.50	<0.50	<0.50	56,000	23,000	5,400	10.55	8.15	7.51	10.7	0.1	0.44
DPL01S03	<0.50	5.9	2.1	2.2	<0.50	<0.50	<0.50	20,000	12,000	4,300	7.1	8.06	2.76	11.3	0.05	0.22
DPL01S03	<0.50	8.6	6.6	8.1	<0.50	<0.50	<0.50	48,000	8,400	3,300	9.9	8.23	1.61	12.5	0.12	0.49
DPL01S03	<0.50	6.9	3.8	2.9	<0.50	<0.50	<0.50	29,000	4,400	4,400	8.36	8.21	0.69	10.4	0.1	0.3

DPL01S03	0.82	8.5	8.3	6.8	<0.50	<0.50	<0.50	22,000	3,900	2,200	8.7	8.26	1.23	9.4	0.16	0.49
DPL01S03	<1.00	8	4.3	4.3	<1.00	<1.00	<1.00	>930,000	22,000	3,200	9.8	8.19	0.81	10.4	0.33	0.2
DPL01S03	<0.50	4.7	4.3	5.6	<0.50	<0.50	<0.50	32,000	7,000	4,900	9	8.12	3.02	14.3	0.1	0.59
DPL01S03	<0.50	4.3	6.1	6.6	<0.50	<0.50	<1.00	21,000	3,600	740	10.36	8.2	3.76	18.3	0.1	0.32
DPL01S03	<0.50	3.8	7.4	8.2	<0.50	<0.50	<1.00	5,200	350	220	11.73	8.08	2.88	8.3	0.1	0.38
DPL01SCWD	<0.50	130	5.1	28	<0.50	9.8	<0.50	550,000	>120,000	58,000	5.59	7.14	3.14	4.8	0.15	1.33
DPL01SCWD	<0.50	97	3.8	13	<0.50	12	<0.50	42,000	13,000	1,500	5.24	7.27	2.25	2.2	<0.05	0.93
DPL01SCWD	0.64	47	5.8	10	<0.50	3.7	<0.50	2,500	2,100	560	16.96	9.42	3.33	0.9	<0.05	0.08
DPL01SCWD	<0.50	59	6.5	8	<0.50	3.8	<0.50	22,000	9,000	2,700	7.8	7.79	6.46	4.6	0.06	2.73
DPL01SCWD	<0.50	63	4.9	13	<0.50	6.4	<0.50	260,000	113,000	7,200	6.3	8.31	3.6	2.8	<0.05	0.99
DPL01SCWD	0.53	230	4.4	39	<0.50	24	<0.50	25,000	14,000	450	6.75	7.55	2.18	3.7	0.07	0.6
DPL01SCWD	16	130	6.6	22	<0.50	16	<0.50	25,000	40	1,000	4.8	7.59	3.15	5.1	<0.05	0.94
DPL01SCWD	0.83	64	6.6	16	<0.50	5.6	<0.50	360,000	4,200	1,500	14.31	8.42	3.31	1.8	0.17	1.04
DPL01SCWD	<0.50	57	4.5	14	<0.50	2.7	<0.50	210,000	50,000	38,000		7.35	11.4	1.9	0.08	0.92
DPL01SCWD	<0.50	41	3.8	14	<0.50	2.6	<0.50	130,000	28,000	8,000	9.61	7.98	7.7	2.2	<0.05	0.85
DPL01SCWD	<0.50	96	4.4	25	<0.50	12	<0.50	29,000	2,700	3,600	3.03	7.93	2.01	3.9	1	0.69
DPL01SCWD	<0.50	87	3	20	<0.50	7.5	<0.50	31,000	1,200	3,100	7.85	7.85	2.76	2	0.07	0.95
DPL01SCWD	<0.50	85	3.1	17	<0.50	7.6	<0.50	160,000	6,100	16,000	0.2	7.87	1.92	2.8	0.06	1.62
DPL01SCWD	0.5	94	1.9	9.5	<0.50	1.6	<0.50	4,600	900	600	8.5	7.87	1.03	2.8	0.05	1.14
DPL01SCWD	<0.50	79	3.1	25	<0.50	6.8	<0.50	40,000	5,200	2,700	5.02	8	3.83	3.6	0.05	1.12
DPL01SCWD	<0.50	68	4.1	16	<0.50	6.5	<0.50	220,000	5,800	7,900	10.38	8.2	3.22	2.3	0.1	0.63
DPL01SCWD	0.56	89	4.5	24	<0.50	7.6	<0.50	89,000	8,000	5,600	13.23	8.18	4.39	2.6	0.22	0.84
DPL01SCWD	<0.50	76	5.2	12	<0.50	6.9	<0.50	>74,000	7,000	150	13.49	8.11	2.82	2.6	0.1	0.91
DPL01SCWD	<1.00	100	7.4	20	<0.50	8	<0.50	750,000	78,000	32,000	9.86	7.79	2.19	3.7	0.1	1.31
DPL01SCWD	<1.00	130	4.6	40	<1.00	20	<0.50	36,000	5,800	7,600	11.63	8.05	1.95	2.7	0.1	0.92
DPL01SCWD	<0.50	51	6.1	9.2	<0.50	3.6	<0.50	>183,000	>910	1,600	13.14	8.33	2.18	2	0.1	0.84
DPL01SCWD	<0.50	68	4.2	11	<0.50	8.1	<1.00	31,000	910	4,600	11.57	8.11	2.89	3.2	0.1	0.62
DPL01SCWD											9.81	8.07	1.41	2.3	0.1	0.76
DPM00P01	<8.00	130	12	79	<2.00	14	<2.00	14,000	12,400	11,400	9.46	7.71	56.5	3	0.17	2.74
DPM00P01	<8.00	160	14	84	<2.00	16	<2.00	12,200	2,350	6,100	9.53	7.76	10.2	3.1	<0.05	0.51

DPM00P01	<8.00	120	13	57	<2.00	14	<2.00	3,500	2,800	3,900	10.96	7.73	3.57	1.9	0.3	0.4
DPM00P01	<8.00	160	9.4	86	<2.00	15	<2.00	7,300	5,200	7,200	10.34	8.03	6.68	3	0.22	0.61
DPM00P01	<8.00	130	5.5	62	<2.00	12	<2.00	48,000	26,000	26,000	8.71	7.85	5.01	2.5	0.08	1.04
DPM00P01	<8.00	110	12	51	<2.00	9	<2.00	42,000	35,000	9,700	10.26	8.01	9.42	1.9		0.99
DPM00P01	<0.50	120	7.8	41	<0.50	11	<0.50	200,000	17,000	1,600	9.15	7.43	2.6	3.8	<0.05	0.62
DPM00P01	<0.50	110	5.3	31	<0.50	8.3	<0.50	12,100	6,000	1,300	9.35	7.82	3.61	6.1	<0.04	0.86
DPM00P01	<0.50	130	5.4	40	<0.50	13	<0.50	14,000	11,000	900	9.55	7.82	3.3	5.1	<0.05	0.64
DPM00P01	<0.50	130	6.7	42	<0.50	11	<0.50	110,000	2,200	6,000	10.51	7.8	11.3	3.6	0.2	0.84
DPM00P01	<0.50	100	6.7	34	<0.50	8.3	<0.50	50,000	2,300	7,000	9.24	7.67	5.41	4.5	0.12	0.82
DPM00P01	<0.50	120	6.8	34	<0.50	9.5	<0.50	21,000	9,300	9,100	9.5	7.86	5.26	3.2	0.06	0.7
DPM00P01	<0.50	100	7.7	41	<0.50	11	<0.50	3,600	1,100	1,400	9.41	7.94	204	3.8	0.07	0.92
DPM00P01	<0.50	140	5.3	50	<0.50	15	<0.50	53,000	4,400	9,400	7.17	7.78	13.6	5.1	0.08	1.11
DPM00P01	<0.50	79	5.1	29	<0.50	8.4	<0.50	380,000	89,000	>120,000	9.69	7.98	9.93	5	0.05	0.79
DPM00P01	<1.00	73	7.6	31	<0.50	5.2	<0.50	41,000	1,300	2,400	10.36	8.01	5.42	2.4	0.12	0.06
DPM00P01	<0.50	72	5.9	32	<1.00	6.8	<1.00	58,000	12,700	30,000	8.45	7.83	8.25	4.8	0.11	1.12
DPM00P01	<0.50	77	5.2	26	<0.50	6.1	<0.50	>85,000	17,000	24,000	20.19	7.77	7.37	3.1	0.18	0.59
DPM00P01											9.55	7.87	7.11	2.2	0.1	0.4
DPM00P05	<8.00	20	11	32	<2.00	<1.00	<2.00	1,700	265	2,500	23.65	9.01	3.14	0.3	0.14	0.21
DPM00P05	<8.00	15	8.7	51	<2.00	<1.00	<2.00	6,550	1,300	1,400	8.56	8.64	4.37	2.8	<0.05	0.44
DPM00P05	<8.00	10	9.3	13	<2.00	<1.00	<2.00	17,000	14,000	2,900		9.07	2.34	1.8	0.2	<0.06
DPM00P05																
DPM00P05	<8.00	18	3.7	42	<2.00	<1.00	<2.00	9,100	7,800	3,500	7.98	7.41	7.05	1.6	0.12	0.89
DPM00P05																
DPM00P05	<0.50	19	6.6	7.4	<0.50	<0.50	<0.50	17,000	600	1,600	16.82	8.22	1.67	1.6	0.09	0.29
DPM00P05	<0.50	21	6.1	8.1	<0.50	<0.50	<0.50	57,000	7,400	1,000	11.38	7.9	2.2	1.2	<0.03	0.39
DPM00P05	<0.50	19	2.7	7.4	<0.50	<0.50	<0.50	14,000	6,000	700	10.68	8.02	3.27	1.2	<0.05	0.59
DPM00P05	<0.50	25	4.9	11	<0.50	<0.50	<0.50	3,000	110	100	6.86	7.8	1.08	1.3	<0.05	0.27
DPM00P05	<0.50	20	3.8	5.4	<0.50	<0.50	<0.50	640	10	60	8.96	7.45	0.96	1	0.2	0.32
DPM00P05	<0.50	16	3.7	5.1	<0.50	<0.50	<0.50	6,300	3,700	1,800	9.74	7.8	0.56	1.4	0.14	0.29
DPM00P05	<0.50	12	11	5.1	<0.50	<0.50	<0.50	3,200	600	400	11.74	8.41	1.22	1.9	0.08	0.23
DPM00P05	<0.50	8.3	8.7	2.8	<0.50	<0.50	<0.50	6,000	<10	320	5.78	8.76	1.17	3.9	0.07	0.3



LFJ01P01	<0.50	8.4	3.7	8.1	<0.50	<0.50	<0.50	140,000	10,000	7,400	8.53	7.5	0.58	8.7	<0.05	1.07
LFJ01P01	<0.50	15	3.7	14	<0.50	<0.50	<0.50	23,000	11,000	2,200	8.34	7.44	0.84	10.3	0.1	1.2
LFJ01P01	<0.50	8.5	2.2	6.2	<0.50	<0.50	<0.50	57,000	22,000	9,800	7.31	7.8	1.18	11.5	<0.05	1.08
LFJ01P01	<0.50	7.6	1.6	5.3	<0.50	<0.50	<0.50	86,000	16,000	7,900	6.16	7.76	2	10.1	<0.05	1.29
LFJ01P01	1.2	12	22	65	<0.50	<0.50	<0.50	110,000	12,000	11,000	5.26	8.01	5.1	11.9	0.16	1.14
LFJ01P01	<0.50	13	3.8	13	<0.50	<0.50	<0.50	6,700	3,300	2,500	12.35	7.86	3.64	9.7	<0.05	0.98
LFJ01P01	<0.50	3.5	2.6	12	<0.50	<0.50	<0.50	30,000	13,000	2,700	8.5	7.89	0.9	9.8	<0.05	1.2
LFJ01P01	<0.50	11	3.2	15	<0.50	<0.50	<0.50	49,000	44,000	7,000	7.65	7.68	1.49	8.1	<0.05	1.19
LFJ01P01	<0.50	2.7	4	15	<0.50	<0.50	<0.50	53,000	25,000	7,700	8.84	7.73	1.23	8	<0.05	0.9
LFJ01P01	<0.50	4.2	4.2	9.1	<0.50	<0.50	<0.50	97,000	33,000	39,000	7.14	7.98	5.94	8.5	0.08	1.21
LFJ01P01	0.64	2.3	6.3	8.2	<0.50	<0.50	<0.50	24,000	3,200	3,700	8.13	7.99	2.09	9.5	0.05	1.33
LFJ01P01	<0.50	2.1	1.6	6.3	<0.50	<0.50	<0.50	49,000	10,000	10,800	6.9	7.91	1.16	9.2	0.05	1.31
LFJ01P01	0.64	2.5	2.5	10	<0.50	<0.50	<0.50	50,000	13,000	7,000	7.67	7.89	1.46	9.1	0.37	1.97
LFJ01P01	<0.50	2.9	2.1	2.9	<0.50	<0.50	<0.50	39,000	16,000	20,000	7.39	8.01	2.85	8.1	0.05	1.37
LFJ01P01	<0.50	2.4	1.1	5.6	<0.50	<0.50	<0.50	41,000	63,000	3,800	6.29	7.8	2.95	10	0.1	2.16
LFJ01P01	0.53	4.2	3.1	10	<0.50	<0.50	<0.50	>30,000	10,000	44,000	9.04	8.11	2.57	11.6	0.1	2.15
LFJ01P01	<0.50	3.2	4.8	6.3	<0.50	<0.50	<0.50	34,000	7,400	4,600	8.26	8.09	0.96	9.2	0.11	1.02
LFJ01P01	<0.50	4	1.4	6.4	<0.50	<0.50	<0.50	19,000	6,700	3,400	8.17	8.02	1.31	8.1	0.1	1.23
LFJ01P01	<0.50	4.2	2.1	5.1	<0.50	<0.50	<0.50	27,000	12,000	6,300	7.48	7.74	1.41	7.8	0.1	1.38
LFJ01P01	<0.50	2.1	0.95	3.5	<0.50	<0.50	<0.50	61,000	14,000	4,100	8.01	7.7	0.94	10.1	0.1	1.37
LFJ01P01	<0.50	2	3.1	7.7	<0.50	<0.50	<0.50	>9,400	6,700	3,600	8.84	8.02	1.74	9.1	0.1	1.42
LFJ01P01	<0.50	1.7	1.8	5.8	<0.50	<0.50	<0.50	23,000	420	1,900	8.64	7.97	3.5	9.4	0.1	1.84
LFJ01P05	<8.00	9.2	23	65	<2.00	<1.00	2				7.83	8.25	12.2	0.5	1.3	4.47
LFJ01P05	<8.00	7.2	7.9	57	<2.00	<1.00	<2.00	3,600	1,800	5,400	9.13	7.31	14.6	0.4	1.6	3.98
LFJ01P05	<8.00	5.1	8	39	<2.00	<1.00	<2.00	34,000	21,000	110	8.39	7.61	5.47	1.1	0.25	3.24
LFJ01P05	<8.00	9.6	12	64	<2.00	<1.00	<2.00	46,000	5,000	470	8.83	8.11	10.4	0.9	0.35	1.41
LFJ01P05	<8.00	<4.00	4.5	34	<2.00	<1.00	<2.00	7,800	810	880	3.07	8.23	4.24	3.1	0.18	1.83
LFJ01P05																
LFJ01P05	<8.00	8.7	13	72	<2.00	<1.00	2.1	7,900	6,200	2,500	8	8.3	14.8	2.9	0.5	2.62
LFJ01P05																
LFJ01P05	<8.00	6.3	8.8	44	<2.00	<1.00	<2.00	59,000	44,000	5,900	8.27	8.15	8.2	1.7	0.2	2.33

LFJ01P05																
LFJ01P05	0.58	9.6	11	42	<0.50	<0.50	0.51	220,000	32,000	6,600	9.25	7.51	7.43	1.6	0.15	2.01
LFJ01P05	<0.50	5.8	5.9	47	<0.50	<0.50	0.56	410,000	140,000	14,000	8.1	8.03	1.91	1.9	0.22	1.87
LFJ01P05	<0.50	2.8	5.1	27	<0.50	<0.50	1.5	62,000	18,000	560	7.8	8.31	9.4	2.4	<0.05	0.63
LFJ01P05	0.52	5.4	11	45	<0.50	<0.50	0.79	830,000	42,000	19,000	13.79	8.01	8.77	2.7	<0.05	3.89
LFJ01P05	<0.50	12	3.5	15	<0.50	<0.50	<0.50	67,000	16,000	4,100	9.09	8.32	2.95	2	0.15	0.47
LFJ01P05	<0.50	4.6	5.4	41	<0.50	<0.50	0.52	>1,200,000	520,000	12,000	8.07	8.11	3.72	0.8	0.1	0.64
LFJ01P05	1.9	16	44	180	<0.50	<0.50	1.3	60,000	50,000	3,000	7.86	7.81	83.2	2.1	2.72	1.48
LFJ01P05	1.3	4.6	18	24	<0.50	<0.50	<0.50	380,000	52,000	10,200	8.93	8.35	4.56	1.3	0.15	3.33
LFJ01P05	0.84	4.2	17	52	<0.50	<0.50	1.6	240,000	22,000	29,000	8.75	8.36	5.9	1.3	0.1	11.68
LFJ01P05	9.1	8.9	27	50	<0.50	<0.50	1.2	420,000	10,000	120,000	7.46	8.12	6.99	1.7	0.36	2.74
LFJ01P05	0.79	4.2	15	120	<0.50	<0.50	3.1	840,000	44,000	17,000	8.62	8.29	7.13	2	0.15	4.18
LFJ01P05	1.2	12	13	80	<0.50	<0.50	0.82	>1,200,000	81,000	23,000	8.46	8.08	13.9	1.8	0.05	3.95
LFJ01P05	0.55	5.4	8	38	<0.50	<0.50	<0.50	46,000	22,000	2,600	9.25	8.13	5.34	3	0.15	2.16
LFJ01P05	0.82	6.3	10	42	<0.50	<0.50	0.62	64,000	1,320	3,600	9.45	8.33	3.65	2	0.45	1.29
LFJ01P05	0.67	5.1	15	84	<0.50	<0.50	0.7	340,000	35,000	47,000	9.83	8.24	7.88	2	0.1	3.23
LFJ01P05	0.82	5.2	12	55	<0.50	<0.50	0.69	>640,000	41,000	14,400	9.26	8.15	8.02	2	0.1	1.84
LFJ01P05	1.1	8.8	21	220	<0.50	0.63	4	>10,000,000	82,000	540,000	8.64	7.96	7.63	2	0.35	6.58
LFJ01P05	<0.50	2.8	4	18	<0.50	<0.50	<0.50	780,000	29,000	26,000	8.93	7.48	4.45	4	0.25	1.81
LFJ01P05	0.62	2.8	9.7	27	<0.50	<0.50	<0.50	3,900,000	80,000	11,100	8.61	8.13	15	2.6	0.16	1.47
LFJ01P05	<0.50	3	8.7	40	<0.50	<0.50	<0.50	8,000	130	2,500	11.51	8.3	4.96	2	0.16	0.9
LFJ01P05@RR	<0.50	5.4	3.3	13	<0.50	<0.50	<0.50	2,100,000	14,000	28,000	9.71	8.17	9.06	2	6.5	0.85
LFJ01P05@RR	<0.50	5.8	10	32	<0.50	<0.50	2	320,000	3,100	13,000	9.64	8.23	3.76	2	6	1.55
LFJ01P05@RR	<0.50	2.6	3.1	15	<0.50	<0.50	<0.50	>7,300	2,500	2,600	8.95	8.63	9.74	2	0.33	0.5
LFJ01P05@RR																
LFJ01P05@RR																
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LFJ01P05@RR																
LFJ01P08	<8.00	8.6	15	78	<2.00	3.3	<2.00	39,000	16,000	36,750	7.7	8.1	5.68	2.6	0.15	5.42

LFJ01P08	<8.00	6.2	8.9	29	<2.00	2.9	<2.00	38,000	16,000	55,000	6.3	6.65	3.1	2	0.1	1.29
LFJ01P08	<8.00	6.2	6.7	30	<2.00	3.3	<2.00	88,000	14,000	1,540	8.89	7.43	3.81	1.9	<0.05	1.83
LFJ01P08	<8.00	4	6.8	44	<2.00	2.3	<2.00	NR	NR	NR	8.88	8	3.18	2	0.43	1.49
LFJ01P08	<8.00	5.4	8.2	29	<2.00	1.3	<2.00	65,000	56,000	43,000	8.99	8	5.73	1.4	1.7	1.19
LFJ01P08	<8.00	7.6	7	34	<2.00	1.8	<2.00	101,000	38,000	79,000	7.63	7.91	13.6	2.2	0.1	1.5
LFJ01P08	<0.50	12	6.2	8.9	<0.50	3.6	<0.50	100,000	29,000	4,500	9.47	7.61	1.14	1.6	0.09	0.78
LFJ01P08																
LFJ01P08	1.2	9.1	7	14	<0.50	1.8	<0.50	160,000	37,000	24,000	8.97	8.22	5.33	0.9	0.13	1.41
LFJ01P08	<0.50	12	5.7	24	<0.50	1.8	<0.50	300,000	90,000	>120,000	7.76	7.97	4.13	3.9	0.13	1.65
LFJ01P08	<0.50	8.8	3.8	5.6	<0.50	0.86	<0.50	210,000	26,000	21,000	6.94	8.02	6.3	1.4	0.07	1.21
LFJ01P08	<0.50	12	3.8	11	<0.50	2.1	<0.50	190,000	21,000	10,000	7.71	7.96	2.2	1.5	<0.05	0.96
LFJ01P08	43	12	10	3.6	<0.50	0.98	<0.50	340,000	60,000	52,000	8.52	9.02	10.7	0.9	0.13	0.36
LFJ01P08	1.3	6.3	8.6	14	<0.50	1.6	<0.50	69,000	68,000	11,000	7.73	7.83	1.81	1.7	0.8	1.03
LFJ01P08	0.75	11	5	8.3	<0.50	1.4	<0.50	44,000	25,000	8,000	7.63	7.76	2.27	1.6	0.11	2.37
LFJ01P08	0.61	4.7	8.3	9.3	<0.50	1.4	<0.50	30,000	29,000	13,000	8.53	8.09	7.1	1	0.1	1.5
LFJ01P08	0.61	4.6	6.3	20	<0.50	1.2	<0.50	160,000	32,000	25,000	7.86	8.01	10.5	0.9	0.4	1.08
LFJ01P08	<0.50	3.8	3.6	8.3	<0.50	0.69	<0.50	37,000	6,400	3,100	9.37	8.15	5.01	2	0.1	1.58
LFJ01P08	0.74	6.4	12	26	<0.50	1.4	<0.50	190,000	>44,000	8,700	8.42	8.14	4.04	2.9	0.45	2.21
LFJ01P08	<0.50	7.5	4.3	8.1	<0.50	0.75	<0.50	>91,000	18,000	10,600	8.47	8.07	4.21	2.8	0.1	0.87
LFJ01P08	0.67	5.7	2.7	7.9	<0.50	1.1	<0.50	800,000	61,000	9,500	12.11	8.09	3.11	2.3	0.3	1.23
LFJ01P08											9.47	8.17	2.79	2	0.12	1.09
LHJ04P04	<8.00	5.4	4.8	32	<2.00	<1.00	<2.00	8,500	1,800	6,900	8.79	7.76	2.51	1.7	0.1	0.91
LHJ04P04	<8.00	<4.00	6.7	16	<2.00	<1.00	<2.00	129,000	21,000	6,400	6.33	7.56	12.3	2.2	0.08	2.69
LHJ04P04	<8.00	<4.00	5.6	23	<2.00	<1.00	<2.00	43,000	21,000	32,000	7.82	7.21	4.07	2.2	<0.05	1.73
LHJ04P04	<8.00	9.4	6.2	45	<2.00	<1.00	<2.00	41,000	12,400	12,200	8.14	7.77	2.58	1.8	0.09	0.82
LHJ04P04	<8.00	7.7	5.2	51	<2.00	<1.00	4.9	59,000	27,000	9,250	7.54	7.8	3.77	2.8	0.1	1.21
LHJ04P04	<8.00	11	6	17	<2.00	<1.00	<2.00	59,000	45,000	26,000	8.45	7.35	15.3	2.5	0.09	1.19
LHJ04P04	1.2	15	4.1	6.9	<0.50	2.7	<0.50	22,000	900	5,400	10.96	7.61	1.93	2.6	0	0.96
LHJ04P04	<0.50	20	9.2	11	<0.50	<0.50	<0.50	690,000	83,000	22,000	8.85	7.31	3.58	1.6	0.08	0.93
LHJ04P04	1	18	6.2	15	<0.50	0.63	<0.50	190,000	29,000	11,000	8.49	7.56	6.28	2.8	0.07	1.17
LHJ04P04	<0.50	14	4.2	9.6	<0.50	<0.50	<0.50	230,000	140,000	15,000	8.31	7.82	2.48	2.3	0.08	1.24

LHJ04P04	<0.50	18	4	9.3	<0.50	<0.50	<0.50	130,000	68,000	7,400	8.3	7.5	2.1	2.3	<0.05	0.97
LHJ04P04	<0.50	18	3	11	<0.50	<0.50	<0.50	42,000	7,800	5,600	12.04	7.67	2.87	2.8	<0.05	1.39
LHJ04P04	0.72	9.9	14	48	<0.50	<0.50	2.6	400,000	20,000	16,000	8.9	7.68	14.4	2.3	0.2	1.09
LHJ04P04	0.66	5.9	11	26	<0.50	<0.50	<0.50	210,000	17,000	15,000	8.24	7.74	7.62	3.4	0.15	1.23
LHJ04P04	<0.50	3.9	4.9	8.2	<0.50	<0.50	<0.50	240,000	95,000	19,000	7.3	6.83	4.27	2.6	0.07	1.16
LHJ04P04	<0.50	8.2	3.7	7.4	<0.50	0.57	<0.50	260,000	100,000	8,100	11.98	7.65	3.77	3.2	0.12	1.48
LHJ04P04	<0.50	4.1	3.8	12	<0.50	0.64	<0.50	4,400	900	320	9.23	7.88	1.39	2.7	0.1	0.72
LHJ04P04	<0.50	5.3	4	6.4	<0.50	0.5	<0.50	33,000	5,700	8,900	8.7	7.78	1.77	2.8	0.06	1.14
LHJ04P04	<0.50	3.8	3.5	6.1	<0.50	<0.50	<0.50	47,000	16,000	13,000	8.19	7.91	3.05	2.7	0.05	1.82
LHJ04P04	<0.50	3.9	3.4	4.2	<0.50	<0.50	<0.50	31,000	26,000	15,000	8.35	7.83	3.5	2.2	0.15	1.2
LHJ04P04	<0.50	3.2	3.1	5.6	<0.50	<0.50	<0.50	200,000	37,000	45,000	8.85	7.86	4.35	1.2	0.05	1
LHJ04P04	<0.50	5.4	4.2	8.2	<0.50	<0.50	<0.50	>41,000	3,800	14,400	9.08	7.85	5.03	3.5	0.12	1.21
LHJ04P04	<0.50	5.1	3.4	6.6	<0.50	<0.50	<0.50	31,000	2,000	10,200			3.85	2.1	0.1	0.97
LHJ04P04	<0.50	5.6	3.7	9.5	<0.50	<0.50	<0.50	60,000	24,000	5,700	7.94	7.82	4.48	2	0.18	0.97
LHJ04P04	<0.50	5.2	3.7	5.5	<0.50	<0.50	<0.50	>55,000	18,000	28,000	9.9	7.92	2.21	2.6	0.1	0.76
LHJ04P04	<0.50	3	3	6.8	<0.50	<0.50	<0.50	78,000	28,000	25,000	8.22	7.73	10.1	2.6	0.1	1.31
LHJ04P04	<0.50	6.2	2.7	3.9	<0.50	<0.50	<0.50	23,000	2,900	4,800	9.55	7.87	6.3	2.5	0.1	0.78
LHJ04P04											9.93	7.84	10.8	2	0.1	0.85
LHJ05P01	<0.50	180	3.7	19	<0.50	17	<0.50	2,200	2,000	2,200	6.53	7.04	5.94	3.9	0.14	1.07
LHJ05P01	<0.50	180	3.9	16	<0.50	7.5	<0.50	180,000	7,000	7,000	5.89	7.22	5.52	3.9	0.18	1.93
LHJ05P01	<0.50	89	3.4	27	<0.50	3.5	<0.50	130,000	90,000	44,000	3.58	6.81	6.85	4.5	0.08	2.06
LHJ05P01	<0.50	120	2.8	15	<0.50	5.1	<0.50	310,000	110,000	1,130,000	6.78	6.81	2.9	2.3	0.11	2.14
LHJ05P01	<0.50	120	4.6	14	<0.50	3.8	<0.50	330,000	70,000	86,000	4.5	7.66	3.97	3.7	0.06	2.45
LHJ05P01	<0.50	170	2.8	7.5	<0.50	4.9	<0.50	14,000	6,000	15,000	4.8	6.88	0.36	3	0.05	0.78
LHJ05P01	<0.50	94	5.1	23	<0.50	7	<0.50	>1,200,000	>1,200,000	20,000	5.76	7.26	3.85	4.1	0.12	6.78
LHJ05P01	<0.50	87	2.7	12	<0.50	3.6	<0.50	170,000	50,000	10,700	5.73	7.2	4.55	3	0.2	2.27
LHJ05P01	<0.50	55	2.6	8.1	<0.50	2.5	<0.50	40,000	10,000	10,800	4.71	6.97	3.05	1.9	0.07	1.42
LHJ05P01	<0.50	88	2.5	13	<0.50	3.5	<0.50	230,000	28,000	28,000	3.83	7.58	5.62	4	0.12	2.62
LHJ05P01	<0.50	91	7.5	20	<0.50	7	<0.50	150,000	12,600	66,000	7.2	7.25	3.77	3.88	0.1	5.49
LHJ05P01	<0.50	140	1.8	4.8	<0.50	3.5	<0.50	53,000	800	42,000	2.36	7.14	3.37	2.5	0.1	0.87
LHJ05P01	<0.50	55	2.5	6	<0.50	2	<0.50	>93,000	16,000	41,000	4.82	7.54	2.19	2	0.1	1.54

LHJ05P01	<0.50	97	1.4	5.1	<0.50	2.3	<0.50	>55,000	5,800	10,800	4.93	7.65	5.04	3	0.1	0.99
LHJ05P01	<0.50	80	2	8.4	<0.50	3.3	<0.50	>107,000	18,000	24,000	4.82	6.82	4.28	3.1	0.1	1.66
LHJ05P01	<1.00	150	2.3	40	<1.00	3.9	<1.00	>11,900	690	2,600	4.29	6.93	1.81	2.8	0.1	0.61
LHJ05P01	<0.50	150	3	4.8	<0.50	6.3	<0.50	6,500	120	2,300	6.27	6.9	0.53	2	0.1	0.59
LHL04TBN1	<0.50	5.4	4.3	34	<0.50	<0.50	<0.50	12,000	5,000	1,000	8.7	7.65	1.7	1.6	0.06	0.94
LHL04TBN1	1.1	14	19	1200	<0.50	1.8	7.1	200,000	23,000	8,500	9.16	7.68	3.19	1.6	0.35	10.85
LHL04TBN1	<0.50	3	3	23	<0.50	<0.50	0.75	39,000	17,000	1,600	9.52	8.01	2.17	1.5	0.1	1.28
LHL04TBN1	<0.50	2.7	2.4	17	<0.50	<0.50	<0.50	90,000	88,000	2,700	8.59	8.01	1.2	0.9	<0.05	1.32
LHL04TBN1	<0.50	3	2.1	14	<0.50	<0.50	<0.50	83,000	69,000	1,300	9.24	8.32	1.2	1	<0.05	1.15
LHL04TBN1	<0.50	7.5	12	85	<0.50	<0.50	<0.50	51,000	9,000	410	12.33	8.14	4.88	3	<0.05	0.97
LHL04TBN1	<0.50	5.8	14	41	<0.50	<0.50	<0.50	21,000	4,200	90	9.54	8.06	3.74	3	0.24	1.12
LHL04TBN1	<0.50	4.9	5.6	39	<0.50	<0.50	<0.50	8,400	3,400	460	8.51	8.2	1.37	2.3	0.14	1.12
LHL04TBN1	<0.50	2.7	7.3	37	<0.50	<0.50	<0.50	3,800	2,400	260	8.85	7.02	2.51	1.8	0.23	0.83
LHL04TBN1	<0.50	2.2	4.8	21	<0.50	<0.50	<0.50	860,000	42,000	3,000	8.22	8.41	2.28	1.3	0.65	0.95
LHL04TBN1	1.1	3	12	23	<0.50	<0.50	<0.50	20,000	800	130	12.2	8.92	5.19	3.4	0.1	0.81
LHL04TBN1	<0.50	1.9	4.7	14	<0.50	<0.50	<0.50	7,800	280	300	9.42	8.24	4.26	2.6	0.09	0.78
LHL04TBN1	7.3	5.2	34	44	<0.50	<0.50	1.4	29,000	2,000	3,900	10.13	8.33	3.95	4.9	0.32	1.19
LHL04TBN1	<0.50	4.5	8.2	56	<0.50	<0.50	0.98	27,000	14,000	700	8.06	8.2	5.61	1.8	0.65	1.63
LHL04TBN1	1.2	4.1	12	35	<0.50	<0.50	0.89	36,000	10,000	2,800	8.5	8.2	5.01	2.2	0.15	1.42
LHL04TBN1	<0.50	3.3	9.5	51	<0.50	<0.50	<0.50	540,000	11,800	5,400	10.05	8.37	3.08	2.4	0.3	0.67
LHL04TBN1	<0.50	2.9	6.3	32	<0.50	<0.50	<0.50	113,000	3,400	3,300			1.99	2.9	0.15	1.07
LHL04TBN1	<0.50	3.5	6.8	44	<0.50	<0.50	<0.50	>36,000	7,000	3,400	8.45	8.13	2.38	2	0.25	0.74
LHL04TBN1	6.4	8.4	8.3	24	<0.50	<0.50	<0.50	>10,500	2,000	1,300	9.21	7.89	1.62	16.7	0.13	2.23
LHL04TBN1	<0.50	2	2.8	16	<0.50	<0.50	<0.50	42,000	8,600	3,900	8.02	7.98	4.72	2	0.15	0.92
LHL04TBN1	<0.50	3	7.2	33	<0.50	<0.50	<0.50	8,900	140	1,000	10.34	8.35	3.53	2.4	0.12	0.52
LHL04TBN1											9.68	8.3	3.84	2	0.11	0.68
LNJ03P01	<8.00	26	4.6	52	<2.00	3	<2.00	149,000	77,000	416,000	9.35	7.82	5.41	2.8	0.08	0.96
LNJ03P01	<8.00	20	21	38	<2.00	2.4	<2.00	12,250	3,950	8,300	8.15	7.62	3.96	2.5	0.15	2
LNJ03P01	<8.00	18	6.1	52	<2.00	3.2	<2.00	2,900	2,600	3,700	9.49	7.56	2.7	1.3	<0.05	0.3
LNJ03P01	<8.00	28	12	58	<2.00	3	<2.00	9,900	6,200	8,450		7.79	4.38	3.8		1.59

LNJ03P01	<8.00	25	9.4	32	<2.00	2.4	<2.00	133,000	106,000	13,000	7.7	7.61	4.09	2	0.28	1.39
LNJ03P01	<8.00	39	520	190	<2.00	16	<2.00	39,000	26,000	7,900	7.36	7.35	6.9	3.4		1.26
LNJ03P01	0.64	52	4.3	29	<0.50	5.9	<0.50	60,000	1,800	1,800	8.23	7.62	1.17	4	<0.05	0.69
LNJ03P01	0.95	42	4.9	26	<0.50	3.8	<0.50	17,000	33,000	2,500	8.21	7.45	2.31	4	0.07	1.7
LNJ03P01	<0.50	32	3.9	17	<0.50	2.6	<0.50	150,000	23,000	6,000	8.1	7.64	3.12	3.6	<0.05	1.31
LNJ03P01	0.53	39	5.4	23	<0.50	4.1	<0.50	54,000	11,200	8,800	8.1	7.36	1.86	3.8	0.07	1.36
LNJ03P01	0.52	25	3.1	16	<0.50	1.1	<0.50	55,000	27,000	7,900	6.93	7.27	3.18	5.2	0.07	2.93
LNJ03P01	0.52	22	2.8	8	<0.50	0.93	<0.50	14,000	8,200	2,200	8.15	7.73	1.23	2.7	<0.05	1.19
LNJ03P01	0.59	21	4.9	19	<0.50	3.2	<0.50	50,000	1,700	1,800	8.8	7.58	1.4	2.9	0.1	1.14
LNJ03P01	0.5	26	3	20	<0.50	1.7	<0.50	34,000	14,000	7,900	8.51	7.65	2.88	4.5	0.05	2.92
LNJ03P01	<0.50	35	3.1	25	<0.50	3.8	<0.50	40,000	3,000	7,300	10.47	7.59	1.6	3.9	0.05	1.19
LNJ03P01	<0.50	20	2.6	14	<0.50	1.7	<0.50	>9,400	3,300	3,700	8.21	7.72	1.75	3.2	0.1	1.21
LNJ03P01	<0.50	23	2.4	13	<0.50	2.1	<0.50	28,000	800	2,100	7.95	7.79	2.08	3.6	0.1	1.02
LNJ03P01	<0.50	21	1.9	19	<0.50	2	<0.50	26,000	360	800	13.54	7.66	2.08	4	0.1	1.47
LNJ03P01											11.29	7.92	5.85	2.6	0.33	0.74
LNJ03P04	<0.50	120	9.3	40	<0.50	14	<0.50	63,000	20,000	8,100	12.17	7.67	8.78	4.2	0.75	1.59
LNJ03P04	<0.50	130	5.1	79	<0.50	12	<0.50	720,000	460,000	43,000	6.45	6.62	4.95	4.8	0.19	1.74
LNJ03P04	0.8	19	6.1	16	<0.50	1.1	<0.50	220,000	68,000	33,000	8.69	7.44	5.67	6.2	<0.05	3.58
LNJ03P04	<0.50	65	4	11	<0.50	2.2	<0.50	98,000	71,000	35,000	7.66	7.69	3.52	2.3	0.08	1.3
LNJ03P04	<0.50	32	4.1	13	<0.50	1.5	<0.50	160,000	120,000	73,000	7	7.73	5	14.7	<0.05	2.93
LNJ03P04	0.63	80	19	79	<0.50	11	<0.50	83,000	19,000	105,000	8.52	7.56	10.8	6.2	0.05	2.59
LNJ03P04	<0.50	60	5.4	20	<0.50	2.2	<0.50	63,000	8,700	17,000	8.46	7.75	7.09	5	0.08	2.18
LNJ03P04	<0.50	43	4.4	15	<0.50	2.2	<0.50	150,000	57,000	23,000	7.72	7.88	7.03	2.3	0.18	2.61
LNJ03P04	<0.50	39	8	22	<0.50	4	<0.50	280,000	160,000	40,000	6.8	7.7	8.63	3.4	2.8	2.81
LNJ03P04	<0.50	34	3	13	<0.50	1.2	<0.50	42,000	13,000	5,000	7.56	7.94	8.97	4.6	0.07	3.59
LNJ03P04	<0.50	58	3.6	13	<0.50	2	<0.50	>940,000	12,700	7,000	8.26	7.83	8.1	3.4	0.12	1.4
LNJ03P04	<0.50	20	5.1	15	<0.50	2.2	<0.50	33,000	1,200	5,200	12.58	7.79	3.79	3.2	0.11	1.72
LNJ03P04	<0.50	41	3.7	9.9	<0.50	1	<0.50	>84,000	23,000	21,000	7.62	8.11	5.33	2.3	0.12	0.89
LNJ03P04	<0.50	25	3.3	6.3	<0.50	1.1	<0.50	>90,000	21,000	29,000	7.83	7.98	3.82	2.9	0.38	1.18
LNJ03P04	0.51	130	3.8	8.8	<0.50	0.79	<0.50	200,000	27,000	13,100	7.99	8.07	14.8	3.7	0.11	0.3
LNJ03P04	<0.50	49	5.8	17	<0.50	2	<0.50	>77,000	10,000	49,000	9.7	7.89	5.69	3	0.11	0.83

LNJ03P04	<0.50	77	3.7	9.9	<0.50	1.3	<0.50	68,000	7,800	62,000	9.3	7.81	4.56	3.9	0.1	0.84
LNJ03P05	<0.50	53	8.5	25	<0.50	3.7	<0.50	23,000	7,000	2,100	13.5	7.88	8.91	3.3	<0.05	0.67
LNJ03P05	<0.50	130	8.3	62	<0.50	6.9	<0.50	43,000	13,000	3,600	9.12	7.7	3.71	4	0.85	1.13
LNJ03P05	<0.50	78	6.5	26	<0.50	3.3	<0.50	68,000	67,000	25,000	9.41	7.8	3.07	3.3	0.08	0.92
LNJ03P05	0.58	73	7.8	34	<0.50	6	<0.50	330,000	140,000	45,000	7.88	7.7	4.01	2.2	0.1	1.1
LNJ03P05	<0.50	81	11	29	<0.50	4.1	<0.50	56,000	42,000	6,000	7.34	7.57	3.16	4.1	0.25	1.48
LNJ03P05	<0.50	97	7.9	54	<0.50	8.3	<0.50	43,000	13,000	10,000	9.92	7.86	8.3	1.6	0.05	0.9
LNJ03P05	<0.50	49	6.8	27	<0.50	2.9	<0.50	220,000	37,000	16,000	8.02	7.46	8.08	6.4	0.09	3.96
LNJ03P05	<0.50	41	4.6	17	<0.50	1.7	<0.50	63,000	4,900	11,000	8.02	7.84	13.7	2.9	0.05	1.31
LNJ03P05	<0.50	39	7	16	<0.50	2	<0.50	380,000	200,000	68,000	8.19	7.98	2.8	1.8	0.28	1.76
LNJ03P05	<0.50	40	4.3	15	<0.50	2	<0.50	49,000	8,000	8,000	8.07	7.52	2.56	2.6	0.05	2.05
LNJ03P05	<0.50	130	4.4	20	<0.50	1.2	<0.50	>32,000	5,300	5,600	9.37	7.31	8.23	4.2	0.17	0.46
LNJ03P05	<0.50	46	6.2	23	<0.50	2.9	<0.50	300,000	14,000	23,000	13.82	7.59	4.13	2.8	0.15	0.86
LNJ03P05	<0.50	38	9.3	15	<0.50	1.8	<0.50	33,000	7,200	22,000	8.2	7.77	15.4	2	0.72	0.89
LNJ03P05	<0.50	55	5.8	14	<0.50	1.7	<0.50	24,000	5,800	5,000	9.48	8.08	3.66	2	0.1	0.77
LNJ03P05	<0.50	81	7.1	20	<0.50	0.81	<0.50	37,000	10,000	9,800	8.93	8.06	5.38	2.6	0.18	0.66
LNJ03P05	<0.50	130	4.5	40	<0.50	8.1	<0.50	28,000	3,400	14,200	9.7	7.93	3.23	3.4	0.1	0.45
LNJ03P05	<0.50	170	4.1	53	<0.50	0.7	<0.50	22,000	1,700	8,400	10.33	7.82	14.4	3.7	0.11	0.33
LNJ03P13	<0.50	390	3.6	190	<0.50	47	<0.50	15,000	3,100	340	7.95	7.44	0.47	4.7	0.06	0.24
LNJ03P13	<0.50	260	2.8	120	<0.50	18	<0.50	34,000	3,400	1,500	6.69	7.11	0.49	6.7	<0.05	0.48
LNJ03P13	<0.50	180	2.9	63	<0.50	4.6	<0.50	19,000	12,000	4,700	7.69	7.25	1.1	5.3	<0.05	0.65
LNJ03P13	0.55	220	3	76	<0.50	7.5	<0.50	43,000	7,900	5,600	8.54	7.33	1.11	6.4	0.06	0.46
LNJ03P13	<0.50	160	3.2	57	<0.50	5.3	<0.50	36,000	13,000	2,000	6.01	7.62	0.71	5.5	0.1	0.35
LNJ03P13	<0.50	180	2.8	110	<0.50	13	<0.50	14,000	610	230	8.35	7.07	0.35	3.2	0.05	0.46
LNJ03P13	<0.50	170	3.1	97	<0.50	12	<0.50	8,200	220	2,800	6.58	7.37	0.71	6.1	0.05	0.48
LNJ03P13	<0.50	120	2.6	57	<0.50	12	<0.50	29,000	3,500	8,800	5.82	7.45	1.83	4.8	0.06	0.68
LNJ03P13	<0.50	120	2.5	52	<0.50	8	<0.50	24,000	9,000	11,000	6.27	7.58	1.26	4.9	0.1	0.66
LNJ03P13	<0.50	86	1.9	35	<0.50	4.4	<0.50	24,000	1,100	800	7.08	7.75	0.33	5	0.05	0.3
LNJ03P13	0.56	160	3.3	82	<0.50	17	<0.50	>158,000	>46,000	860	6.32	7.52	1.04	5.7	0.11	0.24
LNJ03P13	<0.50	120	2.3	63	<0.50	13	<0.50	30,000	460	2,900	8.18	7.32	0.86	5.1	0.12	0.45

LNJ03P13	<0.50	110	2.5	45	<0.50	9	<0.50	4,900	1,330	910	6.02	7.88	0.6	4.3	0.1	0.3
LNJ03P13	<0.50	100	2.7	37	<0.50	7.7	<0.50	15,000	420	1,320	7.26	7.74	0.6	3.1	0.1	0.32
LNJ03P13	<0.50	81	3.1	43	<0.50	7.7	<0.50	5,800	510	950	7.14	8.05	0.96	6.6	0.1	0.3
LNJ03P13	0.56	120	2.9	52	<0.50	9.5	<0.50				8.09	7.5	0.4	3.4	0.1	0.3
LNJ03P13								22,000	390	550	9.73	7.65	0.54	4.6	0.1	0.38
LNJ04@LPAZ	0.51	100	2.3	23	<0.50	1.6	<0.50	>40,000	8,400	5,700	8.42	7.51	6	4	0.1	0.57
LNJ04@LPAZ								37,000	5,100	5,500	5.74	7.19	5.02	4.2	0.1	0.83
LNJ04DSRP	<0.50	57	6.2	35	<0.50	9.4	<0.50	170	<9	50	5.83	7.42	5.74	4.9	0.1	5.55
LNJ04DSRP								32,000	1,000	2,300	6.83	7.66	3.61	4.5	0.1	0.8
LNK01P07	<8.00	5.4	9.1	33	<2.00	<1.00	<2.00	24,000	16,000	8,200	8.85	8.39	8.83	2.4	<0.05	1.67
LNK01P07	<8.00	7.7	12	36	<2.00	<1.00	<2.00	18,600	5,000	3,900	8.99	6.89	2.48	4	0.1	2.37
LNK01P07	<8.00	6	13	29	<2.00	<1.00	<2.00	25,000	16,300	54,000	8.33	7.23	6.17	3	<0.05	2.03
LNK01P07	<8.00	5.5	13	35	<2.00	<1.00	<2.00	54,000	30,000	16,100	8.52	7.8	5.07	3	0.13	1.77
LNK01P07	<8.00	6.8	12	70	<2.00	<1.00	<2.00	12,600	6,900	11,800	8.29	8.2	2.2	2.9	0.08	1.79
LNK01P07	<8.00	8.8	18	39	<2.00	<1.00	<2.00	67,000	52,000	7,700	7	7.8	15.5	3.4		2.78
LNK01P07	<0.50	7.8	11	15	<0.50	<0.50	<0.50	410,000	116,000	143,000	8.33	7.3	2.62	4.6	0.16	2.24
LNK01P07	<0.50	9.5	7.6	25	<0.50	<0.50	<0.50	440,000	>120,000	86,000	8.6	7.68	6.68	3.3	<0.05	4.8
LNK01P07	<0.50	8.4	6	11	<0.50	<0.50	<0.50	330,000	100,000	280,000	8.67	7.91	5.32	4.3	<0.05	2.5
LNK01P07	<0.50	9.8	6.9	21	<0.50	<0.50	<0.50	570,000	117,000	11,000	8.8	7.9	3.19	4.5	0.06	2.83
LNK01P07	<0.50	12	8.7	31	<0.50	<0.50	<0.50	110,000	14,000	23,000	8.73	7.61	6.88	5.3	0.08	3.84
LNK01P07	<0.50	18	5.7	16	<0.50	<0.50	<0.50	91,000	66,000	36,000	8.34	7.59	6.57	3.2	0.1	2.92
LNK01P07	<0.50	5.2	6.6	16	<0.50	<0.50	<0.50	32,000	21,000	7,400	9.31	7.9	5.85	6.3	0.06	3.56
LNK01P07	<0.50	6.2	6.1	10	<0.50	<0.50	<0.50	107,000	17,000	22,000	9.2	8.1	1.99	3.5	0.05	1.76
LNK01P07	<0.50	4.2	13	13	<0.50	<0.50	<0.50	160,000	50,000	29,000	8.24	8.04	5.92	2.9	0.05	2.49
LNK01P07	<0.50	5.3	5.8	13	<0.50	<0.50	<0.50	510,000	22,000	7,400	10.65	7.94	5.73	4.8	0.1	1.86
LNK01P07	<0.50	5.6	6.7	17	<0.50	<0.50	<0.50	190,000	22,000	28,000	8.36	7.98	2.7	3.8	0.11	2.12
LNK01P07	<0.50	5.7	13	17	<0.50	<0.50	0.93	135,000	>4,600	30,000	14.45	8.64	14	2.7	0.18	1.9
LNK01P07	<0.50	3.6	5.2	11	<0.50	<0.50	<0.50	>29,000	>450	6,500	10.11	7.94	5.09	3.7	0.1	1.61
LNK01P07											9.87	8.12	5.82	4.2	0.1	1.98

LNK01P08	<8.00	6	10	31	<2.00	<1.00	<2.00	69,000	5,000	4,500	9.2	8.25	6.47	2.3	<0.05	1.45
LNK01P08	<8.00	4.1	12	40	<2.00	<1.00	<2.00	129,000	940	102,000	8.91	6.97	2.02	5.5	<0.05	3.87
LNK01P08	<8.00	<4.00	10	23	<2.00	<1.00	<2.00	35,000	4,300	46,000	8.71	7.4	2.71	2.9	<0.05	1.15
LNK01P08	<8.00	6.6	10	39	<2.00	<1.00	<2.00	88,000	42,000	17,700	8.5	7.9	3.44	2.4	0.9	1.86
LNK01P08	<8.00	9.1	15	63	<2.00	<1.00	<2.00	20,450	12,200	5,600	7.98	8.13	2.36	2.9	0.13	1.51
LNK01P08	<8.00	11	7.8	27	<2.00	<1.00	<2.00	10,000	7,300	6,500	8	7.9	4.44	2.6		2.02
LNK01P08	<0.50	12	6.4	12	<0.50	<0.50	<0.50	540,000	63,000	22,000	9.16	7.64	3.62	2.8	0.19	1.16
LNK01P08	<0.50	13	10	23	<0.50	<0.50	0.78	300,000	>120,000	109,000	8.87	7.88	6.07	3.2	0.22	2.27
LNK01P08	<0.50	7.9	4.3	7.6	<0.50	<0.50	<0.50	200,000	130,000	20,000	8.91	8.02	3.93	2.8	<0.05	1.44
LNK01P08	<0.50	14	7.7	13	<0.50	<0.50	<0.50	370,000	63,000	12,000	8.95	7.96	3.13	2.8	0.19	1.36
LNK01P08	<0.50	14	5.2	7.9	<0.50	<0.50	<0.50	54,000	9,500	19,000	9.28	8	3.13	2.2	0.15	1.76
LNK01P08	0.7	15	13	22	<0.50	0.58	1.3	390,000	250,000	22,000	8.45	7.66	29.7	2.8	0.08	1.26
LNK01P08	<0.50	4.8	11	12	<0.50	<0.50	<0.50	18,000	11,500	6,200	9.63	8.01	2.72	4.1	0.06	2.58
LNK01P08	<0.50	5.2	5.8	11	<0.50	<0.50	<0.50	48,000	6,700	13,000	8.95	8.16	3.06	2.7	0.1	1.53
LNK01P08	<0.50	3.9	3.2	9.1	<0.50	<0.50	<0.50	50,000	19,000	11,000	8.7	8.07	2.83	2.5	0.05	1.73
LNK01P08	<0.50	4.9	3.4	9.5	<0.50	<0.50	<0.50	>34,000	4,800	11,900	11.57	8.09	3.7	4.4	0.1	1.25
LNK01P08	<0.50	4.6	5.1	7.7	<0.50	<0.50	<0.50	>79,000	16,000	24,000	8.96	8.07	2.2	2.6	0.1	1.02
LNK01P08	<0.50	4.8	4.1	7	<0.50	<0.50	<0.50	56,000	3,600	9,900	13.86	8.24	4	2	0.23	1.11
LNK01P08	<0.50	4.3	3.3	8.9	<0.50	<0.50	<0.50	>48,000	>900	8,400	10.32	8.03	2.36	3.1	0.1	1.24
LNK01P08											9.9	8.14	5.96	3.8	0.1	2.13
LNK01P09	<8.00	6.3	6.3	47	<2.00	<1.00	<2.00	740	<10	1,400	10.26	8.16	22.7	2.9	<0.05	1.37
LNK01P09	<8.00	4.1	7	34	<2.00	<1.00	<2.00	<10	<10	1,550	10.28	6.45	7.1	3.1	0.08	1.99
LNK01P09	<8.00	<4.00	10	33	<2.00	<1.00	<2.00	39,000	29,000	37,000	9.93	7.31	17.8	4.2	<0.05	2.02
LNK01P09	<8.00	7.5	5.4	41	<2.00	<1.00	<2.00	510	350	610	11	8	3.99	2.8	0.15	1.71
LNK01P09	<8.00	9.1	6.1	63	<2.00	<1.00	<2.00	610	510	460	8.77	8.08	3.88	1.4		1.56
LNK01P09	<8.00	8.5	14	32	<2.00	<1.00	<2.00	70,000	57,000	35,000	3.4	7	3.33	3.4	0.1	2.14
LNK01P09	<0.50	19	6.3	11	<0.50	<0.50	<0.50	33,000	200	420	9.42	7.53	1.67	4.5	0.08	1.63
LNK01P09	<0.50	13	4.1	13	<0.50	<0.50	<0.50	16,000	9,000	700	9.31	7.84	1.23	3.4	<0.05	1.41
LNK01P09	<0.50	15	4.7	12	<0.50	<0.50	<0.50	50,000	30,000	590	9.45	7.85	0.73	5.2	<0.05	2.36
LNK01P09	<0.50	24	3.7	11	<0.50	<0.50	<0.50	4,700	1,500	410	9.38	7.83	0.8	3.7	<0.05	1.62

LNK01P09	<0.50	23	4.1	12	<0.50	<0.50	<0.50	6,300	100	9,200	9.84	7.87	1.55	2.3	0.18	1.85
LNK01P09	<0.50	24	5.7	15	<0.50	1.1	<0.50	5,200	1,400	800	8.77	7.62	0.47	3.1	0.1	2.24
LNK01P09	<0.50	5	3.7	12	<0.50	<0.50	<0.50	1,300	180	500	9.94	7.83	0.6	3.4	0.06	2.19
LNK01P09	<0.50	4.8	2.8	8.3	<0.50	<0.50	<0.50	520	110	80	9.69	8	1.09	3.1	0.1	1.98
LNK01P09	<0.50	4.3	1.9	9.1	<0.50	<0.50	<0.50	700	400	700	10.06	7.98	0.52	2	0.05	2.39
LNK01P09	<0.50	6	2	6.7	<0.50	<0.50	<0.50	>480	<9	240	11.74	7.95	0.58	2	0.1	2.27
LNK01P09	<0.50	6.3	5.5	8.4	<0.50	<0.50	<0.50	2,100	60	320	9.69	7.94	0.71	2.2	0.1	2.19
LNK01P09	<0.50	6.6	1.7	6.8	<0.50	<0.50	<0.50	590	<9	230	15.81	8.06	1	2	0.11	1.98
LNK01P09	<0.50	4.7	3.3	8.5	<0.50	<0.50	<0.50	2,800	200	370	11.09	7.91	0.66	3	0.1	2.3
LNK01P09											10.32	7.97	0.59	2.7	0.1	2.95
LNL03P03	0.81	9.6	4.6	34	<0.50	<0.50	<0.50	80,000	10,000	2,900	7.56	7.55	1.19	2.4	0.17	<0.06
LNL03P03	<0.50	12	3.8	34	<0.50	<0.50	<0.50	38,000	8,000	4,700	9.21	7.6	1.76	3.7	<0.05	1.38
LNL03P03	<0.50	7.1	4.4	32	<0.50	<0.50	<0.50	200,000	38,000	13,000	7.73	7.94	2.93	1.8	0.12	1.47
LNL03P03	<0.50	12	2.8	26	<0.50	<0.50	<0.50	1,180,000	1,090,000	27,000	7.5	7.9	2.9	2.5	<0.05	1.25
LNL03P03	<0.50	19	4.6	49	<0.50	0.58	<0.50	460,000	74,000	40,000	8.6	7.95	4.5	6.7	0.23	4.01
LNL03P03	0.91	9.5	7	51	<0.50	<0.50	<0.50	19,000	1,600	720	9.67	7.92	4.03	4.5	0.07	4.89
LNL03P03	<0.50	8.5	6.8	50	<0.50	<0.50	<0.50	1,000	<10	90	8.3	7.67	4.3	5.7	0.11	14.5
LNL03P03	<0.50	9.9	4.6	53	<0.50	0.55	0.52	76,000	140	14,000	7.29	7.7	1.79	8.1	0.13	4.38
LNL03P03	<0.50	6.4	5.7	54	<0.50	0.56	<0.50	58,000	40,000	28,000	7.72	7.57	4.29	7	0.15	3.63
LNL03P03	<0.50	6.6	3.1	22	<0.50	<0.50	<0.50	59,000	20,000	13,000	0	7.95	5.4	5.3	0.1	2.78
LNL03P03	<0.50	8.3	11	76	<0.50	1.1	1.1	230,000	45,000	520	8.12	7.82	2.8	12	0.35	3.33
LNL03P03	0.72	8.4	12	88	<0.50	0.74	0.78	6,500	1,900	1,200	8.53	8.07	5.49	10	0.19	3.54
LNL03P03	<0.50	6.5	3.6	39	<0.50	<0.50	0.66	37,000	3,600	6,800	6.15	7.98	1.45	4.5	0.06	3.5
LNL03P03	<0.50	6.6	3.4	44	<0.50	<0.50	1	90,000	29,000	6,700	7.85	7.76	2.82	7.4	0.1	2.57
LNL03P03	<0.50	7.7	3.1	38	<0.50	<0.50	0.56	7,700	2,000	2,100	6.45	7.87	1.55	7	0.05	4.4
LNL03P03	<0.50	4.6	3.5	41	<0.50	<0.50	<0.50	>21,000	2,200	5,200	6.6	7.86	2.12	2.2	0.1	1.44
LNL03P03	<0.50	5.4	4.1	31	<0.50	<0.50	<0.50	>19,500	>380	2,800	10.15	7.94	4.25	2	0.11	0.93
LNL03P03	<0.50	4.8	2.4	12	<0.50	2.3	<0.50	122,000	10,000	3,200	12.13	8.13	3.78	2	0.12	1.49
LNL03P03	<0.50	15	3.3	14	<0.50	4.1	<0.50	56,000	25,000	31,000	4.76	7.87	1.98	4.5	0.1	3.19
LNL03P03	<0.50	8.8	4	21	<0.50	1.9	<0.50	58,000	9,400	10,400	8.06	8.2	2.14	6	0.1	5.21
LNL03P03	<0.50	7.9	5.3	48	<0.50	<0.50	<0.50	76,000	8,200	5,800	8.43	8.12	4.62	12.9	0.1	6.83

LNL03P03	<0.50	2.8	3.7	23	<0.50	<0.50	<0.50	42,000	1,700	4,300	10.27	8.1	3.66	5.1	0.1	2.29
LNL03P04	<8.00	8.1	4.6	21	<2.00	<1.00	<2.00	<10	<10	<10	11.87	8.06	0.87	1.3	<0.05	0.66
LNL03P04	<8.00	7.8	5.6	43	<2.00	<1.00	<2.00	8,600	3,100	860	13.99	7.46	1.77	<0.20	<0.05	1.39
LNL03P04	<8.00	6.3	6.4	23	<2.00	<1.00	<2.00	3,800	3,100	760	11.4	8.11	1.24	1.1	0.5	0.42
LNL03P04	<8.00	13	7.9	51	<2.00	<1.00	<2.00	4,000	2,100	1,610	9.24	8.09	1.28	1.9	<0.05	0.85
LNL03P04	<8.00	13	5.9	24	<2.00	<1.00	<2.00	450	260	1,200	10.99	8.39	1.77	2.1		1
LNL03P04	<8.00	15	5.2	31	<2.00	<1.00	<2.00	300	110	1,130	7.97	7.75	1.53	1.1		1.69
LNL03P04	<0.50	31	4.5	19	<0.50	1.3	<0.50	140,000	50,000	6,500	11.45	8.1	1.95	3.7	0.09	0.49
LNL03P04																
LNL03P04	<0.50	29	3.4	19	<0.50	1	<0.50	22,000	2,500	810	8.2	7.86	1.32	3.5	0.08	1.32
LNL03P04	<0.50	20	2.7	15	<0.50	0.63	<0.50	100,000	30,000	3,600	9.73	7.98	1.88	2.5	<0.05	1.64
LNL03P04	<0.50	31	3.5	20	<0.50	<0.50	<0.50	30,000	6,900	3,500	9.22	7.62	2.22	4.7	0.13	1.56
LNL03P04	<0.50	25	2.6	13	<0.50	0.54	<0.50	9,500	690	1,200	5.69	7.5	2.01	4.3	0.15	0.92
LNL03P04	<0.50	13	3.6	13	<0.50	<0.50	<0.50	9,000	1,300	1,000	6.03	7.61	2.18	3	0.07	1.35
LNL03P04	<0.50	12	4.7	26	<0.50	1.5	<0.50	6,100	320	870	9.64	7.93	1.91	5.4	0.09	3.45
LNL03P04	<0.50	13	6.2	20	<0.50	0.9	<0.50	400	<10	100	5.23	7.77	0.61	3.6	0.07	1.38
LNL03P04	<0.50	31	2	22	<0.50	0.77	<0.50	8,000	900	1,900	6.08	7.78	1.41	3.7	0.06	1.79
LNL03P04	<0.50	16	2.6	18	<0.50	<0.50	<0.50	74,000	380	5,200	5.38	7.49	6.62	3.2	0.11	1.31
LNL03P04	<0.50	10	2.6	9.4	<0.50	<0.50	<0.50	>21,000	640	2,000	7.15	7.93	2.46	2.8	0.1	1.11
LNL03P04	<0.50	10	3.6	7.3	<0.50	<0.50	<0.50	>10,700	830	4,100	6.82	8	14.4	2	0.12	0.78
LNL03P04	<0.50	15	7.8	69	<0.50	0.84	<0.50	>1,300	70	190	8.15	7.86	0.85	2.9	0.1	0.45
LNL03P06	<8.00	38	15	41	<2.00	2.6	<2.00	1,900	1,400	1,100	8.77	7.38	1.35	7.3	<0.05	1.27
LNL03P06	<8.00	42	19	51	<2.00	2.3	<2.00	9,300	6,300	2,600	8.95	6.99	2.04	6.9	0.1	1.53
LNL03P06	<8.00	19	6.4	17	<2.00	4.3	<2.00	62,000	28,000	22,000	8.48	8.14	4.36	0.7	<0.05	0.45
LNL03P06	<8.00	11	7.4	42	<2.00	<1.00	<2.00	1,210	440	450	7.52	7.52	1000	1.4	0.1	0.27
LNL03P06	<8.00	42	36	43	<2.00	3.2	<2.00	38,000	13,200	42,000	1.11	8.03	8.89	7.9	0.21	1.86
LNL03P06	<8.00	33	18	91	<2.00	2.4	<2.00	78,000	45,000	18,800	7.54	7.95	24.3		0.18	2.71
LNL03P06	<8.00	41	29	86	<2.00	4.2	<2.00	26,000	8,050	10,300	8.26	7.79	7.23	4.5		1.73
LNL03P06	<8.00	31	22	11	<2.00	<1.00	<2.00	36,000	26,000	6,500	8.33	7.4	3.43	4.7		1.43
LNL03P06	<8.00	18	11	27	<2.00	<1.00	<2.00	65,000	34,000	11,900	13.39	8.05	81.7	2.6	0.2	2.24

LNL03P06	<8.00	24	21	68	<2.00	1.2	<2.00	<200,000	<200,000	<200,000	12.85	8.19	15	7.3	1.3	4.79
LNL03P06	<0.50	110	8.1	72	<0.50	8.2	<0.50	30,000	310	5,400	8.66	7.85	3.48	6	<0.05	0.83
LNL03P06	<0.50	80	9.6	41	<0.50	5.2	<0.50	90,000	3,400	3,900	9.12	7.56	2.26	7.8	0.1	1.31
LNL03P06	3.1	16	6.1	80	0.98	3.9	2.9	9,000	3,100	430	9.15	8	616	3.1	0.15	0.45
LNL03P06	<0.50	44	7.1	26	<0.50	2.1	<0.50	120,000	80,000	11,000	8.4	8	3.27	7.5	0.07	1.58
LNL03P06	0.59	200	7.5	49	<0.50	4.9	<0.50	45,000	33,000	3,700	8.4	7.81	2.3	5.8	0.08	1.16
LNL03P06	<0.50	24	13	45	<0.50	1.9	<0.50	43,000	10,000	880	7.04	7.29	3.42	5.3	0.11	5.39
LNL03P06	1	34	21	190	<0.50	5.8	0.66	45,000	130	250	7.51	7.47	10.3	5.9	1.6	6.65
LNL03P06	<0.50	28	7.9	32	<0.50	2.3	<0.50	23,000	<10	320	6.5	7.42	3.06	8	<0.05	5.43
LNL03P06	1.6	16	9.2	45	<0.50	2.5	<0.50	4,200	160	800	7.4	7.56	3.34	9.4	0.11	5.08
LNL03P06	<0.50	24	6.3	26	<0.50	2.7	<0.50	23,000	<10	<10	0	7.8	1.39	5.9	<0.04	3.64
LNL03P06	<0.50	48	15	38	<0.50	3.1	<0.50	37,000	780	700	8.59	7.75	3.19	8.9	0.12	3.25
LNL03P06	<0.50	25	13	26	<0.50	1.7	<0.50	25,000	900	6,100	8.98	7.92	1.51	8.7	0.12	2.02
LNL03P06	<0.50	23	13	20	<0.50	0.87	<0.50	140,000	55,000	13,000	7.38	7.96	1.67	6.9	0.05	2.3
LNL03P06	<0.50	12	4.7	20	<0.50	0.79	<0.50	50,000	23,000	47,000	7.96	7.75	1.63	6.2	0.05	2.48
LNL03P06	<0.50	13	9	27	<0.50	0.94	<0.50	320,000	19,000	6,000	6.3	7.8	3.99	4.3	0.11	3.22
LNL03P06	<0.50	16	7.1	21	<0.50	1.1	<0.50	35,000	3,700	5,200	8.93	7.96	4.3	6.6	0.1	1.19
LNL03P06	<0.50	16	4.5	20	<0.50	1.3	<0.50	27,000	3,300	2,300	10.88	8.18	1.87	4.2	0.08	0.65
LNL03P06	<0.50	24	4.8	13	<0.50	0.74	<0.50	13,000	>3,300	2,200	12.36	8.12	2.41	3.2	0.1	0.83
LNL03P06	<0.50	84	4.7	20	<0.50	3.1	<0.50	>124,000	46,000	23,000	8.68	7.72	38	14.3	0.1	5.31
LNL03P06	<0.50	30	6.3	21	<0.50	1.8	<0.50	84,000	18,400	8,400	10.87	8.04	3.99	8.3	0.15	2.74
LNL03P06	<0.50	84	8.2	38	<0.50	3.7	<0.50	>64,000	3,300	12,500	8.45	7.92	2.87	13.8	0.1	1.32
LNL03P06	<0.50	110	7.8	64	<0.50	2	<0.50	34,000	1,800	3,300	10.29	7.98	2.42	13.5	0.1	1.92
LWI02P18	<0.50	2.1	5.6	7.7	<0.50	<0.50	<0.50	31,000	4,400	3,900	9.6	7.7	4.67	1.9	0.08	0.75
LWI02P18	<0.50	1.9	1.4	<2.00	<0.50	<0.50	<0.50	18,000	990	2,800	7.84	7.76	835	1.1	0.09	0.57
LWI02P18	<0.50	4	3.5	6.6	<0.50	<0.50	<0.50	40,000	6,000	4,900	0	7.88	9.22	1.2	0.08	1.52
LWI02P18	<0.50	3.7	2.5	3.2	<0.50	<0.50	<0.50	7,100	700	1,300	8.2	7.67	23.3	1.8	0.06	1.85
LWI02P18	<0.50	4.9	2.1	6.2	<0.50	<0.50	<0.50	36,000	8,300	6,500	5.84	7.87	25.9	1.3	0.12	1.6
LWI02P18	<0.50	3.9	4.2	9.5	<0.50	<0.50	<0.50	>9,500	140	8,000	9.87	7.82	3.73	2.3	0.15	0.36
LWI02P18	<0.50	3.8	1.4	5.6	<0.50	<0.50	<0.50	36,000	24,000	5,700	12.27	7.85	12.9	2	0.11	0.3
LWI02P18	<0.50	4.4	1.8	6.2	<0.50	<0.50	<0.50	9,700	860	3,700	7.06	7.88	13.7	2	0.1	0.34

LWI02P18	<0.50	5.1	3.5	8.9	<0.50	<0.50	<0.50	16,000	2,500	8,200	7.31	7.35	21	2	0.25	0.45
LWI02P18	<0.50	3.7	1	3.6	<0.50	<0.50	<0.50	26,000	620	3,200	11.8	7.66	22.8	2	0.1	0.41
LWI02P18	<0.50	2.9	3.9	5	<0.50	<0.50	<0.50	2,300	210	500	9.41	7.61	14.1	2	0.1	0.3
LWI02P18	<0.50	2.9	6.6	6.7	<0.50	<0.50	<0.50	21,000	1,600	5,700	10.2	7.76	17.9	2	0.21	0.3
LWJ01ASVM	<0.50	100	2.4	27	<0.50	32	<0.50	9,000	3,500	130	8.94	7.34	0.31	1	0.1	1.08
LWJ01ASVM																
LWJ01ASVM	<0.50	110	2.6	29	<0.50	14	<0.50	3,100	330	200	9.42	7.75	0.26	1.1	<0.05	0.99
LWJ01ASVM	<0.50	97	2.1	20	<0.50	15	<0.50	16,000	13,000	240	8.62	7.61	0.37	3.5	<0.05	1.15
LWJ01ASVM	<0.50	90	2.2	16	<0.50	11	<0.50	17,000	3,700	740	8.16	7.55	0.4	1.6	<0.05	1.19
LWJ01ASVM	<0.50	100	2.7	55	<0.50	16	<0.50	27,000	2,000	1,900	8.12	7.72	0.6	1.9	<0.05	1.08
LWJ01ASVM	<0.50	120	2.4	26	<0.50	23	<0.50	2,600	1,100	490	13.4	7.6	0.96	1.9	0.06	1.18
LWJ01ASVM	<0.50	110	2.3	18	<0.50	17	<0.50	2,600	130	460	9.26	7.72	0.44	1.5	0.08	1.53
LWJ01ASVM	<0.50	100	2.1	18	<0.50	17	<0.50	3,700	540	220	8.72	7.7	0.56	0.9	0.09	1.4
LWJ01ASVM	<0.50	100	2	17	<0.50	11	<0.50	8,200	2,800	170	9.75	7.33	0.33	1.7	<0.05	1.27
LWJ01ASVM	<0.50	85	2.9	11	<0.50	23	<0.50	5,000	<10	<10	8.72	7.76	0.29	1.4	<0.05	1.15
LWJ01ASVM	<0.50	67	3.4	16	<0.50	12	<0.50	1,600	200	140	13.37	7.92	0.27	1.3	0.12	1.2
LWJ01ASVM	<0.50	68	3	18	<0.50	10	<0.50	3,100	1,700	1,100	9.21	7.95	0.31	0.8	0.05	1.14
LWJ01ASVM	<0.50	56	0.98	13	<0.50	6.2	<0.50	5,600	2,000	1,300	8.09	7.78	0.66	0.7	0.05	1.3
LWJ01ASVM	<0.50	57	2.6	15	<0.50	2.4	<0.50	17,000	6,900	4,100	8.05	7.86	2.79	0.4	0.5	1.32
LWJ01ASVM	<0.50	54	0.95	7	<0.50	0.68	<0.50	2,800	400	300	8.5	7.84	0.76	0.6	0.05	1.24
LWJ01ASVM	<0.50	83	1.8	18	<0.50	5.9	<0.50	>21,000	900	14,400	9.47	7.94	3.68	2	0.1	1.22
LWJ01ASVM	<0.50	78	0.93	14	<0.50	2.2	<0.50	>940	<9	200	8.72	7.68	0.56	2	0.1	0.96
LWJ01ASVM	<0.50	77	2.1	16	<0.50	11	<0.50	>10,400	1,800	1,130	7.83	7.84	1.68	2	0.12	1.39
LWJ01ASVM	<0.50	83	1.7	10	<0.50	6.8	<0.50	>900	210	60	10.06	7.71	1.83	1	0.1	1.12
LWJ01ASVM	<0.50	68	2	17	<0.50	10	<0.50	4,100	440	520	7.63	7.75	0.69	2	0.1	1.25
LWJ01ASVM	<1.00	76	2.6	19	<1.00	6.3	<1.00	>1,220	250	540	10.04	7.84	0.64	2	0.1	0.83
LWJ01ASVM								2,200	240	280	11.95	7.87	0.77	2	0.1	0.98
MVJ01P03	<8.00	5.5	19	70	<2.00	<1.00	2.1	27,000	12,000	40,400	7.28	7.93	5.44	1	0.19	1.13
MVJ01P03	<8.00	<4.00	6.1	37	<2.00	<1.00	<2.00	25,000	6,000	15,400	9.5	7.21	1.68	0.9	0.14	1.77
MVJ01P03	<8.00	4	12	35	<2.00	<1.00	<2.00	60,000	43,000	16,100	1.35	7.86	1.66	1.1	0.33	0.48

MVJ01P03	<8.00	4.6	16	40	<2.00	<1.00	<2.00	18,600	5,200	70	6.57	7.35	3.66	1.5	0.1	1.45
MVJ01P03	<8.00	<4.00	17	34	<2.00	<1.00	<2.00	34,000	7,600	15,800	2.17	7.62	4.65	1.6	0.3	1.36
MVJ01P03	<8.00	4.5	6.6	45	<2.00	<1.00	<2.00	25,000	15,200	7,000	11.1	7.89	2.85	1.5	0.1	1.37
MVJ01P03	<8.00	6.6	9.7	47	<2.00	<1.00	<2.00	85,000	70,000	23,000	7.8	7.7	2.3	1.5	0.25	7.82
MVJ01P03	<8.00	7.9	39	53	<2.00	<1.00	<2.00	28,000	13,000	49,000	7.79	7.57	3.72	1.9		1.82
MVJ01P03	<8.00	13	38	40	<2.00	<1.00	<2.00	106,000	71,000	18,400	6.8	7.7	3.6	1.8	0.2	2.04
MVJ01P03	<8.00	7	16	30	<2.00	<1.00	<2.00	47,000	30,000	34,000	7.9	7.52	4.13	2.1	0.4	2.33
MVJ01P03	2.4	9.4	72	35	<0.50	<0.50	<0.50	77,000	21,000	27,000	11.4	7.46	36.1	2.6	0.02	1.11
MVJ01P03	<0.50	13	11	19	<0.50	<0.50	<0.50	320,000	56,000	19,000	7.79	7.01	1.47	1.9	0.27	1.38
MVJ01P03	1.7	15	14	27	<0.50	<0.50	<0.50	200,000	11,000	3,900	8.75	7.43	1.34	3.1	<0.05	1.4
MVJ01P03	<0.50	9.8	4.2	14	<0.50	<0.50	<0.50	80,000	62,000	19,000	7.57	7.52	1.66	2.1	0.07	1.37
MVJ01P03	<0.50	7.5	3.4	9.9	<0.50	<0.50	<0.50	54,000	33,000	5,900	7.24	7.44	24.7	2.1	0.18	1.45
MVJ01P03	1.1	16	7.8	21	<0.50	<0.50	<0.50	53,000	29,000	3,000	9.6	7.4	1.96	2.7	<0.05	1.02
MVJ01P03	<0.50	<0.50	<0.50	<2.00	<0.50	<0.50	<0.50	1,050,000	130,000	3,900	8.02	7.52	3.79	2.6	0.12	0.91
MVJ01P03	0.65	5.9	12	27	<0.50	<0.50	<0.50	230,000	13,000	37,000	7.27	7.47	2.29	1.9	0.14	1.37
MVJ01P03	0.52	4.9	9	15	<0.50	<0.50	<0.50	41,000	33,000	4,900	7.62	7.16	1.69	1.7	0.13	1.33
MVJ01P03	<0.50	11	7.5	17	<0.50	<0.50	<0.50	310,000	25,000	7,200	11.9	7.61	1.49	1.5	<0.05	1.29
MVJ01P03	0.53	4.4	17	22	<0.50	<0.50	<0.50	350,000	11,000	16,000	8.73	7.75	2.38	2	0.11	0.71
MVJ01P03	1.2	4.9	8.7	16	<0.50	<0.50	<0.50	5,800	1,000	15,000	8.11	7.6	2.15	1.8	0.13	1.22
MVJ01P03	<0.50	5.5	3.6	13	<0.50	<0.50	<0.50	>1,200,000	18,000	>120,000	5.79	7.77	675	1.9	0.32	1.38
MVJ01P03	<0.50	4.3	7.3	13	<0.50	<0.50	<0.50	110,000	18,000	11,000	7.67	7.74	1.95	2.1	0.37	1.48
MVJ01P03	<0.50	4.6	13	13	<0.50	<0.50	<0.50	50,000	28,000	7,700	7.59	7.73	1.95	1.6	0.12	1.38
MVJ01P03	<0.50	4.9	6.9	15	<0.50	<0.50	<0.50	32,000	3,800	4,200	8.78	7.52	1.66	2.7	0.43	2
MVJ01P03	<0.50	5.2	6.3	18	<0.50	<0.50	<0.50	>40,000	2,200	12,200	9.46	7.81	1.56	1.5	0.1	1.1
MVJ01P03	<0.50	5.8	4	15	<0.50	<0.50	<0.50	48,000	7,500	3,300	7.24	7.95	1.61	0.2	0.12	1.29
MVJ01P03	<0.50	6	6.2	25	<0.50	<0.50	<0.50	>121,000	29,000	13,700	8.68	7.41	5.29	2.5	0.27	1.43
MVJ01P03	<0.50	4.1	4.8	20	<0.50	<0.50	<0.50	102,000	15,000	10,000	10.78	8.15	3.86	2	0.14	1.29
MVJ01P03	0.56	5	6.7	17	<0.50	<0.50	<0.50	39,000	320	2,600	7.94	7.69	1.86	2	0.34	0.74
MVJ01P03	0.52	7.1	5.5	22	<0.50	<0.50	<0.50	29,000	870	7,400	8.77	7.5	1.72	2.1	0.1	1.6
MVJ01P03											8.78	7.94	1.7	2.2	0.33	1.4
MVJ07P02	<8.00	8	18	50	<2.00	<1.00	<2.00	2,180	1,260	750	12.66	7.9	195	2.1	<0.05	1.87

MVJ07P02	<8.00	12	6.7	57	<2.00	1.5	<2.00	52,000	27,000	48,000	6.12	7.73	12.5	1.7	<0.05	0.94
MVJ07P02	<8.00	4.9	8.9	50	<2.00	1.3	<2.00	10,500	8,700	9,500	8.35	7.97	11.3	0.7	0.32	0.74
MVJ07P02	<8.00	6.9	13	52	<2.00	<1.00	<2.00	13,600	2,400	6,200	11.84	8.13	3.38	3.3		2.05
MVJ07P02	<8.00	<4.00	12	34	<2.00	<1.00	<2.00	123,000	81,000	18,600	7.96	8.31	5.66	2.8	0.22	1.31
MVJ07P02	<8.00	13	79	380	<2.00	2	3.3	159,000	95,000	197,000	9.21	8.03	7.37	3.1	0.25	3.81
MVJ07P02	<0.50	6.9	6.8	15	<0.50	<0.50	<0.50	270,000	>120,000	5,900	8.91	7.74	1.86	3.7	0.13	1.44
MVJ07P02	<0.50	5.9	9	13	<0.50	<0.50	<0.50	20,000	9,000	11,000	8.7	7.89	1.75	2.2	<0.05	1.66
MVJ07P02	<0.50	7.6	4.9	54	<0.50	<0.50	<0.50	240,000	140,000	10,400	7.77	7.96	7.4	3	0.09	1.81
MVJ07P02	<0.50	4.5	9.4	23	<0.50	<0.50	<0.50	170,000	5,300	4,000	8.3	8.22	2.23	1.6	0.18	1.01
MVJ07P02	0.53	3.7	9.8	17	<0.50	<0.50	<0.50	46,000	30,000	8,200	8.36	7.94	8.31	1.4	0.08	1.35
MVJ07P02	0.64	5.8	14	19	<0.50	<0.50	<0.50	190,000	32,000	7,100	8.05	8.02	2.06	0.9	0.1	1.98
MVJ07P02	<0.50	5.3	8.9	15	<0.50	<0.50	<0.50	140,000	4,000	6,000	9.61	8.33	1.69	1.6	0.19	1.67
MVJ07P02	<0.50	5.3	8.6	35	<0.50	<0.50	<0.50	38,000	25,000	13,000	8.6	8.07	3.52	2.3	0.15	1.49
MVJ07P02	<0.50	6.3	8.4	27	<0.50	<0.50	<0.50	160,000	6,000	7,300	10.58	8.17	2.32	3.1	0.1	1.62
MVJ07P02	<0.50	3.8	7.6	11	<0.50	<0.50	<0.50	>72,000	22,000	9,600	5.77	8.1	2.17	2.2	0.16	1.44
MVJ07P02	<0.50	6.4	10	30	<0.50	<0.50	<0.50	52,000	21,000	9,500	7.41	8.17	4	2.1	0.28	1.1
MVJ07P02	<0.50	4.6	4.5	8.9	<0.50	<0.50	<0.50	>10,600	2,100	1,590	13.66	8.39	1.6	2.8	0.1	1.61
MVJ07P02											9.66	8.29	4.47	3.6	0.1	1.65
MVL02P14	<0.50	13	6.6	14	<0.50	1.4	<0.50	270,000	270,000	21,000	4.69	7.63	3.16	5.1	0.14	1.35
MVL02P14	<0.50	11	7.4	13	<0.50	1.9	<0.50	390,000	20,000	31,000	8.97	7.86	3.38	2.1	0.2	1.42
MVL02P14	<0.50	12	11	35	<0.50	1.3	<0.50	420,000	170,000	33,000	7.42	7.62	5.94	2.2	0.14	1.17
MVL02P14	<0.50	7.8	13	10	<0.50	1.6	<0.50	230,000	9,000	51,000		7.72	5.34	1.6	0.11	1.44
MVL02P14	<0.50	7.7	9	13	<0.50	1.1	<0.50	170,000	40,000	15,000	11.32	8.02	2.54	12.8	<0.05	1.22
MVL02P14	<0.50	4.2	6.9	8.5	<0.50	<0.50	<0.50	10,700	9,100	8,800	9.57	8.05	3.6	2.1	0.1	1.36
MVL02P14	<0.50	3.3	6.4	9.1	<0.50	<0.50	<0.50	270,000	4,500	21,000	8.85	8.05	2.97	1.5	0.09	1.52
MVL02P14	<0.50	3.5	5.6	7.1	<0.50	<0.50	<0.50	65,000	14,000	17,000	8.22	8.35	4.01	1.4	0.11	1.59
MVL02P14	<0.50	4	8.4	7.6	<0.50	<0.50	<0.50	190,000	16,000	28,000	8.27	8.21	4.75	1.7	0.1	1.81
MVL02P14	<0.50	3.4	4.8	7.6	<0.50	<0.50	<0.50	270,000	54,000	48,000	7.93	8.01	5.38	1.2	0.05	1.88
MVL02P14	<0.50	4.2	5.2	10	<0.50	0.57	<0.50	>64,000	11,500	7,000	9.3	8.2	6.53	2.3	0.08	1.05
MVL02P14	<0.50	3.7	4.7	8	<0.50	<0.50	<0.50	>35,000	5,300	12,900	5.19	8.08	2.76	2.1	0.11	0.81
MVL02P14	<0.50	3.8	5.4	7.6	<0.50	<0.50	<0.50	>84,000	32,000	10,000	8.86	8.37	3.92	2	0.12	1.02

MVL02P14	<0.50	5.3	4.6	6	<0.50	0.53	<0.50	>124,000	38,000	14,100	9.75	8.16	2.38	2.3	0.1	1.04
MVL02P14	<0.50	4.1	4.3	7.1	<0.50	<0.50	<0.50	150,000	84,000	71,000	11.64	8.02	90.7	2	0.15	1.2
MVL02P14	<0.50	4.3	6.8	9	<0.50	<0.50	<0.50	34,000	5,800	11,100	10.29	8.29	3.74	2.5	0.1	1.48
MVL02P14											9.38	8.13	3.09	1.9	0.1	1.05
MVL02P20	<8.00	<4.00	9	20	<2.00	<1.00	<2.00	400	155	190	10.73	8.57	9.64	1.8	0.06	1.21
MVL02P20	<8.00	<4.00	7.8	27	<2.00	<1.00	<2.00	8,100	3,400	6,600	9.79	7.37	3.45	1.3	0.07	1.4
MVL02P20	<8.00	4.3	15	27	<2.00	<1.00	<2.00	75,000	42,000	53,000	8.92	7.98	1.9	1	0.2	0.65
MVL02P20																
MVL02P20	<8.00	8.7	16	77	<2.00	<1.00	<2.00	52,000	28,000	42,000	9.12	8.24	6.94	0.9	0.4	1.31
MVL02P20	<8.00	4	9.1	35	<2.00	<1.00	<2.00	36,000	28,000	10,600	8.66	8.41	2.37	1.5	0.16	1.82
MVL02P20	<8.00	5.1	7.6	29	<2.00	<1.00	<2.00	88,000	58,000	9,850	9.13	8.14	4.95	1.7	0.1	1.7
MVL02P20	1.1	7.1	22	48	<0.50	0.5	0.8	280,000	>120,000	33,000	8.78	7.74	26.6	2.5	38.8	1.36
MVL02P20	<0.50	6.1	5	11	<0.50	<0.50	<0.50	340,000	47,000	12,000	8.63	8.23	1.72	3.5	<0.05	1.44
MVL02P20	<0.50	4.6	8.7	10	<0.50	<0.50	<0.50	120,000	75,000	21,000	8.89	7.89	2.5	2	<0.05	2.54
MVL02P20	0.62	5.3	9.7	15	<0.50	<0.50	<0.50	240,000	16,000	10,000	4.94	7.74	2.83	1.9	0.15	21.35
MVL02P20	<0.50	4	10	9.1	<0.50	<0.50	<0.50	40,000	5,700	7,600	9.7	7.99	2.8	2	0.12	1.25
MVL02P20	<0.50	3.7	6.7	9.3	<0.50	<0.50	<0.50	270,000	170,000	65,000		7.82	4.48	1	0.21	1.64
MVL02P20	<0.50	2	4.6	6.2	<0.50	<0.50	<0.50	5,800	3,700	8,800	10.91	8.27	2.86	2.2	0.06	1.06
MVL02P20	<0.50	2.3	7.9	11	<0.50	<0.50	<0.50	47,000	7,000	48,000	8.5	8.18	4.87	1.8	0.07	1.53
MVL02P20	<0.50	3	6.6	21	<0.50	<0.50	<0.50	250,000	10,000	11,200	9.48	8.38	3.36	1.3	0.25	1.26
MVL02P20	<0.50	3.7	7.9	32	<0.50	<0.50	<0.50	>45,000	4,100	12,000	9.28	8.22	2.7	2.6	0.22	1.27
MVL02P20	<0.50	2.7	8.1	15	<0.50	<0.50	<0.50	>98,000	49,000	23,000	9.27	8.24	2.71	3.5	0.1	2.11
MVL02P20	<0.50	2.7	6.7	8.5	<0.50	<0.50	<0.50	61,000	12,000	12,300	8.86	8.21	4.38	3	0.1	1.15
MVL02P20	<0.50	2.2	5.9	9.4	<0.50	<0.50	<0.50	3,100,000	8,000	102,000	9.78	8.19	3.43	2.1	0.13	0.92
MVL02P20											9.49	8.09	5.34	2.8	0.14	4.87
MVL03P09	<0.50	71	3.6	29	<0.50	18	<0.50	25,000	2,300	1,300	8.17	6.67	7.42	1.3	<0.05	1.07
MVL03P09	0.73	82	5.1	36	<0.50	19	<0.50	33,000	2,000	2,800	7.83	6.5	2.01	2.6	<0.05	1.17
MVL03P09	<0.50	130	4.8	45	<0.50	33	<0.50	28,000	16,000	700	7.48	6.82	1.96	<0.20	<0.05	0.79
MVL03P09	<0.50	97	3.3	40	<0.50	15	<0.50	47,000	35,000	5,400	6.91	6.74	5	2.4	<0.05	1.44
MVL03P09	<0.50	110	4.2	37	<0.50	29	<0.50	41,000	20,000	980	7.27	7.09	4.1	2.3	0.06	0.73

MVL03P09	<0.50	110	6	41	<0.50	26	<0.50	50,000	6,000	300	8.47	6.8	1.75	3.2	<0.05	0.86
MVL03P09	<0.50	87	5.2	49	<0.50	18	<0.50	170,000	30,000	26,000	8.07	6.97	12.3	2.9	<0.05	1.23
MVL03P09	<0.50	79	4.8	40	<0.50	24	<0.50	43,000	20,000	8,000	7.35	7.2	15.7	2.1	0.11	1.13
MVL03P09	0.68	62	11	31	<0.50	15	<0.50	80,000	40,000	12,000	6.98	6.59	15.8	3.2	0.09	1.62
MVL03P09	<0.50	98	3.9	37	<0.50	24	<0.50	41,000	29,000	4,200	13.68	7.43	3.71	3.3	0.12	0.93
MVL03P09	<0.50	100	5.1	45	<0.50	26	<0.50	55,000	1,900	1,070	7.37	6.8	3.93	2	0.05	1.28
MVL03P09	0.91	87	5	38	<0.50	23	<0.50	25,000	10,000	4,600	7.63	6.97	9.01	2.4	0.08	1.24
MVL03P09	<0.50	100	4.5	40	<0.50	26	<0.50	37,000	7,600	1,500	7.24	7.36	2.16	2.2	0.05	0.84
MVL03P09	<0.50	67	6.2	30	<0.50	16	<0.50	110,000	28,000	21,000	7.21	7.11	5.1	1.7	0.1	1.02
MVL03P09	<0.50	60	4.1	28	<0.50	16	<0.50	220,000	42,000	9,000	8.02	7.25	2.38	1.9	0.06	1.34
MVL03P09	<0.50	65	4.1	26	<0.50	17	<0.50	21,000	890	860	8.72	7.02	3.33	3.2	0.1	0.82
MVL03P09	<0.50	89	4.6	33	<0.50	22	<0.50	>4,600	370	1,900	8.67	6.98	2.83	2.8	0.11	0.65
MVL03P09	<0.50	28	2.1	16	<0.50	4.3	<0.50	>8,000	5,300	1,070	7.93	7.82	6.26	2.1	0.1	1.01
MVL03P09	<0.50	66	4.8	27	<0.50	15	<0.50	>116,000	54,000	11,000	8.75	6.98	3.67	2.8	0.1	0.85
MVL03P09	<0.50	64	3.5	32	<0.50	18	<0.50	20,000	3,000	4,100	12.38	7.4	3.44	2.2	0.1	0.77
MVL03P09	<0.50	99	4.5	35	<0.50	21	<0.50	>38,000	1,400	3,100	7.3	7.11	3.17	2.2	0.13	0.62
MVL03P09	<0.50	69	5.5	30	<0.50	15	<0.50	>55,000	2,900	6,600	8.21	7.13	9.75	2.6	0.1	1.04
MVL03P09											8.85	7.3	4.04	2.2	0.1	0.62
MVL03P11	<8.00	8.4	7.3	18	<2.00	1.1	<2.00	40	<10	<10	11.16	7.96	7.5	2.4	0.15	2.5
MVL03P11	<8.00	8.1	5.2	26	<2.00	1.6	<2.00	28,000	12,200	2,800	9.72	7.21	1.14	2.1	<0.05	1.23
MVL03P11	<8.00	6	9.4	23	<2.00	1.5	<2.00	62,000	48,000	7,800	3.05	8.26	1.11	0.5	0.28	0.28
MVL03P11	<8.00	10	7.7	41	<2.00	<1.00	<2.00	15,300	8,800	6,700	8.08	8.2	2.18	2	1.1	0.08
MVL03P11	<8.00	13	7.5	22	<2.00	1.1	<2.00	29,000	15,600	6,000	8.33	8.18	1.87	2.7	0.15	0.85
MVL03P11	<8.00	12	6.9	22	<2.00	1.1	<2.00	52,000	32,000	19,600	9.28	8.17	3.28	1.7	0.1	0.96
MVL03P11	<0.50	19	4	8.5	<0.50	0.71	<0.50	69,000	10,700	87,000	8.93	7.64	11.1	3.2	0.09	1.58
MVL03P11	<0.50	20	6.7	18	<0.50	1.3	<0.50	18,000	8,000	3,400	8.13	7.83	1.9	2.5	0.92	1.52
MVL03P11	<0.50	14	5.6	25	<0.50	0.76	0.5	330,000	150,000	>120,000	8.32	8.12	2.18	2.9	<0.05	1.67
MVL03P11	<0.50	28	18	33	<0.50	2.2	0.6	30,000	12,000	1,300	5.68	7.92	3.84	3.1	0.11	1.34
MVL03P11	<0.50	24	4.2	7.8	<0.50	0.94	<0.50	46,000	3,300	3,600	9.37	7.88	1.31	2.9	0.1	0.94
MVL03P11	<0.50	9.5	5.7	7.9	<0.50	0.69	<0.50	70,000	16,000	17,000	8.83	7.86	4.18	1.8	0.06	1.38
MVL03P11	<0.50	6.6	4.7	9.4	<0.50	0.58	<0.50	7,600	4,000	18,000	9.5	8.19	2.35	3.6	0.05	1.28

MVL03P11	2.8	5.3	5.8	6.9	<0.50	0.71	<0.50	23,000	2,100	4,400	8.41	8.14	3.33	2.4	0.1	1.02
MVL03P11	0.89	7.3	5.1	8.2	<0.50	<0.50	<0.50	56,000	11,000	3,500	9.03	8.19	12	1.8	0.05	0.99
MVL03P11	<0.50	9	5.6	14	<0.50	0.74	<0.50	>20,000	5,400	5,900	9.54	8.16	4.79	2.4	0.2	1.2
MVL03P11	<0.50	6	3.7	4.8	<0.50	0.66	<0.50	56,000	8,400	5,600	8.21	8.18	1.78	2	0.11	1.11
MVL03P11	<0.50	4.4	3.6	5.3	<0.50	<0.50	<0.50	46,000	6,600	10,100	11.65	8.6	2	2.2	0.1	0.93
MVL03P11											9.55	7.93	0.78	2.6	0.1	0.91
RSML02@AP	<0.50	3.7	1.9	7.2	<0.50	<0.50	<0.50	>68,000	4,800	10,000	9.01	8.02	1.59	2	0.1	1.59
RSML02@AP	<0.50	2.1	1.8	4.4	<0.50	<0.50	<0.50	27,000	2,000	9,400	9.77	8.09	5.85	2	0.1	0.61
RSML02@AP	<0.50	2.3	2.6	5.2	<0.50	<0.50	<0.50	>76,000	24,000	5,200	9.28	8.06	1.63	2	0.45	0.3
RSML02@AP	<0.50	4.5	2.9	14	<0.50	<0.50	<0.50	6,400,000	2,200,000	1,490,000	9.77	7.81	11.3	2.3	0.12	1.03
RSML02@AP	<0.50	6.8	2.4	5.6	<0.50	<0.50	<0.50	64,000	14,000	7,500	12.62	7.9	2.76	2	0.2	0.85
RSML02@AP	<0.50	5.7	2.3	5.7	<0.50	<0.50	<0.50	38,000	390	5,000	10.25	7.98	1.86	2	0.11	1.12
RSML02@AP											9.54	7.86	2.11	2	0.1	0.99
RSML02P25	<8.00	<4.00	9.3	27	<2.00	<1.00	<2.00	8,200	4,700	7,050	8.94	8.19	2.7	1.5	0.2	1.42
RSML02P25	<8.00	<4.00	3.3	35	<2.00	<1.00	<2.00	37,000	7,850	1,900	9.29	7.28	6.87	1.9	<0.05	1.31
RSML02P25	<8.00	<4.00	4.5	23	<2.00	<1.00	<2.00	36,000	22,000	66,000	9.57	7.95	3.47	1.4	0.07	0.35
RSML02P25	<8.00	<4.00	4.2	43	<2.00	<1.00	<2.00	34,000	27,000	11,000	9.26	8	2.98		<0.05	0.55
RSML02P25	<8.00	5.2	6.5	32	<2.00	<1.00	<2.00	42,000	19,800	21,000	9.51	7.94	2.89	1.5		1.43
RSML02P25	<8.00	4.8	3.2	25	<2.00	<1.00	<2.00	31,000	21,000	10,600	8.38	7.93	1.75	0.9		0.74
RSML02P25	<0.50	6.9	2.6	7.9	<0.50	<0.50	<0.50	45,000	15,000	3,800	9.67	7.5	1.62	2.3	<0.05	0.65
RSML02P25	<0.50	5.9	2.7	9.2	<0.50	<0.50	<0.50	41,000	8,000	6,300	8.89	8.02	2.92	3.1	<0.05	1.25
RSML02P25	<0.50	6.9	2.5	6.9	<0.50	<0.50	<0.50	130,000	23,000	5,000	8.75	7.96	1.6	2	<0.05	0.96
RSML02P25	<0.50	10	3.2	9.9	<0.50	<0.50	<0.50	50,000	12,000	530	8.86	7.87	1.28	2.5	0.07	0.79
RSML02P25	<0.50	9.6	3.6	16	<0.50	<0.50	<0.50	44,000	7,000	25,000	9.14	7.82	2.4	2	<0.05	1.56
RSML02P25	<0.50	2.2	4	7.7	<0.50	<0.50	<0.50	36,000	26,000	17,000	8.62	7.7	2.41	1.3	0.07	0.92
RSML02P25	<0.50	2.3	2.8	5	<0.50	<0.50	<0.50	48,000	17,000	5,800	9.81	7.9	1.64	2.1	0.05	1
RSML02P25	<0.50	2.3	3.3	4.8	<0.50	<0.50	<0.50	63,000	22,000	7,300	7.2	8.1	2.44	1.4	0.05	0.99
RSML02P25	<0.50	2.3	2.1	4.6	<0.50	<0.50	<0.50	51,000	32,000	10,000	8.81	8.01	2.11	4.1	0.05	1.93
RSML02P25	<0.50	3.3	3.7	7.1	<0.50	<0.50	<0.50	>9,000	1,700	3,100	9.37	7.97	1.25	2.1	0.1	0.83
RSML02P25	<0.50	2.6	2.8	4	<0.50	<0.50	<0.50	21,000	8,500	6,200	9.78	8.55	1.95	2	0.12	0.74

RSML02P25	<0.50	2.3	2.3	3.9	<0.50	<0.50	<0.50	>7,900	3,900	5,100	12.81	8.23	0.99	2	0.12	0.69
RSML02P25	<0.50	4.8	4	4	<0.50	<0.50	<0.50	>7,100	1,200	2,000	11.12	8.08	1.09	2	0.1	0.76
RSML02P28	<8.00	17	19	75	<2.00	<1.00	<2.00	10,000	5,600	5,150	8.55	8.23	25.8	1.1	0.3	0.85
RSML02P28	<8.00	17	19	75	<2.00	<1.00	<2.00	4,200	1,450	1,850	9.33	6.77	10.2	1.8	0.22	0.17
RSML02P28	<8.00	4.1	16	61	<2.00	<1.00	<2.00	37,000	2,800	7,600	8.81	7.85	5.22	1	0.45	0.23
RSML02P28	<8.00	6.1	15	63	<2.00	<1.00	<2.00	11,200	7,200	6,800	14	8.3	5.59	1.4	0.55	1.13
RSML02P28	<8.00	7.4	6.4	63	<2.00	<1.00	<2.00	6,400	1,460	3,400	9	7.96	42.8	1.8		0.97
RSML02P28																
RSML02P28	0.88	7.4	19	50	<0.50	<0.50	0.6	340,000	800	970	9.91	7.84	5.99	1.4	0.6	1.57
RSML02P28	<0.50	6	7.5	20	<0.50	<0.50	<0.50	31,000	21,000	1,500	9.08	8.05	2.3	2.1	0.08	1.38
RSML02P28	<0.50	4.1	2.6	13	<0.50	<0.50	<0.50	20,000	1,190	1,900	8.52	8.2	3.1	2	<0.05	0.55
RSML02P28	<0.50	3.3	2.4	17	<0.50	<0.50	<0.50	5,100	3,200	150	9.45	8.4	0.98	2	0.08	0.41
RSML02P28	0.52	8.9	21	120	<0.50	<0.50	<0.50	420,000	68,000	4,300	9.26	8.11	4.21	2.1	0.35	1.03
RSML02P28	3.8	1	6.6	4.7	<0.50	<0.50	<0.50	5,600	3,100	200	8.69	8.22	25.9	1.4	0.06	0.62
RSML02P28	<0.50	2	9.4	20	<0.50	<0.50	<0.50	400,000	27,000	52,000	9.97	8.97	5.18	2.7	0.06	1.76
RSML02P28	<0.50	1.5	7.1	12	<0.50	<0.50	<0.50	460,000	66,000	4,400	7.21	8.32	2.3	1.7	0.05	0.74
RSML02P28	<0.50	2.2	5.1	15	<0.50	<0.50	<0.50	16,000	3,000	1,400	9.04	8.4	1.09	2.3	0.05	0.94
RSML02P28	5.1	15	25	410	<0.50	<0.50	0.71	>38,000	4,400	6,400	9.83	8.46	8.75	2.4	0.42	6.3
RSML02P28	2	6.4	6.9	470	<0.50	<0.50	<0.50	>9,100,000	>8,400	240,000	8.63	8.29	11.9	3.6	0.43	0.54
RSML02P28																
RSML02P28	<0.50	3.7	6	15	<0.50	<0.50	<0.50	>11,800	1,100	2,100	11.6	8.45	1.78	2.7	0.1	0.72
RSML02P32	<8.00	<4.00	23	41	<2.00	<1.00	<2.00	29,000	18,000	24,800	6.91	7.98	5.89	3.6	<0.05	1.15
RSML02P32	<8.00	<4.00	22	34	<2.00	<1.00	<2.00	4,950	1,800	3,300	9.34	7.01	11.6	2.4	0.22	1.34
RSML02P32	<8.00	<4.00	11	24	<2.00	<1.00	<2.00	8,900	6,200	8,000	7.93	7.71	3.16	1.2	0.15	0.39
RSML02P32	<8.00	<4.00	6.7	70	<2.00	<1.00	<2.00	16,100	8,950	10,000	8.41	8.1	4.9	3.9	0.13	1.21
RSML02P32	<8.00	4.8	12	41	<2.00	<1.00	<2.00	31,000	24,000	50,000	9.21	8.02	1.93	3		1.68
RSML02P32	<8.00	5.4	9.4	31	<2.00	<1.00	<2.00	45,000	35,000	9,450	8.71	7.77	2.88	2.9		1.34
RSML02P32	<0.50	4.7	24	12	<0.50	<0.50	<0.50	52,000	40,000	1,900	9.44	7.36	2.82	4.6	0.07	0.96
RSML02P32	<0.50	3.9	5.3	21	<0.50	<0.50	<0.50	33,000	8,000	7,000	8.37	8.02	6.59	3.4	0.08	1.4
RSML02P32	<0.50	4.4	5.2	11	<0.50	<0.50	<0.50	20,000	8,600	6,500	8.42	7.92	1.6	3.1	<0.05	1.48

RSML02P32	0.59	5.9	9.9	18	<0.50	<0.50	<0.50	190,000	150,000	53,000	8.98	7.87	8.05	3.4	<0.05	0.97
RSML02P32	<0.50	5.6	15	20	<0.50	<0.50	<0.50	19,000	4,100	17,000	9.2	7.84	1.95	3.4	0.48	2.3
RSML02P32	<0.50	1.9	7.5	11	<0.50	<0.50	<0.50	58,000	25,000	43,000	8.57	7.79	2.85	2.7	0.1	29.9
RSML02P32	0.64	1.2	3.3	9.2	<0.50	<0.50	<0.50	6,100	4,400	1,220	9.65	8.16	0.61	2.9	0.08	0.8
RSML02P32	0.53	1.9	6.7	11	<0.50	<0.50	<0.50	680,000	580,000	86,000	6.98	8.07	6.56	1	0.06	3.77
RSML02P32	<0.50	1.3	3.8	10	<0.50	<0.50	<0.50	57,000	28,000	16,000	8.8	8.17	1.6	2.1	0.23	1.29
RSML02P32	2.1	2.2	3.6	15	<0.50	<0.50	<0.50	>12,600	4,400	5,800	10.23	8.23	1.98	3.2	0.1	0.89
RSML02P32	0.54	2.5	4.6	10	<0.50	<0.50	<0.50	28,000	8,800	8,600	8.79	8.11	1.59	3	0.1	0.83
RSML02P32	<0.50	2	4.4	6.1	<0.50	<0.50	<0.50	49,000	11,000	15,400	12.75	7.94	2.39	3.4	0.1	0.9
RSML02P32	<0.50	1.4	4.8	7.8	<0.50	<0.50	<0.50	27,000	3,000	11,000	9.65	8.19	1.85	2	0.1	0.76
RSML02P32											9.72	8.14	0.86	2.5	0.1	0.97
RSML02P45	<8.00	<4.00	10	36	<2.00	<1.00	<2.00	9,550	8,300	5,500	7.74	8.26	7.81	3.5	<0.05	1.33
RSML02P45	<8.00	<4.00	4.2	22	<2.00	<1.00	<2.00	2,900	2,700	6,550	7.18	6.9	4.17	4.5	<0.05	0.36
RSML02P45	<8.00	<4.00	4.9	27	<2.00	<1.00	<2.00	26,000	14,600	8,100	7.84	8.1	2.85	1	0.1	0.33
RSML02P45	<8.00	<4.00	4.3	34	<2.00	<1.00	<2.00	30,000	23,000	10,600	7.17	7.9	1.74	1.7		0.96
RSML02P45	<8.00	6.1	7.3	37	<2.00	<1.00	<2.00	7,800	6,300	6,600	9.15	8.13	3.56	2.9	<0.05	1.72
RSML02P45	<8.00	<4.00	3.6	26	<2.00	<1.00	<2.00	10,600	7,300	5,600	9.53	7.97	2.91	2.7		1.28
RSML02P45	<0.50	5.8	4.7	5.5	<0.50	<0.50	<0.50	41,000	9,300	10,000	7.57	7.88	10.4	2.6	0.13	0.77
RSML02P45	<0.50	4.5	9	14	<0.50	<0.50	<0.50	17,000	11,000	5,200	8.89	7.94	1.35	2.5	<0.05	1.47
RSML02P45	<0.50	4.6	3.5	7.7	<0.50	<0.50	<0.50	43,000	7,500	4,900	21.82	8.03	1.3	2.9	<0.05	1.14
RSML02P45	<0.50	5.5	4.7	9.6	<0.50	<0.50	<0.50	120,000	17,000	1,200	8.84	8.01	3.82	2.8	0.08	1.07
RSML02P45	<0.50	4.8	4.1	6.5	<0.50	<0.50	<0.50	40,000	15,000	5,400	9.17	8.08	2.81	2.9	0.11	1.35
RSML02P45	0.65	8	7.4	5.7	<0.50	<0.50	<0.50	39,000	8,000	12,000	8.1	7.85	3.57	1.5	0.7	2.38
RSML02P45	<0.50	1.3	2.5	7.2	<0.50	<0.50	<0.50	40,000	5,100	8,100	10.71	8.28	1.23	2.5	0.1	1
RSML02P45	<0.50	1.3	3	7.8	<0.50	<0.50	<0.50	61,000	5,200	3,900	9.43	8.22	1.98	2.1	0.1	0.96
RSML02P45	<0.50	1.4	2.4	4.3	<0.50	<0.50	<0.50	39,000	8,000	7,200			1.64	2	0.1	0.79
RSML02P45	<0.50	1.9	4.8	9.5	<0.50	<0.50	<0.50	>52,000	38,000	88,000	11.34	8.33	3.56	2.4	0.2	1.01
RSML02P45	0.67	2.6	7.7	17	<0.50	<0.50	<0.50	>39,000	17,000	7,200	8.65	8.19	4.74	4.6	0.7	1.5
RSML02P45	<0.50	2.4	3.3	4.4	<0.50	<0.50	<0.50	>57,000	5,000	60,000	12.84	8.05	1.82	2.4	0.1	1.15
RSML02P45	<0.50	1.2	3.6	5.7	<0.50	<0.50	<0.50	46,000	2,700	9,300	9.82	8.22	1.73	2	0.1	0.45
RSML02P45											9.92	8.13	3.36	2.3	0.1	0.57

RSML11P02	<8.00	<4.00	26	58	<2.00	<1.00	<2.00	26,400	10,600	11,300	10.53	7.96	8.8	2.4	0.9	1.44
RSML11P02	<8.00	<4.00	9	42	<2.00	<1.00	<2.00	16,300	7,400	9,900	8.1	8.5	3.59	<0.20	<0.05	2.65
RSML11P02	<8.00	<4.00	8.2	22	<2.00	<1.00	<2.00	41,000	25,000	33,000	19.01	8.24	8.75	2	<0.05	1.73
RSML11P02	<8.00	<4.00	9.3	35	<2.00	<1.00	<2.00				8.36	8.23	2.13	2.9	0.08	1.44
RSML11P02	<8.00	<4.00	7.1	26	<2.00	<1.00	<2.00	42,000	7,900	28,000	8.37	8.04	5.22	2.8	0.15	1.4
RSML11P02	<8.00	5.5	7.6	39	<2.00	<1.00	<2.00	114,000	45,000	116,000	12	7.8	5.4	2.2	0.1	1.59
RSML11P02	0.59	6.1	17	19	<0.50	<0.50	<0.50	800,000	6,700	2,300	7.6	7.98	2.65	1.5	0.45	1.63
RSML11P02	<0.50	4.3	4.9	11	<0.50	<0.50	<0.50	240,000	210,000	44,000	9.4	7.94	4.17	2.2	<0.05	1.93
RSML11P02	<0.50	4	6.7	17	<0.50	<0.50	<0.50	300,000	130,000	34,000	9.03	8.15	4.6	2.2	0.1	1.56
RSML11P02	0.64	10	36	180	<0.50	<0.50	<0.50	330,000	65,000	42,000	8.63	7.94	8.49	3	<0.05	2.08
RSML11P02	<0.50	5.1	9.1	15	<0.50	<0.50	<0.50	360,000	120,000	20,000	9.13	8.09	5.54	1.9	0.25	1.89
RSML11P02	<0.50	6	4.6	12	<0.50	<0.50	<0.50	150,000	90,000	23,000	8.64	7.91	4.34	1.5	0.1	1.71
RSML11P02	<0.50	2.4	12	12	<0.50	<0.50	<0.50	38,000	4,300	8,300	9.43	8.2	11	2.9	0.13	1.13
RSML11P02	<0.50	1.9	5.5	11	<0.50	<0.50	<0.50	190,000	22,000	23,000	9.32	8.16	3.46	2.3	0.09	1.27
RSML11P02	<0.50	2.6	4.5	8.5	<0.50	<0.50	<0.50	70,000	26,000	32,000			3.98	2.7	0.25	1.91
RSML11P02	<0.50	2.6	5.6	17	<0.50	<0.50	<0.50	34,000	5,900	13,200	11.03	8.32	3.73	2.4	0.18	0.87
RSML11P02	<0.50	2.8	8.6	13	<0.50	<0.50	<0.50	380,000	110,000	500,000	8.61	8.2	3.14	2.4	0.11	1.21
RSML11P02	<0.50	2.5	3.1	7.4	<0.50	<0.50	<0.50	680,000	38,000	42,000	12.92	7.93	3.8	2.2	0.12	1.31
RSML11P02	<0.50	1.8	6.5	8.4	<0.50	<0.50	<0.50	33,000	2,400	23,000	9.74	8.2	3.21	2.1	0.1	0.87
RSML11P02											9.77	8.2	8.14	2	0.1	0.74
SCBS@M02	<8.00	41	62	220	<2.00	3.2	4.3	78,000	37,000	58,000	5.23	7.89	18.8	2.6	2.6	12.76
SCBS@M02	<8.00	18	3.9	30	<2.00	1.9	<2.00	62,000	14,000	4,300	5.32	7.32	8.13	3.2	0.12	1.26
SCBS@M02	<8.00	18	7.1	44	<2.00	<1.00	<2.00	<10	<10	<10	5.23	8	10.2	1.8	0.3	0.27
SCBS@M02	<8.00	21	9.1	27	<2.00	<1.00	<2.00	14,500	27,000	78,000	1.69	8.04	5	0.9	0.55	0.22
SCBS@M02	<8.00	19	18	52	<2.00	2.2	<2.00	166,000	46,000	119,000	1.75	8.01	10.6	0.8	1.35	0.86
SCBS@M02																
SCBS@M02	<8.00	21	8.4	62	<2.00	<1.00	<2.00	10,400	8,850	12,700	7.66	8.19	7.48	4.4	0.38	2.02
SCBS@M02	<8.00	20	9	39	<2.00	<1.00	<2.00	64,000	37,000	11,200	8.85	8.18	7.82	4.7	0.13	1.27
SCBS@M02	<8.00	26	13	97	<2.00	<1.00	<2.00	<200,000	<200,000	129,000	7.98	8.13	6.5	3	0.45	1.69
SCBS@M02	<8.00	29	10	15	<2.00	<1.00	<2.00	28,000	20,222	49,000	14.4	8.3	6.7	4.4	0.15	1.04

SCBS@M02	<8.00	31	5.2	16	<2.00	<1.00	<2.00	7,900	4,800	2,100	14	8.3	33.7	2.32	0.2	1.36
SCBS@M02	<0.50	71	5.9	28	<0.50	4.5	<0.50	38,000	30,000	3,000	7.73	8.03	2.03	3	<0.05	0.52
SCBS@M02	<0.50	86	4.6	11	<0.50	1.4	<0.50	370,000	47,000	9,400	8.9	7.53	1.7	5.1	0.14	0.55
SCBS@M02	0.89	36	7	4.2	<0.50	1.6	<0.50	200,000	150,000	4,200	9.05	8.03	1.52	2.9	0.29	0.51
SCBS@M02	<0.50	67	6.1	11	<0.50	2	<0.50	720,000	190,000	240	8.8	8.02	1.8	3.3	<0.05	0.43
SCBS@M02	<0.50	54	9.2	3	<0.50	1.3	<0.50	310,000	45,000	1,700	8.88	8.05	1.2	5	<0.05	0.44
SCBS@M02	<0.50	45	5.8	16	<0.50	1.9	<0.50	200,000	58,000	730	8.43	8.04	1.22	5.1	0.44	0.35
SCBS@M02	<0.50	39	4.4	9.6	<0.50	1.6	<0.50	76,000	42,000	2,200	9.03	7.97	1.44	3.9	0.12	0.62
SCBS@M02	1.3	49	17	20	<0.50	1.6	<0.50	160,000	10	18,300	7.44	8.08	5.91	3.5	0.32	1.01
SCBS@M02	<0.50	34	9.3	14	<0.50	1.4	<0.50	1,190,000	480,000	4,100	7.92	7.87	1.71	3.3	0.5	0.73
SCBS@M02	<0.50	37	5.8	4.8	<0.50	0.53	<0.50	87,000	12,000	9,600	9.98	7.81	3.75	2.2	0.15	0.5
SCBS@M02	0.53	14	18	17	<0.50	1.5	<0.50	>1,200,000	>1,200,000	640	7.94	8.12	6.12	5.8	0.65	2.32
SCBS@M02	1.1	30	67	130	<0.50	1.2	1.1	270,000	6,300	62,000	8.1	8.19	113	4.5	5.2	2.92
SCBS@M02	<0.50	13	5.4	6.2	<0.50	<0.50	<0.50	36,000	7,700	5,500	9.5	8.06	5.26	3.4	0.05	0.83
SCBS@M02	<0.50	16	4.6	7.8	<0.50	<0.50	<0.50	30,000	1,700	4,900	9.48	8.16	4.19	4	0.05	0.97
SCBS@M02	0.73	14	5.8	23	<0.50	<0.50	<0.50	240,000	2,900	3,800	6.65	8.05	4	4.2	0.15	0.43
SCBS@M02	<0.50	17	5.2	9.4	<0.50	0.92	<0.50	390,000	6,100	3,100	9.72	8.21	4.65	2.3	0.23	0.56
SCBS@M02	<0.50	8.8	3.4	4.4	<0.50	<0.50	<0.50	51,000	2,800	3,900	8.92	8.28	2.98	2.8	0.11	0.54
SCBS@M02	<2.50	11	4	<10.00	<2.50	<2.50	<2.50	9,600,000	43,000	7,800	9.16	8.03	20.5	5.1	1.05	0.74
SCBS@M02	<0.50	10	3.9	8.6	<0.50	<0.50	<1.00	31,000	2,700	1,140	12.22	8.06	2.6	5.7	0.33	0.69
SCBS@M02	<1.00	11	13	8.8	<1.00	<1.00	<0.50	640,000	46,000	84,000	13.94	8.16	21.9	4.7	0.15	0.95
SCBS@M02	<1.00	13	4.5	9.1	<1.00	<1.00	<2.50	116,000	>99	8,400	10.85	8.21	1.45	2.8	0.24	0.45
SCBS@M02	<0.50	9.9	7.8	23	<2.50	<2.50	<2.50	95,000	2,200	42,000	15.85	8.21	3.15	4.9	0.19	0.51
SCM00P03	<8.00	15	12	62	<2.00	<1.00	<2.00	89,000	42,000	10,800	13.6	8.19	2.77	0.4	0.65	0.27
SCM00P03																
SCM00P03	<8.00	18	6.5	39	<2.00	<1.00	<2.00				8.07	7.75		2.4	0.35	0.69
SCM00P03	<8.00	19	8.2	36	<2.00	<1.00	<2.00	27,000	17,800	1,400	4.18	7.58	1.6	2.1	0.15	0.74
SCM00P03	0.53	24	13	81	<0.50	0.54	<0.50	370,000	4,600	13,000	9.08	7.65	3.35	2.9	0.18	1.4
SCM00P03	0.58	39	8.6	6.2	<0.50	1.1	<0.50	15,000	2,400	800	12.17	8.27	2.01	0.4	<0.03	0.6
SCM00P03	0.85	18	23	66	<0.50	0.78	1.1	37,000	31,000	2,500	9.52	8.14	4.43	4.4	1.02	2.95
SCM00P03	0.79	38	11	20	<0.50	0.85	<0.50	3,200	600	2,000	13.92	8.27	16.1	1.3	0.08	0.67

SCM00P03	1	9.9	14	500	<0.50	<0.50	<0.50	>1,200,000	5,100	7,400	9.08	8.25	22.9	1.8	4.3	1.49
SCM00P03	1.8	15	8.9	77	<0.50	<0.50	<0.50	160,000	21,000	11,000	9.73	8.22	4.49	1.9	0.7	1.37
SCM00P03	<0.50	10	6.7	47	<0.50	0.63	<0.50	2,800	1,200	1,100	9.94	8.28	2.66	2.5	0.09	1.48
SCM00P03	<0.50	14	6.6	62	<0.50	3.5	<0.50	3,800	500	600	5.79	8.21	4.85	2.1	0.05	1.26
SCM00P03																
SCM00P03	<0.50	19	5.8	52	<0.50	0.73	<0.50	>2,400	110	590	10.85	8.14	0.33	2	0.11	0.53
SCM00P03	0.51	14	4.6	48	<1.00	<1.00	<1.00	49,000	>130	8,200	8.71	8.01	4.8	2.2	0.1	0.83
SCM00P03	<2.00	16	5.7	15	<0.50	<0.50	<0.50	27,000	240	3,400	13.51	7.66	15.6	3.6	0.12	0.76
SCM00P03											9.8	8.06	7	2	0.1	1.26
SCM02XXX	<8.00	760	<2.00	130	<2.00	54	<2.00	16,000	2,850	12,650	10.54	7.89	7.82	6.7	<0.05	0.3
SCM02XXX	120	9.8	9.6	50	<2.00	<1.00	<2.00	3,800	3,100	1,760	8.87	8.1	403	1.3	0.45	0.18
SCM02XXX	<8.00	14	7.4	160	<2.00	<1.00	<2.00	12,000	6,100	3,900	9.33	8.27	13.5	0.7	0.1	1.56
SCM02XXX	<8.00	25	13	54	<2.00	5.4	<2.00	77,000	67,000	4,700	7.02	7.38	3.44	3.1	1.5	2.49
SCM02XXX																
SCM02XXX	<8.00	12	7.8	<10.00	<2.00	<1.00	<2.00	111,000	85,000	17,200	9.14	8.1	62.1	1.5		2.33
SCM02XXX	0.82	22	6.1	4.5	<0.50	0.52	<0.50	22,000	5,200	13,000	7.23	8.3	7.13	3.5	<0.05	1.5
SCM02XXX	0.54	29	5.2	4.1	<0.50	<0.50	<0.50	65,000	27,000	5,700	9.75	8.05	46.9	1.7	<0.05	1.28
SCM02XXX	0.58	24	4	3.3	<0.50	0.52	<0.50	25,000	12,000	4,800	9.6	8.13	3.1	1.8	0.06	1.51
SCM02XXX	0.64	11	5.3	7.6	<0.50	<0.50	<0.50	5,900	3,600	530	9.49	8.14	16.9	1.8	0.35	0.79
SCM02XXX	<0.50	7.6	6.9	11	<0.50	<0.50	<0.50	630	270	400	9.26	8.14	16.1	1.9	0.08	1.64
SCM02XXX	<0.50	12	5.9	75	<0.50	<0.50	<0.50	52,000	2,900	3,000	8.34	8.02	16.1	4	0.06	1.67
SCM02XXX	0.55	16	4.6	6.8	<0.50	0.53	<0.50	15,000	9,000	4,900	10.34	8.26	5.17	2.8	0.09	1.23
SCM02XXX	0.69	14	4.9	7.9	<0.50	0.56	<0.50	37,000	930	2,000	7.45	8.19	3.95	3.1	0.05	1.39
SCM02XXX	<0.50	7.8	3.7	18	<0.50	<0.50	<0.50	150,000	22,000	39,000	6.5	7.8	3.51	11.2	0.07	2.35
SCM02XXX																
SCM02XXX	0.52	12	6.4	9.9	<0.50	0.57	<0.50	32,000	2,600	2,400	11.26	8.08	676	4	0.11	1.1
SCM02XXX	<0.50	9.9	5.4	15	<0.50	0.62	<0.50	>44,000	28,000	51,000	11.48	8.16	6.2	3.1	0.12	3.11
SCM02XXX	<0.50	11	4.2	8	<0.50	0.52	<0.50	33,000	5,300	9,200	15.27	8.23	6.93	4.1	0.1	1.77
SCM02XXX											11.16	7.92	2.36	2.8	0.1	1.64
SCM03P01	<8.00	22	8	35	<2.00	3.3	<2.00	94,000	56,000	2,950	7.86	7.44	17.6	2	<0.05	0.53

SCM03P01	<8.00	17	8.4	19	<2.00	2	<2.00	59,000	5,000	3,200	7.08	7.8	4.88	3.2	0.15	1.98
SCM03P01	<8.00	26	9.2	53	<2.00	4.3	<2.00	4,500	3,200	5,900	7.83	7.47	6.94	1.1	0.1	0.41
SCM03P01	<8.00	37	9.3	63	<2.00	8.8	<2.00	8,000	2,800	6,000	7.67	7.34	3.07	2.6		1.24
SCM03P01	<8.00	14	7	21	<2.00	<1.00	<2.00	84,000	49,000	58,000	9.34	8.3	4.79	1.5	0.1	1.24
SCM03P01	<8.00	30	9	54	<2.00	5.9	<2.00	3,200	1,400	1,080	6.53	7.33	1.59	2.5	0.1	1.53
SCM03P01	0.5	42	5.8	22	<0.50	6.6	<0.50	36,000	30,000	8,000	5.02	7.3	2.03	3.4	<0.05	1.14
SCM03P01	<0.50	42	6.9	26	<0.50	7.9	<0.50	180,000	190,000	13,800	6.56	7.17	2.13	3.2	<0.05	1.12
SCM03P01	<0.50	35	5.5	19	<0.50	6.6	<0.50	48,000	16,000	6,200	7.55	7.48	2.5	2.9	<0.05	1.36
SCM03P01	0.58	66	5.3	40	<0.50	15	<0.50	28,000	2,400	800	7.56	7.4	0.85	5.3	<0.03	1.02
SCM03P01	<0.50	59	6.7	46	<0.50	13	<0.50	1,080,000	570,000	>1,200,000	7.59	7.57	2.57	3.6	0.28	2.06
SCM03P01	<0.50	57	6.1	37	<0.50	12	<0.50	450,000	50,000	86,000	4.8	7.71	2.56	4.8	0.18	1.94
SCM03P01	<0.50	60	5.3	32	<0.50	13	<0.50	4,600	50,000	500	6.24	7.44	1.12	5	0.1	0.99
SCM03P01	<0.50	73	7	45	<0.50	16	<0.50	290,000	27,000	20,000	4.81	7.63	1.4	5.4	0.07	1.19
SCM03P01	<0.50	81	4.5	54	<0.50	21	<0.50	5,000	3,000	500	6.47	7.43	1.82	5.6	0.05	1.27
SCM03P01	<0.50	11	5.3	13	<0.50	1.3	<0.50	>35,000	6,400	10,800	8.96	7.65	2.35	5.2	0.17	1.17
SCM03P01	<0.50	26	3.9	15	<0.50	3.5	<0.50	20,000	3,600	3,100	8.57	7.96	2.12	3.7	0.1	1.61
SCM03P01	<0.50	24	2.1	21	<0.50	2.4	<0.50	>8,000	2,700	7,400	10.67	8.2	2.53	4.7	0.1	1.21
SCM03P01											7.54	6.96	5.1	5.6	0.14	1.35
SJCL01@CC	<8.00	<4.00	5	56	<2.00	<1.00	<2.00	2,070	725	580	10.88	8.41	2.4	0.8	<0.05	0.82
SJCL01@CC	<8.00	6.9	13	370	<2.00	<1.00	6.1	39,000	960	1,030	10.2	7.62	5.43	6.4	<0.05	1.22
SJCL01@CC	<8.00	<4.00	3.5	17	<2.00	<1.00	<2.00	1,130	980	960	8.69	7.82	1.14	1.7	<0.05	0.44
SJCL01@CC	<8.00	<4.00	12	42	<2.00	<1.00	<2.00	8,200	4,300	6,100	7.6	8.21	6.72	0.8	0.18	0.16
SJCL01@CC	<8.00	<4.00	2.2	15	<2.00	<1.00	<2.00	8,700	3,300	3,900	9.7	8.29	0.88	0.9	<0.05	0.17
SJCL01@CC	<8.00	5.3	12	80	<2.00	<1.00	2.2	79,000	72,000	2,800	10.23	8.51	3.05	1.2	0.24	1.43
SJCL01@CC	<8.00	6.2	10	88	<2.00	<1.00	<2.00	4,700	3,300	1,290	4.24	7.84	10.9	1.3	0.15	1.68
SJCL01@CC	<8.00	5.1	7.2	40	<2.00	<1.00	<2.00	11,400	8,900	1,210	9.51	8.36	1.95	0.8	0.15	1.03
SJCL01@CC	<8.00	23	9.2	37	<2.00	<1.00	<2.00	73,000	58,000	87,000	14.6	8.2	6.4		0.1	3.85
SJCL01@CC	<8.00	7.1	10	150	<2.00	<1.00	<2.00	62,000	50,000	53,000	13.8	8.6	15.9		0.9	3.87
SJCL01@CC	<0.50	4.4	5.5	28	<0.50	<0.50	<0.50	30,000	400	3,000	8.11	8.26	1.97	2.7	0.08	0.77
SJCL01@CC	<0.50	10	15	460	<0.50	0.62	3.7	820,000	>100,000	103,000	8.2	7.53	2.4	1.4	0.45	5.02
SJCL01@CC	1.5	5.1	3.6	60	0.72	1.1	1.4	>1,200,000	>120,000	>120,000	7.36	7.87	2.11	0.9	0.6	1.15

SJCL01@CC	<0.50	4.4	3.5	25	<0.50	<0.50	<0.50	40,000	18,000	6,000	8.41	8.28	1.08	4.7	0.11	1.83
SJCL01@CC	<0.50	5	4.5	55	<0.50	<0.50	<0.50	24,000	7,900	1,500	8.29	8.08	2.1	2.8	0.14	1.82
SJCL01@CC	<0.50	8.2	8.6	49	<0.50	<0.50	<0.50	600,000	110,000	3,400	10.25	8.08	1.93	3.3	0.5	1.14
SJCL01@CC	<0.50	5.5	7.8	39	<0.50	<0.50	<0.50	710,000	9,200	3,000	8.75	8.07	4.3	1.4	0.22	1.61
SJCL01@CC	<0.50	6.1	6.9	45	<0.50	<0.50	<0.50	39,000	<10	7,700	9.09	8.21	1.6	1.5	0.15	1.56
SJCL01@CC	<0.50	1.9	6	31	<0.50	<0.50	<0.50	24,000	5,000	4,300	9.1	7.88	1.58	1.7	0.22	1.45
SJCL01@CC	<0.50	1.3	4.1	14	<0.50	0.64	<0.50	<10	<10	<10	0	8.34	0.34	1.6	0.12	0.23
SJCL01@CC	1.1	2.4	8.2	35	<0.50	<0.50	<0.50	30,000	3,000	1,000	9.06	8.12	6.51	2.1	0.18	0.74
SJCL01@CC	<0.50	5.9	13	500	<0.50	0.67	5.2	14,000	1,500	6,200	8.81	8.14	1.22	0.8	0.48	2.71
SJCL01@CC	<0.50	3.2	10	47	<0.50	<0.50	0.53	22,000	4,200	15,000	7.5	8.37	1.61		0.27	1.33
SJCL01@CC	<0.50	3.2	5.4	43	<0.50	<0.50	<0.50	540,000	220,000	84,000	8.99	8.03	1.58	1.8	0.3	2
SJCL01@CC	1.3	4.4	7.3	43	<0.50	<0.50	3	800,000	210,000	18,000	8.04	8.17	13.3	1.2	0.45	2.19
SJCL01@CC	<0.50	4.1	6.1	39	<0.50	<0.50	<0.50	6,400	5,600	2,400	9.74	8.3	4.51	2.3	0.3	1.46
SJCL01@CC	<0.50	2.9	5.6	41	<0.50	<0.50	<0.50	40,000	8,600	7,400	10.67	8.33	2.74	0.2	0.25	1.04
SJCL01@CC	<0.50	5.9	7.9	250	<0.50	<0.50	2	166,000	98,000	145,000	12.7	8.2	2.8	2.4	0.83	1.9
SJCL01@CC	<0.50	3.5	4.8	41	<0.50	<0.50	<0.50	>7,800	3,100	4,000	11.05	8.29	2.81	2	0.12	0.73
SJCL01@CC	<0.50	4.3	6.8	44	<0.50	<0.50	<0.50	410,000	48,000	13,100	8.95	8.33	5.48	2.5	0.18	1.16
SJCL01@CC	<0.50	3.2	5.1	30	<0.50	<0.50	<0.50	79,000	25,000	51,000	9.66	8.25	2.95	2	0.14	1.09
SJCL01@CC	<0.50	6	8	100	<0.50	<0.50	<0.50	7,900,000	24,000	58,000	10.59	8.22	3.81	2	0.36	0.52
SJCL01P03	<8.00	<4.00	15	19	<2.00	<1.00	<2.00	29,000	17,000	13,750	8.62	8.28	3.96	6	<0.05	0.63
SJCL01P03	<8.00	<4.00	6.2	96	<2.00	<1.00	<2.00	24,000	6,550	5,450	8.23	8.02	9.74	2.8	<0.05	0.61
SJCL01P03	<8.00	<4.00	4.1	19	<2.00	<1.00	<2.00	7,100	6,200	6,500	8.47	8.33	2.43	7	<0.05	0.88
SJCL01P03	<8.00	8.2	5.8	44	<2.00	<1.00	<2.00	12,400	9,750	5,200	9.72	8.36	3.6	2.5	0.08	1.02
SJCL01P03	<8.00	6.6	7.5	75	<2.00	<1.00	<2.00	52,000	44,000	10,000	7.57	8.23	3.17	5.6	<0.05	1.03
SJCL01P03	<8.00	5.7	12	25	<2.00	<1.00	<2.00	15,200	11,600	17,000	10.32	8.01	7.03	5.6		1
SJCL01P03	<0.50	13	3.8	13	<0.50	0.9	<0.50	100,000	2,800	5,400	8.4	7.69	2.65	5.9	<0.05	0.63
SJCL01P03	<0.50	9.5	3.3	10	<0.50	<0.50	<0.50	53,000	17,000	17,000	8.17	8.05	7.92	4.6	<0.05	4.36
SJCL01P03								270,000	48,000	30,000	8.01	8.22	16.7	2.9	0.07	3.01
SJCL01P03	0.52	11	2.8	9.1	<0.50	<0.50	<0.50	66,000	11,700	3,400	8.68	8.18	1.7	4.3	0.08	<0.06
SJCL01P03	<0.50	8.5	4.6	9.2	<0.50	<0.50	<0.50	85,000	1,400	34,000	7.65	7.98	64.3	4.2	0.13	2.09
SJCL01P03	0.56	3.7	11	25	<0.50	<0.50	1.2	140,000	18,000	17,000	6.71	8.21	227	3.5	0.25	1.74

SJCL01P03	<0.50	2.3	3	10	<0.50	<0.50	<0.50	19,000	5,900	6,100	8.72	8.18	3.4	4	0.08	0.95
SJCL01P03	<0.50	3.6	2.2	6	<0.50	<0.50	<0.50	30,000	3,400	8,900	8.11	8.3	2.97	4.4	0.1	1.36
SJCL01P03	<0.50	3.2	3.4	13	<0.50	<0.50	<0.50	47,000	5,400	7,600	7.5	8.05	52.3	3.3	0.35	1.34
SJCL01P03	<0.50	3.5	6.2	11	<0.50	<0.50	<0.50	>34,000	3,500	7,600	8.14	8.12	2.24	4	0.12	0.69
SJCL01P03	<0.50	2.5	2.6	2.9	<0.50	<0.50	<0.50	41,000	5,600	6,400	8.18	8.54	3.24	2	0.1	0.47
SJCL01P03	0.5	4.8	2.9	5.6	<0.50	<0.50	<0.50	32,000	3,600	8,100	13.68	8.33	0.66	3.3	0.1	0.68
SJCL01P03											8.82	8.2	3.71	2	0.1	1.21
SJCL01S01	<0.50	5.3	3.6	7.7	<0.50	<0.50	<0.50	31,000	3,800	3,300	9.61	8.14	1.92	3.1	0.12	0.61
SJCL01S01	0.53	5.8	5.6	14	<0.50	1.3	<0.50	>5,100	220	780	9.29	8.09	3.06	3.9	0.12	0.87
SJCL01S01	<0.50	1.6	2.2	16	<0.50	<0.50	<0.50	3,700	210	9,400	11.06	7.98	1.94	2	0.1	0.3
SJCL01S01	<0.50	7.3	4	13	<0.50	<0.50	<0.50	>39,000	13,000	10,900	9.85	8.07	9.53	4.1	0.1	1.17
SJCL01S01	<0.50	6.4	2.9	4.8	<0.50	<0.50	<0.50	21,000	3,400	8,800	9.47	8.06	1.67	3.6	0.1	0.86
SJCL01S01	<0.50	6.9	4.2	5.1	<0.50	<0.50	<0.50	>5,900	100	600	10.29	8.24	2.23	3.2	0.1	0.92
SJCL01S01	<0.50	3.1	4.4	5.8	<0.50	<0.50	<1.00	38,000	330	1,860	13.2	8.12	2.95	4.2	0.1	1.61
SJCL01S01											10.32	8.06	3.16	3.7	0.1	0.99
SJCL01TBN1	<0.50	4.3	12	9.5	<0.50	<0.50	<0.50	100,000	8,000	4,000	7.78	9.07	7.38	1.9	0.2	1.23
SJCL01TBN1	<0.50	5.2	11	11	<0.50	<0.50	<0.50	220,000	14,000	26,000	8.49	7.71	6.12	2.6	0.2	2.38
SJCL01TBN1	0.76	4.6	15	11	<0.50	<0.50	<0.50	140,000	38,000	16,000	8.94	7.99	10	2	0.08	1.86
SJCL01TBN1	93	92	23	87	<0.50	25	26	NR	NR	NR	8.02	8.1	6.1	1	0.1	1.2
SJCL01TBN1	0.59	6.8	4.1	18	<0.50	<0.50	<0.50	62,000	38,000	38,000	8.86	8.04	3.3	1.6	0.35	1.9
SJCL01TBN1	0.54	5	11	8.5	<0.50	<0.50	<0.50	23,000	8,000	3,900	9.51	8	3.23	3.6	0.18	1.51
SJCL01TBN1	0.85	4.8	13	8	<0.50	<0.50	<0.50	280,000	480	56,000	10.75	8.46	4.86	5.1	0.1	3.43
SJCL01TBN1	0.63	6.4	16	19	<0.50	<0.50	<0.50	24,000	3,200	10,000	11.27	8.5	3.46	3.9	0.25	2.73
SJCL01TBN1	<0.50	2.1	13	8.8	<0.50	<0.50	<0.50	470,000	54,000	57,000	9.99	8.17	4.65	3.3	0.18	3.65
SJCL01TBN1	<0.50	2.9	8.1	5.7	<0.50	<0.50	<0.50	210,000	22,000	12,000	12.3	8.1	2.41	1.8	<0.05	1.3
SJCL01TBN1	0.61	3.1	20	13	<0.50	<0.50	<0.50	102,000	20,000	15,000	3.94	8.21	3.63	6.3	0.8	2.94
SJCL01TBN1	<0.50	1.4	20	5.1	<0.50	<0.50	<0.50	6,300	790	5,100	9.28	8.17	1.32	2.7	0.11	3.77
SJCL01TBN1	<0.50	2.1	9.6	5.5	<0.50	<0.50	<0.50	36,000	13,000	56,000	0.2	8.16	2.2	3.1	0.05	3.51
SJCL01TBN1	<0.50	1.7	8.4	4.4	<0.50	<0.50	<0.50	32,000	1,600	4,100	8.51	8.11	5.2	2.2	0.1	1.37
SJCL01TBN1	<0.50	2.4	7.9	9	<0.50	<0.50	<0.50	63,000	15,000	4,000	6.4	8.18	3.46	2.9	0.25	3.26

SJCL01TBN1																
SJCL01TBN1	<0.50	2.7	9.9	9.9	<0.50	<0.50	<0.50	28,000	2,400	9,700	8.84	8.04	1.63	3.2	0.1	1.03
SJCL01TBN1	<0.50	2.9	8.2	12	<0.50	<0.50	<0.50	>75,000	3,800	11,100	11.95	8.06	3.33	4.3	0.3	2.44
SJCL01TBN1																
SJCL01TBN1	<0.50	2.9	6	4.2	<0.50	<0.50	<0.50	163,000	9,700	6,700	7.01	8.13	6.43	2.3	0.1	1.37
SJCL01TBN1	<0.50	3.9	9.3	12	<0.50	<0.50	<0.50	>24,000	>230	20,000	7.86	7.98	4.69	3	0.33	1.6
SJCL01TBN1	0.88	2.3	8.9	11	<0.50	<0.50	<0.50	>69,000	4,300	14,500	9.68	8.04	4.53	2	0.56	2.41
SJCL01TBN1																
SJCL02P02	<8.00	4.9	8.5	36	<2.00	<1.00	<2.00	87,000	42,000	50,660	7.08	7.99	6.31	0.9	0.2	2.9
SJCL02P02	24	35	77	2900	<2.00	3.2	16	98,000	41,000	3,450	4.61	7.46	19.4	2.1	<0.05	2.01
SJCL02P02	<8.00	4.3	11	41	<2.00	<1.00	<2.00	81,000	36,000	66,000	7.46	7.5	3.76	2.9	0.17	1.43
SJCL02P02	<8.00	6.9	22	190	<2.00	<1.00	<2.00	18,500	12,600	8,450	7.27	7.95	2.89	1.3	0.16	1.81
SJCL02P02	<8.00	6.4	10	84	<2.00	<1.00	6.2	>200,000	110,000	76,000	6.56	8.05	3.96	0.8	0.33	2.25
SJCL02P02	<8.00	7.9	5.9	69	<2.00	<1.00	<2.00	<200,000	58,000	170,000	5.26	7.55	12.4	0.9	0.6	2.97
SJCL02P02	<0.50	10	7.6	17	<0.50	<0.50	<0.50	180,000	6,000	3,800	6.63	7.44	1.46	1.4	0.08	1.52
SJCL02P02																
SJCL02P02	<0.50	4.4	2.2	6	<0.50	<0.50	<0.50	200,000	47,000	7,900	7.07	8.02	16.7	1.8	<0.05	1.56
SJCL02P02	<0.50	6.4	5.9	9.8	<0.50	<0.50	<0.50	40,000	4,800	3,800	10.46	8.1	2.02	0.7	0.06	<0.06
SJCL02P02	<0.50	6.9	6.4	18	<0.50	<0.50	<0.50	45,000	720	6,900	6.72	7.99	1.78	3.7	0.17	2.11
SJCL02P02	<0.50	4.5	4.1	10	<0.50	<0.50	<0.50	53,000	10,000	11,000	6.22	8.04	6.2	0.9	0.4	1.53
SJCL02P02	<0.50	7	7.7	27	<0.50	<0.50	<0.50	160,000	80,000	48,000	9.3	8.03	4.65	1.2	0.15	2.58
SJCL02P02	0.86	5.6	13	29	<0.50	<0.50	0.5	43,000	1,100	5,900	6.43	8.03	5.66	4.7	0.32	3
SJCL02P02	<0.50	2.6	4.2	8.9	<0.50	<0.50	<0.50	170,000	48,000	30,000	6.88	8.1	4.78	3	0.8	1.85
SJCL02P02	<0.50	3.9	8	19	<0.50	<0.50	<0.50	>41,000	2,500	2,800	12.8	8.61	2.31	1.8	0.42	1.25
SJCL02P02	0.86	7.3	14	85	<0.50	<0.50	1.4	480,000	80,000	44,000	5.57	8.04	17.2	1.1	1.15	1.82
SJCL02P02	<0.50	2.8	1.8	11	<0.50	<0.50	<0.50	99,000	11,900	30,000	12.09	8.2	3.18	2	0.2	1.44
SJCL02P02											12.35	8.29	6.8	2	0.78	1.92

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
SAN DIEGO REGION**

**FACT SHEET / TECHNICAL REPORT**

**FOR**

**ORDER NO. R9-2009-0002  
NPDES NO. CAS0108740**

**WASTE DISCHARGE REQUIREMENTS**

**FOR**

**DISCHARGES OF RUNOFF FROM  
THE MUNICIPAL SEPARATE STORM SEWER SYSTEMS (MS4s)  
DRAINING THE WATERSHEDS OF THE  
COUNTY OF ORANGE,  
THE INCORPORATED CITIES OF ORANGE COUNTY,  
AND THE ORANGE COUNTY FLOOD CONTROL DISTRICT  
WITHIN THE SAN DIEGO REGION**

**December 16, 2009**

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**LIST OF ACRONYMS AND ABBREVIATIONS**

ADT - Average Daily Traffic  
 ASBS - Area of Special Biological Significance  
 AST – Active Sediment Treatment  
 BAT - Best Available Technology  
 BIA - Building Industry Association of San Diego County  
 BMP - Best Management Practice  
 Basin Plan - Water Quality Control Plan for the San Diego Basin  
 BU – Beneficial Uses  
 CASQA - California Stormwater Quality Association  
 CCC - California Coastal Commission  
 CDFG - California Department of Fish and Game  
 CEQA - California Environmental Quality Act  
 CFR - Code of Federal Regulations  
 Copermittees - County of Orange, the 11 incorporated cities within the County of Orange in the San Diego Region, and the Orange County Flood Control District  
 CWA - Clean Water Act  
 CWC - California Water Code  
 CZARA - Coastal Zone Act Reauthorization Amendments of 1990  
 DAMP – Drainage Area Management Plan  
 ESAs - Environmentally Sensitive Areas  
 FR - Federal Register  
 GIS - Geographic Information System  
 HMP – Hydromodification Management Plan  
 IBI – Index of Biotic Integrity  
 IC/ID - Illicit Connections and Illicit Discharges  
 JRMP - Jurisdictional Runoff Management Plan  
 LARWQCB – California Regional Water Quality Control Board, Los Angeles Region  
 LID – Low Impact Development  
 MEP - Maximum Extent Practicable  
 MRP - Receiving Waters Monitoring and Reporting Program  
 MS4 - Municipal Separate Storm Sewer System  
 NOI - Notice of Intent  
 NPDES - National Pollutant Discharge Elimination System  
 NRDC - Natural Resources Defense Council  
 NURP - Nationwide Urban Runoff Program  
 OCVCD – Orange County Vector Control District  
 Regional Board – California Regional Water Quality Control Board, San Diego Region  
 RGOs - Retail Gasoline Outlets  
 ROWD - Orange County Copermittees' Report of Waste Discharge (application for NPDES reissuance)  
 RWLs - Receiving Water Limitations  
 SAL - Storm Water Action Level  
 SIC - Standard Industrial Classification Code  
 SSMP - Standard Storm Water Mitigation Plan  
 State Board - State Water Resources Control Board  
 SWMP - Storm Water Management Plan  
 SWPPP - Storm Water Pollution Prevention Plan  
 SWQPA - State Water Quality Protected Area  
 TAC - State Water Resources Control Board Urban Runoff Technical Advisory Committee  
 TIE - Toxicity Identification Evaluation  
 TMDL - Total Maximum Daily Load  
 USEPA - United States Environmental Protection Agency

USACE – United States Army Corps of Engineers  
WDRs - Waste Discharge Requirements  
WLA - Waste Load Allocation  
WQC - Water Quality Criteria  
WQBEL - Water Quality Based Effluent Limitations  
WQMP – Water Quality Management Plan  
WSPA - Western States Petroleum Association  
WRMP - Watershed Runoff Management Plan

## I. FACT SHEET FORMAT

This Fact Sheet briefly sets forth the principle facts and the significant factual, legal, methodological, and policy questions that the California Regional Water Quality Control Board, San Diego Region (Regional Board) considered in preparing Order No. R9-2009-0002. In accordance with the Code of Federal Regulations (CFR) title 40 parts 124.8 and 124.56, this Fact Sheet includes, but is not limited to, the following information:

- A. Contact information
- B. Public process and notification procedures
- C. Background information
- D. Permitting approach
- E. Economic issues
- F. Legal authority
- G. Findings
- H. Directives

Tentative Order No. R9-2008-0001 was distributed for review on February 9, 2007. A public hearing was subsequently held on April 11, 2007 in the City of Mission Viejo to receive oral comments from interested persons, and the Regional Board accepted written comments on the Tentative Order until April 25, 2007. Following review of the comments, a Revised Tentative Order was distributed on July 6, 2007 with a Response to Comments document (RTC 1). A second set of written comments were received on the revisions until August 23, 2007. Following review of the second round of written comments, the Regional Board further revised specific sections of the Order and distributed a second Response to Comments document (RTC 2). Tentative Order No. R9-2008-0001 was submitted to the Board for adoption on February 13, 2008. Upon review and comment, the Board chose not to adopt Tentative Order No. R9-2008-0001 and sent the Order back to staff with comments for changes. Tentative Order No. R9-2009-0002 was distributed for review on March 13, 2009. Written comments received on the tentative Order prior to June 19, 2009 were provided to Regional Board members for a public hearing regarding the Tentative Order held on July 1, 2009. On August 12, 2009, the sixth version of the Tentative Order was distributed for review. On November 18, 2009 an adoption hearing was held on the Tentative Order. The Regional Board directed staff to make specific changes and bring the Tentative Order back for consideration.

The Regional Board's files applicable to the issuance of Order No. R9-2009-0002 are incorporated into the administrative record in support of the findings and requirements of Order No. R9-2009-0002.

**II. CONTACT INFORMATION****Regional Board**

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The Order and other related documents can be downloaded from the Regional Board website at [http://www.waterboards.ca.gov/sandiego/programs/oc\\_stormwater.html](http://www.waterboards.ca.gov/sandiego/programs/oc_stormwater.html).

All documents referenced in this Fact Sheet and in Order No. R9-2009-0002 are available for public review at the Regional Board office, located at the address listed above. Public records are available for inspection during regular business hours, from 8:00 am to 5:00 pm Monday through Friday. To schedule an appointment to inspect public records, contact Sylvia Wellnitz at 858-637-5593 or DiAnne Broussard at 858-492-1763.

**Copermittees**

County of Orange	City of Laguna Woods
Orange County Flood Control District	City of Lake Forest
City of Aliso Viejo	City of Mission Viejo
City of Dana Point	City of Rancho Santa Margarita
City of Laguna Beach	City of San Clemente
City of Laguna Hills	City of San Juan Capistrano
City of Laguna Niguel	

### III. PUBLIC PROCESS AND NOTIFICATION PROCEDURES

The Regional Board followed the schedule listed below for the preparation of Order No. R9-2009-0002:

- A. In April 2006 and July 2006, the Northern Watershed Unit of the Regional Board met with the Copermitees to discuss the Report of Waste Discharge (ROWD) and potential changes to the permit based on the annual reports and the tentative permit for San Diego County.
- B. On August 18, 2006, the Regional Board received the ROWD for the permit renewal.
- C. On October 20, 2006 the Regional Board provided written comments on the ROWD to the Copermitees.
- D. On November 15, 2006, the Regional Board received the 2005-06 annual reports from the Copermitees for the existing permit.
- E. On January 11, 2007, the Regional Board notified all known interested parties that an electronic email listserv had been established to provide information and notices on the reissuance of the municipal storm water NPDES permit for southern Orange County.
- F. On February 9, 2007, the Regional Board released the tentative Order and notified interested parties of a planned workshop. Written comments were accepted until April 25, 2007.
- G. A public workshop was held on March 12, 2007.
- H. A public hearing of the tentative Order was conducted on April 11, 2007.
- I. A revised tentative Order was released on July 6, 2007. Written comments were accepted until August 23, 2007.
- J. A second revised tentative Order was released on December 12, 2007.
- K. A public hearing was conducted on February 13, 2008. The Regional Board chose not to adopt the tentative Order, and sent it back to staff for revision.
- L. On March 13, 2009 the Regional Board released a fourth version of the revised tentative Order and notified interested parties of a planned workshop.
- M. On April 03, 2009 and May 06, 2009 the Regional Board held public workshops.
- N. A public hearing of the tentative Order was held on July 01, 2009.
- O. On August 12, 2009 the Regional Board released an additional version of the revised tentative Order for public review. Written comments were accepted until September 28, 2009.
- P. An adoption hearing of the tentative Order was conducted on November 18, 2009. The Regional Board chose not to adopt the tentative Order and directed staff to make specific changes.

#### IV. BACKGROUND

Tentative Order No. R9-2009-0002 is the fourth iteration of the storm water permit for the municipal separate storm sewer systems (MS4s) in the Orange County portion of the San Diego region. The first permit was adopted in 1990, and the permit was reissued in 1996 and 2002.

**Municipal Storm Water Permits are required by the Federal Clean Water Act 1987 Amendments.** The federal Clean Water Act (CWA) was amended in 1987 to address storm water runoff from municipal and industrial dischargers. One requirement of the amendment was that many municipalities throughout the United States were obligated for the first time to obtain National Pollutant Discharge Elimination System (NPDES) permits for discharges of storm water runoff from their MS4s. In response to the CWA amendment (and the pending federal NPDES regulations which would implement the amendment), the Regional Board issued a municipal storm water permit, Order No. 90-38, in July 1990 to the Copermittees for their MS4 discharges.<sup>1</sup>

**The First and Second Term Permits, Order Nos. 90-38 and 96-03, provided maximum flexibility.** Order No. 90-38 contained the “essentials” of the 1990 regulations, but the requirements were written in very broad, generic terms. This was done in order to provide the maximum amount of flexibility to the Copermittees in implementing the new requirements (flexibility was, in fact, the stated reason for issuing the permit in advance of the final regulations). This lack of specificity was reflected in the Drainage Area Management Plan (DAMP) implemented under this First Term Permit in 1993 and renewed under the Second Term Permit in 1996. From staff’s perspective however, this same lack of specificity, combined with the lack of funding and political will, also provided the Copermittees with ample reasons to take few substantive steps towards permit compliance. The situation was exacerbated by the Regional Board’s own lack of storm water resources.

**By 2000 the Regional Board and Copermittees recognized the importance of an improved storm water program.** Although renewed in 1996 as Order No. 96-03, the 1993 DAMP implemented by the Copermittees was not significantly updated until 2000. The 2000 DAMP submitted to the Regional Board for the Third-Term Permit renewal was improved over the earlier DAMP. Regional Board staff concluded, however, that it reflected only the basic requirements of the 1990 Federal Regulations and in most cases did not represent significant improvement over the 1993 DAMP. Continued implementation of the DAMP without amendment would not have adequately addressed the impacts to receiving waters resulting from the discharge of storm water runoff and would not have achieved the maximum extent practicable standard (MEP) as defined in the Order.

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<sup>1</sup> The 1990 permit was issued to the County of Orange, the Orange County Flood Control District, and six incorporated cities. Additional municipalities have been added to the MS4 NPDES permit as they have incorporated.

In order to provide the Copermittees with the minimum requirements to meet the MEP standard for storm water of the Regional Board, a more detailed Order was adopted (Order No. R9-2002-01) that emphasized the strong jurisdictional level programs developed by the Copermittees during the First and Second Term Permits as well as the watershed-level approach embodied in the proposed DAMP.

**The Third-Term Permit introduced specific requirements.** The regulatory approach incorporated into Order No. R9-2002-01 was a significant departure from the regulatory approach of the First and Second-Term Permits. Where Order Nos. 90-38 and 96-03 included broad, nonspecific requirements in order to provide the Copermittees with the maximum amount of flexibility in developing their programs, Order No. R9-2002-01 used detailed, specific requirements which outlined the minimum level of implementation required for the Copermittees' programs. The shift in permitting approaches resulted from the Regional Board's conclusion that the lack of specificity in earlier Orders resulted in frequently unenforceable permit requirements, which in turn allowed some Copermittees to only make limited progress in implementing their programs.

**The Third-Term Permit followed the San Diego County permit template.** The shift in regulatory approaches for MS4 permits was first manifested in the 2001 MS4 permit to the owners and operators of San Diego County MS4s (Order No. R9-2001-01). The Third-Term Orange County Permit included similar requirements as the 2001 San Diego County Permit. Both the San Diego and Orange County Permits were appealed to the State Water Resources Control Board (State Board).<sup>2</sup> Minor modifications of each were made by the State Board, but the vast majority of the requirements were upheld. The San Diego County permit was also challenged in the Superior Court of the State of California and the Court of Appeal, Fourth Appellate District. Further litigation on the Orange County permit was held pending the precedential decisions on the San Diego Permit. The San Diego Permit was largely upheld in the Superior and Appellate Courts. The State of California Supreme Court declined to hear a final appeal from the Building Industry Association in March 2005. Thus, the Third-Term Orange County permit requirements remained as slightly modified by the State Board.

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<sup>2</sup> Seven petitions were filed with the State Board over the Third-Term Orange County Permit. Six were placed in abeyance. Three of the petitioners sought stays. One stay request was dismissed and one was withdrawn. The active petition and stays were addressed by the State Board in Order No. WQO 2002-0014. That Order stayed provision F.5.f regarding sewage spills and modified Finding No. 26 regarding chronic toxicity.

**The Third-Term Permit was adopted following substantial public participation.**

Public participation was extensive during the adoption process of the Third-Term Permit. The draft permit was released for public review and comment on July 2, 2001, and revised in response to comments and State Board Order WQ 2001-15 on the petition to review the San Diego Municipal Storm Water Permit. Because the proposed requirements for Orange County were similar to those that had recently been adopted and contested in San Diego County, much of the public participation dialogue echoed the discussions held during the San Diego renewal. Approximately 684 comments were received and responded to during two public workshops and a written comment period on the Tentative Order for the Third-Term Orange County permit. Following the extensive public participation process, the Regional Board adopted Order No. R9-2002-01 on February 13, 2002.

**Storm water programs have improved under the Third-Term Permit.** Since adoption of Order No. R9-2002-01, the Copermittees' storm water programs have expanded dramatically. Audits of the Copermittees' programs and reviews of annual reports exhibit that the Copermittees' jurisdictional programs are largely in compliance with the Order. Some of the efforts currently being conducted on a regular basis by the Copermittees that were not conducted on a widespread basis prior to adoption of Order No. R9-2002-01, include: construction site storm water inspections, industrial and commercial facility storm water inspections, municipal facility storm water inspections, management of storm water quality from new development, development of BMP requirements for existing development, interdepartmental coordination, comprehensive water quality monitoring, and assessment of storm water program effectiveness.

**Significant challenges remain.** When viewed relative to the magnitude of the storm water runoff problem, enormous challenges remain, particularly regarding the management of storm water runoff on a watershed scale. Today, storm and non-storm water discharges from the MS4 continue to be the leading cause of water quality impairment in the San Diego Region.<sup>3</sup> The Copermittees' monitoring data exhibits persistent exceedances of water quality objectives in most watersheds.<sup>4</sup> Many watersheds also have conditions that are frequently toxic to aquatic life. Bioassessment data from the watersheds further reflects these conditions, finding that macroinvertebrate communities in creeks have widespread Poor to Very Poor Index of Biotic Integrity ratings. Finally, the now too familiar "health advisory" or "beach closure" signs, which often result from high levels of bacteria in storm and non-storm water, exhibit the continued threat to public health by such discharges.

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<sup>3</sup> The potential sources of impairments are identified on the CWA section 303(d) list of impaired water bodies for the San Diego Region.

<sup>4</sup> Data is provided in annual reports to the Regional Board. A summary of data collected during the third-term permit is provided in the Copermittees' application for permit reissuance. That summary is available on-line at: [http://www.ocwatersheds.com/StormWater/documents\\_ROWd.asp](http://www.ocwatersheds.com/StormWater/documents_ROWd.asp)

## **V. PERMITTING APPROACH (PROGRAM INTEGRATION, FLEXIBILITY, AND DETAIL)**

The Order contains an increased emphasis on storm water discharge management on a watershed basis. This shift towards increased watershed management is consistent with planning efforts conducted by the Regional Board regarding reissuance of the San Diego Permit (Order No. R9-2007-0001), and it is also consistent with the Copermittees' most recent Report of Waste Discharge (ROWD).<sup>5</sup> This shift reflects recognition of the maturity of the storm water programs since they began implementing the Third-Term Permit. Addressing storm water discharge management on a watershed basis is only possible if effective jurisdictional programs have been established, and maintaining effective jurisdictional programs is crucial to the success of watershed-focused management.

There are several reasons for this shift in emphasis. First, the Copermittees are generally doing an effective job at implementing their jurisdictional programs; while on the other hand, an emphasis on watersheds is necessary to shift the focus of the Copermittees from program development and implementation to water quality results. After over 15 years of Copermittee program implementation, it is critical that the Copermittees link their efforts with positive impacts on water quality. Addressing storm water on a watershed scale focuses on water quality results by emphasizing the receiving waters within the watershed. The conditions of the receiving waters drive management actions, which in turn focus on the water quality problems in each watershed.

Focusing on watershed implementation does not mean that the Copermittees must expend funds outside of their jurisdictions. Rather, the Copermittees within each watershed are expected to collaborate to develop a watershed strategy to address the high priority water quality problems within each watershed. They have the option of implementing the strategy in the manner they find to be most effective. Each Copermittee can implement the strategy individually within its jurisdiction, or the Copermittees can group together to implement the strategy throughout the watershed.

While the Order includes a new emphasis on addressing storm water discharges on a watershed basis, the Order includes recognition of the importance of continued program implementation on jurisdictional and countywide levels. The Order also acknowledges that jurisdictional, watershed, and countywide efforts are not always mutually exclusive. For this reason, an attempt has been made to allow for the Copermittees' jurisdictional, watershed, and countywide programs to integrate.

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<sup>5</sup> The Report of Waste Discharge (ROWD) was submitted to the Regional Board on August 18, 2006 by the Principal Permittee (County of Orange) on behalf of all Copermittees.

In the Order, the watershed requirements serve as the mechanism for this program integration. Since jurisdictional and countywide activities can also serve watershed purposes, such activities can be integrated into the Copermitees' watershed programs, provided the activities meet certain criteria. In this manner, the Copermitees' activities do not always need to distinguish between jurisdictional, watershed, and countywide levels of implementation. Instead, they can be integrated on multiple levels.

Such opportunities for program integration inherently provide flexibility to the Copermitees in implementing their programs. Program integration can be expanded or minimized as the Copermitees see fit. For example, there is flexibility provided in determining the activities to be integrated and implemented in the watershed programs – watershed-based efforts, countywide efforts, enhanced jurisdictional efforts, or a mixture of the three. Significant flexibility is also provided throughout other portions of the Order.

Copermitees can choose the best management practices (BMPs) to be implemented, or required to be implemented, for development, construction, and existing development areas. Flexibility to determine which industrial or commercial sites are to be inspected is also provided to the Copermitees. Educational approaches are also to be determined by the Copermitees under the Order. Implementation of certain efforts on a countywide basis is largely optional for the Copermitees as well. Significant leeway is also provided to the Copermitees in using methods to assess the effectiveness of their various runoff management programs. This flexibility is further extended to the monitoring program requirements, which allow the Copermitees to develop monitoring approaches to several aspects of the monitoring program.

The challenge in drafting the Order is to provide the flexibility described above while ensuring that the Order is still enforceable. To achieve this, the Order frequently prescribes minimum measurable outcomes, while providing the Copermitees with flexibility in the approaches they use to meet those outcomes. Enforceability has been found to be a critical aspect of the Order. For example, the watershed requirements of Order No. R9-2002-01 were some of the Order's most flexible requirements. This lack of specificity in the watershed requirements resulted in inefficient watershed compliance efforts. This situation reflects a common outcome of flexible permit language. Such language can be unclear and unenforceable, and it can lead to implementation of inadequate programs.

To avoid these types of situations, a balance between flexibility and enforceability has been crafted into the Order. Minimum measurable outcomes are utilized to ensure the Order is enforceable, while the Copermitees are provided flexibility in deciding how they will implement their programs to meet the minimum measurable outcomes.

## GENERAL CRITERIA

Non-storm water discharges may contain pollutants which result from various activities that occur within areas draining into the MS4. This includes, but is not limited to, illicit discharges and connections, exempted categories of discharge not a source of pollutants (40 CFR 122.26(d)), and discharges into the MS4 covered under a separate NPDES permit. As such, existing and proposed discharges of non-storm water from MS4s:

- a) Result from similar activities through the MS4 system;
- b) Are the same type of water;
- c) Require similar effluent limitations for the protection of the Beneficial Uses of the receiving waters;
- d) Require similar monitoring;
- e) Are under the control of the owner and operator of the MS4 system;  
and
- f) Are more appropriately regulated under a general permit than individual permits.

## VI. ECONOMIC ISSUES

Economic discussions of storm and non-storm water management programs tend to focus on the significant costs incurred by municipalities in developing and implementing the programs. However, when considering the cost of implementing the programs, it is also important to consider the alternative costs incurred by not fully implementing the programs, as well as the benefits which result from program implementation. For instance, unhealthful coastal water quality conditions negatively affect residents, tourists, and related portions of the Orange County economy.<sup>6</sup>

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<sup>6</sup> Orange County 2006 Community Indicators Project. 2006. Sponsored by the County of Orange, the Orange County Business Council, and the Children and Families Commission of Orange County. Available on-line at [www.oc.ca.gov/ceocommunity.asp](http://www.oc.ca.gov/ceocommunity.asp)

It is very difficult to ascertain the true cost of implementation of the Copermittees' management programs because of inconsistencies in reporting by the Copermittees. Reported costs of compliance for the same program element can vary widely from city to city, often by a very wide margin that is not easily explained.<sup>7</sup> Despite these problems, efforts have been made to identify management program costs, which can be helpful in understanding the costs of program implementation. The Orange County Municipalities plan to prepare a common fiscal reporting strategy to better define the expenditure and budget line items included in annual reports.<sup>8</sup>

### **Estimates of Phase I Storm Water Program Costs.**

The United States Environmental Protection Agency (USEPA), the California Regional Water Quality Control Boards, and the State Board have attempted to evaluate the costs of implementing municipal storm water programs. The assessments demonstrate that true costs are difficult to ascertain and reported costs vary widely. Nonetheless, they provide a useful context for considering the costs of requirements within Tentative Order No. R9-2008-0001. In addition, reported fiscal analyses tend to neglect the costs incurred to municipalities when storm water runoff is not effectively managed. Such costs result from pollution, contamination, nuisance, and damage to ecosystems, property, and human health.

In 1999 USEPA reported on multiple studies it conducted to determine the cost of management programs. A study of Phase II municipalities determined that the annual cost of the Phase II program was expected to be \$9.16 per household. USEPA also studied 35 Phase I municipalities, finding costs to be \$9.08 per household annually, similar to those anticipated for Phase II municipalities.<sup>9</sup> The USEPA cost estimate for Phase I municipalities is valuable because it considers municipalities in Orange County.

A study on program cost was also conducted by the California Regional Water Quality Control Board, Los Angeles Region (LARWQCB), where program costs reported in the municipalities' annual reports were assessed. The LARWQCB estimated that average per household cost to implement the MS4 program in Los Angeles County was \$12.50.<sup>10</sup> Since the Los Angeles County permit is very similar to Order No. R9-2002-01, this estimate is also useful in assessing general program costs in Orange County.

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<sup>7</sup> LARWQCB, 2003. Review and Analysis of Budget Data Submitted by the Permittees for Fiscal Years 2000-2003. P. 2.

<sup>8</sup> Orange County Storm Water Copermittees. 2006. Report of Waste Discharge (San Diego Region)

<sup>9</sup> Federal Register / Vol. 64, No. 235 / Wednesday, December 8, 1999 / Rules and Regulations. P. 68791-68792.

<sup>10</sup> LARWQCB, 2003. Review and Analysis of Budget Data Submitted by the Permittees for Fiscal Years 2000-2003. P. 2.

The State Board also recently commissioned a study by the California State University, Sacramento to assess costs of the Phase I MS4 program. This study includes an assessment of costs incurred by Phase I MS4s throughout the State to implement their programs. Annual cost per household in the study ranged from \$18-46, with the City of Encinitas in San Diego County representing the upper end of the range.<sup>11</sup> Although no Orange County municipalities were assessed, the cost of the City of Encinitas' program may be somewhat representative of the upper range of Orange County MS4 programs. Encinitas shares similarities with southern Orange County, including the similarity of the San Diego MS4 permit to the Orange County MS4 permit, the city's coastal location, and its reliance on tourism. However, the City's program cost can be considered as the high end of the spectrum for management program costs because the City has a consent decree with environmental groups regarding its program, and City of Encinitas has received recognition for implementing a superior program.

It is important to note that reported program costs are not all attributable to compliance with MS4 permits. Many program components, and their associated costs, existed before any MS4 permits were ever issued. For example, street sweeping and trash collection costs cannot be solely or even principally attributable to MS4 permit compliance, since these practices have long been implemented by municipalities. Therefore, true program cost resulting from MS4 permit requirements is some fraction of reported costs. The California State University, Sacramento study found that only 38 percent of program costs are new costs fully attributable to MS4 permits. The remainder of the program costs were either pre-existing or resulted from enhancement of pre-existing programs.<sup>12</sup> In 2000, the County of Orange found that even lesser amounts of program costs are solely attributable to MS4 permit compliance, reporting that the amount attributable to implement the Drainage Area Management Plan (DAMP), was less than 20 percent of the total budget. The remaining 80 percent was attributable to pre-existing programs.<sup>13</sup>

### **Estimating Costs of Reissued Storm Water Permits**

The vast majority of costs that will be incurred as a result of implementing Order No. R9-2009-0002 are not new. Storm water management programs have been in place in Orange County for over 15 years. Any increase in cost to the Copermitttees will be incremental in nature. Moreover, since Order No. R9-2009-0002 "fine tunes" the requirements of Order No. R9-2002-01, these cost increases are expected to be modest.

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<sup>11</sup> State Water Board, 2005. NPDES Stormwater Cost Survey. P. ii.

<sup>12</sup> Ibid. P. 58.

<sup>13</sup> County of Orange, 2000. A NPDES Annual Progress Report. P. 60. More current data from the County of Orange is not used in this discussion because the County of Orange no longer reports such information.

The anticipated costs of program changes are difficult to estimate because of the flexibility inherent within the Permit and the recognition that program modifications will vary among the municipalities in response to the specific needs of the local and watershed programs. In other words, the Permit is intended to allow each Permittee to de-emphasize some program components and strengthen others based on the experience of the jurisdictional programs.

The changes in Order No. R9-2009-0002 reflect the iterative process of BMP implementation and the necessarily adaptive nature of storm water management that is expected by the USEPA. In 1996, USEPA recognized that changes to MS4 programs would occur during the reapplication period based on new information on the relative magnitude of a problem, new data on water quality impacts of the storm water discharges, and experience gained under the prior permit.<sup>14</sup> Some program changes have been proposed by the Copermittees in the permit reapplication package, and others have been included because the Regional Board considers those measures necessary and feasible to protect water quality from the effects of MS4 discharges.

### **Other Economic Considerations.**

Economic considerations of management programs cannot be limited only to program costs. Evaluation of programs requires information on the implementation costs and information on the benefits derived from environmental protection and improvement.<sup>15</sup> Attention is often focused on program costs, but the programs must also be viewed in terms of their value to the public.

For example, household willingness to pay for improvements in fresh water quality for fishing and boating has been estimated by USEPA to be \$158-210.<sup>16</sup> This estimate can be considered conservative, since it does not include important considerations such as marine waters benefits, wildlife benefits, or flood control benefits. The California State University, Sacramento study corroborates USEPA's estimates, reporting annual household willingness to pay for statewide clean water to be \$180.<sup>17</sup> When viewed in comparison to household costs of existing management programs, household willingness to pay estimates exhibit that per household costs incurred by Copermittees to implement their management programs remain reasonable.

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<sup>14</sup> Federal Register / Vol. 61, No. 155 / Friday, August 9, 1996 / Rules and Regulations. Interpretive policy memorandum on reapplication requirements for MS4s.

<sup>15</sup> Ribardo M.O. and D. Heelerstein. 1992, *Estimating Water Quality Benefits: Theoretical and Methodological Issues*. U.S. Department of Agriculture. Technical Bulletin No. 1808.

<sup>16</sup> Federal Register / Vol. 64, No. 235 / Wednesday, December 8, 1999 / Rules and Regulations. P. 68793.

<sup>17</sup> State Board, 2005. NPDES Stormwater Cost Survey. P. iv.

The effect of storm and non-storm water discharges on receiving waters can also influence the value of real estate in southern Orange County. For instance, recent marketing of new developments in the region prominently features access or proximity to the ocean.<sup>18</sup> This demonstrates the added value of healthy aquatic environments to property values. The real estate industry recognizes that home buyers are willing to pay for access to clean water environments. The ability to market water-based recreational activities is dependent on healthy water quality conditions.

Municipalities and business groups in Orange County recognize the value of programs to prevent and treat storm water pollution in Orange County. For instance, both coastal and inland Orange County cities positively promote their access to the Pacific Ocean as a valuable quality of life feature.<sup>19</sup> In addition, the South Orange County Regional Chamber of Commerce's legislative policy for infrastructure includes the support of programs and solutions for non-point source storm water runoff. This demonstrates that the business community realizes the negative economic effects that result from polluted storm water.

Another important way to consider management program costs is to consider implementation in terms of costs incurred by not improving the programs. Storm and non-storm water discharges from MS4s in southern California has been found to cause illness in people bathing near storm drains.<sup>20</sup> A study of south Huntington Beach and north Newport Beach (both located in northern Orange County) found that an illness rate of about 0.8 percent among bathers at those beaches resulted in about \$3 million annually in health-related expenses.<sup>21</sup> Extrapolation of such numbers to the wide range of beaches of Orange County could result in huge public expenses.

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<sup>18</sup> Examples include the "Marblehead Coastal" project in San Clemente (<http://www.marbleheadonthecoast.com>), the "Pacifica San Juan" project in San Juan Capistrano (<http://pacificasanjuan.com>), and "The Strand at Headlands" in Dana Point (<http://strandoc.com>).

<sup>19</sup> For a coastal city, see Laguna Beach Overview at <http://www.lagunabeachcity.net/about/overview>. For an inland city, see the Lake Forest 2005 Economic Profile at <http://www.theharbor.info/pdf/2005%20Economic%20Profile.pdf>.

<sup>20</sup> Haile, R.W., et al, 1996. An Epidemiological Study of Possible Adverse Health Effects of Swimming in Santa Monica Bay. Santa Monica Bay Restoration Project.

<sup>21</sup> Dwight, R.H., et al., 2005. Estimating the Economic Burden From Illnesses Associated With Recreational Coastal Water Pollution – A Case Study in Orange County, California. *Journal of Enviro. Management* Vol.76. No.2 p.95-103. Also reported in: Los Angeles Times, May 2, 2005. Here's What Ocean Germs Cost You: A UC Irvine Study Tallies the Cost of Treatment and Lost Wages for Beachgoers Who Get Sick.

Storm and non-storm water MS4 discharges, and their impact on receiving waters also affect tourism. In past years, Orange County was featured in the national press for its water quality problems. Such news is likely to have a negative impact on tourism, since polluted beaches are generally not attractive to tourists. According to the Orange County Community Indicators Project, the County's visitors spent an average of \$107.70 per day in 2004.<sup>22</sup> The experience of Huntington Beach provides an example of the potential economic impact of poor water quality. Approximately eight miles of Huntington Beach were closed for two months in the middle of summer of 1999, severely impacting beach visitation. When considered with the number of visitors and their average expenditure, the negative effects to the local economy are obvious.

Coastal tourism is an important industry in Orange County and is dependent upon effective management of storm water pollution and the prevention of non-storm water pollution. The following examples reflect that relationship.

DANA POINT: In response to a Grand Jury finding (1999-2000 Rainy Season's First Flush Hits the Harbors of Orange County), the city of Dana Point notes the interrelationship between the clean coastal water and the economic health of the city. Dana Point reports receiving \$5.2 million in transit occupancy tax funds in FY 1999-2000 "due in large part because of proximity to the beach. Without clean beaches, Dana Point risks losing its major revenue source."<sup>23</sup> More recently, the City budget report estimates that transit occupancy taxes comprise 35 percent of general fund revenues for the 2006 fiscal year.

LAGUNA BEACH: Tourism is one of the primary components of the Laguna Beach economy, and the beach is one of the main tourist attractions in the city. In 1999, hotel/motel bed tax revenue was approximately \$3 million, representing 13 percent of the City's general fund revenue.<sup>24</sup> In 2006, the City expects transit occupancy taxes to represent about 11 percent of general fund revenue.<sup>25</sup> The proportional decrease is due to an increase in property taxes, which is also affected in part by the quality of coastal waters. The City Council recognizes the value of the beaches to tourists, and the local population and has funded several low-flow non-storm water diversion systems in an attempt to prevent beach pollution and beach closures.

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<sup>22</sup> Orange County 2006 Community Indicators Project. 2006. Sponsored by the County of Orange, the Orange County Business Council, and the Children and Families Commission of Orange County. Available on-line at [www.oc.ca.gov/ceocommunity.asp](http://www.oc.ca.gov/ceocommunity.asp)

<sup>23</sup> Orange County Grand Jury. 1999-2000 Rainy Season's First Flush Hits the Harbors of Orange County.

<sup>24</sup> Laguna Beach at a Glance. May 2000. Prepared by Moore Iacofano Goltsman, Inc.

<sup>25</sup> City of Laguna Beach, adopted budget 2006-2007. Available on-line at: <http://www.lagunabeachcity.net/government/reference/budget07>

DOHENY STATE BEACH: In 1997, the U.S. Army Corps of Engineers (USACE) prepared an economic analysis as part of the San Juan Creek and Aliso Creek Watershed Study. Recreational value for Doheny State Beach, based on annual visitation of 670,545 people in 1995, was calculated at \$2,850,000. Furthermore, the USACE notes that lifeguards reported that beach attendance falls dramatically when there are unhealthy conditions in the ocean. In 1999, the USACE prepared an updated economic study as part of the Feasibility Phase of the San Juan Creek Watershed Management Study. The 1999 study reports that average beach attendance from 1996 to 1998 increased to 918,735. The USACE places a recreation value per visitor at \$5.76, which implies the annual recreational value of Doheny State Beach for 1996 to 1998 was \$5,291,914.

ALISO BEACH: In 1997, the USACE prepared an economic analysis as part of the San Juan Creek and Aliso Creek Watershed Study. Recreational value for Aliso Beach, based on annual visitation of 3,477,369 people in 1995, was calculated at \$14,779,000. In the 1999 Draft Feasibility Report for the Aliso Creek Watershed Management Study, the USACE noted that the average beach attendance from 1996 to 1998 decreased to 1,148,374. The recreation value per visitor was calculated at \$4.50 and the average annual impact from water quality-related beach closures at Aliso Beach Park was estimated to be \$468,392. This number is comparable to an economic analysis conducted as part of the Aliso Creek Watershed 205(j) study that estimated the annual average recreational value impact of beach closures at Aliso Beach Park to be \$468,400.

Finally, it is important to consider the benefits of management programs in conjunction with their costs. A recent study conducted by the University of Southern California and University of California, Los Angeles assessed the costs and benefits of implementing various approaches for achieving compliance with the MS4 permits in the Los Angeles Region. The study found that non-structural systems would cost \$2.8 billion but provide \$5.6 billion in benefit. If structural systems were determined to be needed, the study found that total costs would be \$5.7 to \$7.4 billion, while benefits could reach \$18 billion.<sup>26</sup> Costs are anticipated to be borne over many years – probably ten years at least. As can be seen, the benefits of the programs are expected to considerably exceed their costs. Such findings are corroborated by USEPA, which found that the benefits of implementation of its Phase II storm water rule would also outweigh the costs.<sup>27</sup>

Additional discussion of economic issues can be found at section 3 of the Fact Sheet/Technical Report for Regional Board Order No. R9-2002-01, available at:

[http://www.waterboards.ca.gov/sandiego/programs/oc\\_stormwater.html](http://www.waterboards.ca.gov/sandiego/programs/oc_stormwater.html).

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<sup>26</sup> LARWQCB, 2004. Alternative Approaches to Stormwater Control.

<sup>27</sup> Federal Register / Vol. 64, No. 235 / Wednesday, December 8, 1999 / Rules and Regulations. P. 68791.

## VII. LEGAL AUTHORITY

The following statutes, regulations, and Water Quality Control Plans provide the basis for the requirements of Order No. R9-2009-0002: Clean Water Act (CWA), California Water Code (CWC), 40 CFR Parts 122, 123, 124 (National Pollutant Discharge Elimination System Permit Application Regulations for Storm Water Discharges, Final Rule), Part II of 40 CFR Parts 9, 122, 123, and 124 (National Pollutant Discharge Elimination System – Regulations for Revision of the Water Pollution Control Program Addressing Storm Water Discharges; Final Rule), Water Quality Control Plan – Ocean Waters of California (California Ocean Plan), Water Quality Control Plan for the San Diego Basin (Basin Plan), 40 CFR 131 Water Quality Standards; Establishment of Numeric Criteria for Priority Toxic Pollutants for the State of California; Rule (California Toxics Rule), and the California Toxics Rule Implementation Plan.

The legal authority citations below generally apply to directives in Order No. R9-2009-0002, and provide the Regional Board with ample underlying authority to require each of the directives of Order No. R9-2009-0002. Legal authority citations are also provided with each permit section discussion in section IX of this Fact Sheet/Technical Report.

CWA 402(p)(3)(B)(ii) – The CWA requires in section 402(p)(3)(B)(ii) that permits for discharges from municipal storm sewers “shall include a requirement to effectively prohibit non-storm water discharges into the storm sewers.”

CWA 402(p)(3)(B)(iii) – The CWA requires in section 402(p)(3)(B)(iii) that permits for discharges from municipal storm sewers “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.”

40 CFR 122.26(d)(2)(i)(B,C,E, and F) – Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(B,C,E, and F) provide that each Copermittee’s permit application “shall consist of: (i) Adequate legal authority. A demonstration that the applicant can operate pursuant to legal authority established by statute, ordinance or series of contracts which authorizes or enables the applicant at a minimum to: [...] (B) Prohibit through ordinance, order or similar means, illicit discharges to the municipal separate storm sewer; (C) Control through ordinance, order or similar means the discharge to a municipal separate storm sewer of spills, dumping or disposal of materials other than storm water; [...] (E) Require compliance with condition in ordinances, permits, contracts or orders; and (F) Carry out all inspection, surveillance and monitoring procedures necessary to determine compliance and noncompliance with permit conditions including the prohibition on illicit discharges to the municipal separate storm sewer.”

40 CFR 122.26(d)(2)(iv) – Federal NPDES regulation 40 CFR 122.26(d)(2)(iv) provides that the Copermitttee shall develop and implement a proposed management program which “shall include a comprehensive planning process which involves public participation and where necessary intergovernmental coordination, to reduce the discharge of pollutants to the maximum extent practicable using management practices, control techniques and system, design and engineering methods, and such other provisions which are appropriate. The program shall also include a description of staff and equipment available to implement the program. [...] Proposed programs may impose controls on a system wide basis, a watershed basis, a jurisdiction basis, or on individual outfalls. [...] Proposed management programs shall describe priorities for implementing controls.”

40 CFR 122.26(d)(2)(iv)(A - D) – Federal NPDES regulations 40 CFR 122.26(d)(2)(iv)(A - D) require municipalities to implement controls to reduce pollutants in storm water runoff from new development and significant redevelopment, construction, and commercial, residential, industrial, and municipal land uses or activities. Prevention of illicit discharges is also required.

CWC 13377 – CWC section 13377 provides that “Notwithstanding any other provision of this division, the State Board or the regional boards shall, as required or authorized by the CWA, as amended, issue waste discharge requirements and dredged or fill material permits which apply and ensure compliance with all applicable provisions of the act and acts amendatory thereof or supplementary, thereto, together with anymore stringent effluent standards or limitation necessary to implement water quality control plans, or for the protection of beneficial uses, or to prevent nuisance.”

Order No. R9-2009-0002 is an essential mechanism for achieving the water quality objectives that have been established for protecting the beneficial uses of the water resources in the San Diego Regional Board’s portion of Orange County. Federal NPDES regulation 40 CFR 122.44(d)(1) requires MS4 permits to include any requirements necessary to “achieve water quality standards established under CWA section 303, including State narrative criteria for water quality.” The term “water quality standards” in this context refers to a water body’s beneficial uses and the water quality objectives necessary to protect those beneficial uses as established in the Basin Plan and antidegradation policies.

## VIII. FINDINGS

The findings of the Order have been modified to reduce repetition in their discussions and address new requirements. Each finding of the Order is provided and discussed below. Additional discussion relative to the findings can be found in section IX of the Fact Sheet, which provides discussions of the Order's directives.

### A. Basis For the Order

**Finding A.1.** This Order is based on the federal Clean Water Act (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 San Diego Basin adopted by the Regional Board, the California Toxics Rule, and the California Toxics Rule Implementation Plan.

**Discussion of Finding A.1.** In 1987, Congress established CWA Amendments to create requirements for storm water discharges under the NPDES program, which provides for permit systems to regulate the discharge of pollutants. Under the Porter-Cologne Water Quality Control Act, the State Board and the nine Regional Water Quality Control Boards have primary responsibility for the coordination and control of water quality, including the authority to implement the CWA. Porter-Cologne (section 13240) directs the Regional Water Quality Control Boards to set water quality objectives via adoption of Basin Plans that conform to all State policies for water quality control.

As a means for achieving those water quality objectives, Porter-Cologne (section 13243) further authorizes the Regional Water Quality Control Boards to establish waste discharge requirements (WDRs) to prohibit waste discharges in certain conditions or areas. Since 1990, the San Diego Regional Board has issued area-wide MS4 NPDES permits. The Order will renew Order No. R9-2002-01 to comply with the CWA and attain water quality objectives in the Basin Plan by limiting the contributions of pollutants conveyed by storm water and by including numeric action levels for dry weather non-storm water discharges designed to ensure that the Copermittees comply with the requirement to effectively prohibit all types of unauthorized non-storm water discharges into their MS4. Further discussions of the legal authority associated with the prohibitions and directives of the Order are provided in section VII this document.

**Finding A.2.** This Order renews National Pollutant Discharge Elimination System (NPDES) Permit No. CAS0108740, which was first issued on July 16, 1990 (Order No. 90-38), and then renewed on August 8, 1996 (Order No. 96-03) and February 13, 2002 (Order No. R9-2002-01). On August 21, 2006, in accordance with Order No. R9-2002-01, the County of Orange, as the Principal Permittee, submitted a Report of Waste Discharge (ROWD) for renewal of the MS4 Permit.

**Discussion of Finding A.2.** This Order renews National Pollutant Discharge Elimination System (NPDES) Permit No. CAS0108740, which was first issued on July 16, 1990 (Order No. 90-38), and then renewed on August 8, 1996 (Order No. 96-03) and February 13, 2002 (Order No. R9-2002-01). On August 21, 2006, in accordance with Order No. R9-2002-01, the County of Orange, as the Principal Permittee, submitted a Report of Waste Discharge (ROWD) for renewal of the MS4 Permit. Supporting information discussing the topic of this finding can be found in section V of this document.

**Finding A.3.** This Order is consistent with the following precedential Orders adopted by the State Water Resources Control Board (State Board) addressing municipal storm water NPDES Permits: Order 99-05, Order WQ-2000-11, Order WQ 2001-15, Order WQO 2002-0014, and Order WQ-2009-0008 (*SWRCB/OCC FILE A-1780*).

**Discussion of Finding A.3.** In recent years the State Board has considered several appeals of MS4 permits issued by the Regional Boards. In Order 99-05, the State Board established language for Receiving Water Limitation Language for MS4 permits. In Order No. WQ-2000-11, the State Board addressed design standards for Standard Urban Storm Water Mitigation Plan (SUSMP) requirements. Order WQ 2001-15 addressed Petitions of the San Diego County MS4 Permit issued by the Regional Board in 2001 (Order No. R9-2001-01). Order WQO 2002-0014 addresses Petitions of the Orange County MS4 Permit issued by the Regional Board in 2002 (Order No. R9-2002-01).

## B. Regulated Parties

**Finding B.1.** Each of the persons in Table 1 of the Order, hereinafter called Copermittees or dischargers, owns or operates a municipal separate storm sewer system (MS4), through which it discharges storm water and non-storm water into waters of the United States within the San Diego Region. These MS4s fall 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) a small MS4 that is “interrelated” to a medium or large MS4; or (3) an MS4 which contributes to a violation of a water quality standard; or (4) an MS4 which is a significant contributor of pollutants to waters of the United States.

**Discussion of Finding B.1.** Section 402 of the CWA prohibits the discharge of any pollutant to waters of the United States from a point source, unless that discharge is authorized by a NPDES permit. Though storm water and non-storm water may come from a diffuse source, it is discharged through MS4s, which are point sources under the CWA. Federal NPDES regulation 40 CFR 122.26(a) (iii) and (iv) provide that discharges from MS4s, which service medium or large populations greater than 100,000 or 250,000 respectively, shall be required to obtain a NPDES permit. Federal NPDES regulation 40 CFR 122.26(a)(v) also provides that a NPDES permit is required for “A [storm water] discharge which the Director, or in states with approved NPDES programs, either the Director or the USEPA Regional Administrator, determines to contribute to a violation of a water quality standard or is a significant contributor of pollutants to waters of the United States.” Such sources are then designated into the program.

Other small MS4s, such as those serving universities and military installations, also exist within the watersheds of Orange County in the San Diego Region. While these MS4s are not subject to this Order, they are subject to the Phase II NPDES storm water regulations. Over time, these MS4s will be designated for coverage under the State Board’s statewide general storm water permit for small MS4s.

## C. Discharge Characteristics

**Finding C.1.** Runoff discharged from an MS4 contains waste, as defined in the California Water Code (CWC), and pollutants that adversely affect the quality of the waters of the State. The discharge of runoff from an MS4 is a “discharge of pollutants from a point source” into waters of the U.S. as defined in the CWA.

**Discussion of Finding C.1.** Section 13050(d) of the CWC defines “waste” as “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.” 40 CFR 122.2 defines “point source” as “any discernable, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel or other floating craft from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture or agricultural storm water runoff.” 40 CFR 122.2 defines “discharge of a pollutant” as “Any addition of any pollutant or combination of pollutants to waters of the U.S. from any point source.” Also, the justification for control of pollution into waters of the state can be found at CWC section 13260(a)(1). State Board Order WQ 2001-15 verifies that discharges from the MS4 contain waste.<sup>28</sup>

The term urban runoff has been removed throughout Tentative Order R9-2009-0002 and replaced with storm water (wet weather) or non-storm water (dry weather) runoff. This clarification is necessary to prevent the misunderstanding that regulation under this permit is subject only to urbanized areas. The term “urban runoff” is not defined in the Code of Federal Regulations or Federal Register in the regulation of phase 1 MS4 discharges.

The discharge of runoff from an MS4 is a “discharge of pollutants from a point source” into waters of the U.S. as defined in the Clean Water Act (CWA). The Permit defines runoff as all flows in a storm water conveyance system (MS4 defined below) and consists of the following components:

- (1) storm water (wet weather flows) and
- (2) non-storm water discharges (dry weather flows).

The Permit defines an MS4 as a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains):

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<sup>28</sup> State Board, 2001. Order WQ 2001-15. In the Matter of Petitions of Building Industry Association of San Diego County and Western States Petroleum Association: For Review of Waster Discharge Requirements Order No. 2001-01 for Urban Runoff from San Diego County [NPDES No. CAS0108758] Issued by the Regional Board.

- (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 or 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 122.26.

Permit finding D.3.c. includes natural streams that convey runoff as part of the MS4. The presence of an MS4 system is not limited to areas considered to be “urban” in nature. Though the term urban is often referred to specifically as pertaining to cities, runoff means all flows in a storm water conveyance system, regardless of the location of the conveyance system. A conveyance system owned or operated by a State, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State law), may be located in a setting (e.g. unincorporated area, low density residential) that is not considered by the public to be “urban” in nature. These areas are contributing pollutants to the MS4 system that must be addressed. The term runoff applies to all flows in an MS4 system, no matter where the MS4 may be located in regards to incorporated or unincorporated property.

The Code of Federal Regulations (CFR) at 40 CFR 122.26 requires that large and medium MS4s obtain a permit for all discharges from their systems. Appendix I to 40 CFR 122 designates Orange County as having a large and medium MS4 requiring a permit. The regulations do not differentiate discharges from urban or rural MS4 systems. Rather, the regulations require the permit for all discharges from their systems. In the Final Rule establishing the Phase 1 storm water regulations, the USEPA clarified that all discharges are subject to a permit. On page 48041 of the Final Rule, the USEPA states:

“EPA recognizes that some of the counties addressed by today’s rule have, in addition to areas with high unincorporated urbanized populations, areas that are essentially rural or uninhabited and may not be the subject of planned development. While permits issued for these municipal systems **will cover** (*emphasis added*) **municipal systems discharges in unincorporated portions of the county** (*emphasis added*), it is the intent of EPA that management plans

and other components of the programs focus on the urbanized and developing areas of the county.”

So, while the Permit covers all MS4 discharges regardless if that discharge is in an urban or unincorporated area; the Copermittees management program should focus on urbanized areas. Due to the Permit’s requirements, the Copermittees management programs will naturally focus on urbanized areas. Urbanized areas have more industry, construction, pollution and MS4s that require more inspection, maintenance, monitoring, enforcement and complaint follow-up.

USEPA further clarified on page 48041 that all MS4 discharges require permit coverage when addressing highway MS4 systems:

“[The regulations] will result in discharges from separate storm sewer systems serving State highways and other highways through storm sewers ... in unincorporated portions of specified unincorporated portions of specified counties being included as part of the large or medium municipal separate storm sewer systems, since all municipal separate storm sewers within the boundaries of these political entities are included.”

In their summary on page 48043, the USEPA states:

“The definition [of MS4] provides that all systems within a geographical area including highways and flood controls will be covered, thereby avoiding fragmented and ill-coordinated programs;”

Neither the State Board’s storm water permit for Caltrans (Order No. 99-06-DWQ) nor the Los Angeles Regional Board’s draft MS4 permit for Ventura County include the term “urban runoff” in a significant regulatory capacity. The Caltrans permit has one reference to “urban runoff” where the term is used interchangeably with “storm water.” The draft Ventura permit uses the term “urban runoff” when referring to titles of reference documents, previously adopted management plans and municipal ordinances that may contain the phrase.

Understandably, the Copermittees have expressed concern regarding the regulation of pollutants from natural, undeveloped areas that enter the MS4 in an unincorporated area. The MS4 collection could change a natural sheet flow discharge to a concentrated point discharge. The MS4 does not provide natural infiltration or other pollutant remediation that these flows would receive in an otherwise natural drainage system. The MS4 may concentrate these natural pollutants and flows. In some cases, the MS4 may ultimately discharge the elevated concentrations of natural pollutants and flow rates to waters of the US far from the natural pollutant and flow source, causing a condition of pollution or a violation of water quality standards.

**Finding C.2.** MS4 storm water and non-storm water discharges are likely to contain pollutants that cause or threaten to cause a violation of surface water quality standards, as outlined in the Regional Board's Water Quality Control Plan for the San Diego Basin (Basin Plan). Storm water and non-storm water discharges from the MS4 are subject to the conditions and requirements established in the San Diego Basin Plan for point source discharges. These water quality standards must be complied with at all times, irrespective of the source and manner of discharge.

**Discussion of Finding C.2.** This finding is a clarification regarding the potential for discharges of storm water and non-storm water to impact the Beneficial Uses as described in the Basin Plan. As such these point source discharges require Waste Discharge Requirements (WDRs) to ensure that water quality standards are met. Furthermore, since point source discharges require WDRs, the discharges are subject to the prohibitions, conditions and requirements of the Basin Plan.

In addition, municipal discharges have been split into storm water and non-storm water discharges to represent the differing regulations applicable to storm water and non-storm water, though both types of discharges are likely to contain pollutants.

**Finding C.3.** The most common categories of pollutants in runoff include total suspended solids, sediment (due to anthropogenic activities); 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); detergents; and trash.

**Discussion of Finding C.3.** The National Urban Runoff Program (NURP) study showed that heavy metals, organics, coliform bacteria, nutrients, oxygen demanding substances (e.g., decaying vegetation), and total suspended solids are found at relatively high levels in storm water and non-storm water discharges.<sup>29</sup> It also found that MS4 discharges draining residential, commercial, and light industrial areas contain significant loadings of total suspended solids and other pollutants. The Basin Plan goes on to identify runoff pollutants to include lawn and garden chemicals, household and automotive care products dumped or drained on streets, and sediment that erodes from construction sites.<sup>30</sup> In addition, the State Board Urban Runoff Technical Advisory Committee (TAC) finds that urban runoff pollutants include sediments, nutrients, oxygen-demanding substances, heavy metals, petroleum hydrocarbons, pathogenic bacteria, viruses, and pesticides.<sup>31</sup> Runoff that flows over streets, parking lots, construction sites, and industrial, commercial, residential, and municipal areas carries these untreated pollutants through storm drain networks directly to the receiving waters of the San Diego Region.

**Finding C.4.** The discharge of pollutants and/or increased flows from MS4s may cause or threaten to cause the concentration of pollutants to exceed applicable receiving water quality objectives and impair or threaten to impair designated beneficial uses resulting in a condition of pollution (i.e., unreasonable impairment of water quality for designated beneficial uses), contamination, or nuisance.

**Discussion of Finding C.4.** The 1992, 1994, and 1996 National Water Quality Inventory Reports to Congress prepared by USEPA showed a trend of impairment in the nation's waters from contaminated storm and non-storm water runoff.<sup>32</sup> The 1998 National Water Quality Inventory Report showed that runoff discharges affect 11 percent of rivers, 12 percent of lakes, and 28 percent of estuaries. The report states that ocean shoreline impairment due to runoff increased from 55 percent in 1996 to 63 percent in 1998. The report notes that runoff discharges are the leading source of pollution and the main factor in the degradation of surface water quality in California's coastal waters, rivers, and streams. Furthermore, the NURP study found that pollutant levels from illicit non-storm water discharges were high enough to significantly degrade receiving water quality, and threaten aquatic life, wildlife, and human health.<sup>33</sup>

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<sup>29</sup> Ibid.

<sup>30</sup> Regional Board, 1994. Water Quality Control Plan, San Diego Basin, Region 9. San Diego.

<sup>31</sup> State Board, 1994. Urban Runoff Technical Advisory Committee Report and Recommendations. Nonpoint Source Management Program.

<sup>32</sup> USEPA, 2000. Quality of Our Nation's Waters: Summary of the National Water Quality Inventory 1998 Report to Congress – USEPA 841-S-00-001; Water Quality Conditions in the United States: Profile from the 1998 National Water Quality Inventory Report to Congress – USEPA 841-F-00-006.

<sup>33</sup> USEPA, 1993. Results of the Nationwide Urban Runoff Program, Volume 1 – Final Report.

In addition, the Region's CWA section 303(d) list, which identifies water bodies with impaired beneficial uses within the region, also indicates that the impacts of storm water and non-storm water runoff on receiving waters are significant. Many of the impaired water bodies on the 303(d) list are impaired by constituents that have been found at high levels within storm water and non-storm water runoff by the County of Orange storm water monitoring program.<sup>34</sup> Examples of constituents frequently responsible for beneficial use impairment include indicator fecal bacteria, heavy metals, and sediment; these constituents have been found at high levels in runoff both regionally and nationwide.<sup>35,36</sup> In addition, impairments may be caused by synergistic effects of multiple contaminants or by pollutants not currently monitored by storm water programs<sup>37</sup>.

**Finding C.5.** Pollutants in runoff can threaten and adversely affect human health. Human illnesses have been clearly linked to recreating near storm drains flowing to coastal waters. Also, runoff pollutants in receiving waters can bioaccumulate in the tissues of invertebrates and fish, which may be eventually consumed by humans.

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<sup>34</sup> County of Orange, 2006. Orange County Municipal Copermittees 2005-2006 Annual Storm Water Program Report, Section 11.

<sup>35</sup> Ibid.

<sup>36</sup> USEPA, 1983. Results of the Nationwide Urban Runoff Program, Volume 1 – Final Report.

<sup>37</sup> County of Orange, 2006. Orange County Municipal Copermittees 2005-2006 Annual Storm Water Program Report, Section 11.

**Discussion of Finding C.5.** A landmark study, conducted by the Santa Monica Bay Restoration Project, found that there was an increased occurrence of illness in people that swam in proximity to a flowing storm drain.<sup>38</sup> A study of south Huntington Beach and north Newport Beach (both located in northern Orange County) found that an illness rate of about 0.8 percent among bathers at those beaches resulted in about \$3 million annually in health-related expenses.<sup>39</sup> Furthermore, runoff pollutants in receiving waters can bioaccumulate in the tissues of invertebrates and fish, which may eventually be consumed by humans. Pollutants such as heavy metals and pesticides, which are commonly found in MS4 runoff, have been found to bioaccumulate and biomagnify in long-lived organisms at the higher trophic levels.<sup>40</sup> Since many aquatic species are utilized for human consumption, toxic substances accumulated in species' tissues can pose a significant threat to public health. USEPA supports this finding when it states, "As runoff flows over areas altered by development, it picks up harmful sediment and chemicals such as oil and grease, pesticides, heavy metals, and nutrients (e.g., nitrogen and phosphorus). These pollutants often become suspended in runoff and are carried to receiving waters, such as lakes, ponds, and streams. Once deposited, these pollutants can enter the food chain through small aquatic life, eventually entering the tissues of fish and humans."<sup>41</sup>

**Finding C.6.** Runoff discharges from MS4s often contain pollutants that cause toxicity to aquatic organisms (i.e., adverse responses of organisms to chemicals or physical agents ranging from mortality to physiological responses such as impaired reproduction or growth anomalies). Toxic pollutants impact the overall quality of aquatic systems and beneficial uses of receiving waters.

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<sup>38</sup> Haile, R.W., et al., 1996. An Epidemiological Study of Possible Adverse Health Effects of Swimming in Santa Monica Bay. Santa Monica Bay Restoration Project.

<sup>39</sup> Dwight, R.H., et al., 2005. Estimating the Economic Burden From Illnesses Associated With Recreational Coastal Water Pollution – A Case Study in Orange County, California. *Journal of Environ. Management* Vol.76. No.2 p.95-103. Also reported in: Los Angeles Times, May 2, 2005. Here's What Ocean Germs Cost You: A UC Irvine Study Tallies the Cost of Treatment and Lost Wages for Beachgoers Who Get Sick.

<sup>40</sup> Abel, P.D., 1996. *Water Pollution Biology*.

<sup>41</sup> USEPA, 2000. Storm Water Phase II Compliance Assistance Guide. Washington D.C. EPA 833-R-00-002.

**Discussion of Finding C.6.** The Copermittees' monitoring data exhibits frequent toxic conditions in runoff during storm events and dry weather. Toxicity is observed in both fresh and marine receiving waters, but varies significantly within and among sites and over time. However, according to the County of Orange, toxicity in both dry and wet weather appears concentrated along the coast. This supports the conclusion that toxicity is associated with anthropogenic activities and is caused by pollutants that flow downstream and become concentrated near the bottom of developed watersheds. Physical channel modification and hydromodification are also greatest near the coast and likely contribute to findings of toxicity. The cause of toxicity may vary between locations, dates, and indicator organisms. The actual cause may be influenced by various factors such as development, runoff management, habitat modification, hydromodification, and native aquatic environment. Toxicity identification evaluations (TIEs) have failed to confirm initial findings of toxicity. Follow-up studies by the County of Orange implicate both pollutants and physical stream habitat degradation (e.g. channel modification and hydromodification) as factors related to toxicity findings.<sup>42</sup>

**Finding C.7.** The Copermittees discharge runoff into lakes, drinking water reservoirs, rivers, streams, creeks, bays, estuaries, coastal lagoons, the Pacific Ocean, and tributaries thereto within one of the eleven hydrologic units (San Juan Hydrologic Unit) comprising the San Diego Region as shown in Tables 2a and 2b. Some of the receiving water bodies have been designated as impaired by the Regional Board and the United States Environmental Protection Agency (USEPA) in 2006 pursuant to CWA section 303(d). Also shown in the Tables are the watershed management areas (WMAs) as defined in the Regional Board report, Watershed Management Approach, January 2002.

**Discussion of Finding C.7.** This finding identifies the Copermittees responsible for MS4 discharges in each watershed management area. The list is identical to Order No. R9-2002-0001. The CWA Section 303(d) List of Impaired Waters, 2006 Update has been approved by the Regional Board, State Board, and USEPA.<sup>43</sup> This 303(d) list identifies waters that do not meet water quality standards after applying certain required technology-based effluent limits ("impaired" water bodies). As part of this listing process, states are required to prioritize waters/watersheds for future development of Total Maximum Daily Loads (TMDLs). The listed 303(d) pollutant(s) of concern do not necessarily reflect impairment of the entire corresponding WMA or all corresponding major surface water bodies. The specific impaired portions of each WMA are listed in the State Board's 2006 Section 303(d) List of Water Quality Limited Segments.

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<sup>42</sup> County of Orange, 2006. Orange County Municipal Copermittees 2005-2006 Annual Storm Water Program Report, Section 11.

<sup>43</sup> The approved 2006 Clean Water Act Section 303(d) List of Water Quality Limited Segments is on-line at: [http://www.waterboards.ca.gov/tmdl/303d\\_lists2006.html](http://www.waterboards.ca.gov/tmdl/303d_lists2006.html)

**Finding C.8.** Trash is a persistent pollutant which can enter receiving waters from the MS4 resulting in accumulation and transport in receiving waters over time. Trash poses a serious threat to the Beneficial Uses of the receiving waters, including, but not limited to, human health, rare and endangered species, navigation and human recreation.

**Discussion of Finding C.8.** The Copermittees to date have documented high volumes of trash coming from the MS4 system and in receiving waters.<sup>44</sup>

The Basin Plan specifies the following narrative Water Quality Objective (WQO) for Floating Material:

*“Waters shall not contain floating material, including solids, liquids, foams, and scum in concentrations which cause nuisance or adversely affect beneficial uses.”*

The Basin Plan specifies the following narrative WQO for Suspended and Settleable Solids: Material:

*“Waters shall not contain suspended and settleable solids in concentrations of solids that cause nuisance or adversely affect beneficial uses.”*

Additionally, high density urban areas in Southern California have been shown to be responsible for up to 60 percent of the trash that enters receiving waters from the MS4.<sup>45</sup> The retrofitting of existing MS4 systems, such as catch basins, in targeted high trash areas can result in significant reductions in the amount of trash entering receiving waters from the MS4.

Trash, as litter in both solid and liquid form, is consistently found on and adjacent to roadways. A California Department of Transportation Litter Management Pilot Study found that of roadway trash, plastics and Styrofoam accounted for 33 percent of trash by weight, and 43 percent by volume. Further, the study found that approximately 80 percent of the litter associated with roadways was floatable, indicating that, without capture, this litter would enter Waters of the State after a storm event, resulting in the impairment of Beneficial Uses.<sup>46</sup> The study, however, relied upon a mesh capture size of 0.25 inches (6.35 millimeters). This size is too large to effectively capture plastic pre-production pellets (aka “nurdles”), which are roughly 3 mm in size, and likely underestimated the total contribution of plastics. Plastics, including pre-production pellets, have been found to be the dominant pollutant on beaches in the County of Orange.<sup>47</sup> Furthermore, pre-production plastic pellets, which are small enough to be easily digested, have been found to carry persistent organic pollutants, including PCBs

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<sup>44</sup> Aliso Creek Watershed 27th, 28th, 29th and 30th Quarterly Progress Reports. 2007-2008.

<sup>45</sup> The City of Los Angeles Meets Trash TMDLs Compliance with CB Inserts and Opening Covers. August 06, 2008.

<sup>46</sup> California Department of Transportation District 7 Litter Management Pilot Study. June 26, 2000.

<sup>47</sup> Moore, S.L., Gregorio, D., Carreon, M., Weisberg, S.B. and M. K. Leecaster. 1998. Composition and Distribution of Beach Debris in Orange County, California. *Marine Pollution Bulletin*. Vol. 42

and DDT.<sup>48</sup>

**Finding C.9.** The Copermitees' water quality monitoring data submitted to date documents persistent violations of Basin Plan water quality objectives for various runoff-related pollutants (fecal coliform bacteria, total suspended solids, turbidity, metals, etc.) at various watershed monitoring stations. Persistent toxicity has also been observed at some watershed monitoring stations. In addition, bioassessment data indicates that the majority of urbanized receiving waters have Poor to Very Poor Index of Biotic Integrity ratings. In sum, the above findings indicate that runoff discharges are causing or contributing to water quality impairments, and are a leading cause of such impairments in Orange County.

**Discussion of Finding C.9.** The Copermitees have produced data that demonstrates water quality objectives are frequently not met during dry and wet weather. The 2006 Report of Waste Discharge and the 2005-06 Annual Reports document that receiving water monitoring stations often fail to meet water quality objectives established in the Basin Plan. Similar conclusions are found in monitoring reported to the Regional Board pursuant to Investigative Orders issued between 2001 and 2006 for Aliso Creek, Salt Creek<sup>49</sup>, Prima Deshecha<sup>50</sup>, and North Creek at Doheny Beach<sup>51</sup>. Monitoring reported to the State Board pursuant to funding grant agreements also demonstrates that discharges from MS4s routinely exceed water quality objectives.<sup>52,53, 54, 55, 56</sup>

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<sup>48</sup> Rios, L.M., Moore, C. and Patrick R. Jones. 2007. Persistent organic pollutants carried by synthetic polymers in the ocean environment. *Marine Pollution Bulletin*. Vol. 54.

<sup>49</sup> An Investigative Order was issued on March 6, 2003 to the City of Dana Point for water quality conditions of Salt Creek near Monarch Beach.

<sup>50</sup> An Investigative Order was issued on July 3, 2002 to the City of San Clemente and the County of Orange for water quality conditions of Prima Deshecha Canada (including Poche Beach).

<sup>51</sup> Investigative Order No. R9-2006-0039 was issued on April 4, 2006 to the City of Dana Point and Quantum Ozone, Inc. for an assessment of water quality conditions at North Creek, Doheny Beach.

<sup>52</sup> City of Dana Point. 2005. *Final Report for the Del Obispo Storm Drain Project*. Prepared for the State Water Resources Control Board Agreement No. 02-216-550-0.

<sup>53</sup> City of Dana Point. 2004. *Final Report For The Alipaz Storm Drain Treatment And Low Flow Diversion Project* by the City of Dana Point. Prepared for State Water Resources Control Board Agreement Number: 01-068-550-0.

<sup>54</sup> James Volz. 2005. *Final Report for Poche Beach Urban Runoff Ultraviolet Light Bacteria Disinfection Project*. Prepared by the County of Orange for State Water Resources Control Board Agreement No. 01-236-550-1.

<sup>55</sup> Max Anderson. 2005. *Final Report: Aliso Beach Clean Beach Initiatives, J01P28 Interim Water Quality Improvement Package Plant Best Management Practices*. Prepared by the County of Orange for State Water Resources Control Board Agreement No. 01-227-550-0.

<sup>56</sup> City of Laguna Niguel and CH2MHILL. 2004. *Final Report: Wetland Capture and Treatment (WetCAT) Network*. Prepared for State Water Resources Control Board Agreement No. 01-122-259-0.

Water quality in receiving waters downstream of MS4 discharges fail to meet Ocean Plan standards<sup>57</sup>, California Toxics Rule standards<sup>58</sup>, and Basin Plan objectives. Data submitted in the MS4 Annual Reports indicate that at various times chemical, bacteria, pesticide, and metal concentrations may exceed water quality objectives in marine and fresh water receiving waters in both wet and dry weather conditions. Although wet weather MS4 effluent data is not generally reported, dry-weather non-storm water MS4 effluent data demonstrates that the effluent contains concentrations of pollutants that would exceed receiving water quality objectives.

In most of these watersheds, there are no other significant NPDES permits discharging to the creeks. For instance, there are no live-stream discharges of treated waste water in south Orange County. The few NPDES permits in the watersheds are mainly for recycled water which only discharges occasionally during the rainy season. Because the water quality monitoring indicates exceedances of water quality standards and MS4 discharges are the main source of pollutants in the watersheds, it can be inferred that the MS4 discharges are causing or contributing to water quality impairments, and are a leading cause of such impairments in Orange County.

**Finding C.10.** When natural vegetated pervious ground cover is converted to impervious surfaces such as paved highways, streets, rooftops, and parking lots, the natural absorption and infiltration abilities of the land are lost. Therefore, runoff leaving a developed area is significantly greater in runoff volume, velocity, and peak flow rate than pre-development runoff from the same area. Runoff durations can also increase as a result of flood control and other efforts to control peak flow rates. Increased volume, velocity, rate, and duration of runoff greatly accelerate the erosion of downstream natural channels. Significant declines in the biological integrity and physical habitat of streams and other receiving waters have been found to occur with as little as a 3-5 percent conversion from natural to impervious surfaces. The increased runoff characteristics from new development must be controlled to protect against increased erosion of channel beds and banks, sediment pollutant generation, or other impacts to beneficial uses and stream habitat due to increased erosive force.

**Finding C.11.** Development creates new pollution sources as human population density increases and brings with it proportionately higher levels of car emissions, car maintenance wastes, municipal sewage, pesticides, household hazardous wastes, pet wastes, trash, etc. which can either be washed or directly dumped into the MS4. As a result, the runoff leaving the developed area is significantly greater in pollutant load than the pre-development runoff from the same area. These increased pollutant loads must be controlled to protect downstream receiving water quality.

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<sup>57</sup> The Basin Plan incorporates terms and conditions of the State Board's *Water Quality Control Plan for Ocean Waters of California* (Ocean Plan) as a water quality objective for Ocean Waters in the San Diego Region.

<sup>58</sup> The California Toxics Rule criteria promulgated by the USEPA are directly applicable water quality standards for certain priority toxic pollutants in inland surface waters and enclosed bays and estuaries in California.

**Discussion of Findings C.10 and C.11.**

The Natural Resources Defense Council (NRDC) 1999 Report, "*Stormwater Strategies, Community Responses to Runoff Pollution*" identifies two main causes of the storm water pollution problem in developed areas. Both causes are directly related to development:

1. Increased volume and velocity of surface runoff. There are three types of human-made impervious covers that increase the volume and velocity of runoff: (i) rooftop, (ii) transportation imperviousness, and (iii) non-porous (impervious) surfaces. As these impervious surfaces increase, infiltration will decrease, forcing more water to run off the surface, picking up speed and pollutants.
2. The concentration of pollutants in the runoff. Certain industrial, commercial, residential and construction activities are large contributors of pollutant concentrations in storm water runoff. As human population density increases, it brings with it proportionately higher levels of car emissions, car maintenance wastes, municipal sewage, pesticides, household hazardous wastes, pet wastes, trash, etc.

As a result of these two causes, runoff leaving developed areas is significantly greater in volume, velocity, and pollutant load than pre-development runoff from the same area.

By accommodating the traditional approach to storm water management, development has also altered the flow regime (rate, magnitude, frequency, timing, and flashiness of runoff) that supports aquatic and riparian habitats. These hydrologic changes are driven by the loss of water storage capacity in the watersheds,<sup>59</sup> and exacerbated by physical alterations of the stream channel network.<sup>60</sup> This relationship between development and stream channel integrity has been documented nationally and in southern California.

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<sup>59</sup> Konrad, Christopher P. and Derek K. Booth, 2005. *Hydrologic Changes in Urban Streams and Their Ecological Significance*. American Fisheries Society Symposium Vol.47 pp.157-177.

<sup>60</sup> Poff, N.L. et al. 1997. The Natural Flow Regime: A paradigm for river conservation and restoration. *Bioscience* Vol. 47, No. 11, pp.769-784.

Hydrologic changes from development also directly and indirectly adversely affect wetlands. Natural wetlands support many beneficial uses and provide important water-quality related ecological services, including pollutant removal, flood attenuation, and groundwater recharge.<sup>61</sup> The Center for Watershed Protection recently provided USEPA with a synthesis of more than 100 scientific studies on the direct and indirect impacts of development, particularly urbanization, on wetlands and the role wetlands play in watershed quality. The report found that the three changes from land development with the most potential to impact wetlands include: Increased storm water runoff; decreased groundwater recharge; and flow constriction.<sup>62</sup> Each of these changes can often be avoided or minimized by implementing LID and hydromodification BMPs.

When Order No. R9-2002-01 was adopted, studies had shown that the level of imperviousness in an area strongly correlates with the quality of nearby receiving waters.<sup>63</sup> One comprehensive study, which looked at numerous areas, variables, and methods, revealed that stream degradation occurs at levels of imperviousness as low as 10 – 20 percent.<sup>64</sup> Stream degradation is a decline in the biological integrity and physical habitat conditions that are necessary to support natural biological diversity. For instance, few urban streams can support diverse benthic communities with imperviousness greater than or equal to 25 percent.<sup>65</sup> To provide some perspective, a medium density, single-family home area can be from 25 percent to 60 percent impervious (variation due to street and parking design).<sup>66</sup>

More recently, a report on the effects of impervious in southern California streams found that local ephemeral and intermittent streams are more sensitive to such effects than streams in other parts of the country. This study, by the Southern California Coastal Water Research Program, estimated a threshold of response at a two to three percent change in percent of impervious cover in a watershed.<sup>67</sup> This threshold is lower than the previously reported estimates by the USEPA that were cited in the Fact Sheet for Order No. R9-2002-01.

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<sup>61</sup> Wright, Tiffany, et al. 2006. "Direct and Indirect Impacts of Urbanization on Wetland Quality." Prepared by the Center for Watershed Protection. Available at: <http://www.cwp.org>. 81p.

<sup>62</sup> Ibid p.26

<sup>63</sup> USEPA, 1999. Part II. 40 CFR Parts 9, 122, 123, and 124. National Pollutant Discharge Elimination System – Regulations for Revision of the Water Pollution Control Program Addressing Storm Water Discharges; Final Rule. Federal Register.

<sup>64</sup> Ibid.

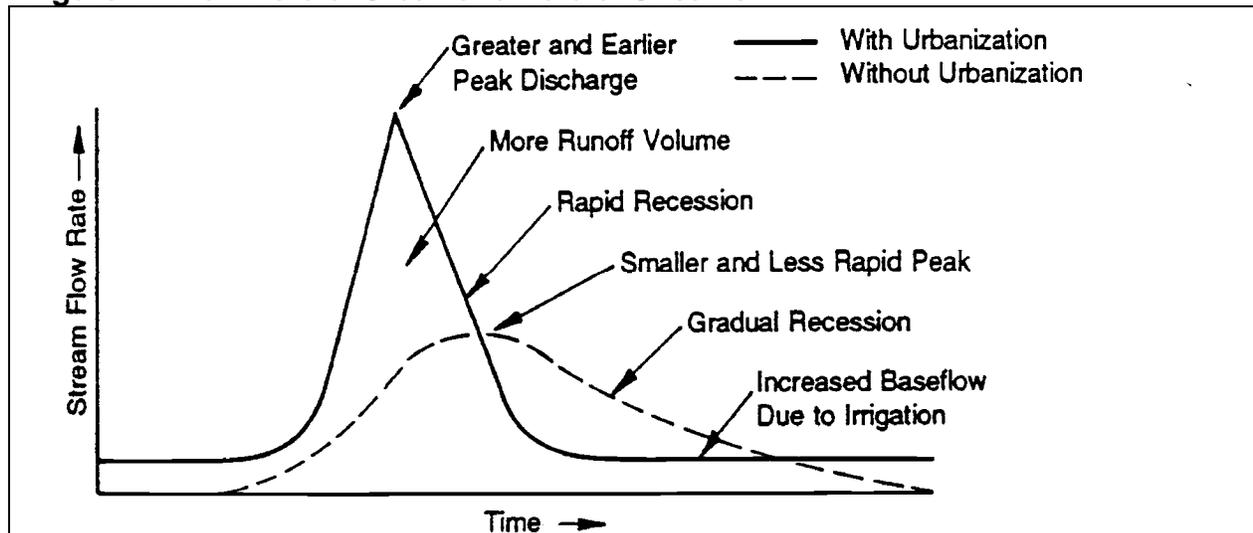
<sup>65</sup> Ibid.

<sup>66</sup> Schueler, T.R., 1994. The Importance of Imperviousness. Watershed Protection Techniques. As cited in 64 Fed. Reg. 68725.

<sup>67</sup> Coleman, Derrick, et al. 2005. *Effect of Increases in Peak Flows and Imperviousness on the Morphology of Southern California Streams*. Technical Report No. 450 of the Southern California Coastal Water Research Project.

To demonstrate the principle of increased volume and velocity of runoff from urbanization, Figure 1 shows the flow rate of an urban vs. a natural stream. What the figure demonstrates is that urban stream flows have greater peaks and volumes, as well as shorter retention times than natural stream flows. The greater peak flows and volumes result in stream degradation through increased erosion of stream banks and damage to aquatic habitat. The shorter retention times result in less time for sediments and other pollutants to settle before being carried out to the ocean. This sediment, and the associated pollutants it carries, can be a significant cause of water quality degradation.

**Figure 1.** Flow Rate of Urban and Natural Streams<sup>68</sup>



Increased volume and velocity of runoff adversely impacts receiving waters and their beneficial uses in many ways. According to the Urban Runoff TAC report,<sup>69</sup> increases in population density and imperviousness result in changes to stream hydrology including:

1. Increased peak discharges compared to pre-development levels;
2. Increased volume of storm water runoff with each storm compared to pre-development levels;
3. Decreased travel time to reach receiving water; increased frequency and severity of floods;
4. Reduced stream flow during prolonged periods of dry weather due to reduced levels of infiltration;
5. Increased runoff velocity during storms due to a combination of effects of higher discharge peaks, rapid time of concentration, and smoother hydraulic surfaces from channelization; and

<sup>68</sup> Adapted from Schueler, T.R., 1987. Controlling Urban Runoff: A Practical Manual for Planning and Designing Urban BMPs. Metropolitan Washington Council of Governments.

<sup>69</sup> State Board, 1994. Urban Runoff Technical Advisory Committee Report and Recommendations. Nonpoint Source Management Program.

## 6. Decreased infiltration and diminished ground water recharge.

Even though the rainfall depths in arid watersheds are lower, watershed development can greatly increase peak discharge rates during rare flood events.<sup>70</sup> A study conducted in arid watersheds around Riverside, CA showed that, over two decades, impervious cover increased from 9 percent to 22 percent, which resulted in an increase of more than 100 percent in the peak flow rate for the two-year storm event. The study also showed that the average annual storm water runoff volume had increased by 115 percent to 130 percent over the same time span.<sup>71</sup>

Prior hydromodification studies in California have shown that the increase in impervious cover, and thus change in runoff volume, velocity, rate, and duration, results in a shift in the range of storms that produce geomorphically significant flows within receiving waters (see above discussion). Additionally, studies in California have determined that ninety percent of the geomorphic “work” done within channels receiving flows from developed areas now occurs from flows below the 10 year peak flow event.<sup>72</sup>

This increased volume, velocity, rate, and duration of runoff greatly accelerates the erosion of the beds and banks within downstream receiving waters. Additionally, storm water flows which runoff directly from impervious surfaces into the MS4 and thus receiving waters prevent the associated runoff of natural sediments which would occur in pre-project conditions. This combined alteration of the physical condition of storm water runoff results in accelerated downstream erosion of receiving water bed and banks. The excessive erosion of stream beds and banks releases pollutants found in soils into receiving waters, degrades macroinvertebrate habitat (see D.2.c), eliminates spawning habitat, reduces associated wetland and riparian habitat, and threatens existing infrastructure adjacent to receiving waters. Bank sloughing within creeks and streams increases the pollutant loading to those receiving waters, particularly for turbidity and phosphorous.<sup>73</sup> In arid environments, accelerated channel erosion has been shown to have synergistic impacts within watersheds. Increased channel erosion within Las Vegas wash has resulted in the loss of over 1,000 acres of wetland and riparian habitat, released additional pollutants into downstream receiving waters, and eliminated in-stream habitat and water quality conditions required for existing threatened and endangered species.<sup>74</sup>

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<sup>70</sup> Schueler and Holland, 2000. Storm Water Strategies for Arid and Semi-Arid Watersheds (Article 66). The Practice of Watershed Protection. P. 695-706.

<sup>71</sup> Ibid.

<sup>72</sup> Santa Clara Valley Hydromodification Management Plan. April 21, 2005.

<sup>73</sup> Sekely, A.C., Mulla, D.J. and D.W. Bauer. 2002. Streambank slumping and its contribution to the phosphorus and suspended sediment loads of the Blue Earth River, Minnesota. *Journal of Soil and Water Conservation*. September 2002 vol. 57 no. 5 243-250.

<sup>74</sup> Tuttle, P.L. and E.L. Orsak. 2002. Las Vegas Wash Water Quality and Implications to Fish and Wildlife. U.S.

Regarding the impact of development on storm water runoff pollutant loads, the Regional Board's Basin Plan states:

*Nonpoint source pollution is primarily the result of man's uses of land such as urbanization, roads and highways, vehicles, agriculture, construction, industry, mineral extraction, physical habitat alteration (dredging/filling), hydromodification (diversion, impoundment, channelization), silviculture (logging), and other activities which disturb land.<sup>75</sup> As a result, when rain falls on and drains through urban freeways, industries, construction sites, and neighborhoods it picks up a multitude of pollutants. The pollutants can be dissolved in the runoff and quickly transported by gravity flow through a vast network of concrete channels and underground pipes referred to as storm water conveyance systems. Such systems ultimately discharge the polluted runoff, without treatment, into the nation's creeks, rivers, estuaries, bays, and oceans.<sup>76</sup>*

According to the Center for Watershed Protection, urbanization strongly shapes the quality of both surface and ground water in arid and semi-arid regions of the southwest. Since rain events are so rare, pollutants have more time to build up on impervious surfaces compared to humid regions. Therefore, the pollutant concentrations of storm water runoff from arid watersheds tends to be higher than that of humid watersheds.<sup>77</sup> The effect of antecedent rainfall events is demonstrated in a recent report from the California Department of Transportation (Caltrans) that found the concept of a seasonal first flush is applicable to the southern California climate.<sup>78</sup>

**Finding C.12.** Development and urbanization especially threaten environmentally sensitive areas (ESAs), such as water bodies designated as supporting a RARE beneficial use (supporting rare, threatened or endangered species) and CWA 303(d)-impaired water bodies. Such areas have a much lower capacity to withstand pollutant shocks than might be acceptable in other areas. In essence, development that is ordinarily insignificant in its impact on the environment may become significant in a particularly sensitive environment. Therefore, additional control to reduce storm water pollutants from new and existing development may be necessary for areas adjacent to or discharging directly to an ESA.

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Fish and Wildlife Service.

<sup>75</sup> Regional Board, 1994. Water Quality Control Plan for the San Diego Basin. P. 4-66.

<sup>76</sup> Ibid. P. 4-69 - 4-70.

<sup>77</sup> Schueler and Holland, 2000. Storm Water Strategies for Arid and Semi-Arid Watersheds (Article 66). The Practice of Watershed Protection. P. 695-706.

<sup>78</sup> Stenstrom, Michael and Masoud Kayhanian, 2005. *First Flush Phenomenon Characterization*. Prepared for Caltrans. Report No. CTSW-RT-05-73-02.6 Study jointly performed by UCLA and UCD. Most of the data presented was collected from three highly urbanized highway sites in west Los Angeles. Much effort went into developing a quantitative way of defining the mass first flush. Other aspects include: variability of water quality during storm events, litter characteristics, correlation among constituents, first flush of organics and particle size distribution, new methods for measuring oil and grease, and grab and composite sampling strategies. The report is available on-line at: <http://www.dot.ca.gov/hq/env/stormwater/special/newsetup/>

**Discussion of Finding C.12.** ESAs are defined in the Order as “Areas that include but are not limited to all CWA Section 303(d) impaired water bodies; areas designated as Areas of Special Biological Significance by the Basin Plan ; water bodies designated with the RARE beneficial use by the Basin Plan; areas designated as preserves or their equivalent under the Natural Communities Conservation Program within the Cities and County of Orange; and any other equivalent environmentally sensitive areas which have been identified by the Copermitees.”

Areas that meet this definition are inherently sensitive habitats containing unique, rare, threatened, or endangered species, or are not achieving their designated beneficial uses. As discussed above, runoff is known to contain a wide range of pollutants and has demonstrated toxicity to plants and animals. Therefore, it is necessary to apply additional storm water controls for developments within, adjacent to, or directly discharging to ESAs. This need for additional storm water controls is addressed within each component of the Order. USEPA supports the requirement for additional storm water controls, stating “For construction sites that discharge to receiving waters that do not support their designated use or other waters of special concern, additional construction site controls are probably warranted and should be strongly considered.”<sup>79</sup> Further support for requiring additional controls to reduce pollutants in storm water discharges to ESAs can be found in *Mitigation of Storm Water Impacts From New Developments in Environmentally Sensitive Areas*, a technical report written by the LARWQCB.<sup>80</sup>

ESAs within the area subject to this Order are expected to be substantially similar to the previous Order. Additions may be necessary once the South County Natural Community Conservation Plan/Habitat Conservation Plan (NCCP/HCP) is formally adopted. Other modifications may reflect updated descriptions or findings of threatened or endangered aquatic species.

**Finding C.13.** Although dependent on several factors, the risks typically associated with properly managed infiltration of runoff (especially from residential land use areas) are not significant. The risks associated with infiltration can be managed by many techniques, including (1) designing landscape drainage features that promote infiltration of runoff, but do not “inject” runoff (injection bypasses the natural processes of filtering and transformation that occur in the soil); (2) taking reasonable steps to prevent the illegal disposal of wastes; (3) protecting footings and foundations; (4) ensuring that each drainage feature is adequately maintained in perpetuity; and (5) pretreatment.

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<sup>79</sup> USEPA, 1992. Guidance Manual for the Preparation of Part II of the NPDES Permit Applications for Discharges from Municipal Separate Storm Sewer Systems. Washington D.C. EPA/833-B-92-002.

<sup>80</sup> LARWQCB, 2001. Mitigation of Storm Water Impacts From New Developments In Environmentally Sensitive Areas.

**Discussion of Finding C.13.** Infiltration is an effective means for managing runoff. However, measures must be taken to protect groundwater quality when infiltration of runoff is implemented. USEPA supports runoff infiltration and provides guidance for protection of groundwater: “With a reasonable degree of site-specific design considerations to compensate for soil characteristics, infiltration may be very effective in controlling both urban runoff quality and quantity problems. This strategy encourages infiltration of urban runoff to replace the natural infiltration capacity lost through urbanization and to use the natural filtering and sorption capacity of soils to remove pollutants; however, the potential for some types of urban runoff to contaminate groundwater through infiltration requires some restrictions.”<sup>81</sup> The restrictions placed on runoff infiltration in this Order are based on recommendations provided by the USEPA Risk Reduction Engineering Laboratory. The State Board found in Order WQ 2000-11 on the appeal of the LARWQCB’s Standard Urban Storm Water Mitigation Plan (SUSMP) requirements that the guidance provided in the above referenced document by the USEPA Risk Reduction Engineering Laboratory is sufficient for the protection of groundwater quality from runoff infiltration. To further protect groundwater quality, the Order also includes guidance from the LARWQCB,<sup>82</sup> the State of Washington,<sup>83</sup> and the State of Maryland.<sup>84</sup> Subsequently, the California Storm Water Quality Association (CASQA) has produced technical guidance for post-construction treatment BMPs to protect ground water quality<sup>85</sup>.

**Finding C.14.** Non-storm water (dry weather) discharge from the MS4 is not considered a storm water (wet weather) discharge and therefore is not subject to regulation under the Maximum Extent Practicable (MEP) standard from CWA 402(p)(3)(B)(iii), which is explicitly for “Municipal ... *Stormwater Discharges* (emphasis added)” from the MS4. Non-storm water discharges, per CWA 402(p)(3)(B)(ii), are to be effectively prohibited. Such dry weather non-storm water discharges have been shown to contribute significant levels of pollutants and flow in arid, developed Southern California watersheds and are not to be effectively prohibited under the Clean Water Act.

### **Discussion of Finding C.14.**

#### Permitting Framework

The Clean Water Act (CWA) employs the strategy of prohibiting the discharge of any pollutant from a point source into waters of the United States unless the discharger of the pollutant(s) obtains a NPDES permit pursuant to Section 402 of the Clean Water

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<sup>81</sup> USEPA, 1994. Potential Groundwater Contamination from Intentional and Nonintentional Stormwater Infiltration. EPA 600 SR-94 051.

<sup>82</sup> LARWQCB, 2000. Standard Urban Storm Water Mitigation Plan for Los Angeles County and Cities in Los Angeles County.

<sup>83</sup> Washington State Department of Ecology, 1999. Draft Stormwater Management in Washington State. Volume V – Runoff Treatment BMPs. Pub. No. 99-15.

<sup>84</sup> Maryland Department of the Environment, 1999. 2000 Maryland Stormwater Design Manual. Volume I.

<sup>85</sup> CASQA. The New Development and Redevelopment Handbook, 2003. Available on-line at <http://www.cabmphandbooks.org/Development.asp>

Act. The discharge of storm water and/or non-storm water from an MS4 system is considered a discharge from a point source. As discussed below, however, the Clean Water Act regulates storm water and non-storm water discharges under different standards.

In 1987 the CWA was amended to include provisions that specifically concerned NPDES permitting requirements for storm water discharges from MS4 systems. Section 402(p) of the CWA regulates the discharge of storm water from a point source, the municipal separate storm sewers. Such discharges of storm water are subject to the maximum extent practicable (MEP) storm water standard and the related iterative process. The MEP standard for storm water discharges reflects Congress' recognition that the variability of flow and intensity of storm events render difficult strict compliance with water quality standards by MS4s. However, this standard was not considered applicable to non-storm water discharges, which under 402(p) are required to be effectively prohibited from entering the MS4. Clearly, if non-storm water discharges must be effectively prohibited from entering the MS4, the very next requirement (402(p)(3)(B)(iii)) requiring discharges from the MS4 be reduced to the MEP intends that the discharge of pollutants be limited to storm water. Unless exempt or authorized under a separate NPDES permit, non-storm water discharges are not authorized to enter the MS4 in the first instance and are considered to be illicit discharges.

The Federal Register further clarifies that such discharges through an MS4 are not authorized under the CWA (55 Fed. Reg. 47995):

“Today’s rule defines the term “illicit discharge” to describe any discharge through a municipal separate storm sewer system that is not composed entirely of storm water and that is not covered by an NPDES permit. Such illicit discharges are not authorized under the Clean Water Act. Section 402(p)(3)(B) requires that permits for discharges from municipal separate storm sewers require the municipality to “effectively prohibit” non-storm water discharges from the municipal separate storm sewer...Ultimately, such non-storm water discharges through a municipal separate storm sewer must either be removed from the system or become subject to an NPDES permit.”

The federal regulations (40 Code of Federal Regulations (CFR) 122.26(d)(vi)(2)(B)) require that the municipal separate storm sewer discharger prohibit “through ordinance, order or similar means, illicit discharges to the municipal separate storm sewer.” As owners and operators of the MS4, Copermittees cannot passively receive discharges from third parties (Federal Register 68766) and thus are responsible for the discharge of any non-storm water from their MS4.

The State Water Board’s recent precedential order (Order WQ-2009-0008) affirming a Los Angeles County MS4 permit modification, consistent with USEPA’s prior interpretations, recognizes that “[n]either the Clean Water Act nor the federal storm water regulations define ‘non-storm water.’ ‘Illicit discharge’ is defined as any discharge to an MS4 ‘not composed entirely of storm water.’[fn]. Thus, ‘illicit

discharge' is the most nearly applicable definition of 'non-storm water' found in federal law and is often used interchangeably with that term."<sup>86</sup>

### Storm Water and Non-storm Water Definitions

By definition non-storm water is not precipitation related. 40 CFR 122.26(b)(13) states that: "Storm water means storm water runoff, snowmelt runoff, and surface runoff and drainage." While "surface runoff and drainage" is not defined in federal law, it is related to precipitation events such as rain and/or snowmelt (see 55 Fed Reg 47995-96). The Federal Register (55, page 47995) includes an entire section on the definition of storm water and non-storm water. The term "surface runoff and drainage" does not include all incidental flows in the MS4 system, but consists of flows relating to precipitation events as clarified by the Federal Register, USEPA's documents and permitting, and other Regional Board Orders.

The Federal Register (55 Fed Reg 47995-47996) provides clarification on the distinction between storm water and non-storm water discharges, including their regulation:

"In response to the comments which requested EPA to define the term storm water broadly to include a number of classes of discharges **which are not in any way related to precipitation events, EPA believes that this rulemaking is not an appropriate forum for addressing the appropriate regulation of such non-storm water discharges**, even though some classes of non-storm water discharges may typically contain only minimal amounts of pollutants. Congress did not intend that the term storm water be used to describe any discharge that has a de minimis amount of pollutants, not did it intend for section 402(p) to be used to provide a moratorium from permitting other non-storm water discharges."

As recently recognized by the State Water Board in a precedential decision upholding an MS4 permit modification adopted by the Los Angeles Regional Water Board, "U.S. EPA has previously rejected the notion that 'storm water,' as defined at 40 Code of Federal Regulations section 122.26(b)(13), includes dry weather flows. In U.S. EPA's preamble to the storm water regulations, U.S. EPA rejected an attempt to define storm water to include categories of discharges 'not in any way related to precipitation events.'[fn]."<sup>87</sup> Thus, USEPA has made it clear that it deems discharges unrelated to precipitation events to be non-storm water discharges. 40 CFR 122.26(d)(iv)(B) itself provides specific examples of non-storm water discharges:

"...the following category of non-storm water discharges or flows shall only be addressed where such discharges are identified by the municipality as sources of pollutants to the United States: water line flushing, landscape irrigation,

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<sup>86</sup> State Water Board Order WQ-2009-0008 (*In the Matter of the Petition of County of Los Angeles and Los Angeles County Flood Control District*, adopted August 4, 2009), p. 4.

<sup>87</sup> State Water Board Order WQ-2009-0008 (*In the Matter of the Petition of County of Los Angeles and Los Angeles County Flood Control District*, adopted August 4, 2009), p. 7.

diverted stream flows, rising ground waters, uncontaminated groundwater infiltration (as defined at 40 CFR 35.2005(20) to separate storm sewers, uncontaminated pumped groundwater,..."

USEPA also removed street wash waters from the definition of storm water, as USEPA specifically identified this discharge as being non-storm water (55 Fed. Reg. page 47996). Additionally, section 1.2.2.2. of USEPA's Multi-Sector General Permit for Industrial Activities (MSGP-2000) considers fire hydrant flushings, irrigation drainage, landscape watering, and foundation or footing drains to be non-storm water discharges. USEPA's September 1999 Storm Water Management Fact Sheet for Non-Storm Water Discharges to Storm Sewers states that non-storm water discharges can include discharges of process water, air conditioning condensate, non-contact cooling water, vehicle wash water, or sanitary wastes.

While these types of non-storm water discharges (or illicit discharges) may be regulated under storm water permits because as a practical matter they can enter and be discharged from the MS4 systems, they are not regulated as storm water discharges under the Clean Water Act because they are unrelated to precipitation events. As indicated above, the State Water Resources Control Board recent discussion of this issue supports the conclusion that non-storm water discharges are unrelated to precipitation events. In its Order affirming amendments to the Los Angeles County MS4 permit to implement a TMDL to control bacteria in dry weather flows, the State Water Board rejected petitioners County of Los Angeles and the Los Angeles County Flood Control District implied assertion that the definition of "storm water" contained in the federal regulations (defined as "surface run-off and drainage") includes the run-off and drainage from non-storm events. The State Water Board notes that the challenged permit provisions do not apply to storm water flows in that they apply only during dry weather conditions as defined in the permit. In upholding the challenged order, the State Water Board notes that the Los Angeles Water Board's permit language followed USEPA's approach, referring to USEPA's rejection of attempts to define storm water to include categories of discharges "not in any way related to precipitation events."<sup>88</sup>

Lastly, the Regional Board and State Board have issued multiple permits for non-storm water discharges, including, but not limited to, R9-2008-0002 (extracted groundwater), R9-2002-0020 (hydrostatic discharge) and 2006-008 DWQ (utility vaults), pursuant to section 402 of the CWA.

#### Permitting Non-storm Water Discharges

The U.S. EPA's approach (and the Regional Board's under its approved program) for non-storm water discharges from MS4s is to regulate these discharges under the existing 402 NPDES framework (Fed Reg 47995 and 48037 see below) for discharges

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<sup>88</sup> State Water Board Order WQ-2009-0008 (*In the Matter of the Petition of County of Los Angeles and Los Angeles County Flood Control District*, adopted August 4, 2009), p. 7 (quoting 55 Fed. Reg. 47990. 47995).

to surface waters. The NPDES program (40 CFR 122.44(d)) utilizes discharge prohibitions and effluent limitations as regulatory mechanisms to regulate non-storm water discharges, including the use of technology and water quality-based effluent limitations. Non-numerical effluent limitations, such as BMPs for non-storm water discharges may only be authorized where numerical effluent limits are infeasible or where the practices are reasonably necessary to achieve effluent limitations and standards or to carry out the purposes and intent of the CWA (40 CFR 122.44(k) see below).

The Federal Register (55, page 48037) provides clarification that non-storm water discharges from the MS4 are to be regulated under section 402, not 402(p):

“Conveyances which continue to accept other “non-storm water” discharges (e.g. discharges without an NPDES permit) with the exceptions noted above (*exempted discharges that are not a source of pollutants*) do not meet the definition of municipal separate storm sewer and are not subject to 402(p)(3)(B) of the CWA unless such discharges are issued separate NPDES permits. Instead, conveyances which continue to accept non-storm water discharges which have not been issued separate NPDES permits are subject to sections 301 and 402 of the CWA.”

This regulatory approach is consistent with the approach recently upheld by the State Water Board in a precedential order adopted on August 4, 2009. In this Order, the State Water Board rejected a challenge to amendments to the Los Angeles County MS4 permit that require compliance with receiving water limitations and discharge prohibitions for dry weather, non-storm water discharges. Petitioners there argued that the receiving water limits and discharge prohibitions for dry weather dischargers were inappropriate and that the Los Angeles Water Board should instead have regulated the discharges with the maximum extent practicable standard, through an iterative process. The State Water Board concludes that dry weather discharges, as defined in the permit and in the underlying TMDL, “are more appropriately regarded as non-storm water discharges, which the Clean Water Act requires to be effectively prohibited.”<sup>89</sup>

As stated above, for NPDES permits under 402 of the CWA, the Code of Federal Regulations (122.44(k)) clarify that a discharger may utilize BMPs to control or abate the discharge of pollutants when:

- “(1) Authorized under section 304(e) of the CWA for the control of toxic pollutants and hazardous substances from ancillary industrial activities;
- (2) Authorized under section 402(p) of the CWA for the control of storm water discharges;
- (3) Numeric limits are infeasible; or
- (4) The practices are reasonably necessary to achieve effluent limitations and standards or to carry out the purposes and intent of the CWA.”

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<sup>89</sup> State Water Board Order WQ-2009-0008 (*In the Matter of the Petition of County of Los Angeles and Los Angeles County Flood Control District*, adopted August 4, 2009), p. 8

For the last 19 years, Southern Orange County NPDES permits for discharges of storm water have regulated non-storm water discharges from the MS4. These permits required Copermittees (dischargers) to prohibit non-storm water discharges into (thus through and from) their MS4 systems, implement a program to prevent illicit discharges, and monitor to identify illicit discharges and exempted discharges that are a source of pollution. These measures are considered Best Management Practices (BMPs), are required to be included in NPDES permits issued under Section 402(p) of the CWA, and are considered by USEPA to be an interim approach to permitting non-storm water discharges from the MS4 in accordance with section 402 of the CWA and CFR 122.44(k).

As explained in the discussion of Finding C.15., below, the Copermittees' reliance on BMPs for the past 19 years has not resulted in compliance with applicable water quality standards. The Regional Board has evaluated (in accordance with 40 CFR 122.44(d)(1)) past and existing controls (BMPs), non-storm water effluent monitoring results, the sensitivity of the species in receiving waters (e.g. endangered species), and the potential for effluent dilution, and has determined that existing BMPs to control pollutants in storm water discharges are not sufficient to protect water quality standards in receiving waters and the existing requirement that Copermittees effectively prohibit all types of unauthorized non-storm water discharges into the MS4 historically results in the discharge of pollutants to the receiving waters. Thus, numeric action levels for non-storm water, dry weather, discharges from the MS4 and required actions following observed exceedances of numeric action levels have been established. For further discussion regarding the development of action levels please see Finding E.12 and discussion.

Dry weather action levels are applicable to non-storm water discharges of effluent from the MS4 system. Non-storm water effluent discharges from the MS4 are those which occur during dry weather conditions. These action levels are not applied to storm water discharges, as defined within the Order. Storm water discharges regulated by the Order are required to meet the MEP standard and related iterative process and have separate action levels.

Dry weather action levels are applicable to non-storm water discharges from the MS4 system into receiving waters. Non-storm water discharges are already required to be prohibited unless specifically exempted or covered under a separate NPDES permit. Dry weather action levels apply to non-storm water discharges of effluent from a point source into receiving waters. The MS4 is not a receiving water. Should a discharger wish to discharge a non-exempt category to the MS4 system, such discharges require a separate NPDES permit pursuant to sections 402 and 301 of the CWA. It is also infeasible to monitor and sample every discharge into the MS4, as such discharges are diffuse by nature and may vary spatially and temporally.

**Finding C.15.** Non-storm water discharges to the MS4 granted an influent exception (i.e., which are exempt from the effective prohibition requirement set forth in CWA section 402(p)(3)(B)(ii)) under 40 CFR 122.26 are included within this Order. Any exempted discharges identified by Copermittees as a source of pollutants are subsequently required to be *addressed* (emphasis added) as illicit discharges through prohibition and incorporation into existing IC/ID programs. The Copermittees have identified landscape irrigation, irrigation water and lawn water, previously exempted discharges, as a source of pollutants and conveyance of pollutants to waters of the United States.

**Discussion of Finding C.15.** The Federal Register (55, page 48037) and 40 CFR 122.26(d)(iv)(B) clarify that certain components and categories of non-storm water discharges into the MS4 are not required to be prohibited. The Code of Federal Regulations requires the discharger have:

“...a program, including inspections, to implement through ordinance, orders or similar means to prevent illicit discharges to the municipal separate storm sewer system; this program shall address all types of illicit discharges, however, the following category of non-storm water discharges or flows shall only be addressed where such discharges are identified by the municipality as sources of pollutants to the United States: water line flushing, landscape irrigation, diverted stream flows, rising ground waters, uncontaminated groundwater infiltration (as defined at 40 CFR 35.2005(20) to separate storm sewers, uncontaminated pumped groundwater...”

As such, the identification of any of these categories as a source of pollutants requires them to be addressed as illicit discharges, which are not authorized under the CWA, and are required to be “effectively prohibited” as illicit discharges via ordinance, order or similar means. The prohibition of previously exempted discharges of non-storm water to waters of the United States from entering, and necessarily being discharged from an MS4, conforms with CWA requirements for standards and enforcement for effluent limitations to necessary to meet water quality standards (33 U.S.C. 1311(b)(1)(C)).

To date the Copermittees have identified overspray and drainage from potable and reclaimed water landscape irrigation as a substantial source and conveyance mechanism for pollutants into waters of the United States. Irrigation runoff into the MS4, as identified by the Copermittees, is a source of pollutants to waters of the United States, and is required to be *addressed* (emphasis added) as an illicit discharge per 40 CFR 122.26(d)(2)(iv)(B)(1) by prohibition through implementing and enforcing an ordinance, order or similar means. The Copermittees have identified irrigation water as a source of pollutants and conveyance of pollutants to waters of the United States, when applied improperly in excess and thereafter entering the MS4, in the following documents:

- Per requirements of 401 Water Quality Certification 02C-055, the County of Orange conducted a **Drainage Area Reconnaissance and Urban Runoff**

**Characterization study.** From the reconnaissance and characterization, the County of Orange determined that:

*“...water quality results provided two important findings.”* First, *“analytical data strongly indicates that irrigation overspray and drainage constitutes a very substantial source and conveyance mechanism for fecal indicator bacteria into Aliso Creek, and suggests that reduction measures for this source of urban runoff could provide meaningful reduction in bacteria loading to the stream.”*

- Aliso Creek, currently 303(d) listed as impaired for Indicator Bacteria, is included in the Bacteria Project I TMDL adopted by the Regional Board on December 12, 2007. Secondly, reclaimed water high in electrical conductivity and Nitrate was indicated as:

*“...the source water at three of the excessive runoff locations (P1,P2,J01). These dissolved nitrogen concentration and flow rates create relatively high nitrogen loadings, which have the potential to contribute to undesirable levels of periphytic algal growth in Aliso Creek.”*

- On November 15, 2007 the **Unified Annual Progress Report Program Effectiveness Assessment** for the 2006-2007 reporting period was submitted by the Copermittees. Within the report, the Copermittees demonstrate that a *“wide range of constituents exceeded the tolerance interval bounds”*, including orthophosphate. Tolerance interval bounds are pollutant levels set by the Copermittees that represent when a problem may be occurring. These tolerance levels sometimes equate with Basin Plan Objectives (BPOs) and California Toxic Rules (CTR) and USEPA Criteria. The report states that *“high levels of orthophosphate concentration are most likely the result of fertilizer runoff or reclaimed water runoff”*. Aliso Creek is currently 303(d) listed as impaired for phosphorous.
- On November 15, 2007 the **Watershed Action Plan Annual Report(s)** for the 2006-2007 reporting period was submitted by the County of Orange, Orange County Flood Control District and Copermittees within the San Juan Creek, Laguna Coastal Streams, Aliso Creek, and Dana Point Coastal Streams Watersheds. San Juan Creek, Laguna Coastal Streams, Aliso Creek and Dana Point Coastal Streams are all currently 303(d) listed as impaired for Indicator Bacteria within their watersheds and/or in the Pacific Ocean at the discharge points of their watersheds. These locations are included in the Bacteria Project I TMDL adopted by the Regional Board on December 12, 2007. The Copermittees, within their Watershed Action Strategy Table for Fecal Indicator Bacteria  
*“Support programs to reduce or eliminate the discharge of anthropogenic dry weather nuisance flow throughout the [...] watershed. Dry weather flow is the transport medium for bacteria and other 303(d) constituents of*

*concern". Additionally, they state that "conditions in the MS4 contribute to high seasonal bacteria propagation in-pipe during warm weather. Landscape irrigation is a major contributor to dry weather flow, both as surface runoff due to over-irrigation and overspray onto pavements; and as subsurface seepage that finds its way into the MS4."*

- In 2006, the State Water Quality Control Board (State Board) allocated Grant funding to the **SmartTimer/Edgescape Evaluation Program (SEEP)**. Project partners include the following Copermittees: the Cities of Aliso Viejo, Dana Point, Laguna Beach, Laguna Hills, Laguna Nigel, Laguna Woods, Lake Forest, Mission Viejo, Rancho Santa Margarita and San Juan Capistrano. Also included in the study were the Metropolitan Water District of Southern California, the Department of Agriculture and ten south Orange County water districts. The project targets irrigation runoff by retrofitting existing development and documenting the conservation and runoff improvements. The Grant Application states that:

*"Irrigation runoff contributes flow & pollutant loads to creeks and beaches that are 303(d) listed for bacteria indicators."*

Furthermore, the grant application states:

*"Regional program managers agree that the reduction and/or elimination of irrigation-related urban flows and associated pollutant loads may be key to successful attainment of water quality and beneficial use goals as outlined in the San Diego Basin Plan and Bacteria TMDL over the long term."*

This is reinforced in the project descriptions and objectives:

*"Elevated dry-weather storm drain flows, composed primarily in the South Orange County Region of landscape irrigation water wasted as runoff, carry pollutants that impair recreational use and aquatic habitats all along Southern California's urbanized coastline. Storm drain systems carry the wasted water, along with landscape derived pollutants such as bacteria, nutrients and pesticides, to local creeks and the ocean. Given the local Mediterranean climate, excessive perennial dry season stream flows are an unnatural hydrologic pattern, causing species shifts in local riparian communities and warm, unseasonal contaminated freshwater plumes in the near-shore marine environment".*

The basis of this grant project, conducted by the Copermittees and additional water use partners, is that over-irrigation (landscape irrigation, irrigation water and lawn watering) into the MS4 is a source and conveyance of pollutants. In addition, they indicate that this alteration of natural flows is impacting the Beneficial Uses of Waters of the State and U.S.

## D. Runoff Management Programs

**Finding D.1.a.** This Order specifies requirements necessary for the Copermittees to reduce the discharge of pollutants in storm water runoff to the maximum extent practicable (MEP). However, since MEP is a dynamic performance standard, which evolves over time as runoff management knowledge increases, the Copermittees' runoff management programs must continually be assessed and modified to incorporate improved programs, control measures, best management practices (BMPs), etc. in order to achieve the evolving MEP standard. Absent evidence to the contrary, this continual assessment, revision, and improvement of runoff management program implementation is expected to ultimately achieve compliance with water quality standards in the Region.

**Discussion of Finding D.1.a.** Under CWA section 402(p), municipalities are required to reduce the discharge of storm water pollutants from their MS4s to the maximum extent practicable (MEP). MEP is the critical technology-based performance standard that municipalities must attain. The MEP standard is an ever-evolving, flexible, and advancing concept, which considers technical and economic feasibility. As knowledge about controlling storm water runoff continues to evolve, so does that which constitutes MEP. Reducing the discharge of storm water pollutants to the MEP requires Copermittees to assess each program component and revise activities, control measures, best management practices (BMPs), and measurable goals, as necessary to meet MEP.

To achieve the MEP standard, municipalities must employ whatever BMPs are technically feasible (i.e., are likely to be effective) and are not cost prohibitive. The major emphasis is on technical feasibility. Reducing storm water 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:

1. Effectiveness: Will the BMPs address a pollutant (or pollutant source) of concern?
2. Regulatory Compliance: Is the BMP in compliance with storm water regulations as well as other environmental regulations?
3. Public Acceptance: Does the BMP have public support?
4. Cost: Will the cost of implementing the BMP have a reasonable relationship to the pollution control benefits to be achieved?
5. Technical Feasibility: Is the BMP technically feasible considering soils, geography, water resources, etc?

If a municipality reviews a lengthy menu of BMPs and chooses to select only a few of the least expensive BMPs, 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 is prohibitive, 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 based 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 easily dismissed. In any case, the burden is on the municipal discharger to show compliance with its permit. After selecting BMPs, it is the responsibility of the discharger to ensure that all BMPs are implemented.<sup>90</sup>

A definition of MEP is not provided in either the federal statute or in the federal regulations. The final determination regarding whether a municipality has reduced storm water pollutants to the MEP can only be made by the Regional Board or the State Board, and not by the municipal discharger. While the Regional Board or the State Board ultimately define MEP, it is the responsibility of the Copermittees to initially propose actions that implement BMPs to reduce storm water pollution to the MEP. In other words, the Copermittees' runoff management programs to be developed under the Order are the Copermittees' proposals of MEP. Their total collective and individual activities conducted pursuant to their runoff management programs become their proposal for MEP as it applies both to their overall effort, as well as to specific activities. The Order provides a minimum framework to guide the Copermittees in meeting the MEP standard for storm water.

It is the Regional Board's responsibility to evaluate the proposed programs and specific BMPs to determine what constitutes MEP, using the above guidance and the court's 1994 decision in NRDC v. California Department of Transportation, Federal District Court, Central District of California. The federal court stated that a Copermittee must evaluate and implement BMPs except where (1) other effective BMPs will achieve greater or substantially similar pollution control benefits; (2) the BMP is not technically feasible; or (3) the cost of BMP implementation greatly outweighs the pollution control benefits. In the absence of a proposal acceptable to the Regional Board, the Regional Board will define MEP by requiring implementation of additional measures by the Copermittees.

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<sup>90</sup> State Water Resources Control Board, 1993. Memo Entitled Definition of Maximum Extent Practicable.

The Copermittees' continual evolution in meeting the MEP standard is expected to achieve compliance with water quality standards. USEPA has consistently supported this expectation. In its Interim Permitting Approach for Water Quality-Based Effluent Limitations (WQBELs) in Storm Water Permits, USEPA states "the interim permitting approach uses best management practices (BMPs) in first-round storm water permits, and expanded or better-tailored BMPs in subsequent permits, where necessary, to provide for attainment of water quality standards."<sup>91</sup> USEPA reiterated its position in 1999, when it stated regarding the Phase II municipal storm water regulations that "successive iterations of the mix of BMPs and measurable goals will be driven by the objective of assuring maintenance of water quality standards" and "EPA anticipates that a permit for a regulated small MS4 operator implementing BMPs to satisfy the six minimum control measures will be sufficiently stringent to protect water quality, including water quality standards [...]."<sup>92</sup>

The requirements of the Order are expected to achieve compliance with receiving water quality standards. The approach to be used is the continual assessment, revision, and improvement of Copermittee best management practice implementation. This approach is consistent with the Clean Water Act and State Board guidance. In *Defenders of Wildlife v. Browner* (1999, 197 F. 3d 1035), the United States Court of Appeals for the Ninth Circuit states: "Under 33 U.S.C. section 1342 (p)(3)(B)(iii), the EPA's choice to include either management practices or numeric limitations in the permits was within its discretion." In addition, the approach is consistent with State Board Order WQ 99-05, which outlines an iterative approach for achieving compliance with water quality standards.

**Finding D.1.b.** The Copermittees have generally been implementing the jurisdictional runoff management programs required pursuant to Order No. R9-2002-01 since February 13, 2003. Prior to that, the Copermittees were regulated by Order No. 96-03 since August 8, 1996. Runoff discharges, however, continue to cause or contribute to violations of water quality standards as evidenced by the Copermittees monitoring results.<sup>93</sup>

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<sup>91</sup> Federal Register / Vol. 61, No. 166 / August 26, 1996 / P. 43761.

<sup>92</sup> Federal Register / Vol. 64, No. 235 / Wednesday, December 8, 1999 / Rules and Regulations. P. 68753-68754.

<sup>93</sup> Orange County Storm Water Program, 2006. Unified Annual Progress Report, Program Effectiveness Assessment (San Diego Region).

**Discussion of Finding D.1.b.** In response to Order No. R9-2002-01, the Copermittees have improved their runoff management programs. For instance, comprehensive runoff management plans have been developed. In order to implement the plans, the Copermittees have, among other things, developed BMP requirements, improved inter- and intra-governmental coordination, improved training programs, improved illicit discharge detection procedures, and improved their monitoring efforts. Although the programmatic improvements have led to better implementation of BMPs, the Copermittees' monitoring data demonstrate that additional or revised BMPs are necessary to prevent discharges from MS4s from causing and contributing to violations of water quality standards. A discussion of data collected by the Copermittees is included in the discussion for Finding C.9.

**Finding D.1.c.** This Order contains new or modified requirements that are necessary to improve Copermittees' efforts to reduce the discharge of storm water pollutants in runoff to the MEP and achieve water quality standards. Some of the new or modified requirements, such as the revised Watershed Runoff Management Program section, are designed to specifically address these high priority water quality problems. Other new or modified requirements address program deficiencies that have been noted during audits, report reviews, and other Regional Board compliance assessment activities.

**Discussion of Finding D.1.c.** The Copermittees are required to update and expand their runoff management programs on jurisdictional and watershed levels in order to improve their efforts to reduce the contribution of storm water pollutants in runoff to the MEP and meet water quality standards. Changes to Order No. R9-2002-01's requirements have been made to help ensure these two standards are achieved by the Copermittees.

The Orders' jurisdictional requirements have changed based on findings by the Regional Board during typical compliance assurance activities or receipt of complaints.<sup>94</sup> The Regional Board performed full jurisdictional program audits of 8 of the 13 Copermittees during the Order No. R9-2002-01 permit term. Where the audits found common implementation problems, requirements have been altered to better ensure compliance. In addition, the Regional Board conducted detailed reviews of every jurisdictional annual report submitted by the Copermittees. Updates to the Copermittees' programs are also based on recommendations found in the Copermittees' ROWD.<sup>95</sup> In many instances, the Copermittees and the Regional Board have identified similar issues that merit program modifications.

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<sup>94</sup> Audit reports, report reviews, and inspection reports are available for review at the Regional Board office.

<sup>95</sup> All significant changes made to the Order's requirements are described and explained in detail in Fact Sheet section X.

To better focus on attainment of water quality standards, the Order's watershed requirements have been improved. The conditions of the receiving waters now drive management actions, which in turn focus diminishing resources on the highest priority water quality problems within the receiving waters in each watershed. Improvements to watershed requirements were also made to facilitate a mutually clear understanding of the requirements between the Regional Board and Copermittees.

**Finding D.1.d.** Updated Jurisdictional Runoff Management Plans (JRMPs) and Watershed Runoff Management Plans (WRMPs), which describe the Copermittees' runoff management programs in their entirety, are needed to guide the Copermittees' runoff management efforts and aid the Copermittees in tracking runoff management program implementation. It is practicable for the Copermittees to update the JRMPs and WRMPs within one year, since significant efforts to develop these programs have already occurred.

**Discussion of Finding D.1.d.** Development of runoff management plans is a crucial runoff management measure and should be considered a BMP. The plans help organize and focus the Copermittees' programs and guide their implementation. In its statewide assessment report to USEPA Region IX and the State Board, Tetra Tech, Inc. concluded that the lack of a master storm water planning document must be considered a serious program deficiency<sup>96</sup>. When submitted to the Regional Board, the plans provide useful correspondence between the Copermittees and the Regional Board. The Plans also become available for review by the public, and thus facilitate public participation in runoff management decisions. Finally, while development and submittal of runoff management plans are not necessary to ensure compliance of the Copermittees' runoff management programs with the Order, the Regional Board is provided with a means to track Copermittee implementation.

The focus of the Order is on development and implementation of storm water programs which meet MEP, rather than creation of Copermittee plans which exhibit MEP. While the Order does not rely upon the plans to ensure MEP and other standards are achieved, the plans still serve a useful purpose. As stated above, the plans serve to organize the Copermittees' efforts to address runoff. As a practical matter, any program of the size required by the Order should be documented in writing. This serves to guide implementation of the program by the numerous individuals responsible for program implementation.

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<sup>96</sup> Tetra Tech, Inc. 2006. *Assessment Report on Tetra Tech's Support of California's MS4 Stormwater Program*. Produced for USEPA Region IX and the California State and Regional Water Quality Control Boards.

Runoff management plans are not necessary for ensuring compliance with the Order because the Order itself contains sufficient detailed requirements to ensure that compliance with discharge prohibitions, receiving water limitations, and the narrative standard of MEP for storm water are achieved. Implementation by the Copermittees of programs in compliance with the Order's requirements, prohibitions, and receiving water limitations is the pertinent compliance standard to be used under the Order, as opposed to assessing compliance by reviewing the Copermittees' implementation of their plans alone. The Regional Board ensures compliance with the Order by reviewing annual reports, conducting inspections, performing audits, and through other general program oversight.

Runoff management plans are particularly important and useful for municipalities when program implementation is spread across several departments and/or when municipalities experience staff turnover.<sup>97</sup> Each Copermittee relies on multiple employees or contractors for program implementation, but the spread of responsibility varies among Copermittees.<sup>98</sup> Written jurisdictional plans ensure appropriate coordination within each municipality.

Copermittees' runoff management plans are simply descriptions of their runoff management programs required under the Order. These plans serve as procedural correspondence which guides program implementation and aids the Copermittees and Regional Board in tracking implementation of the programs. In this manner, the plans are not functional equivalents of the Order. For these reasons, the Copermittees' runoff management plans need not be an enforceable part of the Order.

The Copermittees' plans and programs can be updated within one year because much of their plans and programs are already in existence. In fact, many parts of their plans and programs have been in place for 15 years. Moreover, the adoption of Order No. R9-2002-01 required a larger scale reorganization of the Copermittees' programs than Tentative Order No. R9-2009-0002, but also allowed one year for program updates. The Copermittees were generally able to meet the time schedule required under Order No. R9-2002-01.

**Finding D.1.e.** Pollutants can be effectively reduced in storm water runoff by the application of a combination of pollution prevention, source control, and treatment control BMPs. Pollution prevention is the reduction or elimination of pollutant generation at its source and is the best "first line of defense". Source control BMPs (both structural and non-structural) minimize the contact between pollutants and flows (e.g., rerouting run-on around pollutant sources or keeping pollutants on-site and out of receiving waters). Treatment control BMPs remove pollutants that have been mobilized by wet-weather or dry-weather flows.

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<sup>97</sup> Tetra Tech, Inc. 2005. Program Evaluation Report. Orange County Storm Water Program: Cities of Laguna Beach, Laguna Hills, Lake Forest, and Rancho Santa Margarita.

<sup>98</sup> Responsible departments and employees are described in the 2005-06 Annual Reports for the MS4 programs.

**Discussion of Finding D.1.e.** The State Board finds in its Order No. WQ 98-01 that BMPs are effective in reducing pollutants in storm water runoff, stating that “implementation of BMPs [is] generally the most appropriate form of effluent limitations when designed to satisfy technology requirements, including reduction of pollutants to the maximum extent practicable.” A State Board TAC further supports this finding by recommending “that nonpoint source pollution control can be accomplished most effectively by giving priority to [BMPs] in the following order:

1. Pollution Prevention – implementation of practices that use or promote pollution free alternatives;
2. Source Control – implementation of control measures that focus on preventing or minimizing urban runoff from contacting pollution sources;
3. Treatment Control – implementation of practices that require treatment of polluted runoff either onsite or offsite.”<sup>99</sup>

Pollution prevention, the reduction or elimination of pollutant generation at its source, is an essential aspect of BMP implementation. Fewer pollutants are available to be washed from developed areas when the generation of pollutants by activities is limited. Thus, pollutant loads in storm water discharges are reduced from these areas. In addition, there is no need to control or treat pollutants that are never generated.<sup>100</sup> Furthermore, pollution prevention BMPs are generally more cost effective than removal of pollutants by treatment facilities or cleanup of contaminated media.<sup>101,102</sup>

In the Pollution Prevention Act of 1990, Congress established a national policy that emphasizes pollution prevention over control and treatment. CWC section 13263.3(a) also supports pollution prevention, stating “The Legislature finds and declares that pollution prevention should be the first step in a hierarchy for reducing pollution and managing wastes, and to achieve environmental stewardship for society. The Legislature also finds and declares that pollution prevention is necessary to support the federal goal of zero discharge of pollutants into navigable waters.” Finally, the Basin Plan also supports this finding by stating “To eliminate pollutants in storm water, one can either clean it up by removing pollutants or prevent it from becoming polluted in the first place. Because of the overwhelming volume of storm water and the enormous costs associated with pollutant removal, pollution prevention is the only approach that makes sense.”<sup>103</sup>

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<sup>99</sup> State Board, 1994. Urban Runoff Technical Advisory Committee Report and Recommendations. Nonpoint Source Management Program.

<sup>100</sup> Orange County Storm Water Copermittees. 2006. Report of Waste Discharge (San Diego Region).

<sup>101</sup> Devinsky, J.S. et al. 2004. *Alternative Approaches to Stormwater Quality Control*. Prepared for the Los Angeles Regional Water Quality Control Board. Found as Appendix H to *NPDES Stormwater Cost Survey*. Prepared for the California State Water Resources Control Board by the Office of Water Programs California State University, Sacramento. Available on-line at: <http://www.owp.csus.edu/research/npdes/>

<sup>102</sup> Schueler, T.R., 2000. Center for Watershed Protection. Assessing the Potential for Urban Watershed Restoration, Article 142.

<sup>103</sup> Regional Board, 1994. Water Quality Control Plan, San Diego Basin, Region 9.

USEPA also supports the utilization of a combination of BMPs to address pollutants in runoff. For example, USEPA has found there has been success in addressing illicit discharge related problems through BMP initiatives like storm drain stenciling and recycling programs, including household hazardous waste special collection days.<sup>104</sup> Structural BMP performance data has also been compiled and summarized by USEPA.<sup>105</sup>

The summary provides the performance ranges of various types of structural BMPs for removing suspended solids, nutrients, pathogens, and metals from storm water flows. These pollutants are generally a concern in storm water in the San Diego Region and Orange County.<sup>106</sup> For suspended solids, the least effective structural BMP type was found to remove 30-65 percent of the pollutant load, while the most effective was found to remove 65-100 percent of the pollutant load. For nutrients, the least effective structural BMP type was found to remove 15-45 percent of the pollutant load, while the most effective was found to remove 65-100 percent of the pollutant load. For pathogens, the least effective structural BMP type was found to remove <30 percent of the pollutant load, while the most effective was found to remove 65-100 percent of the pollutant load. For metals, the least effective structural BMP type was found to remove 15-45 percent of the pollutant load, while the most effective was found to remove 65-100 percent of the pollutant load.

Several studies conducted in the last few years have measured the effectiveness of treatment BMPs in southern Orange County. Studies have been conducted on both dry weather and wet weather flows. Each demonstrates that treatment control BMPs can, to varying degrees, remove pollutants from runoff, but that pollution prevention and source control BMPs are necessary to reduce storm water pollutant discharges to the point of supporting water quality objectives in the receiving waters. A partial list of such studies includes:

1. "Assessment of Best Management Practice (BMP) Effectiveness" by the Southern California Coastal Water Research Project (SCCWRP).<sup>107</sup> This project assesses the effectiveness of BMPs in southern California for improving water quality related to toxicity.
2. "Final Report for the Del Obispo Storm Drain Project" by the City of Dana Point.<sup>108</sup> This report assesses the implementation of a solids removal unit and low-flow diversion project.

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<sup>104</sup> USEPA, 1999. 40 CFR Parts 9, 122, 123, and 124 National Pollutant Discharge Elimination System-Regulations for Revision of the Water Pollution Control Program Addressing Storm Water Discharges. 64 FR 68728.

<sup>105</sup> USEPA, 1999. Preliminary Data Summary of Urban Storm Water Best Management Practices. EPA 821-R-99-012.

<sup>106</sup> Orange County Stormwater Program, Appendix E1 BMP Effectiveness and Applicability for Orange County (updated June 2005).

<sup>107</sup> Jeffrey S. Brown and Steven M. Bay 2005. *Assessment of Best Management Practice (BMP) Effectiveness*. SCCWRP Technical Report 461.

<sup>108</sup> City of Dana Point. 2005. *Final Report for the Del Obispo Storm Drain Project*. Prepared for the State Water Resources Control Board Agreement No. 02-216-550-0.

3. "Final Report for the Alipaz Storm Drain Treatment and Low Flow Diversion Project" by the City of Dana Point.<sup>109</sup> This report assesses the implementation of a solids removal unit and low-flow diversion project.
4. "Final Report for Poche Beach Urban Runoff Ultraviolet Light Bacteria Disinfection Project" by the County of Orange.<sup>110</sup> This report assesses the implementation of an ultraviolet system within a box culvert.
5. Final Report for J01P28 Interim Water Quality Improvement Package Plant Best Management Practices.<sup>111</sup> This report assesses the implementation of an ultraviolet treatment system at an inland waters storm drain outfall.
6. "Final Report for Wetland Capture and Treatment (WetCAT) Network" by the City of Laguna Niguel.<sup>112</sup> This report assesses the implementation of constructed wetlands.

Results of these recent studies demonstrate that treatment at the MS4 outfalls for pollutants that have already been discharged *into* the MS4 is generally unlikely to reduce pollutant concentrations to levels that would support water quality objectives. It also demonstrates that non-storm water discharges are occurring into the MS4 that are illicit discharges, exempted discharges that are a source of pollutants and/or discharges under a separate NPDES permit that are in violation of that permit.

It is important to note that the Clean Water Act and NPDES federal regulations clearly require control of discharges into the MS4. Section 402(p)(3)(B)(ii) of the Clean Water Act states that MS4 permits must "prohibit non-storm water discharges into the storm sewers." 40 CFR 122.26(d)(2)(iv)(B) requires Copermittees to "detect and remove [...] illicit discharges and improper disposal into the storm sewer." See Finding C.14 and Discussion.

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<sup>109</sup> City of Dana Point. 2004. *Final Report For The Alipaz Storm Drain Treatment And Low Flow Diversion Project* by the City of Dana Point. Prepared for State Water Resources Control Board Agreement Number: 01-068-550-0.

<sup>110</sup> Volz, James. 2005. *Final Report for Poche Beach Urban Runoff Ultraviolet Light Bacteria Disinfection Project*. Prepared by the County of Orange for State Water Resources Control Board Agreement No. 01-236-550-1.

<sup>111</sup> Anderson, Max. 2005. Final Report: Aliso Beach Clean Beach Initiatives, J01P28 Interim Water Quality Improvement Package Plant Best Management Practices. Prepared by the County of Orange for State Water Resources Control Board Agreement No. 01-227-550-0.

<sup>112</sup> City of Laguna Niguel and CH2MHILL. 2004. *Final Report: Wetland Capture and Treatment (WetCAT) Network*. Prepared for State Water Resources Control Board Agreement No. 01-122-259-0.

The Order's approach to regulating discharges into and from the MS4 is in accordance with State Board Order WQ 2001-15. In that order, the State Board reviewed the San Diego County permit (Order No. 2001-01) requirements and made one change to one prohibition.<sup>113</sup> The Order upheld all other requirements of the current permit. Order No. R9-2009-0002 incorporates the one change made by the State Board, and continues the approach of Order No. 2001-01 (the basis for the current permit), as it was upheld by the State Board in Order WQ 2001-15. State Board Order WQ 2001-15 supports such requirements, stating: "It is important to emphasize that dischargers into MS4s continue to be required to implement a full range of BMPs, including source control."

The Court of Appeals, Fourth Appellate District, found that the current permit's approach to regulation of discharges into the MS4 was appropriate. Since the Tentative Order utilizes the same approach, the court decision supports the Tentative Order's requirements.

**Finding D.1.f.** Runoff needs to be addressed during the three major phases of urban development (planning, construction, and use) in order to reduce the discharge of storm water pollutants to the MEP, effectively prohibit non-storm water discharges and protect receiving waters. Development which is not guided by water quality planning policies and principles can unnecessarily result in increased pollutant load discharges, flow rates, and flow durations which can impact receiving water beneficial uses. Construction sites without adequate BMP implementation result in sediment runoff rates which greatly exceed natural erosion rates of undisturbed lands, causing siltation and impairment of receiving waters. Existing development generates substantial pollutant loads which are discharged in runoff to receiving waters.

**Discussion of Finding D.1.f.** MS4 permits are issued to municipalities because of their land use authority. The ultimate responsibility for the pollutant discharges, increased runoff, and inevitable long-term water quality degradation that results from development lies with local governments. This responsibility is based on the fact that it is the local governments that have authorized the development (i.e., conversion of natural pervious ground cover to impervious surfaces) and the land uses that generate the pollutants and runoff. Furthermore, the MS4 through which the pollutants and increased flows are conveyed, and ultimately discharged into natural receiving waters, are owned and operated by the same local governments. In summary, the Copermitees under the Order are responsible for discharges into and out of their MS4s because (1) they own and operate the MS4; and (2) they have the legal authority that authorizes the very development and land uses with generate the pollutants and increased flows in the first place.

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<sup>113</sup> The State Board removed the prohibition of discharges *into* the MS4 that cause or contribute to exceedances of water quality objectives. The revision allows for treatment of storm water flows once the pollutants have entered the MS4. It does not affect the effective prohibition on certain dry-weather flows into the MS4 that is required by the Clean Water Act.

For example, since grading cannot commence prior to the issuance of a local grading permit, the Copermittees have a built-in mechanism to ensure that all grading activities are protective of receiving water quality. The Copermittee has the authority to withhold issuance of the grading permit until the project proponent has demonstrated to the satisfaction of the Copermittee that the project will not violate their ordinances or cause the Copermittee to be in violation of its MS4 permit. Since the Copermittee will ultimately be held responsible for any discharges from the grading project by the Regional Board, the Copermittee will want to use its own permitting authority to ensure that whatever measures the Copermittee deems necessary to protect discharges into its MS4 are in fact taken by the project proponent.

The Order holds the local government accountable for this direct link between its land use decisions and water quality degradation. The Order recognizes that each of the three major stages in the development process (development planning, construction, and the use or operational stage) are controlled by and must be authorized by the local government. Accordingly, this permit requires the local government to implement, or require others to implement, appropriate best management practices to reduce storm water pollutant discharges and increased flow during each of the three stages of development.

Including plans for BMP implementation during the design phase of new development and redevelopment offers the most cost effective strategy to reduce storm water runoff pollutant loads to surface waters.<sup>114</sup> The Phase II regulations for small municipalities reflect the necessity of addressing runoff during the early planning phase. Due to the greater water quality concerns generally experienced by larger municipalities, Phase II requirements for small municipalities are also applicable to larger municipalities such as the Copermittees. The Phase II regulations direct municipalities to develop, implement, and enforce a program to address storm water runoff from new development and redevelopment projects that disturb greater than or equal to one acre, including projects less than one acre that are part of a larger common plan of development or sale. The program must ensure that controls are in place that would prevent or minimize water quality impacts. This includes developing and implementing strategies which include a combination of structural and/or non-structural BMPs appropriate to the locality. The program must also ensure the adequate long-term operation and maintenance of BMPs.<sup>115</sup> USEPA expands on the Phase II regulations for urban development when it recommends that Copermittees:

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<sup>114</sup> USEPA, 2000. Storm Water Phase II Compliance Assistance Guide. EPA 833-R-00-002.

<sup>115</sup> USEPA, 1999. 40 CFR Parts 9, 122, 123, and 124 National Pollutant Discharge Elimination System-Regulations for Revision of the Water Pollution Control Program Addressing Storm Water Discharges; Final Rule. 64 FR 68845.

“Adopt a planning process that identifies the municipality’s program goals (e.g., minimize water quality impacts resulting from post-construction runoff from new development and redevelopment), implementation strategies (e.g., adopt a combination of structural and/or non-structural BMPs), operation and maintenance policies and procedures, and enforcement procedures. In developing your program, you should consider assessing existing ordinances, policies, programs and studies that address storm water runoff quality.”

Management of storm water runoff during the construction phase is also essential. USEPA explains in the preamble to the Phase II regulations that storm water discharges generated during construction activities can cause an array of physical, chemical, and biological water quality impacts. Specifically, the biological, chemical and physical integrity of the waters may become severely compromised due to runoff from construction sites. Fine sediment from construction sites can adversely affect aquatic ecosystems by reducing light penetration, impeding sight-feeding, smothering benthic organisms, abrading gills and other sensitive structures, reducing habitat by clogging interstitial spaces within the streambed, and reducing intergravel dissolved oxygen by reducing the permeability of the bed material. Water quality impairment also results, in part, because a number of pollutants are preferentially absorbed onto mineral or organic particles found in fine sediment. The interconnected process of erosion (detachment of the soil particles), sediment transport, and delivery is the primary pathway for introducing key pollutants, such as nutrients, metals, and organic compounds into aquatic systems.<sup>116</sup>

Finally, storm water and non-storm water runoff from existing development must be addressed. The Copermittees’ monitoring data exhibits that significant water quality problems exist in receiving waters which receive runoff from areas with extensive existing development, such as Aliso Creek. Source identification, BMP requirements, inspections, and enforcement are all important measures which can be implemented to address runoff from existing development. USEPA supports inspections and enforcement by municipalities when it states “Effective inspection and enforcement requires [...] penalties to deter infractions and intervention by the municipal authority to correct violations. Enforcement mechanisms [...] also must be described.”<sup>117</sup>

**Finding D.1.g.** Annual reporting requirements included in this Order are necessary to meet federal requirements and to evaluate the effectiveness and compliance of the Copermittees’ programs.

**Discussion of Finding D.1.g.** The annual reporting requirements are consistent with federal NPDES regulation 40 CFR 122.41, which states:

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<sup>116</sup> Ibid., 64 FR 68728.

<sup>117</sup> USEPA, 1992. Guidance Manual for the Preparation of Part II of the NPDES Permit Applications for Discharges from Municipal Separate Storm Sewer Systems. EPA 833-B-92-002.

“The operator of a large or medium municipal separate storm sewer system of a municipal separate storm sewer system that has been designated by the Director under section 122.26(a)(1)(v) of this part must submit an annual report by the anniversary of the date of the issuance of the permit for such a system. The report shall include: (1) The status of implementing the components of the storm water management program that are established as permit conditions; (2) Proposed changes to the storm water management program that are established as permit condition, Such proposed changes shall be consistent with § 122.26(d)(2)iii) of this part; (3) Revisions, if necessary, to the assessment of controls and the fiscal analysis reported in the permit application under § 122.26(d)(2)iv) and (d)(2)v) of this part; (4) A summary of data, including monitoring data, that is accumulated throughout the reporting year; (5) Annual expenditures and budget for year following each annual report; (6) A summary describing the number and nature of enforcement actions, inspections, and public education programs; and (7) Identification of water quality improvements or degradation.”

CWC section 13267 provides that “the regional board may require that any person who has discharged [...] shall furnish, under penalty of perjury, technical or monitoring reports which the regional board requires.”

The Regional Board must assess the reports to ensure that the Copermittees’ programs are adequate to assess and address water quality. The reporting requirements can also be useful tools for the Copermittees to review, update, or revise their programs. Areas or issues which have received insufficient efforts can also be identified and improved.

**Finding D.1.h.** This Order establishes Storm Water Action Levels (SALs) for selected pollutants based on USEPA Rain Zone 6 (arid southwest) Phase I MS4 monitoring data for pollutants in storm water. The SALs were computed as the 90<sup>th</sup> percentile of the data set, utilizing the statistical based population approach, one of three approaches recommended by the California Water Board’s Storm Water Panel in its report, ‘The Feasibility of Numerical Effluent Limits Applicable to Discharges of Storm Water Associated with Municipal, Industrial and Construction Activities (June 2006). SALs are identified in Section D of this Order. Copermittees shall implement a timely, comprehensive, cost-effective storm water pollution control program to reduce the discharge of pollutants in storm water from the permitted areas so as not to exceed the SALs. SALs express an integration of the adequacy/inadequacy of programmatic measures and BMPs required in this Order.

**Discussion of Finding D.1.h.** Section 402(p) of the CWA states MS4 permits for storm water 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. This includes requiring numeric effluent limitations for storm water.

SALs are not numeric effluent limitations, which is reflected in language which clarifies an excursion above a SAL does not create a presumption that MEP is not being met. Instead, a SAL exceedance is to be used by the Copermitttee as an indication that the MS4 storm water discharge point is a definitive "bad actor," and the result from the monitoring needs to be considered as part of the iterative process for reducing pollutants in storm water to the MEP.

The CWA defines effluent limitations as:

"Any restriction imposed by the Director on quantities, discharge rates, and concentrations of pollutants which are "discharged" from "point sources" into "waters of the United States"..." A SAL is not a restriction on a quantity, rate or concentration, but is a level at which actions that further reduce pollutants from that discharge point need to be evaluated in order to reduce storm water pollutants to the MEP. Thus, SALs are not effluent limitations as defined by the CWC or CWA.

The approach of using "action levels" is consistent with recommendations made by USEPA in their Interim Permitting Approach for Water Quality-Based Effluent Limitations in Storm Water Permits, dated August 26, 1996:

"Under the Clean Water Act(CWA) and NPDES regulations, permitting authorities may employ a variety of conditions and limitations in storm water permits, including best management practices, performance objectives, narrative conditions, monitoring triggers, action levels (e.g., monitoring benchmarks, toxicity reduction evaluation action levels), etc., as the necessary water-quality based limitations, where numeric water quality based effluent limitations are determined to be unnecessary or infeasible". As such, these action levels are not considered numeric water quality-based effluent limitations.

It should be noted that a purpose of monitoring, required under this and previous Orders, is to aid in the evaluation of implemented programs and BMPs in reducing pollutants in storm water discharges to the MEP. The tentative Monitoring and Reporting Program states:

This Receiving Waters and Runoff Monitoring and Reporting Program is intended to meet the following goals:

2. Measure and improve the effectiveness of the Permittees' runoff management programs;
  3. Assess the chemical, physical, and biological impacts to receiving waters resulting from runoff discharges;
  4. Characterize runoff discharges;
  5. Identify sources of specific pollutants;
  6. Prioritize drainage and sub-drainage areas that need management actions;
- and

#### 9. Provide information to implement required BMP improvements.

For the past 4 permit cycles (19 years), Copermittees have utilized non-numerical limitations (BMPs) to control and abate the discharge of any pollutants in storm water discharges to the MEP. Copermittees have been accorded 19 years to research, develop, and deploy BMPs that are capable of reducing storm water discharges from the MS4 to levels represented in SALs. Storm Water Action Levels are set at such a level that any exceedance of a SAL will clearly indicate BMPs being implemented are insufficient to protect the Beneficial Uses of waters of the State. Copermittee shall utilize the exceedance information as a high priority consideration when adjusting and executing annual work plans, as required by this Permit. Failure to appropriately consider and react to SAL exceedances in an iterative manner creates a presumption that the Copermittee(s) have not complied to the MEP.

SALs have been developed utilizing Phase I storm water effluent data (updated February 2008, <http://rpitt.eng.ua.edu/Research/ms4/mainms4.shtml>) from the arid west region (USEPA Rain Zone 6). USEPA Rainfall Zone 6, which includes MS4 effluent data from Orange, San Diego, Los Angeles and Ventura County. While the County of Orange has a large monitoring data set, Regional Board staff have concluded that there is a lack of effluent monitoring from major outfalls that are representative of conditions throughout the Region. The approach taken to derive SALs is a straightforward percentile approach, with the SAL being set as the 90<sup>th</sup> percentile of the dataset for each constituent. This approach is consistent with the 2006 State Board Panel Report:

"The statistically based population approach would once again rely on the average distribution of measured water quality values developed from many water quality samples taken for many events at many locations. In this case, however, the Action Level would be defined by the central tendency and variance estimates from the population data. For example, the Action Level could be set as two standard deviations above the mean, i.e. if measured concentrations are consistently higher than two standard deviations above the mean, an Action Level would be triggered. Other population based measures of central tendency could be used (i.e. geomean, median, etc.) or estimates of variance (i.e. prediction intervals, etc.). Regardless of which population based estimators are used (or percentile from above), the idea would be to identify the [statistically derived] point at which managers feel concentrations are significantly beyond the norm."

SALs are a measurable criteria which quantifies the performance of BMPs for a particular watershed or subwatershed that discharges storm water MS4 effluent from that particular discharge point. Thus, Copermittees can utilize SAL results to determine the effectiveness BMPs on the effluent from a particular area of the MS4.

SALs represent the lowest 10 percent of pollutant reduction for USEPA Rain Zone 6 MS4 Phase I programs discharging to waters of the United States. For the past 4

permit cycles (19 years), Copermitees have utilized non-numerical limitations (BMPs) to control and abate the discharge of any pollutants in storm water discharges to the MEP. Copermitees have been accorded 19 years to research, develop, and deploy BMPs that are capable of reducing storm water discharges from the MS4 to levels represented in SALs. Storm Water Action Levels are set at such a level that any exceedance of a SAL will indicate to the Copermitee(s) that the discharge is within the lowest 10% of monitored outfalls. Therefore, an exceedance of a SAL warrants priority consideration within the Copermitee iterative process.

**Finding D.2.a.** The Standard Storm Water Mitigation Plan (SSMP) requirements contained in this Order are consistent with Order WQ-2000-11 adopted by the State Water Resources Control Board (State Board) on October 5, 2000. In the precedential order, the State Board found that the design standards, which essentially require that runoff generated by 85 percent of storm events from specific development categories be infiltrated or treated, reflect the MEP standard. The order also found that the SSMP requirements are appropriately applied to the majority of the Priority Development Project categories contained in Section D.1 of this Order. The State Board also gave Regional Water Quality Control Boards the needed discretion to include additional categories and locations, such as retail gasoline outlets (RGOs), in SSMPs.

**Discussion of Finding D.2.a.** The post-construction requirements and design standards contained in the SSMP section of Order No. R9-2009-0002 constitute MEP consistent with State Board guidance, court decisions, and Regional Board requirements. The State Board and Regional Boards have made several recent decisions in regards to inclusion of SSMP requirements in MS4 permits. In a precedential decision, State Board WQ Order No. 2000-11, the State Board found that the SSMP provisions constitute MEP for addressing storm water pollutant discharges resulting from Priority Development Projects. The provisions of the SSMP section of the Order are also consistent with those previously issued by the Regional Board for Orange County (Order No. R9-2002-0001) and San Diego County (Order Nos. R9-2001-01 and R9-2007-0001), as well as requirements in the Los Angeles County MS4 permit (Order No. R4-2001-182). In State Board Order WQ 2001-15, the State Board reaffirmed that SSMP requirements constitute MEP. Moreover, the SSMP requirements of the San Diego County MS4 permit (Order No. R9-2001-01) were upheld when the California State Supreme Court declined to hear the matter on appeal.

**Finding D.2.b.** Controlling runoff pollution by using a combination of onsite source control and site design BMPs augmented with treatment control BMPs before the runoff enters the MS4 is important for the following reasons: (1) Many end-of-pipe BMPs (such as diversion to the sanitary sewer) are typically ineffective during significant storm events. Whereas, onsite source control BMPs can be applied during all runoff conditions; (2) End-of-pipe BMPs are often incapable of capturing and treating the wide range of pollutants which can be generated on a sub-watershed scale; (3) End-of-pipe BMPs are more effective when used as polishing BMPs, rather than the sole BMP to be implemented; (4) End-of-pipe BMPs do not protect the quality or beneficial uses of receiving waters between the pollutant source and the BMP; and (5) Offsite end-of-pipe BMPs do not aid in the effort to educate the public regarding sources of pollution and their prevention.

**Discussion of Finding D.2.b.** Many end-of-pipe BMPs are designed for low flow conditions because their end-of-pipe location prevents them from being designed for large storm events. This results in the end-of-pipe BMPs being overwhelmed, bypassed, or ineffective during larger storm events more frequently than onsite BMPs designed for larger storms. BMPs are also frequently most effective for a particular type of pollutant (such as sediment). Such BMPs may be appropriate for small sites with a limited suite of pollutants generated; however, end-of-pipe BMPs must typically be able to address a wide range of pollutants generated by a sub-watershed, limiting their effectiveness and/or increasing costs. Moreover, the location of some end-of-pipe BMPs allow for untreated pollutants to be discharged to and degrade receiving waters prior to their reaching the BMPs. This fails to protect receiving waters, which is the purpose of BMP implementation. In addition, opportunities to educate the public regarding runoff pollution can be lost when end-of-pipe BMPs are located away from pollutant sources and out of sight. Onsite BMPs can lead to a better public understanding of runoff issues since their presence can provide a visible and/or tangible lesson in pollution prevention.

**Finding D.2.c.** Use of Low-Impact Development (LID) site design BMPs at new development, redevelopment and retrofit projects can be an effective means for minimizing the impact of storm water runoff discharges from the development projects on receiving waters. LID is a site design strategy with a goal of maintaining or replicating the pre-development hydrologic regime through the use of design techniques. LID site design BMPs help preserve and restore the natural hydrologic cycle of the site, allowing for filtration and infiltration which can greatly reduce the volume, peak flow rate, velocity, and pollutant loads of storm water runoff. Current runoff management, knowledge, practices and technology have resulted in the use of LID BMPs as an acceptable means of meeting the storm water MEP standard.

**Discussion of Finding D.2.c.** The Clean Water Act (CWA) is the cornerstone of surface water quality protection in the United States. (The Act does not deal directly with ground water nor with water quantity issues.) The statute employs a variety of regulatory and nonregulatory tools to sharply reduce direct pollutant discharges into

waterways, and manage polluted runoff. These tools are employed to achieve the broader goal of restoring and maintaining the chemical, physical, and biological integrity of the nation's waters so that they can support the protection and propagation of fish, shellfish, wildlife and recreation in and on the water.

Increasing the volume, velocity, frequency and discharge duration of storm water runoff from developed areas will eventually greatly accelerate downstream erosion, impair stream habitat in natural drainages, and negatively impact beneficial uses. Development and urbanization increase pollutant loads and volume while simultaneously increasing impervious area. Impervious surfaces can neither absorb water nor remove pollutants and thus lose the purification and infiltration provided by naturally vegetated soil. Furthermore, impervious surfaces tend to concentrate pollutants on the top of the surface that are then washed off into the MS4 and waters of the State in a concentrated manner. The use of Low-Impact Development (LID) site design BMPs can be an effective means of minimizing the impact of runoff discharges on receiving waters. By reducing water pollution, reducing runoff and increasing groundwater recharge, LID helps to improve the quality of receiving surface waters, stabilize the flow rates of receiving waters (preventing downstream hydromodification), reduce downstream flooding and protect and enhance water supply sources. Current runoff management, knowledge, practice and technology has resulted in the use of LID BMPs as an acceptable means of meeting the MEP standard for storm water treatment.

Current municipal codes may oppose or hinder the design, use and implementation of specific elements of LID. These codes include, but are not limited to, emergency services access requirements, building landscape ordinances, building height limits and parking space requirements. It is essential for Copermittees to work with other responsible agencies and/or update codes that have the potential to impact the use of LID.

The Local Government Commission, a non-profit organization working to build livable communities, developed a set of principles known as the *Ahwahnee Water Principles for Resource-Efficient Land Use*<sup>118</sup> that provide the opportunity to reduce costs and improve the reliability and quality of our water resources. Implementation of LID incorporates several of the Ahwahnee principles such as:

1. "Community Design should be compact, mixed use, walkable and transit-oriented so that urban runoff pollutants are minimized and the open lands that absorb water are preserved to the maximum extent possible."
3. "Water holding areas such as creek beds, recessed athletic fields, ponds, cisterns, and other features that serve to recharge groundwater, reduce runoff, improve water quality and decrease flooding should be incorporated into the urban landscape."

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<sup>118</sup> Local Government Commission, "The Ahwahnee Water Principles – A Blueprint for Regional Sustainability", [http://water.lgc.org/Members/tony/docs/lgc\\_water\\_guide.pdf](http://water.lgc.org/Members/tony/docs/lgc_water_guide.pdf)

4. "All aspects of landscaping from the selection of plants to soil preparation and the installation of irrigation systems should be designed to reduce water demand, retain runoff, decrease flooding, and recharge groundwater."
5. "Permeable surfaces should be used for hardscape. Impervious surfaces such as driveways, streets, and parking lots should be minimized so that land is available to absorb storm water, reduce polluted urban runoff, recharge groundwater and reduce flooding."

The use of LID site design BMPs helps reduce the amount of impervious area associated with development and allows storm water to infiltrate into the soil. Natural vegetation and soil filters storm water runoff and reduces the volume and pollutant loads of storm water. Studies have revealed that the level of imperviousness resulting from development and urbanization is strongly correlated with the water quality impairment of nearby receiving waters.<sup>119</sup> In many cases, the impacts on receiving waters due to changes in hydrology can be more significant than those attributable to the contaminants found in storm water discharges.<sup>120</sup> These impacts include stream bank erosion (increased sediment load and subsequent deposition), benthic habitat degradation, and decreased diversity of macroinvertebrates. Although conventional BMPs do reduce storm water pollutant loads, they may not effectively control adverse effects from changes in the discharge hydrologic conditions.<sup>121</sup>

The Order includes requirements for developments to include site design BMPs that mimic or replicate the natural hydrologic cycle. Open space designs which maximize pervious surfaces and retention of "natural" drainages have been found to reduce both the costs of development and pollutant export.<sup>122</sup> Moreover, USEPA finds including plans for a "natural" site design and BMP implementation during the design phase of new development and redevelopment offers the most cost effective strategy to reduce storm water pollutant loads to surface waters.<sup>123</sup> In addition, a recent U.S. Department of Housing and Urban Development guidance document on low-impact development notes that the use of LID-based storm water management design allows land to be developed, but in a cost-effective manner that helps mitigate potential environmental impacts.<sup>124</sup>

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<sup>119</sup> USEPA, 1999. 40 CFR Parts 9, 122, 123, and 124 National Pollutant Discharge Elimination System – Regulations for Revision of the Water Pollution Control Program Addressing Storm Water Discharges; Final Rule.

<sup>120</sup> Ibid.

<sup>121</sup> USEPA, 2000. Low-Impact Development: A literature review. EPA-841-B-00-005. 35p.

<sup>122</sup> Center for Watershed Protection, 2000. "The Benefits of Better Site Design in Residential Subdivisions." Watershed Protection Techniques. Vol. 3. No. 2.

<sup>123</sup> USEPA, 1999. 40 CFR Parts 9, 122, 123, and 124 National Pollutant Discharge Elimination System – Regulations for Revision of the Water Pollution Control Program Addressing Storm Water Discharges; Final Rule.

<sup>124</sup> U.S. Department of Housing and Urban Development, Office of Policy Development and Research, 2003. "The Practice of Low Impact Development." Prepared by: NAHB Research Center, Inc. Upper Marlboro, Maryland. Contract No. H-21314CA. 131p.

**Finding D.2.d.** Retail Gasoline Outlets (RGOs) are significant sources of pollutants in storm water runoff. RGOs are points of convergence for motor vehicles for automotive related services such as repair, refueling, tire inflation, and radiator fill-up and consequently produce significantly higher loadings of hydrocarbons and trace metals (including copper and zinc) than other developed areas.

**Discussion of Finding D.2.d.** RGOs are included in the Order as a Priority Development Project category because RGOs produce significantly greater loadings of hydrocarbons and trace metals (including copper and zinc) than other developed areas. To meet the storm water MEP standard, source control and structural treatment BMPs are needed at RGOs that meet the following criteria: (a) 5,000 square feet or more or (b) an ADT of 100 or more vehicles per day. These are appropriate thresholds since vehicular development size and volume of traffic are good indicators of potential impacts of storm water runoff from RGOs on receiving waters.

This finding has been added to satisfy State Board WQ Order No. 2000-11's requirements for including RGOs as a Priority Development Category. Order No. 2000-11 acknowledged that a threshold (size, average daily traffic, etc.) appropriate to trigger SSMP requirements should be developed for RGOs and that specific findings regarding RGOs should be included in MS4 permits to justify the requirement.<sup>125</sup> Additional detail to support the inclusion of RGOs can be found in the Fact Sheet discussion of Section D.1.d.2.j.

**Finding D.2.e.** Industrial sites are significant sources of pollutants in runoff. Pollutant concentrations and loads in runoff from industrial sites are similar or exceed pollutant concentrations and loads in runoff from other land uses, such as commercial or residential land uses. As with other land uses, LID site design, source control, and treatment control BMPs are needed at industrial sites in order to meet the MEP standard. These BMPs are necessary where the industrial site is larger than 10,000 square feet. The 10,000 square feet threshold is appropriate, since it is consistent with requirements in other Phase I NPDES storm water regulations throughout California.

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<sup>125</sup> State Board, 2000. Order WQ 2000-11. In the Matter of the Petitions of The Cities Of Bellflower, Et Al., The City Of Arcadia, And Western States Petroleum Association Review of January 26, 2000 Action of the Regional Board And Actions and Failures to Act by both the California Regional Water Quality Control Board, Los Angeles Region and Its Executive Officer Pursuant to Order No. 96-054, Permit for Municipal Storm Water and Urban Run-Off Discharges Within Los Angeles County [NPDES NO. CAS614001] SWRCB/OCC FILES A-1280, A-1280(a) and A-1280(b)

**Discussion of Finding D.2.e.** Industrial sites can be a significant source of pollutants in storm water runoff. In an extensive review of storm water literature, the LARWQCB found widespread support for the finding that "industrial and commercial activities can also be considered hot spots as sources of pollutants." It also found that "industrial and commercial areas were likely to be the most significant pollutant source areas" of heavy metals.<sup>126</sup> Likewise, storm water runoff from heavy industry in the Santa Clara Valley has been found to be extremely toxic.<sup>127</sup> These findings are corroborated by USEPA, which states in the preamble to the 1990 Phase I NPDES storm water regulations that "Because storm water from industrial facilities may be a major contributor of pollutants to municipal separate storm sewer systems, municipalities are obligated to develop controls for storm water discharges associated with industrial activity through their system in their storm water management program." Since heavy industrial sites can be a significant source of pollutants in runoff in a manner similar to other SSMP project categories such as commercial development or automotive repair shops, it is appropriate to include heavy industrial sites as a SSMP category in the Order.

The Phase I NPDES storm water regulations require the Copermittees to "control through ordinance, permit, contract, order, or similar means, the contribution of pollutants to the municipal storm sewer by storm water discharges associated with industrial activity and the quality of storm water discharged from sites of industrial activity" (40 CFR 122.26(d)(2)(i)). In addition, it has been established that the MEP standard for the control of storm water runoff from new development projects includes incorporation of the SSMP requirements. Since the Copermittees must both control storm water pollutants from industrial sites and meet the storm water MEP standard for new development, it is appropriate to apply the SSMP requirements to heavy industrial sites.

The State Board's Order WQ 2000-11 indicates that it is appropriate to apply SSMP requirements to categories of development where evidence shows the category of development can be a significant source of pollutants. As evidenced above, heavy industrial sites can be a significant source of pollutants. Therefore, the Order includes heavy industrial sites as a SSMP Priority Development Project category.

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<sup>126</sup> Los Angeles Regional Water Quality Control Board. 2001.

<sup>127</sup> Schueler and Holland, 2000. Storm Water Strategies for Arid and Semi-Arid Watersheds (Article 66). The Practice of Watershed Protection.

**Finding D.2.f.** If not properly designed or maintained, certain BMPs implemented or required by municipalities for runoff management may create a habitat for vectors (e.g. mosquitoes and rodents). However, proper BMP design and maintenance to avoid standing water can prevent the creation of vector habitat. Nuisances and public health impacts resulting from vector breeding can be prevented with close collaboration and cooperative effort between municipalities, the Orange County Vector Control District, and the California Department of Public Health during the development and implementation of runoff management programs.

**Discussion of Finding D.2.f.** The implementation of certain structural BMPs or other runoff treatment systems can result in significant vector problems in the form of increased breeding or harborage habitat for mosquitoes, rodents or other potentially disease transmitting organisms. The implementation of BMPs that retain water may provide breeding habitat for a variety of mosquito species, some of which have the potential to transmit diseases such as Western Equine Encephalitis, St. Louis Encephalomyelitis, and malaria. Recent BMP implementation studies by Caltrans<sup>128</sup> in District 7 and District 11 have demonstrated mosquito breeding associated with some types of BMPs. The Caltrans BMP Retrofit Pilot study cited lack of maintenance and improper design as factors contributing to mosquito production. However, a Watershed Protection Techniques article describes management techniques for selecting, designing, and maintaining structural treatment BMPs to minimize mosquito production.<sup>129</sup> State and local runoff management programs that include structural BMPs with the potential to retain water have been implemented in Florida and the Chesapeake Bay region without resulting in significant public health threats from mosquitoes or other vectors.<sup>130</sup>

**Finding D.2.g.** The increased volume, velocity, frequency and discharge duration of storm water runoff from developed areas has the potential to greatly accelerate downstream erosion, impair stream habitat in natural drainages, and negatively impact beneficial uses. Development and urbanization increase pollutant loads in storm water runoff and the volume of storm water runoff. Impervious surfaces can neither absorb water nor remove pollutants and thus lose the purification and infiltration provided by natural vegetated soil. Hydromodification measures for discharges to hardened channels allow for the future restoration of the hardened channels to their natural state, thereby restoring the chemical, physical, and biological integrity and Beneficial Uses of local receiving waters.

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<sup>128</sup> Caltrans, 2000. BMP Retrofit Pilot Studies: A Preliminary Assessment of Vector Production.

<sup>129</sup> Watershed Protection Techniques, 1995. Mosquitoes in Constructed Wetlands: A Management Bugaboo? 1(4):203-207.

<sup>130</sup> Shaver, E. and R. Baldwin, 1995. Sand Filter Design for Water Quality Treatment in Herricks, E., Ed. Stormwater Runoff and Receiving Systems: Impact, Monitoring, and Assessment, CRC Lewis Publishers, New York, NY.

**Discussion of Finding D.2.g.** Increasing the volume, velocity, frequency and discharge duration of storm water runoff from developed areas will eventually greatly accelerate downstream erosion, impair stream habitat in natural drainages, and negatively impact beneficial uses. Development and urbanization increase pollutant loads and volume while simultaneously increasing impervious area. Impervious surfaces can neither absorb water nor remove pollutants and thus lose the purification and infiltration provided by naturally vegetated soil.

Historic hydromodification impacts, such as concrete lining and channelization, have impacted the natural physical habitat of urban streams resulting in low Index of Biotic Integrity (IBI) scores. The Copermittee's 2006-2007 monitoring indicated decreased IBI scores in the developed watersheds. In the absence of water chemistry and toxicity impacts, these low scores were attributed to be a result of poor physical habitat conditions.<sup>131</sup>

Hydromodification impacts result in poor physical habitat conditions through streambed scour, erosion, vegetation displacement, sediment deposition, channelization and channel modifications. Increased sediment loads from hydromodification causes other impacts to physical habitats including increased turbidity which then may cause increased temperatures. In addition, an increased sediment load may have an increased biological content thereby increasing the sediment oxygen demand and lowering the dissolved oxygen available for aquatic life.<sup>132</sup>

The objective of the CWA is "to restore and maintain the chemical, *physical*, and biological integrity of the Nation's waters (emphasis added)." Stream restoration by removing concrete and other unnatural materials is a major step toward achieving that objective. The success of future stream restoration and stabilization is, however, dependent on preventing and reducing physical impacts from activities upstream. Therefore, hydromodification management measures are necessary upstream of modified (e.g. concrete, rip rap, etc.) channels in addition to non-modified channels.

Please see discussion of Findings C.10 and C.11.

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<sup>131</sup> Orange County Copermittees, November 15, 2007. 2006-2007 Unified Annual Progress Report Program Effectiveness Assessment (San Diego Region).

<sup>132</sup> USEPA, National Management Measures to Control Nonpoint Source Pollution from Hydromodification, EPA 841-B-07-002, July 2007.

**Finding D.3.a.** In accordance with federal NPDES regulations and to ensure the most effective oversight of industrial and construction site discharges, discharges of runoff from industrial and construction sites are subject to dual (state and local) storm water regulation. Under this dual system, each Copermitttee is responsible for enforcing its local permits, plans, and ordinances, and the Regional Board is responsible for enforcing the General Construction Activities Storm Water Permit, State Board Order 99-08 DWQ, NPDES No. CAS000002 (General Construction Permit) and the General Industrial Activities Storm Water Permit, State Board Order 97-03 DWQ, NPDES No. CAS000001 (General Industrial Permit). NPDES municipal regulations require that municipalities develop and implement measures to address runoff from industrial and construction activities. Those measures may require the implementation of additional BMPs than are required under the statewide general permits for activities subject to both state and local regulation.

**Discussion of Finding D.3.a.** USEPA finds the control of pollutant discharges from industry and construction so important to receiving water quality that it has established a double system of regulation over industrial and construction sites. This double system of regulation consists of two parallel regulatory systems with the same common objective: to keep pollutants from industrial and construction sites out of the MS4. In this double system of regulation for runoff from industrial and construction sites, local governments must enforce their legal authorities (i.e., local ordinances and permits) while the Regional Board must enforce its legal authority (i.e., statewide general industrial and construction storm water permits). These two regulatory systems are designed to complement and support each other. Municipalities are not required to enforce Regional Board and State Board permits; however, they are required to enforce their ordinances and permits. The Federal regulations are clear that municipalities have responsibility to prevent non-storm water and address storm water runoff from industrial and construction sites which enters their MS4s.

Municipalities have this responsibility because they have the authority to issue land use and development permits. Since municipalities are the lead permitting authority for industrial land use and construction activities, they are also the lead for enforcement regarding runoff discharges from these sites. For sites where the municipality is the lead permitting authority, the Regional Board will work with the municipality and provide support where needed. The Regional Board will assist municipalities in enforcement against non-compliant sites after the municipality has exhibited a good faith effort to bring the site into compliance.

According to USEPA, the storm water regulations envision that NPDES permitting authorities and municipal operators will cooperate to develop programs to monitor and control pollutants in storm water discharges from industrial facilities.<sup>133</sup> USEPA discusses the “dual regulation” of construction sites in its Storm Water Phase II Compliance Assistance Guide, which states “Even though all construction sites that disturb more than one acre are covered nationally by an NPDES storm water permit, the construction site runoff control minimum measure [...] is needed to induce more localized site regulation and enforcement efforts, and to enable operators [...] to more effectively control construction site discharges into their MS4s.”<sup>134</sup> While the Storm Water Phase II Compliance Assistance Guide applies to small municipalities, it is applicable to the Copermittees, because they are similar in size and have the potential to discharge similar pollutant types as Phase II municipalities.

**Finding D.3.b.** Identification of sources of pollutants in runoff (such as municipal areas and activities, industrial and commercial sites/sources, construction sites, and residential areas), development and implementation of BMPs to address those sources, and updating ordinances and approval processes are necessary for the Copermittees to ensure that discharges of pollutants from its MS4 in storm water are reduced to the MEP and that non-storm water discharges are not occurring. Inspections and other compliance verification methods are needed to ensure minimum BMPs are implemented. Inspections are especially important at high risk areas for pollutant discharges.

**Discussion of Finding D.3.b.** Source identification is necessary to characterize the nature and extent of pollutants in discharges and to develop appropriate BMPs. It is the first step in a targeted approach to runoff management. Source identification helps identify the location of potential sources of pollutants in runoff. Pollutants found to be present in receiving waters can then be traced to the sites which frequently generate such pollutants. In this manner source inventories can help to target inspections, monitoring, and potential enforcement. This allows for limited inspection, monitoring, and enforcement time to be most effective. USEPA supports source identification as a concept when it recommends construction, municipal, and industrial source identification in guidance and the federal regulations.<sup>135,136</sup>

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<sup>133</sup> USEPA, 1992. Guidance Manual for the Preparation of Part II of the NPDES Permit Applications for Discharges from Municipal Separate Storm Sewer Systems. EPA 833-B-92-002.

<sup>134</sup> USEPA, 2000. Storm Water Phase II Compliance Assistance Guide. EPA 833-R-00-002.

<sup>135</sup> USEPA, 1992. Guidance Manual for the Preparation of Part II of the NPDES Permit Applications for Discharges from Municipal Separate Storm Sewer Systems. EPA 833-B-92-002.

<sup>136</sup> 40 CFR 122.26(d)(2)(ii)

The development of BMPs for identified sources will help ensure that appropriate, consistent controls are implemented at all types of development and areas. Copermittees must reduce the discharge of pollutants in storm water runoff to the maximum extent practicable. To achieve this level of pollutant reduction, BMPs must be implemented. Designation of minimum BMPs helps ensure that appropriate BMPs are implemented for various sources. These minimum BMPs also serve as guidance as to the level of water quality protection required. USEPA requires development and implementation of BMPs for construction, municipal, commercial, industrial, and residential sources at 40 CFR 122.26(d)(2)(iv)(A-D).

Updating ordinances and approval processes is necessary in order for the Copermittees to control discharges to their MS4s. USEPA supports updating ordinances and approval processes when it states “A crucial requirement of the NPDES storm water regulation is that a municipality must demonstrate that it has adequate legal authority to control the contribution of pollutants in storm water discharged to its MS4. [...] In order to have an effective municipal storm water management program, a municipality must have adequate legal authority to control the contribution of pollutants to the MS4. [...] ‘Control,’ in this context, means not only to require disclosure of information, but also to limit, discourage, or terminate a storm water discharge to the MS4.”<sup>137</sup>

Inspections provide a necessary means for the Copermittees to evaluate compliance of pollutant sources with their municipal ordinances and minimum BMP requirements. USEPA supports inspections when it recommends inspections of construction, municipal, and industrial sources.<sup>138</sup> Inspection of high risk sources are especially important because of the ability of frequent inspections to help ensure compliance, thereby reducing the risk associated with such sources. USEPA suggests that inspections can improve compliance when it states “Effective inspection and enforcement requires [...] penalties to deter infractions and intervention by the municipal authority to correct violations.”<sup>139</sup>

**Finding D.3.c.** Historic and current development makes use of natural drainage patterns and features as conveyances for runoff. Urban streams used in this manner are part of the municipalities MS4 regardless of whether they are natural, anthropogenic, or partially modified features. In these cases, the urban stream is both an MS4 and receiving water.

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<sup>137</sup> USEPA, 1992. Guidance Manual for the Preparation of Part II of the NPDES Permit Applications for Discharges from Municipal Separate Storm Sewer Systems. EPA 833-B-92-002.

<sup>138</sup> Ibid.

<sup>139</sup> USEPA, 1992. Guidance Manual for the Preparation of Part II of the NPDES Permit Applications for Discharges from Municipal Separate Storm Sewer Systems. EPA 833-B-92-002.

**Discussion of Finding D.3.c.** An MS4 is defined in the federal regulations as a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains), owned or operated by a Copermittee, and designed or used for collecting or conveying runoff.<sup>140</sup> Natural drainage patterns and urban streams are frequently used by municipalities to collect and convey runoff away from development within their jurisdiction. Therefore, the Regional Board considers natural drainages that are used for conveyances of runoff, regardless of whether or not they've been altered by the municipality, as both part of the MS4s and as receiving waters. To clarify, an unaltered natural drainage, which receives runoff from a point source (channeled by a Copermittee to drain an area within their jurisdiction), which then conveys the runoff to an altered natural drainage or a man-made MS4, is both an MS4 and a receiving water.<sup>141</sup>

**Finding D.3.d.** As operators of the MS4s, the Copermittees cannot passively receive and discharge pollutants from third parties. By providing free and open access to an MS4 that conveys discharges to waters of the U.S., the operator essentially accepts responsibility for discharges into the MS4 that it does not prohibit or control. These discharges may cause or contribute to a condition of contamination or a violation of water quality standards.

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<sup>140</sup> USEPA, 2000. EPA Administered Permit Programs: The National Pollutant Discharge Elimination System. Code of Federal Regulations, Vol. 40, Part 122.

<sup>141</sup> Regional Board, 2001. Response in Opposition to Petitions for Review of California Regional Water Quality Control Board San Diego Region Order No. 2001-01 – NPDES Permit No. CAS0108758 (San Diego Municipal Storm Water Permit).

**Discussion of Finding D.3.d.** CWA section 402(p) requires operators of MS4s to prohibit non-storm water discharges into their MS4s. This is necessary because pollutants which enter the MS4 generally are conveyed through the MS4 to be eventually discharged into receiving waters. If a municipality does not prohibit non-storm water discharges, it is providing the pathway (its MS4) which enables pollutants to reach receiving waters. Since the municipality's storm water management service can result in pollutant discharges to receiving waters, the municipality must accept responsibility for the water quality consequences resulting from this service. Furthermore, third party discharges can cause a municipality to be out of compliance with its permit. Since pollutants from third parties which enter the MS4 will eventually be discharged from the MS4 to receiving waters, the third party discharges can result in a situation of municipality non-compliance if the discharges lead to an exceedance of water quality standards. For these reasons, each Copermittee must prohibit and/or control discharges from third parties to its MS4. USEPA supports this concept when it states "the operators of regulated small MS4s cannot passively receive and discharge pollutants from third parties" and "the operator of a small MS4 that does not prohibit and/or control discharges into its system essentially accepts 'title' for those discharges. At a minimum, by providing free and open access to the MS4s that convey discharges to the waters of the United States, the municipal storm sewer system enables water quality impairment by third parties."<sup>142</sup>

**Finding D.3.e.** Waste and pollutants which are deposited and accumulate in MS4 drainage structures will be discharged from these structures to waters of the U.S. unless they are removed. These discharges may cause or contribute to, or threaten to cause or contribute to, a condition of pollution in receiving waters. For this reason, pollutant discharges from storm water into MS4s must be reduced using a combination of management measures, including source control, and an effective MS4 maintenance program must be implemented by each Copermittee.

**Discussion of Finding D.3.e.** When rain falls and drains freeways, industries, construction sites, and neighborhoods, it picks up a multitude of pollutants. Gravity flow transports the pollutants to the MS4. Illicit discharges and connections also can contribute a significant amount of pollutants to MS4s. MS4s are commonly designed to convey their contents as quickly as possible. Due to the resulting typically high flow rates within the concrete conveyance systems of MS4s, pollutants which enter or are deposited in the MS4 and not removed are generally flushed unimpeded through the MS4 to waters of the United States. Since treatment generally does not occur within the MS4, in such cases reduction of storm water pollutants to the MEP must occur prior to discharges entering the MS4.

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<sup>142</sup> Federal Register / Vol. 64, No. 235 / Wednesday, December 8, 1999 / Rules and Regulations. P. 68765-68766.

The importance of this concept is supported by the tons of wastes/pollutants that have been removed from the Copermittees' MS4s as reported in their ROWD.<sup>143</sup> Moreover, these pollutants will be discharged into receiving waters unless an effective MS4 and structural treatment BMP maintenance program is implemented by the Copermittees. The requirement for Copermittees to conduct a MS4 maintenance program is specifically directed in both the Phase I and Phase II storm water regulations. Regarding MS4 cleaning, USEPA states "The removal of sediment, decaying debris, and highly polluted water from catch basins has aesthetic and water quality benefits, including reducing foul odors, reducing suspended solids, and reducing the load of oxygen-demanding substances that reach receiving waters."<sup>144</sup> It goes on to say, "Catch basin cleaning is an efficient and cost-effective method for preventing the transport of sediment and pollutants to receiving water bodies." USEPA also finds that "Lack of maintenance often limits the effectiveness of storm water structural controls such as detention/retention basins and infiltration devices. [...] The proposed program should provide for maintenance logs and identify specific maintenance activities for each class of control, such as removing sediment from retention ponds every five years, cleaning catch basins annually, and removing litter from channels twice a year."<sup>145</sup>

**Finding D.3.f.** Enforcement of local runoff related ordinances, permits, and plans is an essential component of every runoff management program and is specifically required in the federal storm water regulations and this Order. Each Copermittee is individually responsible for adoption and enforcement of ordinances and/or policies, implementation of identified control measures/BMPs needed to prevent or reduce pollutants in storm water runoff, and for the allocation of funds for the capital, operation and maintenance, administrative, and enforcement expenditures necessary to implement and enforce such control measures/BMPs under its jurisdiction. Education is an important aspect of every effective runoff management program and the basis for changes in behavior at a societal level. Education of municipal planning, inspection, and maintenance department staffs is especially critical to ensure that in-house staffs 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.

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<sup>143</sup> Orange County Storm Water Copermittees. 2006. Report of Waste Discharge (San Diego Region).

<sup>144</sup> USEPA, 1999. Storm Water O&M Fact Sheet, Catch Basin Cleaning. EPA 832-F-99-011.

<sup>145</sup> USEPA, 1992. Guidance Manual for the Preparation of Part II of the NPDES Permit Applications for Discharges from Municipal Separate Storm Sewer Systems. EPA 833-B-92-002.

**Discussion of Finding D.3.f.** The Federal NPDES regulations 40 CFR 122.26(d)(2)(iv)(A – D) are clear in placing responsibility on municipalities for control of runoff from third party activities and land uses to their MS4.<sup>146</sup> In order for municipalities to assume this responsibility, they must implement ordinances, permits, and plans addressing runoff from third parties. Assessments for compliance with their ordinances, permits, and plans are essential for a municipality to ensure that third parties are not causing the municipality to be in violation of its municipal storm water permit. When conditions of non-compliance are determined, enforcement is necessary to ensure that violations of municipality ordinances and permits are corrected. When the Copermittees determine a violation of its storm water ordinance, it must pursue correction of the violation. Without enforcement, third parties do not have incentive to correct violations. USEPA supports enforcement by municipalities when it states “Effective inspection and enforcement requires [...] penalties to deter infractions and intervention by the municipal authority to correct violations. Enforcement mechanisms [...] also must be described.”<sup>147</sup>

Education is a critical BMP and an important aspect of runoff management programs. USEPA finds that “An informed and knowledgeable community is critical to the success of a storm water management program since it helps ensure the following: Greater support for the program as the public gains a greater understanding of the reasons why it is necessary and important, [and] greater compliance with the program as the public becomes aware of the personal responsibilities expected of them and others in the community, including the individual actions they can take to protect or improve the quality of area waters.”<sup>148</sup>

Regarding target audiences, USEPA also states “The public education program should use a mix of appropriate local strategies to address the viewpoints and concerns of a variety of audiences and communities, including minority and disadvantaged communities, as well as children.”

**Finding D.3.g.** Public participation during the development of runoff management programs is necessary to ensure that all stakeholder interests and a variety of creative solutions are considered.

**Discussion of Finding D.3.g.**

This finding is supported by the Phase II Storm Water Regulations, which state “early and frequent public involvement can shorten implementation schedules and broaden public support for a program.” USEPA goes on to explain, “Public participation is likely to ensure a more successful storm water program by providing valuable expertise and a conduit to other programs and governments.”<sup>149</sup>

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<sup>146</sup> USEPA, 2000. EPA Administered Permit Programs: The National Pollutant Discharge Elimination System. Code of Federal Regulations, Vol. 40, Part 122.

<sup>147</sup> USEPA, 1992. Guidance Manual for the Preparation of Part II of the NPDES Permit Applications for Discharges from Municipal Separate Storm Sewer Systems. EPA/833-B-92-002.

<sup>148</sup> USEPA, 2000. Storm Water Phase II Compliance Assistance Guide. EPA 833-R-00-002.

<sup>149</sup> Federal Register / Vol. 64, No. 235 / Wednesday, December 8, 1999 / Rules and Regulations. P. 68755.

**Finding D.3.h.** Retrofitting existing development with storm water treatment controls including LID, is necessary to address storm water discharges from existing development that may cause or contribute to a condition of pollution or a violation of water quality standards. Although SSMP BMPs are required for redevelopment, the current rate of redevelopment will not address water quality problems in a timely manner. Cooperation with private landowners is necessary to effectively identify, implement and maintain retrofit projects for the preservation, restoration, and enhancement of water quality.

**Discussion of Finding D.3.h.** Existing BMPs are not sufficient to protect the Beneficial Uses of receiving waters from storm water MS4 discharges, as evidenced by 303(d) listings and exceedances of Water Quality Objectives from the Copermittees monitoring reports. Implementing more advanced BMPs, including the retrofitting of existing development with LID, is part of the iterative process. Based on the current rate of redevelopment compared to existing BMPs, the use of LID only on new and redevelopment will not adequately address current water quality problems, including downstream hydromodification. Retrofitting existing development is practicable for a municipality through a systematic evaluation, prioritization and implementation plan focused on impaired water bodies, pollutants of concern, areas of downstream hydromodification, feasibility and effective communication and cooperation with private property owners.

**Finding D.4.a.** Since runoff within a watershed can flow from and through multiple land uses and political jurisdictions, watershed-based runoff management can greatly enhance the protection of receiving waters. Such management provides a means to focus on the most important water quality problems in each watershed. By focusing on the most important water quality problems, watershed efforts can maximize protection of beneficial use in an efficient manner. Effective watershed-based runoff management actively reduces pollutant discharges and abates pollutant sources causing or contributing to watershed water quality problems. Watershed-based runoff management that does not actively reduce pollutant discharges and abate pollutant sources causing or contributing to watershed water quality problems can necessitate implementation of the iterative process outlined in section A.3 of the Tentative Order. Watershed management of runoff does not require Copermittees to expend resources outside of their jurisdictions. Watershed management requires the Copermittees within a watershed to develop a watershed-based management strategy, which can then be implemented on a jurisdictional basis.

**Discussion of Finding D.4.a.** In recent years, addressing water quality issues from a watershed perspective has increasingly gained attention. Regarding watershed-based permitting, the USEPA *Watershed-Based NPDES Permitting Policy Statement* issued on Jan. 7, 2004 states the following:

USEPA continues to support a holistic watershed approach to water quality management. The process for developing and issuing NPDES permits on a watershed basis is an important tool in water quality management. USEPA believes that developing and issuing NPDES permits on a watershed basis can benefit all watershed stakeholders, from the NPDES permitting authority to local community members. A watershed-based approach to point source permitting under the NPDES program may serve as one innovative tool for achieving new efficiencies and environmental results. USEPA believes that watershed-based permitting can:

- Lead to more environmentally effective results;
- Emphasize measuring the effectiveness of targeted actions on improvements in water quality;
- Provide greater opportunities for trading and other market based approaches;
- Reduce the cost of improving the quality of the nation's waters;
- Foster more effective implementation of watershed plans, including total maximum daily loads (TMDLs); and
- Realize other ancillary benefits beyond those that have been achieved under the CWA (e.g., facilitate program integration including integration of clean water act and safe drinking water act programs).

Watershed-based permitting is a process that ultimately produces NPDES permits that are issued to point sources on a geographic or watershed basis. In establishing point source controls in a watershed-based permit, the permitting authority may focus on watershed goals, and consider multiple pollutant sources and stressors, including the level of nonpoint source control that is practicable. In general, there are numerous permitting mechanisms that may be used to develop and issue permits within a watershed approach.

This USEPA guidance is in line with State Board and Regional Board watershed management goals. For example, the State Board's TAC recommends watershed-based water quality protection, stating "Municipal permits should have watershed specific components." The TAC further recommends that "All NPDES permits and Waste Discharge Requirements should be considered for reissuance on a watershed basis."

In addition, the Basin Plan states that "public agencies and private organizations concerned with water resources have come to recognize that a comprehensive evaluation of pollutant contributions on a watershed scale is the only way to realistically assess cumulative impacts and formulate workable strategies to truly protect our water resources. Both water pollution and habitat degradation problems can best be solved by following a basin-wide approach."

In light of USEPA's policy statement and the State Board's and Regional Board's watershed management goals, the Regional Board seeks to expand watershed management in the regulation of runoff from the MS4. Watershed-based MS4 permits can provide for more effective receiving water quality protection by focusing on specific water quality problems. The entire watershed for the receiving water can be assessed, allowing for critical areas and practices to be targeted for corrective actions. Known sources of pollutants of concern can be investigated for potential water quality impacts. Problem areas can then be addressed, leading to eventual improvements in receiving water quality. Management of runoff on a watershed basis allows for specific water quality problems to be targeted so that efforts result in maximized water quality improvements.<sup>150</sup>

**Finding D.4.b.** Some runoff issues, such as general education and training, can be effectively addressed on a regional basis. Regional approaches to runoff management can improve program consistency and promote sharing of resources, which can result in implementation of more efficient programs.

**Discussion of Finding D.4.b.** Copermittees in Orange County participate in several runoff-related activities whose scope extends beyond the area subject to this Order. These include countywide activities (e.g., portions of Orange County fall under the jurisdiction of the Santa Ana Regional Board), southern California, and statewide activities. Copermittees' participation in these regional activities is generally directed at improving management capability, preventing redundancy and taking advantage of economies of scale. For instance, Copermittees seek to develop consistency between watershed and/or jurisdictional programs (e.g., through standards development), and to collaborate on certain program activities such as education, training, and monitoring. The Copermittees report agreeing that jurisdictional, watershed, and regional programs cannot be effectively developed and implemented in isolation. In addition, the Copermittees, through WRMP implementation efforts, have learned that many watershed activities can be more effectively implemented (e.g., achieve more water quality benefits) at the regional level due to economies of scale and agree watershed protection should be increasingly emphasized as a focal point of Copermittee efforts under the re-issued Permit.<sup>151</sup>

**Finding D.4.c.** It is important for the Copermittees to coordinate their water quality protection and land use planning activities to achieve the greatest protection of receiving water bodies. Copermittee coordination with other watershed stakeholders, especially Caltrans, the Department of Defense, and water and sewer districts, is also important.

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<sup>150</sup> Regional Board, 2004. San Diego County Municipal Storm Water Permit Reissuance Analysis Summary. P. 1.

<sup>151</sup> Orange County Storm Water Copermittees. 2006. Report of Waste Discharge (San Diego Region).

**Discussion of Finding D.4.c.** Conventional planning and zoning can be limited in their ability to protect the environmental quality of creeks, rivers, and other waterbodies. Watershed-based planning is often ignored, despite the fact that receiving waters unite land by collecting runoff from throughout the watershed. Since watersheds unite land, they can be used as an effective basis for planning. Watershed-based planning enables local and regional areas to realize economic, social, and other benefits associated with growth, while conserving the resources needed to sustain such growth, including water quality.

This type of planning can involve four steps: (1) Identify the watersheds shared by the participating jurisdictions; (2) Identify, assess, and prioritize the natural, social, and other resources in the watersheds; (3) Prioritize areas for growth, protection, and conservation, based on prioritized resources; and (4) Develop plans and regulations to guide growth and protect resources. Local governments have started with simple, yet effective, steps toward watershed planning, such as adopting a watershed-based planning approach, articulating the basic strategy in their General Plans, and beginning to pursue the basic strategy in collaboration with neighboring local governments who share the watersheds. Examples of new mechanisms created to facilitate watershed-based planning and zoning include the San Francisquito Creek Watershed Coordinated Resource Management Process and the Santa Clara Basin Watershed Management Initiative.<sup>152</sup>

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<sup>152</sup> Bay Area Stormwater Management Agencies Association., 1999. Start at the Source. Forbes Custom Publishing. Available on-line at: [http://www.scvurppp-w2k.com/basmaa\\_satsm.htm](http://www.scvurppp-w2k.com/basmaa_satsm.htm)

## E. Statute and Regulatory Considerations

**Finding E.1.** The Receiving Water Limitations (RWL) language specified in this Order is consistent with language recommended by the USEPA and established in State Board Water Quality Order 99-05, *Own Motion Review of the Petition of Environmental Health Coalition to Review Waste Discharge Requirements Order No. 96-03, NPDES Permit No. CAS0108740*, adopted by the State Board on June 17, 1999. The RWL in this Order require compliance with water quality standards, which for storm water discharges is to be achieved through an iterative approach requiring the implementation of improved and better-tailored BMPs over time. Compliance with receiving water limitations based on applicable water quality standards is necessary to ensure that MS4 discharges will not cause or contribute to violations of water quality standards and the creation of conditions of pollution.

**Discussion of Finding E.1.** The RWLs in the Order require storm water compliance with water quality standards through an iterative approach for implementing improved and better-tailored BMPs over time. The iterative BMP process requires the implementation of increasingly stringent BMPs until receiving water standards are achieved. This is necessary because implementation of BMPs alone cannot ensure attainment of receiving water quality standards. For example, a BMP that is effective in one situation may not be applicable in another. An iterative process of BMP development, implementation, and assessment is needed to promote consistent compliance with receiving water quality objectives. If assessment of a given BMP confirms that the BMP is ineffective, the iterative process should be restarted, with redevelopment of a new BMP that is anticipated to result in compliance with receiving water quality objectives.

The issue of whether storm water discharges from MS4s must meet water quality standards has been intensely debated in past years. The argument arises because CWA section 402(p) fails to clearly state that municipal dischargers of storm water must meet water quality standards. On the issue of industrial discharges of storm water, the statute clearly indicates that industrial dischargers must meet both (1) the technology-based standard of “best available technology economically achievable (BAT)” and (2) applicable water quality standards. On the issue of municipal discharges however, the statute states that municipal dischargers must meet (1) the technology-based standard of “MEP” and (2) “such other provisions that the Administrator or the State determines appropriate for the control of such pollutants.” The statute fails, however, to specifically state that municipal dischargers must meet water quality standards.

As a result, the municipal storm water dischargers have argued that they do not have to meet water quality standards; and that they only are required to meet MEP for storm water. Environmental interest groups maintain that not only do MS4 discharges have to meet water quality standards, but that MS4 permits must also comply with numeric effluent limitations for the purpose of meeting water quality standards. On the issue of water quality standards, USEPA, the State Board, and the Regional Board have consistently maintained that MS4s must indeed comply with water quality standards. On the issue of whether water quality standards must be met by numeric effluent limitations, USEPA, the State Board (in Orders WQ 91-03 and WQ 91-04), and the Regional Board have maintained that MS4 permits can contain narrative requirements for the implementation of BMPs in place of numeric effluent limitations for storm water discharges.<sup>153</sup>

In addition to relying on USEPA's legal opinion concluding that MS4s must meet MEP for storm water and water quality standards, the State Board also relied on the CWA's explicit authority for States to require "such other provisions that the Administrator or the State determines appropriate for the control of such pollutants" in addition to the technology-based standard of MEP for storm water discharges. To further support its conclusions that MS4 permit dischargers must meet water quality standards, the State Board relied on provisions of the CWC that specify that all waste discharge requirements must implement applicable Basin Plans and take into consideration the appropriate water quality objectives for the protection of beneficial uses.

The State Board first formally concluded that permits for MS4s must contain effluent limitations based on water quality standards in its Order WQ 91-03. In that Order, the State Board also concluded that it was appropriate for Regional Boards to achieve this result by requiring best management practices, rather than by inserting numeric effluent limitations into MS4 permits. Later, in Order WQ 98-01, the State Board prescribed specific precedent setting Receiving Water Limitations language to be included in all future MS4 permits. This language specifically requires that MS4 dischargers meet water quality standards and allows for the use of narrative BMPs (increasing in stringency and implemented in an iterative process) as the mechanism by which water quality standards can be met for storm water discharges.

In Order WQ 99-05, the State Board modified its receiving water limitations language in Order WQ 98-01 to meet specific objections by USEPA (the modifications resulted in stricter compliance with water quality standards). State Board Order WQ 99-05 states:

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<sup>153</sup> For the most recent assessment, see Storm Water Panel Recommendations to the California State Water Resources Control Board, 2006. *The Feasibility of Numeric Effluent Limits Applicable to Discharges of Storm Water Associated with Municipal, Industrial, and Construction Activities.*

“In Order WQ 98-01, the State Board ordered that certain receiving water limitation language be included in future municipal storm water permits. Following inclusion of that language in permits issued by the San Francisco Bay and San Diego Regional Boards for Vallejo and Riverside respectively, the USEPA objected to the permits. The USEPA objection was based on the receiving water limitation language. The USEPA has now issued those permits itself and has included receiving water limitation language it deems appropriate.

In light of USEPA’s objection to the receiving water limitation language in Order WQ 98-01 and its adoption of alternative language, the State Board is revising its instructions regarding receiving water limitation language for municipal storm water permits. It is hereby ordered that Order WQ 98-01 will be amended to remove the receiving water limitation language contained therein and to substitute the USEPA language. Based on the reasons stated here, and as a precedent decision, the following receiving water limitation language shall be included in future municipal storm water permits.”

In the 1999 case involving MS4 permits issued by USEPA to several Arizona cities (*Defenders of Wildlife v. Browner*, 1999, 197 F. 3d 1035), the United States Court of Appeals for the Ninth Circuit upheld USEPA’s requirement for MS4 dischargers to meet water quality standards, but it did so on the basis of USEPA’s discretion rather than on the basis of strict compliance with the Clean Water Act. In other words, while holding that the Clean Water Act does not require all MS4 discharges to comply strictly with state water quality standards, the Court also held that USEPA has the authority to determine that ensuring strict compliance with state water quality standards is necessary to control pollutants. On the question of whether MS4 permits must contain numeric effluent limitations, the court upheld USEPA’s use of iterative BMPs in place of numeric effluent limitations for storm water discharges.

On October 14, 1999, the State Board issued a legal opinion on the federal appellate decision and provided advice to the Regional Boards on how to proceed in the future. In the memorandum, the State Board concludes that the recent Ninth Circuit opinion upholds the discretion of USEPA and the State to (continue to) issue storm water permits to MS4s that require compliance with water quality standards through iterative BMPs. Moreover, the memorandum states that “[...] because most MS4 discharges enter impaired water bodies, there is a real need for permits to include stringent requirements to protect those water bodies. As TMDLs are developed, it is likely that MS4s will have to participate in pollutant load reductions, and the MS4 permits are the most effective vehicles for those reductions.” In summary, the State Board found that the Regional Boards should continue to include the RWL established in State Board Order WQ 99-05 in all future permits.

The issue of the RWLs language was also central to BIA's (and others') appeal of Order No. 2001-01 (San Diego MS4 permit), which was used as a template for Order No. R9-2002-01. BIA contended that the storm water MEP standard was a ceiling on what could be required of the Copermitees in implementing their runoff management programs, and that Order No. 2001-01's receiving water limitations requirements exceeded that ceiling. In other words, BIA argued that the Copermitees could not be required to comply with receiving water limitations if they necessitated efforts which went beyond the MEP standard. Again, the courts upheld the Regional Board's discretion to require compliance with water quality standards in municipal storm water permits, without limitation. The Court of Appeal, Fourth Appellate District found that the Regional Board has "the authority to include a permit provision requiring compliance with water quality standards."<sup>154</sup> On further appeal by BIA, the California State Supreme Court declined to hear the matter.

While implementation of the iterative BMP process is a means to achieve compliance with water quality objectives for storm water MS4 discharges, it does not shield the discharger from enforcement actions for continued non-compliance with water quality standards. Consistent with USEPA guidance,<sup>155</sup> regardless of whether or not an iterative process is being implemented, discharges that cause or contribute to a violation of water quality standards are in violation of Order No. R9-2008-0001.

**Finding E.2.** The Water Quality Control Plan for the San Diego Basin (Basin Plan), identifies the following beneficial uses for surface waters in Orange County: Municipal and Domestic Supply (MUN)<sup>156</sup>, Agricultural Supply (AGR), Industrial Process Supply (PROC), Industrial Service Supply (IND), Ground Water Recharge (GWR), Contact Water Recreation (REC1) Non-contact Water Recreation (REC2), Warm Freshwater Habitat (WARM), Cold Freshwater Habitat (COLD), Wildlife Habitat (WILD), Rare, Threatened, or Endangered Species (RARE), Freshwater Replenishment (FRSH), Hydropower Generation (POW), and Preservation of Biological Habitats of Special Significance (BIOL). The following additional beneficial uses are identified for coastal waters of Orange County: Navigation (NAV), Commercial and Sport Fishing (COMM), Estuarine Habitat (EST), Marine Habitat (MAR), Aquaculture (AQUA), Migration of Aquatic Organisms (MIGR), Spawning, Reproduction, and/or Early Development (SPWN), and Shellfish Harvesting (SHELL).

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<sup>154</sup> Building Industry Association et al., v. State Water Resources Control Board, et al. 2004.

<sup>155</sup> USEPA, 1998. Jan. 21, 1998 correspondence, "State Board/OCC File A-1041 for Orange County," from Alexis Strauss to Walt Petit, and March 17, 1998 correspondence from Alexis Strauss to Walt Petit.

<sup>156</sup> Subject to exceptions under the "Sources of Drinking Waters" Policy (Resolution No. 89-33)

**Discussion of Finding E.2.** The southern portion of Orange County is within the San Diego Region. The Orange County portion of the San Diego Region falls within and comprises the majority of the San Juan Hydrologic Unit. Major streams within the Orange County watersheds include San Juan Creek, Trabuco Creek, and San Mateo Creek. Other surface water bodies include Aliso Creek, Prima Deshecha Canada, Segunda Deshecha Canada, Oso Creek, Salt Creek, Laguna Canyon Channel, Canada Gobernadora, and Bell Canyon. Several small canyon streams drain directly to the Ocean. Major inland waterbodies include Oso Reservoir, El Toro Reservoir, and Sulphur Creek Reservoir.

The Orange County watersheds include unincorporated portions of Orange County, the Cities of Aliso Viejo, Dana Point, Laguna Beach, Laguna Hills, Laguna Niguel, Laguna Woods, Lake Forest, Mission Viejo, Rancho Santa Margarita, San Clemente, and San Juan Capistrano. The uppermost portions of the San Mateo, San Juan, Trabuco, and Aliso Creek watersheds are within the Cleveland National Forests.

Approximately 500,000 people reside within the permitted area. This estimate is based on the 2000 census, which does not represent exact numbers because three municipalities (County of Orange and the Cities of Laguna Hills and Lake Forest) lie within both the San Diego Region and the Santa Ana Region. In addition, new developments have increased the housing stock of the area since the 2000 census. This includes the master planned developments of Ladera Ranch in the San Juan Creek watershed and Talega in the San Clemente Coastal and San Mateo Creek watersheds.

**Finding E.3.** This Order is in conformance with State Board Resolution No. 68-16, *Statement of Policy with Respect to Maintaining High Quality Waters in California*, and the federal Antidegradation Policy described in 40 CFR 131.12.

**Discussion of Finding E.3.** Runoff management programs are required to be designed to reduce pollutants in storm water MS4 discharges to the maximum extent practicable and achieve compliance with water quality standards. Therefore, implementation of runoff management programs, which satisfy the requirements of Order No. R9-2009-0002, will prevent violations of receiving water quality standards. The Basin Plan states that "Water quality objectives must [...] conform to US EPA regulations covering antidegradation (40 CFR 131.12) and State Board Resolution 68-16, *Statement of Policy with Respect to Maintaining High Quality of Waters in California*." As a result, when water quality standards are met, USEPA and State Board antidegradation policy requirements are also met.

**Finding E.4.** Section 6217(g) of the Coastal Zone Act Reauthorization Amendments of 1990 (CZARA) requires coastal states with approved coastal zone management programs to address non-point pollution impacting or threatening coastal water quality. CZARA addresses five sources of non-point pollution: agriculture, silviculture, urban, marinas, and hydromodification. This NPDES permit addresses the management measures required for the urban category, with the exception of septic systems. The adoption and implementation of this NPDES permit relieves the Permittee from developing a non-point source plan, for the urban category, under CZARA. The Regional Board addresses septic systems through the administration of other programs.

**Discussion of Finding E.4.** Coastal states are required to develop programs to protect coastal waters from nonpoint source pollution, as mandated by the federal CZARA. CZARA Section 6217 identifies polluted runoff as a significant factor in coastal water degradation, and requires implementation of management measures and enforceable policies to restore and protect coastal waters. In lieu of developing a separate NPS program for the coastal zone, California's NPS Pollution Control Program was updated in 2000 to address the requirements of both the CWA section 319 and the CZARA section 6217 on a statewide basis. The California Coastal Commission (CCC), the State Board, and the nine Regional Water Quality Control Boards are the lead State agencies for upgrading the program, although 20 other State agencies also participate. Pursuant to the CZARA (6217(g) Guidance Document the development of runoff management programs pursuant to this NPDES permit fulfills the need for coastal cities to develop an runoff non-point source plan identified in the State's Non-point Source Program Strategy and Implementation Plan.<sup>157</sup>

**Finding E.5.** Section 303(d)(1)(A) of the CWA requires that "Each state shall identify those waters within its boundaries for which the effluent limitations...are not stringent enough to implement any water quality standard (WQS) applicable to such waters." The CWA also requires states to establish a priority ranking of impaired waterbodies known as Water Quality Limited Segments and to establish Total Maximum Daily Loads (TMDLs) for such waters. This priority list of impaired waterbodies is called the Section 303(d) List. The current Section 303(d) List was approved by the State Board on February 4, 2003 and on July 25, 2003 by USEPA. The List was recently updated by the State Board on October 25, 2006. On June 28, 2007 the 2006 303(d) list for California was given final approval by the United States Environmental Protection Agency (USEPA).

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<sup>157</sup> State Board/CCC, 2000. Nonpoint Source Program Strategy and Implementation Plan, 1998-2013 (PROSIP).

**Discussion of Finding E.5.** Section 303(d) of the federal CWA (CWA, 33 USC 1250, et seq., at 1313(d)), requires States to identify waters that do not meet water quality standards after applying certain required technology-based effluent limits (“impaired” water bodies). States are required to compile this information in a list and submit the list to USEPA for review and approval. This list is known as the Section 303(d) list of impaired waters. As part of this listing process, States are required to prioritize waters/watersheds for future development of TMDLs. The State Board and Regional Boards have ongoing efforts to monitor and assess water quality, to prepare the Section 303(d) list, to prioritize waters/watersheds for TMDL development and to subsequently develop TMDLs. TMDLs developed and adopted by the Regional Board are incorporated into the Basin Plan via a Basin Plan Amendment as authorized under section 13240 of the California Water Code. The 2006 California 303(d) List identifies impaired receiving water bodies and their watersheds within the State of California. Storm water and non-storm water runoff that is discharged from the Copermittees’ MS4s is a leading cause of receiving water quality impairment in the San Diego Region.<sup>158</sup> TMDLs Project I and II for bacteria are considered priority development TMDLs due to impacts to REC 1 benefits due to impairment of waters for human contact recreation.

**Finding E.6.** This Order does not constitute an unfunded local government mandate subject to subvention under Article XIII B, 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. (33 U.S.C. § 1342(p)(3)(B).) Second, the local agency Copermittees’ obligations under this Order are similar to, and in many respects less stringent than, the obligations of non-governmental and new dischargers who are issued NPDES permits for storm water and non-storm water discharges. Third, the local agency Copermittees have the authority to levy service charges, fees, or assessments sufficient to pay for compliance with this Order. Fourth, the Copermittees 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 storm water discharges. 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 XIII B, Section (6) of the California Constitution. 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. sec. 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. sec. 122.44(d)(1)(vii)(B).)

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<sup>158</sup> The approved 2006 Clean Water Act Section 303(d) List of Water Quality Limited Segments is on-line at: [http://www.waterboards.ca.gov/tmdl/303d\\_lists2006.html](http://www.waterboards.ca.gov/tmdl/303d_lists2006.html).

**Discussion of Finding E.6.** This Order does not constitute an unfunded local government mandate subject to subvention under Article XIII B, 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 in storm water 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.)

Second, the local agency Copermittees' 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 Copermittees 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 Copermittees 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 storm water 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 Copermittees have voluntarily sought a program-based municipal storm water permit in lieu of a numeric limitations approach on their storm water discharge. (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 limitations].) 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 XIII B, Section (6) of the California Constitution.

**Finding E. 7.** Runoff treatment and/or mitigation must occur prior to the discharge of runoff into receiving waters. Treatment BMPs must not be constructed in waters of the U.S. or State unless the runoff flows are sufficiently pretreated to protect the values and functions of the water body. Federal regulations at 40 CFR 131.10(a) state that in no case shall a state adopt waste transport or waste assimilation as a designated use for any waters of the U.S. Authorizing the construction of an runoff treatment facility within a water of the U.S., or using the water body itself as a treatment system or for conveyance to a treatment system, would be tantamount to accepting waste assimilation as an appropriate use for that water body. Furthermore, the construction, operation, and maintenance of a pollution control facility in a water body can negatively impact the physical, chemical, and biological integrity, as well as the beneficial uses, of the water body. Without federal authorization (e.g., pursuant to Clean Water Act Section 404), waters of the U.S. may not be converted into, or used as, waste treatment or conveyance facilities. Similarly, waste discharge requirements pursuant to California Water Code Section 13260 are required for the conversion or use of waters of the State as waste treatment or conveyance facilities. Diversion from waters of the U.S./State to treatment facilities and subsequent return to waters of the U.S. is allowable, provided that the effluent complies with applicable NPDES requirements.

**Discussion of Finding E.7.** Runoff treatment and/or mitigation in accordance with any of the requirements in the Order must occur prior to the discharge of storm water into receiving waters. Allowing storm water polluted runoff to enter receiving waters prior to treatment to the MEP will result in degradation of the water body and potential exceedances of water quality standards, from the discharge point to the point of dissipation, infiltration, or treatment. Furthermore, the construction, operation, and maintenance of a pollution control facility in a water body can negatively impact the physical, chemical, and biological integrity, as well as the beneficial uses, of the water body. This requirement is supported by federal regulation 40 CFR 131.10(a) and USEPA guidance. According to USEPA,<sup>159</sup> "To the extent possible, municipalities should avoid locating structural controls in natural wetlands. Before considering siting of controls in a natural wetland, the municipality should demonstrate that it is not possible or practicable to construct them in sites that do not contain natural wetlands... Practices should be used that settle solids, regulate flow, and remove contaminants prior to discharging storm water into a wetland."

Additional Federal guidance discusses the implementation of wetlands to treat municipal storm water discharges (USEPA, 2000. *Guiding Principles for Constructed Treatment Wetlands: Providing for Water Quality and Wildlife Habitat*). It states:

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<sup>159</sup> USEPA, 1992. Guidance Manual for the Preparation of Part II of the NPDES Permit Applications for Discharges from Municipal Separate Storm Sewer Systems. EPA 833-B-92-002.

*“..treatment wetlands should not be constructed in a waters of the U.S. unless you can sufficiently pretreat the stormwater flows to protect the values and functions of the waters of the U.S. Because storm water is an unpredictable effluent source and can contain high levels of toxic substances, nutrients, and pathogens, we strongly encourage that you construct the treatment wetland in uplands and use best management practices in these projects.”<sup>160</sup>*

Consistent with USEPA guidance, the conversion or use of waters of the U.S./State into runoff treatment facilities or conveyance facilities for untreated storm water discharges must be appropriately reviewed by both Federal and State resource agencies. Such projects may be subject to federal permitting pursuant to Clean Water Act Section 404 if discharges of dredged or fill material is involved.

The placement of hydromodification controls within waters of the U.S./State may also be subject to federal and/or state permitting, but would not necessarily be considered a pollutant treatment BMP. Provided the grade control structures are designed to re-establish a natural channel gradient and correct excessive changes to the sediment transport regime caused by urbanization, rather than to create a series of artificial hydrological impoundments for the purpose of treating pollution, this type of project is not considered an in-stream treatment BMP.

**Finding E. 8.** The issuance of waste discharge requirements and an NPDES permit for the discharge of runoff from MS4s to waters of the U.S. is exempt from the requirement for preparation of environmental documents under the California Environmental Quality Act (CEQA) (Public Resources Code, Division 13, Chapter 3, section 21000 et seq.) in accordance with the CWC section 13389.

**Discussion of Finding E. 8.** CWC Section 13389 exempts the adoption of waste discharge requirements (such as NPDES permits) from CEQA requirements: “Neither the State Board nor the regional boards shall be required to comply with the provisions of Chapter 3 (commencing with section 21100) of Division 13 of the Public Resources Code prior to the adoption of any waste discharge requirement, except requirements for new sources as defined in the Federal Water Pollution Control Act or acts amendatory thereof or supplementary thereto.”

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<sup>160</sup> USEPA, 2000. Guiding Principles for Constructed Treatment Wetlands: Providing for Water Quality and Wildlife Habitat, (EPA 843-B-00-003).

This CEQA exemption was challenged during BIA's (and others') appeal of Order No. 2001-01. BIA contended that the CEQA exemption did not apply to permit requirements where the Regional Board utilized its discretion to craft permit requirements which were more prescriptive than required by federal law. The Court of Appeal, Fourth Appellate District disagreed with this argument, stating "we also reject Building Industry's argument to the extent it contends the statutory CEQA exemption in Water Code section 13389 is inapplicable to a particular NPDES permit provision that is discretionary, rather than mandatory, under the CWA."<sup>161</sup> On further appeal by BIA, the California State Supreme Court declined to hear the matter.

In a recent decision, the Court of Appeal of the State of California, Second Appellate District, upheld the CEQA exemption for municipal storm water NPDES permits (County of Los Angeles, et al. v. California State Water Resources Control Board, et al.).<sup>162</sup>

**Finding E.9.** Multiple water bodies in Orange County have been identified as impaired and placed on the 303(d) list. In 2004, Bacteria Impaired Waters TMDL Project II included six bacteria impaired shorelines in Dana Point Harbor and San Diego Bay: Baby Beach in Dana Point Harbor and Shelter Island Shoreline Park, B Street, G Street Pier, Tidelands Park, and Chula Vista Marina in San Diego Bay. Since then, only Baby Beach in Dana Point Harbor and Shelter Island Shoreline Park in San Diego Bay can be confirmed as still impaired by indicator bacteria. On June 11, 2008 the Regional Board adopted a Basin Plan amendment to incorporate *Bacteria Impaired Waters TMDL Project II for San Diego Bay and Dana Point Harbor Shorelines*. On June 16, 2009, the State Board approved the Basin Plan amendment. This action meets requirements of section 303(d) of the Clean Water Act (CWA). The Basin Plan amendment process is authorized under section 13240 of the Water Code. The State's Office of Administrative Law (OAL) approved the TMDLs on September 15, 2009. The effective date of the TMDLs is the date of OAL approval. USEPA approved the TMDLs on October 26, 2009.

**Finding E.10.** Storm water discharges from developed and developing areas in Orange County are significant sources of certain pollutants that cause, may be causing, threatening to cause or contributing to water quality impairment in the waters of Orange County. Furthermore, as delineated in the CWA section 303(d) list in Table 3, the Regional Board has found that there is a reasonable potential that municipal storm water and non-storm water discharges from MS4s cause or may cause or contribute to an excursion above water quality standards for the following pollutants: Indicator Bacteria, Phosphorous, Toxicity and Turbidity. In accordance with CWA section 303(d), the Regional Board is required to establish Total Maximum Daily Loads (TMDLs) for these pollutants to these waters to eliminate impairment and attain water quality standards. Therefore, certain early pollutant control actions and further pollutant impact assessments by the Copermitttees are warranted and required

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<sup>161</sup> Building Industry Association et al., v. State Water Resources Control Board, et al. 2004.

<sup>162</sup> Los Angeles County Super. Ct. No. BS080792. Partial publication dated November 6, 2006.

pursuant to this Order.

**Finding E.11.** This Order incorporates only those MS4 Waste Load Allocations (WLAs) developed in TMDLs that have been adopted by the Regional Water Board and have been approved by the State Board, Office of Administrative Law and U.S. EPA. Approved TMDL WLAs are to be addressed using water quality-based effluent limitations (WQBELs) calculated as numeric limitations (either in the receiving waters and/or at the point of MS4 discharge) and/or as BMPs. In most cases, the numeric limitation must be achieved to ensure the adequacy of the BMP program. Waste load allocations for storm water and non-storm water discharges have been included within this Order only if the TMDL has received all necessary approvals. This Order establishes WQBELs and conditions consistent with the requirements and assumptions of the WLAs in the TMDLs as required by 40 CFR 122.44(d)(1)(vii)(B).

A TMDL is the total amount of a particular pollutant that a water body can receive and still meet Water Quality Standards (WQSs), which are comprised of Water Quality Objectives (WQOs), Beneficial Uses and the States Policy on Maintaining High Quality Waters<sup>163</sup>. The WQOs serve as the primary basis for protecting the associated Beneficial Use. The Numeric Target of a TMDL interprets and applies the numeric and/or narrative WQOs of the WQSs as the basis for the WLAs. This Order addresses TMDLs through Water Quality Based Effluent Limitations (WQBELs) that must be consistent with the assumptions and requirements of the WLA<sup>164</sup>. Federal guidance<sup>165</sup> states that when adequate information exists, storm water permits are to incorporate numeric water quality based effluent limitations. In most cases, the numeric target(s) of a TMDL are a component of the WQBELs. When the numeric target is based on one or more numeric WQOs, the numeric WQOs and underlying assumptions and requirements will be used in the WQBELs as numeric effluent limitations by the end of the TMDL compliance schedule, unless additional information is required. When the numeric target interprets one or more narrative WQOs, the numeric target may assess the efficacy and progress of the BMPs in meeting the WLAs and restoring the Beneficial Uses by the end of the TMDL compliance schedule.

This Order fulfills a component of the TMDL Implementation Plan adopted by this Regional Board on June 11, 2008 for indicator bacteria in Baby Beach by establishing WQBELs expressed as both BMPs to achieve the WLAs and as numeric limitations<sup>166</sup> for the City of Dana Point and the County of Orange. The establishment of WQBELs expressed as BMPs should be sufficient to achieve the WLA specified in the TMDL. The Waste Load Allocations (WLAs) and Numeric Targets are the necessary metrics to ensure that the BMPs achieve appropriate concentrations of bacterial indicators in

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<sup>163</sup> State Water Resources Control Board, Resolution No. 68-16

<sup>164</sup> 40 CFR 122.44(d)(1)(vii)(B)

<sup>165</sup> USEPA, *Interim Permitting Approach for Water Quality-Based Effluent Limitations in Storm Water Permits*, 61 FR 43761, August 26, 1996

<sup>166</sup> The Waste Load Allocations are defined in Resolution No. R9-2008-0027, A Resolution to Adopt an Amendment to the *Water Quality Control Plan for the San Diego Basin (9)* to Incorporate Total Maximum Daily Loads for Indicator Bacteria, Baby Beach in Dana Point Harbor and Shelter Island Shoreline Park in San Diego Bay.

the receiving waters.

**Discussion of Finding E.9, E.10, E.11.** Section 303(d)(1)(A) of the Clean Water Act (CWA) requires that:

*“Each state must identify those waters within its boundaries for which the effluent limitations...are not stringent enough to implement any water quality standard (WQS) applicable to such waters.”*

The CWA also requires states to establish a priority ranking of impaired waterbodies known as Water Quality Limited Segments and to establish Total Maximum Daily Loads (TMDLs) for such waters. This priority list of impaired waterbodies is called the Section 303(d) List. The current Section 303(d) List was approved by the State Water Resources Control Board (State Board) on October 25, 2006. On June 28, 2007 the 2006 303(d) list for California was given final approval by the United States Environmental Protection Agency (USEPA). Every two years the State of California is required by CWA section 303(d) and 40 CFR(130.7) to develop and submit to the USEPA for approval an updated 303(d) list of impaired waterbodies. The Regional Board is currently undergoing the required 2 year (2008) update for submittal to the State Board.

Multiple water bodies in Orange County have been identified as impaired and placed on the Section 303(d) list. The Regional Board has 78 current 303(d) listings for which TMDLs must be prioritized and subsequently developed. The 303(d) listing of a waterbody and subsequent TMDL development is required when regulations under current permits, such as Technology Based Effluent Limitations (TBELS), are not stringent enough to meet Water Quality Standards and protect the Beneficial Uses of Waters of the State. In 2004, the *Bacteria Impaired Waters TMDL Project II* addressed six bacteria impaired shorelines including Baby Beach in Dana Point Harbor. On June 11, 2008 the Regional Board adopted a Basin Plan amendment to incorporate *TMDLs for Indicator Bacteria, Baby Beach in Dana Point Harbor and Shelter Island Shoreline Park in San Diego Bay*. On June 16, 2009, the State Board approved the Basin Plan amendment. The *TMDLs for Indicator Bacteria, Baby Beach in Dana Point Harbor and Shelter Island Shoreline Park in San Diego Bay* are pending approval by the State Office of Administrative Law (OAL) and USEPA.

Storm water discharges from developed and developing areas in Orange County are a significant source of certain pollutants that cause, may be causing, threatening to cause or contributing to water quality impairment in the waters of Orange County. Furthermore, the CWA section 303(d) list indicates that there is a reasonable potential that municipal storm water and dry weather discharges from MS4s cause or may cause or contribute to an excursion above water quality standards for the following pollutants: Indicator Bacteria, Phosphorous, Toxicity and Turbidity. In accordance with CWA section 303(d), the Regional Board is required to establish TMDLs for these pollutants in these waters to eliminate impairment and attain water quality standards. Per 40 CFR(130.7), WLAs are required for all point sources, including storm water and

non-storm water discharges from MS4s. Therefore, focused pollutant control actions and further pollutant impact assessments by the Copermittees are warranted and required pursuant to this Order.

MS4 Permits address only those TMDL WLAs that have been adopted by the Regional Board and have been approved by the State Board, OAL and USEPA. WLAs are portions of a receiving water's loading capacity that is allocated to one of its existing or future point sources of pollution. The TMDL WLAs in MS4 Permits can be addressed using water quality-based numeric effluent limitations (WQBELs) calculated at end-of-pipe. WQBELs must be consistent with the assumptions and requirements of the WLAs.<sup>167</sup>

Assessment of compliance with WLAs is to be assessed at the point of discharge to the receiving water and within the receiving water. TMDL WLAs evaluated end-of-pipe will be assessed using WQBELs. Determination of compliance may also be assessed within the receiving waters to evaluate WLA reductions, program effectiveness and to assess overall water quality. As Numeric Targets serve to establish WLAs, they are part of the underlying assumptions of the WLA and can serve as points of compliance.

**Finding E.12.** This Order requires each Copermittee to effectively prohibit all types of unauthorized discharges of non-storm water into its MS4. However, historically pollutants have been identified as present in dry weather non-storm water discharges from the MS4s through 303(d) listings, monitoring conducted by the Copermittees under Order No. R9-2002-0001, and there are others expected to be present in dry weather non-storm water discharges because of the nature of these discharges. This Order includes action levels for pollutants in non-storm water, dry weather, discharges from the MS4 designed to ensure that the requirement to effectively prohibit all types of unauthorized discharges of non-storm water in the MS4 is being complied with. Action levels in the Order are based upon numeric or narrative water quality objectives and criteria as outlined in the Basin Plan, Water Quality Control Plan for Ocean Waters of California (Ocean Plan), and State Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (State Implementation Policy or SIP). An exceedance of an action level requires specified responsive action by the Copermittees. This Order describes what actions the Copermittees must take when an exceedance of an action level is observed. Exceedances of non-storm water action levels do not alone constitute a violation of this Order but could indicate non-compliance with the requirement to effectively prohibit all types of unauthorized non-storm water discharges into the MS4 or other prohibitions established in this Order. Failure to undertake required source investigation and elimination action following an exceedance of a non-storm water action level (NAL or action level) is a violation of this Order. The Regional Board recognizes that use of action levels will not necessarily result in detection of all unauthorized sources of non-storm water discharges because there may be some

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<sup>167</sup> Per 40 CFR 122.44(d)(1)(vii)(B)

discharges in which pollutants do not exceed established action levels. However, establishing NALs at levels appropriate to protect water quality standards is expected to lead to the identification of significant sources of pollutants in dry weather non-storm water discharges.

**Discussion of Finding E.12.** This Order includes the existing requirement that Copermitees effectively prohibit all types of unauthorized non-storm water discharges in the MS4s. It also includes the following prohibition set forth in the Basin Plan: “The discharge of waste to waters of the state in a manner causing, or threatening to cause a condition of pollution, contamination or nuisance as defined in California Water Code section 13050 is prohibited.” (Prohibition A.1.) As discussed in the Order’s Findings on discharge characteristics, e.g., C.2., C.4., C.6., C.7., C.9., C.14., and C.15., the Copermitees’ reliance on BMPs for the past 19 years has not resulted in compliance with applicable water quality standards or compliance with the requirement to effectively prohibit all types of unauthorized discharges of non-storm water in the MS4. The Regional Board has evaluated (in accordance with 40 CFR 122.44(d)(1)) past and existing control (BMPs), non-storm water effluent monitoring results, the sensitivity of the species in receiving waters (e.g. endangered species), and the potential for effluent dilution and has determined that existing BMPs to control pollutants in storm water discharges are not sufficient to protect water quality standards in receiving waters and the existing requirement that Copermitees effectively prohibit all types of unauthorized non-storm water discharges into the MS4 historically results in the discharge of pollutants to the receiving waters.

Therefore it is appropriate to establish dry weather non-storm water action levels based upon established water quality standards to measure pollutants levels in the discharge of dry weather non-storm water that could indicate non-compliance with the requirement to effectively prohibit all types of unauthorized non-storm water discharges into the MS4 and/or that these discharges are causing, or threatening to cause, a condition of pollution, contamination or nuisance in the receiving waters. NALs are not numeric effluent limitations. While not alone a violation of this Order, an exceedance of an NAL requires the Copermitees to initiate a series of source investigation and elimination actions to address the exceedance. Results from the NAL monitoring are to be used in developing the Copermitees annual work plans. Failure to undertake required source investigation and elimination action following an exceedance of an NAL is a violation of this Order. Please see further discussion in the directives section C of the fact sheet.

A purpose of monitoring, required under this and previous Orders, as stated in the Monitoring and Reporting Program is to “detect and eliminate illicit discharges and illicit connections to the MS4” and to answer the following core management questions:

1. Are conditions in receiving waters protective, or likely to be protective, of beneficial uses?

2. What is the extent and magnitude of the current or potential receiving water problems?
3. What is the relative MS4 discharge contribution to the receiving water problem(s)?
4. What are the sources of MS4 discharge that contribute to receiving water problem(s)?
5. Are conditions in receiving waters getting better or worse?

For the past 4 permit cycles (19 years), Copermittees have utilized their IC/ID program to identify and eliminate non-storm water discharges that are sources of pollutants to the MS4. The Copermittees are also subject to the requirement to effectively prohibit all types of unauthorized discharges of non-storm water into the MS4s. Historically, discharges of unauthorized non-storm water do occur, resulting in the discharge of pollutants to the receiving water. NALs have been included in this Order to ensure that the Copermittees comply with the requirement to effectively prohibit all types of unauthorized non-storm water discharges that are a source of pollutants in the receiving waters.

## F. Public Process

**Finding F.1.** The Regional Board has notified the Copermitttees, all known interested parties, and the public of its intent to consider adoption of an Order prescribing waste discharge requirements that would serve to renew an NPDES permit for the existing discharge of runoff.

**Discussion of Finding F.1.** Public notification of development of a draft permit is required under Federal regulation 40 CFR 124.10(a)(1)(ii). This regulation states “(a) Scope. (1) The Director shall give public notice that the following actions have occurred: (ii) A draft permit has been prepared under Sec. 124.6(d).” Public notifications “shall allow at least 30 days for public comment,” as required under Federal regulation 40 CFR 124.10(b)(1).

**Finding F.2.** The Regional Board has held public hearings on April 11, 2007, February 13, 2008, July 1, 2009, and November 18, 2009 and heard and considered all comments pertaining to the terms and conditions of this Order.

**Discussion of Finding F.2.** Public hearings are required under CWC Section 13378, which states “Waste discharge requirements and dredged or fill material permits shall be adopted only after notice and any necessary hearing.” Federal regulation 40 CFR 124.12(a)(1) also requires public hearings for draft permits, stating “The Director shall hold a public hearing whenever he or she finds, on the basis or requests, a significant degree of public interest in a draft permit(s).” Regarding public notice of a public hearing, Federal regulation 40 CFR 124.10(b)(2) states that “Public notice of a public hearing shall be given at least 30 days before the hearing.”

## IX. DIRECTIVES

This section discusses significant changes which have been made to the requirements of the Order from the requirements which were previously included in Order No. R9-2002-0001. For each section of the Order that has been changed there is a discussion which describes the change that was made and provides the rationale for the change. In addition, comments on the Copermittees' ROWD recommendations, as they pertain to each changed requirement of the Order, are provided.

Requirements of the Order that are not discussed in this section have not been significantly changed from those requirements previously included in Order No. 2002-0001. For such requirements, discussions and rationale for the requirements can be found in section VII of the Fact Sheet/Technical Report for Regional Board Order No. R9-2002-0001, dated February 13, 2002. Section VII also provides additional background information for those requirements that have undergone significant change which are described in detail in this report. The Fact Sheet/Technical Report is available for download at:

[http://www.waterboards.ca.gov/sandiego/programs/oc\\_stormwater.html](http://www.waterboards.ca.gov/sandiego/programs/oc_stormwater.html)

Legal authority citations are provided for each major section of the Tentative Order. These citations apply to all applicable requirements within the section for which they are provided.

### A. Prohibitions and Receiving Water Limitations

The following legal authority applies to section A:

**Broad Legal Authority:** CWA sections 402(p)(3)(B)(ii-iii), CWC section 13377, and Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(B, C, E, and F) and 40 CFR 122.26(d)(2)(iv).

**Specific Legal Authority:** The Regional Board Water Quality Control Plan for the San Diego Basin (Basin Plan) contains the following waste discharge prohibition: "The discharge of waste to waters of the state in a manner causing, or threatening to cause a condition of pollution, contamination, or nuisance as defined in California Water Code Section 13050, is prohibited."

California Water Code section 13050(l) states "(1) 'Pollution' means an alteration of the quality of waters of the state by waste to a degree which unreasonably affects either of the following: (A) The water for beneficial uses. (B) Facilities which serve beneficial uses. (2) 'Pollution' may include "contamination."

California Water Code section 13050(k) states “‘Contamination’ means an impairment of the quality of waters of the state by waste to a degree which creates a hazard to public health through poisoning or through the spread of disease. ‘Contamination’ includes any equivalent effect resulting from the disposal of waste, whether or not waters of the state are affected.”

California Water Code section 13050(m) states “‘Nuisance’ means anything which meets all of the following requirements: (1) Is injurious to health, or is indecent or offensive to the senses, or an obstruction to the free use of property, so as to interfere with the comfortable enjoyment of life or property. (2) Affects at the same time an entire community or neighborhood, or any considerable number of persons, although the extent of the annoyance or damage inflicted upon individuals may be unequal. (3) Occurs during, or as a result of, the treatment or disposal of wastes.”

California Water Code section 13241 requires each regional board to “establish such water quality objectives in water quality control plans as in its judgment will ensure the reasonable protection of beneficial uses and the prevention of nuisance [...]”

California Water Code Section 13243 provides that “A regional board, in a water quality control plan or in waste discharge requirements, may specify certain conditions or areas where the discharge of waste, or certain types of waste, will not be permitted.”

California Water Code Section 13263(a) provides that waste discharge requirements prescribed by the Regional Board implement the Basin Plan.

Federal NPDES regulations 40 CFR 122.26(d)(2)(iv)(A - D) require municipalities to implement controls to reduce pollutants in storm water runoff from commercial, residential, industrial, and construction land uses or activities.

Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(A - D) require municipalities to have legal authority to control various discharges to their MS4.

Federal NPDES regulation 40 CFR 122.44(d)(1) requires municipal storm water permits to include any requirements necessary to “[a]chieve water quality standards established under section 303 of the CWA, including State narrative criteria for water quality.”

Federal NPDES regulation 40 CFR 122.44(d)(1)(i) requires NPDES permits to include limitations to “control all pollutants or pollutant parameters (either conventional, nonconventional, or toxic pollutants) which the Director determines are or may be discharged at a level which will cause, have reasonable potential to cause, or contribute to an excursion above any State water quality standard, including State narrative criteria for water quality.”

**Section A** of the Order combines two previously distinct requirement sections – Prohibitions and RWLs. These sections have been combined into one section for organization purposes and to reduce redundancy, since both sections address the same issue. These changes have no net effect on the implementation and enforcement of the Order.

**Section A.3** describes the “iterative process.” The Copermitees must reduce the discharge of storm water pollutants to the MEP and ensure that their MS4 discharges do not cause or contribute to violations of water quality standards. If the Copermitees have reduced storm water pollutant discharges to the MEP, but their discharges are still causing or contributing to violations of water quality standards, the Order provides a clear and detailed process for the Copermitees to follow. This process is often referred to as the "iterative process" and can be found at section A.3. The language of section A.3 is prescribed by the State Board and is included in MS4 permits statewide. Section A.3 essentially requires additional BMPs to be implemented until MS4 storm water discharges no longer cause or contribute to a violation of water quality standards.

The State Policy with respect to maintaining high quality waters has been added to clarify that discharges from the MS4 that cause or contribute to a violation of the Policy for high quality waters is prohibited.

## B. Non-Storm Water Discharges

The following legal authority applies to section B:

**Broad Legal Authority:** CWA sections 402, 402(p)(3)(B)(ii-iii), CWC section 13377, and Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(B, C, E, and F), 40 CFR 122.26(d)(2)(iv) and 40 CFR 122.44.

**Specific Legal Authority:** Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(B) requires MS4 operators “to detect and remove (or require the discharger to the municipal separate storm sewer to obtain a separate NPDES permit for) illicit discharges and improper disposal into the storm sewer.”

Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(B)(1) provides that the Copermitees shall prevent all types of illicit discharges into the MS4 except for certain non-storm water discharges.

**Section B** of the Order has been reworded to simplify and clarify the requirements for addressing non-storm water discharges that are not prohibited. This rewording has no net effect on the implementation and enforcement of the Order.

**Section B.2** has been modified by the removal of landscape irrigation, irrigation water and lawn watering from the list of non-storm water discharges that are not prohibited, i.e. landscape irrigation, irrigation water and lawn watering discharges into and from the MS4 are now prohibited. Saline swimming pool discharges have been added as a footnote to the list provided the discharge is directly to a saline water body (see Finding C.14 and Discussion). Language has been added to the section to clarify differences in the federal regulations under 40 CFR 122.26(d)(iv)(B) and for the authority of the Director (Regional Board) in regards to exempted discharges.

The following exemptions have been removed from Section B, per identification as a source and conveyance of pollutants to waters of the United States when discharged from the MS4: landscape irrigation, irrigation water and lawn watering. Therefore, these illicit discharges must be addressed per 40 CFR 122.26(B). These previously exempted discharges have been identified by Permittees as a source of pollutants and conveyance of pollutants to waters of the United States in the following:

The County of Orange conducted, per requirements of 401 Water Quality Certification 02C-055, a Drainage Area Reconnaissance and Urban Runoff Characterization study. From the reconnaissance and characterization, the County of Orange determined that “water quality results provided two important findings”. First, “analytical data strongly indicates that irrigation overspray and drainage constitutes a very substantial source and conveyance mechanism for fecal indicator bacteria into Aliso Creek, and suggests that reduction measures for this source of urban runoff could provide meaningful reduction in bacteria loading to the stream”. Aliso Creek, currently 303(d) listed as impaired for Indicator Bacteria, is included in the Bacteria Project I TMDL adopted by the San Diego Regional Board on December 12, 2007. Secondly, reclaimed water high in electrical conductivity and Nitrate was indicated as “the source water at three of the excessive runoff locations (P1,P2,J01P02). These dissolved nitrogen concentration and flow rates create relatively high nitrogen loadings, which have the potential to contribute to undesirable levels of periphytic algal growth in Aliso Creek”.

The County of Orange, Cities of Orange County and Orange County Flood Control District on November 15, 2007 submitted their Unified Annual Progress Report for the 2006-2007 reporting period. Within the report, the Copermittees demonstrate that a “wide range of constituents exceeded the tolerance interval bounds”, including orthophosphate. “These high levels of orthophosphate concentration are most likely the result of fertilizer runoff or reclaimed water runoff”. Aliso Creek is currently 303(d) listed as impaired for phosphorous.

The County of Orange, Orange County Flood Control District and Permittees within the San Juan Creek, Laguna Coastal Streams, Aliso Creek, and Dana Point Coastal Streams Watersheds on November 15, 2007 submitted their Watershed Action Plan Annual Reports for the 2006-2007 reporting period. San Juan Creek, Laguna Coastal Streams, Aliso Creek and Dana Point Coastal Streams are all currently 303(d) listed as impaired for Indicator Bacteria within the watershed and/or Pacific Ocean at the discharge point of the watershed. These locations are included in the Bacteria Project I TMDL adopted by the San Diego Regional Board on December 12, 2007. The Copermittees, within their Watershed Action Strategy Table for Fecal Indicator Bacteria “Support programs to reduce or eliminate the discharge of anthropogenic dry weather nuisance flow throughout the [...] watershed. Dry weather flow is the transport medium for bacteria and other 303(d) constituents of concern”. Additionally, they state that “conditions in the MS4 contribute to high seasonal bacteria propagation in-pipe during warm weather. Landscape irrigation is a major contributor to dry weather flow, both as surface runoff due to over-irrigation and overspray onto pavements; and as subsurface seepage that finds its way into the MS4”.

In 2006, the State Water Quality Control Board allocated Grant funding to the Smarttimer/Edgescape Evaluation Program (SEEP). Project partners include the cities of Aliso Viejo, Dana Point, Laguna Beach, Laguna Hills, Laguna Nigel, Laguna Woods, Lake Forest, Mission Viejo, Rancho Santa Margarita and San Juan Capistrano as well as the Metropolitan Water District of Southern California, the Department of Agriculture and ten south Orange County water districts. The project targets irrigation runoff by retrofitting existing development and documenting the conservation and runoff improvements. The Grant Application states that "Irrigation runoff contributes flow & pollutant loads to creeks and beaches that are 303(d) listed for bacteria indicators". Furthermore, the grant application states that "Regional program managers agree that the reduction and/or elimination of irrigation-related urban flows and associated pollutant loads may be key to successful attainment of water quality and beneficial use goals as outlined in the San Diego Basin Plan and Bacteria TMDL over the long term". This is reinforced in the project descriptions and objectives: "Elevated dry-weather storm drain flows, composed primarily in the South Orange County Region of landscape irrigation water wasted as runoff, carry pollutants that impair recreational use and aquatic habitats all along Southern California's urbanized coastline. Storm drain systems carry the wasted water, along with landscape derived pollutants such as bacteria, nutrients and pesticides, to local creeks and the ocean. Given the local Mediterranean climate, excessive perennial dry season stream flows are an unnatural hydrologic pattern, causing species shifts in local riparian communities and warm, unseasonal contaminated freshwater plumes in the near-shore marine environment". The basis of this grant project, conducted by the Permittees and additional water use partners, is that over-irrigation (landscape irrigation, irrigation water and lawn watering) into the MS4 is a source and conveyance of pollutants. In addition, they indicate that the alteration of natural flows is impacting the Beneficial Uses of waters of the State.

**Section B.3** has been clarified by the recognition of building fire suppression system maintenance (e.g. fire sprinklers) as an illicit discharge. The Regional Board has found that such discharges contain waste, and as such the Regional Board is requiring these discharges be addressed as illicit discharges by the Copermittees. This is consistent with the Federal Regulations (55 Fed Reg 48037). Thus, the discharges are to be prohibited via ordinance, order or similar means and incorporated as part of the Copermittees IC/ID program.

### **C. Non Storm Water Dry Weather Action Levels**

The following legal authority applies to Section C:

**Broad Legal Authority:** CWA section 402, 402(p)(3)(B)(ii), CWC §13377. 40 CFR 122.26(d)(2)(i)(B, C, E, and F), and 40 CFR 122.26(d)(2)(iv).

#### **Specific Legal Authority:**

The Clean Water Act section 402(p)(3)(B)(ii) provides that MS4 permits “shall include a requirement to effectively prohibit non-storm water discharges into the storm sewers.”

Federal NPDES regulations 40 CFR 122.26(d)(2)(iv)(B) provides that the proposed management program “shall be based on a description of a program including a schedule, to detect and remove (or require the discharger to the municipal storm sewer to obtain a separate NPDES permit for) illicit discharges and improper disposal into the storm sewer.”

Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(B)(1) provides that the Copermittee include in its proposed management program “a program, including inspections, to implement and enforce an ordinance, orders or similar means to prevent illicit discharges to the municipal storm sewer system; this program description shall address all types of illicit discharges, however the [listed exempt] category of non-storm water discharges or flows shall be addressed where such discharges are identified by the municipality as sources of pollutants to waters of the United States.”

Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(B)(2) provides that the Copermittee include in its proposed management program “a description of procedures to conduct on-going field screening activities during the life of the permit, including areas or locations that will be evaluated by such field screens.”

Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(B)(3) provides that the Copermittee include in its proposed management program “procedures to be followed to investigate portions of the separate storm sewer system that, based on the results of the field scree, or other appropriate information, indicate a reasonable potential of containing illicit discharges or other sources of non-storm water.”

**Section C** establishes non-storm water dry weather action levels (see also Finding C.14, Finding E.12, and the Discussion for those sections).

Non-exempted, non-storm water discharges are to be effectively prohibited from entering the MS4 or become subject to another NPDES permit (see Federal Register, Vol. 55, No. 222, pg. 47995). Conveyances which continue to accept non-exempt, non-storm water discharges do not meet the definition of MS4 and are not subject to

section 402(p)(3)(B) of the CWA unless the discharges are issued separate NPDES permits. Instead, conveyances that continue to accept non-exempt, non-storm water discharges that do not have a separate NPDES permit are subject to sections 301 and 402 of the CWA (see Federal Register, Vol. 55, No. 222, pg. 48037).

The Order requires the sampling of a representative percentage of major outfalls and other identified stations within each hydrologic subarea. While it is important to assess all major outfall discharges from the MS4 into receiving waters, to date the Copermitees have implemented a dry-weather monitoring program that has identified major outfalls that are representative of each hydrologic subarea and have randomly sampled other major outfalls. Thus, it is expected that the Copermitees will utilize past dry weather monitoring in the selection and annual sampling of a representative percentage of major outfalls in accordance with the requirements under Section C.4.

#### Background and Rationale for Requirements

The Regional Board developed the requirements for dry weather, non-storm water action levels based upon an evaluation of existing controls, monitoring and reporting programs (effluent and receiving water), special studies, and based upon Findings C.1 C.3, C.4, C.6, C.7 and C.14.

#### Water Quality Control Plan

Section 303(C) of the Clean Water Act requires the state to establish Water Quality Standards (WQS). WQS define the water quality goals of a waterbody, or part thereof, by designating their use or uses to be made of the water and by setting criteria necessary to protect those uses.

The Regional Board's Water Quality Control Plan for the San Diego Basin (Basin Plan) designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the Basin Plan. The Basin Plan was adopted by the Regional Board on September 8, 1994, and was subsequently approved by the State Board on December 13, 1994. Subsequent revisions to the Basin Plan have also been adopted by the Regional Board and State Board.

State Board Resolution No. 88-63 establishes state policy that all waters, with certain exceptions, should be considered suitable or potentially suitable for municipal and domestic supplies. Requirements of this Order do not include effluent limitations reflecting municipal and domestic supply use as all waters within the County of Orange under this Order are specifically exempted from municipal and domestic supply as a Beneficial Use.

The State Board adopted the Water Quality Control Plan for Ocean Waters of California (Ocean Plan) in 2005, it was approved by USEPA, and became effective on February 14, 2006. The Ocean Plan establishes Water Quality Objectives, general requirements for management of waste discharged to the ocean, effluent quality

requirements, discharge provisions, and general provisions. Limitations derived from the Ocean Plan have been included in this Order as action levels to protect the Beneficial Uses of enclosed bays and estuaries because their Beneficial Uses are similar

#### National Toxics Rule (NTR) and California Toxics Rule (CTR)

The USEPA adopted the NTR on December 22, 1992, which was amended on May 4, 1995, and November 9, 1999. The CTR was adopted by USEPA on May 18, 2000, and amended on February 13, 2001. These rules include water quality criteria for priority pollutants and are applicable to non-storm water discharges from the MS4. Criteria for 126 priority pollutants are established by the CTR. USEPA promulgated this rule to fill a gap in California water quality standards that was created in 1994 when a California court overturned the State's water quality control plans containing criteria for priority toxic pollutants. The federal criteria are legally applicable in the State of California for inland surface waters, enclosed bays and estuaries for all purposes and programs under the CWA.

#### Antidegradation Policy

Section 131.12 of 40 CFR requires that the State water quality standards include an antidegradation policy consistent with the federal policy. The State Board established California's antidegradation policy in State Board 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 Boards' Basin Plans implement, and incorporate by reference, both the State and federal antidegradation policies. Permitted non-storm water discharges from the MS4 are consistent with the antidegradation provision of 40 CFR section 131.12 and State Board Resolution No. 68-16.

#### Monitoring and Reporting

40 CFR Section 122.48 requires that all NPDES permits specify requirements for recording and reporting monitoring results. Sections 13267 and 13383 of CWC authorize the Regional Boards to require technical and monitoring reports. The Monitoring and Reporting Program establishes monitoring and reporting requirements to implement state and federal regulations. The Monitoring and Reporting Program can be found as Attachment E of the Order.

#### Dilution or Mixing Zones

In order to protect the Beneficial Uses of receiving waters from pollutants as a result of non-storm water MS4 discharges, this Order does not provide for a mixing zone or a zone of initial dilution except when the discharge is to the surf zone.

The San Diego Region has predominately intermittent and ephemeral rivers and streams (Inland Surface Waters) which vary in flow volume and duration at spatial and temporal scales. Therefore, it is assumed that any non-storm water discharge from

the MS4 into the receiving water is likely to be of a quantity and duration that does not allow for dilution or mixing. For ephemeral systems, non-storm water discharges from the MS4 are likely to be the only surface flows present within the receiving water during the dry season.

MS4 discharge points to bays, estuaries and lagoons are not designed to achieve maximum initial dilution and dispersion of non-storm water discharges. Thus, initial dilution factors for non-storm water discharges from the MS4 into bays, estuaries, and lagoons are conservatively assumed to equal zero.

It is appropriate to base numeric action levels for dry weather non-storm water discharges on these considerations.

#### California Ocean Plan

A discharge to a surf zone occurs when the non-storm water discharge point from the MS4 discharges:

- a) Directly into the ocean in a wave induced area subject to long-shore conditions;  
or
- b) Across a primarily sandy substrate beach and subsequently directly into a wave induced area subject to long-shore conditions;

#### Establishment of Action Levels

Action levels in the Order are based upon numeric or narrative water quality objectives and criteria as defined in the Basin Plan, the Water Quality Control Plan for Ocean Waters of California (Ocean Plan), and the State Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (State Implementation Policy or SIP). The Regional Board recognizes that use of action levels will not necessarily result in detection of all unauthorized sources of non-storm water discharges because there may be some discharges in which pollutants do not exceed established action levels.

In June of 2006, the California Water Board's Blue Ribbon Storm Water Panel released its report titled 'The Feasibility of Numerical Effluent Limits Applicable to Discharges of Storm Water Associated with Municipal, Industrial and Construction Activities.' The report only examined numerical limits as applied to storm water and not non-storm water. In the recommendations, the Blue Ribbon panel proposed storm water action levels which are computed using statistical based population approaches. For example, Section D of the Permit uses a recommended statistical approach to develop storm water action levels. The Blue Ribbon panel did not examine the efficacy of action levels or recommendations for development of action levels for non-storm water discharges.

For discharges to inland surface waters, action levels are based on the EPA water quality criteria for the protection of aquatic species, the EPA water quality criteria for the protection of human health, water quality criteria and objectives in the applicable

State plans, effluent concentration available using best available technology, and 40 CFR 131.38. Since the assumed initial dilution factor for the discharge is zero and a mixing zone is not allowed, a non-storm water discharge from the MS4 could not cause an excursion from numeric receiving water quality objectives if the discharge is in compliance with the action levels contained in the Order. Likewise, discharges in compliance with action levels to the surf zone cannot cause excursions from water quality objectives.

Dry weather monitoring of non-storm water MS4 effluent conducted under the previous Order (R9-2002-001), which relies on BMPs as controls to protect water quality standards, has identified pollutants that are found in non-storm water discharges. Monitoring of pH, Dissolved Oxygen, Phosphorus, Nitrate, Turbidity and Methylene Blue Active Substances (MBAS) in non-storm water MS4 discharges has shown that the effluent exceeds state water quality criteria. It is appropriate to establish numeric action levels for these pollutants to ensure that the Copermittees are complying with the requirement to effectively prohibit all types of unauthorized non-storm water discharges into the MS4s.

Water Quality Limited Segments on the current 303(d) list (2006) within the jurisdiction of this Order have been identified due to exceedances of Sulfate, Chloride and Total Dissolved Solids criteria from a source which is currently unknown (see Table 2a). These pollutants are not monitored for under the current non-storm water MS4 effluent monitoring program. While this Order does not establish a numeric action level for these constituents at this time, this Order now requires non-storm water MS4 discharge monitoring to include monitoring for Sulfates, Chlorides and Total Dissolved Solids.

Priority pollutants analyzed included Cadmium, Copper, Chromium, Lead, Nickel, Silver and Zinc. These priority pollutants are likely to be present in non-storm water MS4 discharges (see Finding C.3) and dissolved metal effluent monitoring is available from the previous Order. The most stringent applicable water quality criteria have been identified for these seven metals and, excluding Chromium (VI), and all are dependent on receiving water hardness. The conversion factors for Cadmium and Lead are also water hardness dependent (40 CFR 131.38(b)(2)). These levels are established as the action levels for these constituents.

While effluent monitoring is available from the previous Order, the monitoring was done for dissolved concentrations and lacked a measurement of receiving water hardness. Due to the multiple point source discharges of non-storm water from the MS4, a discharge may enter a receiving water whose hardness will vary temporally. In addition, hardness may vary spatially within and among receiving waters.

However, other information is available to determine the appropriateness of an action level. Existing effluent monitoring concentrations absent of receiving water data, no dilution credit or mixing zone allowance, current 303(d) listings of receiving waters for

other pollutants, receiving water monitoring data, and the classification of waters as critical habitat for endangered and species of concern, provide evidence that NALs are appropriate for these priority pollutants at this time in order to ensure that the Copermittees comply with the requirement to effectively prohibit all types of unauthorized non-storm water discharges into the MS4s.

Existing effluent data (see attachment F), absent receiving water hardness, provides evidence that it is appropriate to include NALs based on a conservative hardness level. Absent receiving water hardness, all analyzed metals, are discharged at concentrations which may be in exceedance of CTR criteria depending on receiving water hardness. Chromium effluent data that is available is in the form of total Chromium. However, per the SIP, Chromium criteria are for Chromium III and Chromium VI. Therefore, the total Chromium measurement is inadequate, but can be used as an estimate of Chromium III and VI concentrations.

As discussed, inland surface waters, enclosed bays, and estuaries have conservatively been allotted a mixing zone and dilution credit of zero. As such, any discharge of these priority pollutants is likely to impact the receiving water, regardless of the quantity or rate of discharge.

As discussed in Finding C.7 and discussion, multiple receiving waters within the County of Orange are 303(d) listed for a number of pollutants, including toxicity. The 303(d) listing of a waterbody as impaired provides evidence that the receiving water(s) are already experiencing negative impacts. These water quality limited segments are more susceptible to degradation from the synergistic addition of more pollutants, even from upstream discharges. It is therefore appropriate to include numeric action levels designed to ensure that the Copermittees are complying with the requirement to effectively prohibit all types of unauthorized discharges of non-storm water into the MS4s.

Copermittees have monitored the receiving waters for MS4 discharges pursuant to requirements under Order R9-2002-0002. Dry weather receiving water data indicates poor conditions within waters receiving non-storm water MS4 discharges. Urban stream bioassessment conducted under the Order (2002-2008) has documented all non-reference sites as consistently having poor or very poor Index of Biotic Integrity (IBI) scores, in part due to receiving water toxicity<sup>168</sup>.

Receiving waters within the jurisdiction of this Order are classified as critical habitat, including being designated with the RARE beneficial use, for endangered, threatened and species of concern including, but not limited to, *O. mykiss irideus*, *E. newberryil*, *A. marmorata pallida* and *G. orcutti*.

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<sup>168</sup> 2006-07 and 2007-08 Unified Annual Progress Reports.

The Regional Board evaluated discharges to the surf zone, per the California Ocean Plan, Appendix VI and in accordance with 40 CFR 122.44(d). Indicator bacteria, pH, turbidity (NTU), and metals were analyzed for the purpose of determining the levels of these constituents in non-storm water discharges from the MS4.

The Regional Board has determined that there is not sufficient information at this time to develop action levels for pH, turbidity and metals. While non-storm water MS4 effluent data is available, the data collected is for discharges to inland surface waters, enclosed bays and estuaries. Preliminary receiving water data and limited non-storm water MS4 discharge data collected under the Ambient Coastal Receiving Water Monitoring indicates some exceedances of criteria for metals in the discharge, and toxicity in receiving waters<sup>169</sup>. However, the Regional Board believes the level of data available is insufficient, and is requiring additional monitoring of pH, turbidity and metals in non-storm water MS4 discharges to ocean waters (discharges to the surf zone).

Water Quality Limited Segments on the current 303(d) list (2006) for the Pacific Ocean shoreline within the jurisdiction of this Order have been identified due to exceedances of Indicator Bacteria criteria whose known source includes non-storm water discharges from the MS4. These 303(d) listed segments support extensive REC-1 beneficial uses and are located within State Marine Reserves and Conservation Areas. The listing of receiving waters as 303(d) listed for bacteria supports the inclusion of action levels to ensure that the Copermitttees are complying with the requirement to effectively prohibit all types of unauthorized non-storm water discharges into the MS4. In addition, no dilution credit or mixing zone allowance is included in developing numeric action levels for the discharge of a pollutant to waters which are 303(d) listed as impaired for that pollutant.

#### Dry Weather Non-Storm Water Action Levels Calculations for Discharges to Inland Surface Waters, Enclosed Bays, and Estuaries

On the basis of the foregoing discussion, the NALs were calculated with the following considerations and assumptions:

No dilution credit is considered for the discharge. Therefore, the discharge must comply with the Water Quality Objective at the point of discharge.

For NALs based on CTR, implementation was done using the procedure list as outlined in the SIP (see below example).

#### NAL CTR/SIP Calculation – Zinc Example:

Criteria for Priority Toxic Pollutants in the State of California is described in the CTR

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<sup>169</sup> 2007-08 Unified Annual Progress Report.

table listed in 40 CFR 131.38.

A		B Freshwater		C Saltwater		D Human Health (10 <sup>-6</sup> risk for carcinogens) For consumption of:	
# Compound	CAS Number	Criterion Maximum Conc. <sup>d</sup> B1	Criterion Continuous Conc. <sup>d</sup> B2	Criterion Maximum Conc. <sup>d</sup> C1	Criterion Continuous Conc. <sup>d</sup> C2	Water & Organisms ( $\mu$ g/L) D1	Organisms Only ( $\mu$ g/L) D2
1. Antimony	7440360					14 a,s	4300 a,t
2. Arsenic <sup>b</sup>	7440382	340 i,m,w	150 i,m,w	69 i,m	36 i,m		
3. Beryllium	7440417					n	n
4. Cadmium <sup>b</sup>	7440439	4.3 e,i,m,w,x	2.2 e,i,m,w	42 i,m	9.3 i,m	n	n
5a. Chromium (III)	16065831	550 e,i,m,o	180 e,i,m,o			n	n
5b. Chromium (VI) <sup>b</sup>	18540299	16 i,m,w	11 i,m,w	1100 i,m	50 i,m	n	n
6. Copper <sup>b</sup>	7440508	13 e,i,m,w,x	9.0 e,i,m,w	4.8 i,m	3.1 i,m	1300	
7. Lead <sup>b</sup>	7439921	65 e,i,m	2.5 e,i,m	210 i,m	8.1 i,m	n	n
8. Mercury <sup>b</sup>	7439976	[Reserved]	[Reserved]	[Reserved]	[Reserved]	0.050 a	0.051 a
9. Nickel <sup>b</sup>	7440020	470 e,i,m,w	52 e,i,m,w	74 i,m	8.2 i,m	610 a	4600 a
10. Selenium <sup>b</sup>	7782492	[Reserved] p	5.0 q	290 i,m	71 i,m	n	n
11. Silver <sup>b</sup>	7440224	3.4 e,i,m		1.9 i,m			
12. Thallium	7440280					1.7 a,s	6.3 a,t
13. Zinc <sup>b</sup>	7440666	120 e,i,m,w,x	120 e,i,m,w	90 i,m	81 i,m		

Saltwater criterion maximum concentration (CMC) = 90 ug/L

Saltwater criterion continuous concentration (CCC) = 81 ug/L

These criteria are expressed in terms of the dissolved fraction of the metal in the water column. [See footnote "m" to Table in paragraph (b)(1) of 40 CFR 131.38].

40 CFR 122.45(c) requires that this Order include effluent limitations as total recoverable concentration; therefore it is appropriate to include action levels also as total recoverable concentration.

The SIP requires that if it is necessary to express a dissolved metal value as a total recoverable and a site-specific translator has not yet been developed, the Regional Board shall use the applicable conversion factor from 40 CFR 131.38.

The term "Conversion Factor" (CF) represents the recommended conversion factor for converting a metal criterion expressed as the total recoverable fraction in the water column to a criterion expressed as the dissolved fraction in the water column.

Total recoverable concentration \* CF = Dissolved concentration criterion

or

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Total recoverable concentration = Dissolved concentration criterion/ CF

§ 131.38

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Metal	Conversion factor (CF) for freshwater acute criteria	CF for freshwater chronic criteria	CF for saltwater acute criteria	CF = for saltwater chronic criteria
Silver .....	0.85	(d)	0.85	(d)
Thallium .....	(d)	(d)	(d)	(d)
Zinc .....	0.978	0.986	0.946	0.946

CF for Zinc = .946, so the total recoverable concentrations for zinc:  
 90 ug/L dissolved (CMC)/ 0.946 (CF) = 95 ug/L total recoverable CMC  
 81 ug/L dissolved (CCC) / 0.946 (CF) = 86 ug/L total recoverable CCC

Effluent Variability multiplier and Coefficient of Variation (CV)

For each concentration based on an aquatic life criterion, the long-term average (LTA) is calculated by multiplying the concentration with a factor that adjusts for effluent variability. The multiplier can be found in Table 1 of the SIP. Since this Order does not have existing data to properly conduct a variability analysis in accordance with the SIP, the CV has been set equal to 0.6 per SIP requirements. The current effluent data is limited due to the small number of representative outfalls sampled, the lack of outfalls discharging to representative waterbodies within the Region, and the targeted nature of the sampling design.

Based upon a CV of 0.6, Table 1 of the SIP requires an effluent variability as follows:

Acute Multiplier = 0.321  
 Chronic Multiplier = 0.527

The long-term average (LTA) is calculated by multiplying the total recoverable concentrations for zinc with the acute and chronic multipliers:

LTA Acute = 95 ug/L \* 0.321 = 30.5  
 LTA Chronic = 86 ug/L \* 0.527 = 45.3

The MDAL and AMAL will be based on the most limiting of the acute and chronic LTA, in the case for copper the most limiting LTA is the acute of 30.5 ug/L

NALs are calculated by multiplying the most limiting LTA with a multiplier that adjusts for the averaging periods and exceedance frequencies of the criteria and the effluent limitations. The multiplier can be found in Table 2 of the SIP. Since this Order has insufficient data, the CV has been set to 0.6 and since sampling frequency is four times a month or less, n has been set equal to 4 per the SIP.

Table 2. Long-Term Average (LTA) Multipliers for Calculating Effluent Limitations

Coefficient of Variation	MDEL Multiplier	AMEL Multiplier			MDEL/AMEL Multiplier		
	99 <sup>th</sup> Percentile Occurrence Probability	95 <sup>th</sup> Percentile Occurrence Probability			MDEL = 99 <sup>th</sup> Percentile AMEL = 95 <sup>th</sup> Percentile Occurrence Probability		
(CV)		n = 4	n = 8	n = 30	n = 4	n = 8	n = 30
0.1	1.25	1.08	1.06	1.03	1.16	1.18	1.22
0.2	1.55	1.17	1.12	1.06	1.33	1.39	1.46
0.3	1.90	1.26	1.18	1.09	1.50	1.60	1.74
0.4	2.27	1.36	1.25	1.12	1.67	1.82	2.02
0.5	2.68	1.45	1.31	1.16	1.84	2.04	2.32
0.6	3.11	1.55	1.38	1.19	2.01	2.25	2.62

Therefore, from Table 2 of the SIP, the LTA multipliers will be as follows:

MDAL Multiplier = 3.11

AMAL Multiplier = 1.55

The MDAL and AMAL limits are calculated by multiplying the LTA with an LTA multiplier for each limit:

MDAL = 30.5 ug/L \* 3.11 = 95 ug/L

AMAL = 30.5 ug/L \* 1.55 = 47 ug/L

#### Dry Weather Non-Storm Water Action Levels Calculations for Discharges to the Surf Zone

Based on the foregoing discussion, the Average Monthly and Maximum Daily NALs were calculated with the following considerations and assumptions:

No dilution credit is considered for the discharge. Therefore, the discharge must comply with the Water Quality Objective at the point of discharge.

#### Whole Effluent Toxicity (WET) Testing Requirements

A WET limit is required if a discharge causes, has a reasonable potential to cause, or contributes to an exceedance of applicable water quality standards, including numeric and narrative. Since these types of discharges are prohibited under this Order, WET limits are not applicable.

Discussion of AMALs, MDALs and Instantaneous Maximums

Where practical, action levels in this Order have been expressed as both AMALs and MDALs. Certain action levels may not practicably be expressed as AMALs and MDALs due to specific BPO language, sampling requirements and/or a lack of Criteria. Based upon the likely sampling frequency of the Copermittees, the frequency of sampling will occur such that grab samples are taken once per sampling day. This single sample would then be subject to MDALs and Instantaneous Maximum levels. In this case, the more conservative action level would apply. In addition, it is expected that some effluent monitoring will occur less than or equal to once per month. In this scenario, the MDAL, AMAL and Instantaneous Maximum levels would need to be met based upon one sample, unless sampling did not occur. For some BPOs, AMALs have been excluded and only MDALs/Instantaneous Maximums set to prevent redundancy in action levels.

Compliance with Action levels (Priority Pollutants)

Compliance with action levels shall be determined as follows:

Dischargers shall be deemed out of compliance with this Order if the Copermittee failed to take the prescribed action in response to a concentration of the priority pollutant in the monitoring sample that is greater than the action level and greater than or equal to the reported Minimum Level (exceedance of an action level). Regardless of the Copermittee's actions in response to an exceedance, they are still subject to the prohibitions found in Section A and B of the Order.

When determining to take an action in response to the AMALs and more than one sample result is available in a month, the discharger shall compute the arithmetic mean unless the data set contains one or more reported determinations of DNQ or ND. In those cases, the discharger shall compute the median in place of the arithmetic mean in accordance with the following procedure:

- (1) The data set shall be ranked from low to high, reported ND determinations lowest, DNQ determinations next, followed by quantified values (if any). The order of the individual ND or DNQ determinations is unimportant.
- (2) The median value of the data set shall be determined. If the data set has an odd number of data points then the median is the middle value. If the data set has an even number of data points, then the median is the average of the two values around the middle unless one or both of those points are ND or DNQ, in which case the median value shall be the lower of the two data points where DNQ is lower than a value and ND is lower than DNQ.

## **D. Storm Water Action Levels**

**Section D** has been added to establish storm water action levels (see also Finding D.1.h and Discussion).

### Introduction

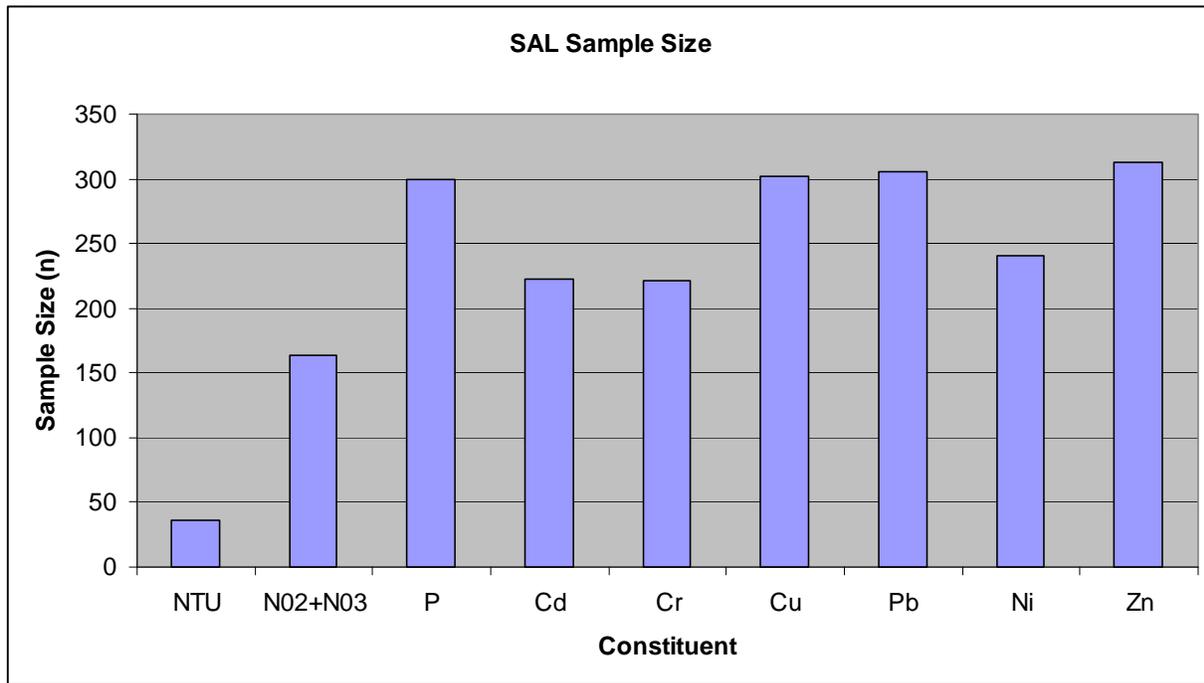
In response to comments at the initial public workshop, meetings with the principle Permittees, and comments from the July 01, 2009 Regional Board meeting, SAL concentrations, standards and constituents have been updated, Order language has been clarified and additions to the monitoring requirements have been made.

### SAL Concentration/Standards Updates

SAL pollutant levels have been updated and now come from a regional subset of nationwide Phase I MS4 data. Regional Board staff have chosen to update SALs by using USEPA Climate Zone 6 (arid west) data when computing SALs. Utilizing data from USEPA Climate Zone 6 is expected to produce SALs which closely reflect the environmental conditions experienced in Orange County. The localized subset of data includes sampling events from multiple Southern California locations including Orange, San Diego, Riverside, Los Angeles and San Bernardino Counties. The dataset includes samples taken from highly built-out impervious areas and from storm events representative of Southern California conditions.

Additionally, utilization of regional data is appropriate due to the addition of data into the nationwide Phase I MS4 monitoring dataset in February 2008. This additional data increased the number of USEPA Climate Zone 6 samples to more than 400, and included additional monitoring events within Southern California (see Figure 2).

Figure 2. Sample Sizes Used to Calculate Storm Water Action Levels



Additional changes have been made by staff to update SALs to reflect the water quality standards in the San Diego Regional Water Quality Control Board Basin Plan, the California Toxic Rule and USEPA Water Quality Criteria. Since it is the goal of the SALs, through the iterative and MEP process, to have outfall storm water discharges meet all applicable water quality objectives, the list of constituents to be tested and protocol for testing has been updated to provide a reference point to evaluate the iterative MEP process. As such, Kjeldahl Nitrogen (TKN) and Total Suspended Solids (TSS) have been removed from the SAL table. There currently are no appropriate criteria for TKN or TSS, and alternate constituents are available which do have BPOs for comparative purposes. Instead, Nitrate/Nitrite and Turbidity, which have BPOs of 1.0 mg/L and 20 NTUs respectively, are included with associated SALs.

Metals included in SALs include Cadmium, Chromium, Nickel, Zinc, Lead and Copper. In receiving water quality monitoring collected by the Copermittees to date, these metals have been detected and shown to contribute to toxicity at mass loading stations within Southern Orange County.

#### Monitoring Updates

SAL language has been updated to require the measurement of hardness and to provide more specificity in the assessment of samples with SALs for total metal concentrations. While USEPA Climate Region 6 data includes a large sample size for concentrations of total metals, the impact the concentration will have on receiving waters will vary with receiving water hardness. Since it is the goal of the SALs,

through the iterative and MEP process, to have MS4 storm water discharges meet all applicable water quality objectives, the hardness of the receiving water should be used when assessing the total metal concentration of a sample. Thus, when an exceedance of a SAL concentration is detected for a metal the Copermittee must determine if that exceedance is above the existing applicable water quality limitation based upon the hardness of the receiving water. The water quality limitations Permittees must use to assess total metal SAL exceedances are the California Toxic Rule (CTR) and USEPA National Recommended Water Quality Criteria for Freshwater Aquatic Life 1 hour maximum concentrations. The 1 hour maximum concentration is to be used for comparison since it is expected to most replicate the impacts to waters of the State from the first flush following a precipitation event.

## E. Legal Authority

The following legal authority applies to section E:

**Broad Legal Authority:** CWA sections 402(p)(3)(B)(ii-iii), CWC section 13377, and Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(B, C, E, and F) and 40 CFR 122.26(d)(2)(iv).

**Specific Legal Authority:** Federal NPDES regulation 40 CFR 122.26(d)(2)(i)(A) provides that the Copermittees shall develop and implement legal authority to “Control through ordinance, order or similar means, the contribution of pollutants to the municipal storm sewer by storm water discharges associated with industrial activity and the quality of storm water discharged from sites of industrial activity.”

Federal NPDES regulation 40 CFR 122.26(d)(2)(i)(D) provides that the Copermittees shall develop and implement legal authority to “Control through interagency agreements among coapplicants the contribution of pollutants from one portion of the municipal system to another portion of the municipal system.”

Illicit discharge is defined under Federal NPDES regulation 40 CFR 122.26(b)(2) as “any discharge to a municipal separate storm sewer system that is not composed entirely of storm water except discharges pursuant to a NPDES permit (other than the NPDES permit for discharges from the municipal separate storm sewer) and discharges resulting from fire fighting activities.”

Federal NPDES regulations 40 CFR 122.26(d)(2)(iv)(A - D) require municipalities to implement controls to reduce pollutants in storm water runoff from commercial, residential, industrial, and construction land uses or activities.

Federal NPDES regulation 40 CFR 122.26(d)(1)(ii) requires from the Copermittee “A description of existing legal authority to control discharges to the municipal separate storm sewer system.”

**Section E.1.b** Prohibit all identified illicit discharges not otherwise allowed pursuant to section B.2 including but not limited to:

- (1) Sewage;
- (2) Discharges of wash water resulting from the hosing or cleaning of gas stations, auto repair garages, or other types of automotive services facilities;
- (3) Discharges resulting from the cleaning, repair, or maintenance of any type of equipment, machinery, or facility including motor vehicles, cement-related equipment, and port-a-potty servicing, etc.;
- (4) Discharges of wash water from mobile operations such as mobile automobile washing, steam cleaning, power washing, and carpet cleaning, etc.;

- (5) Discharges of wash water from the cleaning or hosing of impervious surfaces in municipal, industrial, commercial, and residential areas including parking lots, streets, sidewalks, driveways, patios, plazas, work yards and outdoor eating or drinking areas, etc.;
- (6) Discharges of runoff from material storage areas containing chemicals, fuels, grease, oil, or other hazardous materials;
- (7) Discharges of pool or fountain water containing chlorine, biocides, toxic amounts of salt, or other chemicals; discharges of pool or fountain filter backwash water;
- (8) Discharges of sediment, pet waste, vegetation clippings, or other landscape or construction-related wastes; and

Duplicative language has been removed from this section.

**Section E.1.j** has been added to the Order to ensure that BMPs implemented by third parties are effective. Since the Copermittees cannot passively receive and discharge pollutants from third parties, the Copermittees must ensure discharges of storm water pollutants to the MS4 are reduced to the MEP. In order to achieve this, the Copermittees must be able to ensure that effective BMPs are being implemented by requiring the third parties to document BMP effectiveness. Regarding the Copermittees' ability to require documentation and reporting from third parties, USEPA states "municipalities should provide documentation of their authority to enter, sample, inspect, review, and copy records, etc., as well as demonstrate their authority to require regular reports."<sup>170</sup>

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<sup>170</sup> USEPA, 1992. Guidance Manual for the Preparation of Part 2 of the NPDES Permit Applications for Discharges from Municipal Separate Storm Sewer Systems. EPA 833-B-92-002.

## **F. Jurisdictional Runoff Management Program**

### F.1. Development Planning

The following legal authority applies to section F.1:

**Broad Legal Authority:** CWA sections 402(p)(3)(B)(ii-iii), CWA section 402(a), CWC section 13377, and Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(B, C, E, and F), 40 CFR 131.12, and 40 CFR 122.26(d)(2)(iv).

**Specific Legal Authority:** Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(A)(2) provides that Copermittees develop and implement a management program which is to include “A description of planning procedures including a comprehensive master plan to develop, implement and enforce controls to reduce the discharge of pollutants from municipal separate storm sewers which receive discharges from areas of new development and significant redevelopment. Such plans shall address controls to reduce pollutants in discharges from municipal separate storm sewers after construction is completed.”

Federal NPDES regulation 40 CFR 122.44(d)(1) requires municipal storm water permits to include any requirements necessary to “[a]chieve water quality standards established under section 303 of the CWA, including State narrative criteria for water quality.”

**Sections F.1.a and F.1.b** (General Plan and Environmental Review Process) require the Copermittees to update and revise their General Plan (or equivalent plan) and environmental review processes to ensure water quality and watershed protection principles are included. The Copermittees are required to detail any changes to the General Plan or environmental review process in their Jurisdictional Runoff Management Program Annual Reports.

The change made to these sections requires updating the General Plan and Environmental Review Process on an as-needed basis, is supported by information provided in the Copermittees’ Report of Waste Discharge (ROWD) and Annual Reports. Each Copermittee has either updated, is in the process of updating, or has assessed its General Plan to ensure the General Plans include the required principles and are in compliance with Order No. R9-2002-0001. The ROWD also states that although all the Copermittees have reviewed their environmental review processes, a number of Copermittees want the overall planning approval process to more effectively ensure that water quality protection is considered in the earliest phases of project consideration.

**Section F.1.a** has been modified to include redevelopment projects in the General Plan. This change requires Copermitees to update their General Plan to include water quality and watershed protection for all new development and redevelopment projects.

**Section F.1.c** (Approval Process Criteria and Requirements) requires that all development projects (regardless of size) implement BMPs to reduce storm water pollutant discharges to the MEP. Source control and site design BMP requirements were not clearly described in this section of Order No. R9-2002-0001. Additional detail has been added to this section to better describe the source control and site design BMPs needed for implementation. This additional detail is consistent with the requirements of the SSMP, known in Orange County as the Water Quality Management Plan (WQMP). However, only source control and site design BMPs that apply to all types of development projects are required (i.e., properly designed trash storage areas).

The requirements are consistent with Order No. R9-2002-0001, section F.1.b.1. However, some elements are not contained in the current or proposed DAMP<sup>171</sup> (e.g., buffer zones). One exception is that Order No. R9-2002-0001's requirement that applicants must provide evidence of coverage under the General Industrial Permit has been removed, since industrial tenants for a development project are usually not known during the planning stage.

The section has been modified to reflect the prohibition of over-irrigation runoff to the MS4, as well as LID requirements. Additionally, this section requires the use of native and/or low water use plants for landscaping, where feasible.

**Sections F.1.d and F.1.d.(1)** (Standard Storm Water Mitigation Plans) require the Copermitees to review and update their local SSMPs (also known in Orange County as Water Quality Management Plans – WQMPs) for compliance with the Order. The sections also require all Priority Development Projects falling under certain categories to meet SSMP requirements. The update is necessary to ensure that the Copermitees' local SSMPs are consistent with the changes that have been made to the Order's SSMP requirements. The requirement for the development/adoption of a Model SSMP has been removed since a model was completed and adopted in 2003.

The SSMP section of the Order has been reformatted for clarity. There are also some significant changes. Changes have been made in response to experience gained by the Orange County Storm Water program, USEPA program evaluations, recent BMP development and effectiveness studies, recent reports on the magnitude of problems caused by hydromodification, and reviews of annual reports and the ROWD submitted by the Copermitees.

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<sup>171</sup> Orange County Storm Water Copermitees. *Drainage Area Management Plan (DAMP) 2007*. July 21, 2006. The 2007 DAMP was submitted to the Regional Board with the Report of Waste Discharge as part of the application for NPDES Permit reissuance.

In addition, the Order requires that a one-acre threshold be phased in over three years for the priority development category. This threshold was selected to be consistent with the Phase II NPDES regulations for small municipalities. The one-acre determination applies to the amount of ground area disturbed, not the total size of the parcel or project. Each Copermittee may also lower this threshold if desired.

**Section F.1.d.(2)** (Priority Development Project Categories) includes several changes to improve, simplify, and clarify the Priority Development Project categories.

The most significant change is that where a new Development Project feature, such as a parking lot, falls into a Priority Development Project Category, the entire project footprint is subject to SSMP requirements. This criterion was not included in Order No. R9-2002-0001. It is included, however, in the Model San Diego SSMP that was approved by the Regional Board in 2002. It is included in this Order because existing development inspections by Orange County municipalities show that facilities included in the Priority Development Project Categories routinely pose threats to water quality. This permit requirement will improve water quality and program efficiency by preventing future problems associated with partly treated storm water runoff from redevelopment sites. This approach to improving storm water runoff from existing developments is practicable because municipalities have a better ability to regulate new developments than existing developments.

Industrial sites and retail gasoline outlets have been added to the priority development categories. This heavy industrial category was not included in Order No. R9-2002-0001 because industrial NPDES requirements already establish storm water criteria. This category is included in the Order to be consistent with Phase II rules and to close loopholes. A discussion of retail gasoline outlets is below.

The criterion for commercial developments has been lowered to one acre from 100,000 square feet (2.3 acres). It is modified in order to be consistent with USEPA Phase II guidance, and to reflect the findings from Permittees that smaller commercial developments pose high threats to storm water discharges.

Housing and restaurant criteria have been clarified. The two housing development categories are now combined into one category that includes 10 or more housing units. In addition, requirements which specifically apply to restaurants have been combined in this section. The section has been modified to clarify that restaurants with less than 5,000 square feet of development are subject to SSMP requirements, except for the treatment control BMP and hydromodification control requirements. This is consistent with Order No. R9-2002-0001's approach for applying SSMP requirements to restaurants.

**Section F.1.d.(2)(j)** includes Retail Gasoline Outlets (RGOs) as a Priority Development Project category because RGOs are points of confluence for motor vehicles for automotive related services such as repair, refueling, tire inflation, and radiator fill-up. RGOs consequently produce significantly greater pollutant loadings of hydrocarbons and trace metals (including copper and zinc) than other developed areas. To meet the storm water MEP standard, source control and structural treatment BMPs are needed at RGOs that meet the following criteria: (a) 5,000 square feet or more of developed area, or (b) a projected average daily traffic of 100 or more vehicles per day. These are appropriate thresholds since development size and volume of traffic are good indicators of potential impacts of runoff from RGOs on receiving waters. RGOs were proposed, but not included in Order No. R9-2002-0001 pending guidance from the State Board in its review of the San Diego MS4 Permit, Order No. 2001-0001.

In State Board WQ Order No. 2000-11, the State Board removed RGOs as a SSMP category because the State Board found that RGOs were already heavily regulated and limited in their ability to construct infiltration devices or perform treatment. Order No. 2000-11 also acknowledged that a threshold (size, average daily traffic, etc.) appropriate to trigger SSMP requirements should be developed, and that specific findings regarding RGOs should be included in MS4 permits to justify the requirement.<sup>172</sup> The State Board also removed the RGO category from the San Diego County MS4 permit (Order No. 2001-01) because the Regional Board did not specifically address the issues raised in WQ Order No. 2000-11.

As discussed further below, the LARWQCB and the Regional Board have adequately addressed these issues. RGOs have been included as a SSMP category in the Los Angeles County MS4 permit (Order No. R4-01-182), the statewide general Phase II MS4 permit (WQ Order No. 2003-0005-DWQ), and the Regional Board Southern Riverside County MS4 permit (Order No. R9-2004-001). The State Board also addressed the inclusion of RGOs through the appeals of MS4 permits issued by the Los Angeles and San Francisco Bay Area Regional Boards. The State Board held a workshop addressing RGOs and identified RGOs as significant sources of pollutants. The State Board then dismissed the petitions for removal of RGOs from the SSMP requirements in the Los Angeles and San Francisco Bay Area MS4 permits.

Inexpensive and effective structural treatment BMPs which reduce storm water pollutants and control peak flow rates and velocities are available for use at RGOs. Studies have shown that some catch basin inserts can remove hydrocarbons and heavy metals, which are typical pollutants of concern at RGOs. Sand or media filters have also been found to be effective and available for use at RGOs. Site design measures to control flow include cisterns, small weirs, baffles, and redirecting roof runoff to pervious areas.

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<sup>172</sup> State Board, 2000. Order WQ 2000-11.

No evidence has been provided to indicate that use of these structural BMPs at RGOs will pose a safety risk. In fact, filter BMPs have been installed at RGOs in some municipalities without apparent adverse safety effects. In addition, similar BMPs such as oil/water separators have been used for years by RGOs without safety problems.

Threshold - Studies indicate that runoff from RGOs contains similar pollutants to runoff from commercial parking lots. In precedential WQ Order 2000-11, the State Board determined that parking lots with a size threshold of 5,000 square feet or more is an appropriate SUSMP category. Based in part on the similarity of pollutants, the 5,000 square feet size threshold was also included for RGOs in the Order. In addition, other municipalities currently use similar size thresholds for RGOs when requiring design standards to mitigate storm water runoff. To provide additional flexibility for the Copermittees, another threshold of 100 or more motor vehicles ADT has been added to the Order. This threshold is based on requirements used in Washington and Oregon for what are considered "high use" sites. This is an appropriate threshold since vehicular traffic is a good indicator of the amount of pollutants generated at a site.

The Regional Board followed the State Board's direction regarding RGOs by including the above discussion in this Fact Sheet, as well as a specific finding that justifies the regulation of runoff from RGOs that meet certain criteria. Considering all of the supporting documentation discussed above, it is appropriate to include RGOs as a Priority Development Project category.

Additional detailed supporting information can be found in the 2001 technical report titled *Retail Gasoline Outlets: New Development Design Standards for Mitigation of Storm Water Impacts* by the LARWQCB and the Regional Board.

**Section F.1.d.(3)** (Pollutants of Concern) requires Copermittees to update their procedures for identifying pollutants of concern for each Priority Development Project. This is important to do periodically because of changing water quality conditions and designations of impairments or areas of concern. Furthermore Copermittees continually learn more about pollutant-generating activities as they conduct inspections and investigations, and that information must be incorporated into the SSMP process.

**Section F.1.d.(4)** This Section has been modified to clarify some elements of low impact development. This section requires Copermittees to require or implement site design BMPs at Priority Development Projects in order to reduce the amount of polluted storm water runoff from those sites. The primary approach in site design BMPs is to limit the permanent loss of existing infiltration capacity because loss of infiltration is a major contributor to wet weather pollution discharges. General means to accomplish that goal include retaining natural infiltration areas of a site and limiting the amount of impervious surfaces. The Order does not require a specific or relative amount of pervious surfaces be added to a project. The Order seeks to retain on-site capture of the 85<sup>th</sup> percentile storm.

The site design BMP options listed in these sections are consistent with the site design BMPs currently required by the Copermittees in the Model WQMP. In the ROWD, the Copermittees propose to improve the process of selecting site design BMPs. Specifically, they propose to develop recommendations for incorporating low-impact design (LID) techniques and site design BMPs. However, the Model WQMP employs an open-ended approach to requirements for site design BMPs, requiring implementation of site design BMPs “where applicable and feasible” and “where appropriate.” Unfortunately, this approach has proven to be ineffective in integrating site design BMPs in project designs. Audits conducted in 2005 of four Copermittees found that municipalities need to work with project applicants to improve the quality of site design BMPs.<sup>173</sup> As a result, the Order establishes two sets of site design BMP criteria.

First, section F.1.d.(4)(b) of the Order directs the Copermittees to require, rather than consider, new development projects to employ certain classes of site design BMPs. The required site design BMPs take advantage of features that are incorporated into the Priority Development Project, such as landscaping or walkways. It also requires that projects seek to maintain natural water drainage features rather than instinctively convey water in buried pipes and engineered ditches that eliminate natural water quality treatment functions. These types of site design BMPs are both effective and achievable. These requirements are consistent with the guidelines of Order No. R9-2002-0001 and both the 2003 and 2007 DAMPs.<sup>174</sup>

Next, section F.1.d.(4)(d) of the Order requires that LID BMPs be sized and designed to ensure onsite retention without runoff, of the volume of runoff produced from a 24-hour 85<sup>th</sup> percentile storm event. This is consistent with other municipal stormwater NPDES permits recently adopted by the Los Angeles and Santa Ana Regional Boards. In those permits, the stakeholders were involved in drafting the numerical performance criteria. The requirement for a numerical BMP design standard is well established for treatment control BMPs and is required in permits throughout the nation such as in Pennsylvania, West Virginia, Georgia, and Washington D.C. Since the 85<sup>th</sup> percentile storm event has previously been used as the numeric design standard for treatment control BMPs; the same size storm event can be applied as the numeric design standard for LID BMPs. According to information provided by the County of Orange, the 24 hour, 85<sup>th</sup> percentile rainfall is between 0.7 to 0.8 inches of rain for the majority of the area covered by this permit.

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<sup>173</sup> Tetra Tech, Inc. 2005. Program Evaluation Report. Orange County Storm Water Program: Cities of Laguna Beach, Laguna Hills, Lake Forest, and Rancho Santa Margarita.

<sup>174</sup>The 2003 and 2007 DAMPs include preserving natural drainage features as a recommended site design BMP requirement that was to be reviewed and used where applicable and feasible. The DAMPs note this as a way to mimic a site's natural hydrologic regime.

The retention of natural drainage features, such as ephemeral streams, wetlands, and depressions, can be particularly important because small tributaries are essential to the maintenance of the chemical, biological, and physical integrity of larger waterbodies.<sup>175</sup> The loss and modification of such natural water resources to accommodate post-development storm water management leads to direct and indirect adverse effects on water quality that are felt both on the project site and off the site within the watershed.<sup>176,177,178</sup> Effects to aquatic beneficial uses from altered drainage features can occur downstream and upstream. The length of upstream or downstream effect of channel modifications is dependant on the specific structure type and channel slope.<sup>179</sup> For instance, road culverts can act as partial barriers to upstream distribution of native aquatic macroinvertebrates in urban streams, while bridges can provide adequate passage.<sup>180</sup> As a result of the adverse effects to water quality and beneficial uses, the State of California nonpoint source pollution program management measures for urban areas includes limiting the destruction of natural drainage features and natural conveyance areas.<sup>181</sup>

Through its process of conditioning development projects under the CWA section 401 Water Quality Certification program, the Regional Board finds that the level of site design BMP implementation in the Order is feasible for all projects. This site design BMP requirement will help ensure that site design BMPs are implemented for new development projects. Site design BMPs are a critical component of storm water runoff management at new development projects, since the BMPs provide multiple benefits including preservation of hydrologic conditions, reduction of pollutant discharges, cost effectiveness, and green space.

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<sup>175</sup> Aquatic scientists comment letter (April 10, 2003) on the Advanced Notice of Proposed Rulemaking (ANPRM) on the Clean Water Act Regulatory Definition of "Waters of the United States." (Docket ID No. OW-2002-0050). This letter is a synthesis of scientific information regarding ephemeral, intermittent, and headwater streams. It was written to USEPA by 85 leading aquatic scientists.

<sup>176</sup> Wright, Tiffany, et al. 2006. *Direct and Indirect Impacts of Urbanization on Wetland Quality*. Prepared by the Center for Watershed Protection for the USEPA Office of Wetlands, Oceans, and Watersheds. 81p. Available online at <http://www.cwp.org>

<sup>177</sup> Konrad, Christopher P. and Derek K. Booth, 2005. *Hydrologic Changes in Urban Streams and Their Ecological Significance*. American Fisheries Society Symposium. Vol. 45 pp.157-177.

<sup>178</sup> Coleman, Derrick, et al. 2005. *Effect of Increases in Peak Flows and Imperviousness on the Morphology of Southern California Streams*. Technical Report No. 450 of the Southern California Coastal Water Research Project.

<sup>179</sup> Fischenich, J.C. 2001. "Impacts of stabilization measures," EMRRP Technical Notes Collection (ERDC TNEMRRP- SR-32), U.S. Army Engineer Research and Development Center, Vicksburg, MS. <http://www.wes.army.mil/el/emrrp>

<sup>180</sup> Blakely, Tanya J., et al. 2006. *Barriers To The Recovery Of Aquatic Insect Communities In Urban Streams* Freshwater Biology Vol. 51(9), 1634-1645.

<sup>181</sup> California Nonpoint Source Encyclopedia, Management Measure 3.1.b. Runoff from Developing Areas, Site Development and Management Measure 3.3.a. Runoff from Existing Development, Existing Development.

The site design BMP options listed do not need to be costly.<sup>182</sup> Some design options, such as concave vegetated surfaces or routing rooftop or walkway runoff to landscaped areas, are cost neutral.<sup>183</sup> Other site design BMPs, such as minimizing parking stall widths or use of efficient irrigation devices, are oftentimes already required. In addition, use of site design BMPs reduces storm water runoff quantity, allowing for treatment control BMPs and other storm water infrastructure on site to be smaller, therefore savings costs for both developers and municipalities.<sup>184,185</sup>

Because of the potential economic and environmental benefits of using low-impact development site design, the U.S. Department of Housing and Urban Development, Office of Policy Development and Research, developed “*The Practice of Low Impact Development (LID)*” to assist the housing industry during the land development process.<sup>186</sup> This document focuses specifically on technologies that affect both the cost impacts and environmental issues associated with land development. Much of the report focuses on storm water management because low-impact development storm water management systems can save capital costs for developers and maintenance costs for municipalities.<sup>187</sup> The executive summary of the HUD report notes:

*This approach to land development, called Low Impact Development (LID), uses various land planning and design practices and technologies to simultaneously conserve and protect natural resource systems and reduce infrastructure costs. LID still allows land to be developed, but in a cost-effective manner that helps mitigate potential environmental impacts. LID is best suited for new, suburban development.*

Developers can use site and structure designs that reduce building footprints, decrease the amount of paved infrastructure, and provide for dispersed drainage and infiltration of runoff from impervious surfaces to reduce the effective impervious surface.<sup>188</sup> The concept of effective impervious surface is important, because when runoff from these surfaces is directed to pervious areas rather to an impervious drainage system (i.e., curbs, gutters, street surfaces, storm drain pipes), it can infiltrate, evaporate, or be taken up by vegetation, thereby reducing the total volume of storm water runoff leaving a site.

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<sup>182</sup> USEPA, 2000. Low-Impact Development: A literature review. EPA-841-B-00-005. 35p.

<sup>183</sup> Bay Area Stormwater Management Agencies Association., 1999. Start at the Source. Forbes Custom Publishing. Available on-line at: [http://www.scvurppp-w2k.com/basmaa\\_satsm.htm](http://www.scvurppp-w2k.com/basmaa_satsm.htm). pp. 149.

<sup>184</sup> National Association of Home Builders Research Center. *Builders Guide to Low Impact Development*. Available on-line at <http://www.toolbase.org>

<sup>185</sup> National Association of Home Builders Research Center. *Municipal Guide to Low Impact Development*. Available on-line at <http://www.toolbase.org>

<sup>186</sup> U.S. Department of Housing and Urban Development, Office of Policy Development and Research, 2003. *The Practice of Low Impact Development*.” Prepared by: NAHB Research Center, Inc. Upper Marlboro, Maryland. Contract No. H-21314CA.

<sup>187</sup> Ibid. Executive Summary, p.x.

<sup>188</sup> Bay Area Stormwater Management Agencies Association. 2003. *Using Site Design Techniques to Meet Development Standards for Stormwater Quality*. Available on-line at: <http://www.basmaa.org/>

The Order continues to provide the Copermittees with flexibility in implementing site design BMP requirements by providing a LID BMP waiver program.

**Section F.1.d.(5)** (Source Control BMP Requirements) requires that Priority Development Projects implement minimum source control BMPs. This section has been added to provide more detail and clarify the Order's requirements for source control BMPs. The minimum source control BMPs listed in the section are consistent with the Model WQMP.

**Section F.1.d.(6)** (Treatment Control BMP Requirements) is consistent with Order No. R9-2002-0001, with two exceptions. First, the Order limits the selections of methods used to determine the appropriate volume of storm water runoff to be treated. The modification ensures that priority development project proponents utilize the most accurate information to determine the volume or flow of runoff which must be treated. Using detailed local rainfall data, the County of Orange has developed the 85<sup>th</sup> Percentile Precipitation Isopluvial Map, which exhibits the size of the 85<sup>th</sup> percentile storm event throughout Orange County.<sup>189</sup> Since this map uses detailed local rainfall data, it is more accurate for calculating the 85<sup>th</sup> percentile storm event than other methods which were included in Order No. R9-2002-0001. The other methods found in Order No. R9-2002-0001 were included as options to be used in the event that detailed accurate rainfall data did not exist for various locations within Orange County. The development of the 85<sup>th</sup> Percentile Precipitation Isopluvial Map makes these other less accurate methods superfluous. Therefore, these other methods for calculating the 85<sup>th</sup> percentile storm event have been removed from the current Order.

Second, the Order requires that treatment control BMPs selected for implementation at Priority Development Projects have a removal efficiency rating that is higher than the "low removal efficiency," as presented in the Model SSMP/WQMP. The requirement allows exceptions for those projects that, with a feasibility analysis, can justify the use of a treatment control BMP with a low removal efficiency for a Priority Development Project. This requirement is needed because to date, the Copermittees have generally approved low removal efficiency treatment control BMPs without justification or evidence that use of higher efficiency treatment BMPs was considered and found to be infeasible. Specifically, it has been found during audits of the Copermittees' SSMP programs that many SSMP reports do not adequately describe the selection of treatment control BMPs.<sup>190</sup> Moreover, USEPA's contractor Tetra Tech, Inc. recommends that "project proponents should begin with the treatment control that is most effective at removing the pollutants of concern [...] and provide justification if that treatment control BMP is not selected."<sup>191</sup>

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<sup>189</sup> The isopluvial map can be found as Exhibit 7.II in the Model WQMP.

<sup>190</sup> Tetra Tech, Inc. 2005. Program Evaluation Report. Orange County Storm Water Program: Cities of Laguna Beach, Laguna Hills, Lake Forest, and Rancho Santa Margarita.

<sup>191</sup> Tetra Tech, Inc., 2005. Program Evaluation Report –San Diego Standard Urban Storm Water Mitigation Plan (SUSMP) Evaluation. P. 5.

In the ROWD, the Copermittees acknowledge the need for further attention to the selection and implementation of effective treatment BMPs. They propose to revise the model WQMP table of BMP effectiveness. The requirement is needed to provide clarification that selection of low efficiency treatment control BMPs over high efficiency BMPs without justification does not meet permit requirements and is not in compliance with the storm water MEP standard.

In addition, treatment control BMPs must be designed and implemented with measures to avoid the creation of nuisance or pollution associated with vectors, such as mosquitoes, rodents, and flies. Related guidelines are identified in guidance from CASQA.<sup>192</sup> Additional considerations are outlined in publications from the California Department of Health Services and University of California Division of Agriculture and Natural Resources.<sup>193</sup>

**Section F.1.d.(7).** (Low-Impact Design BMP Waiver Program) allows Copermittees to develop a LID BMP waiver program, under which projects where it is technically infeasible to implement the required LID BMPs could substitute with treatment control BMPs and a mitigation project, payment into an in-lieu funding program, and/or watershed equivalent BMPs. Some sites may be technically infeasible to implement the required LID BMPs due to the site constraints. For this reason, the Regional Board has added to the Order a requirement for the Copermittees to develop such a program. The program would provide the opportunity for development projects to avoid partial or full LID BMP implementation in exchange for implementation of treatment control BMPs and mitigation. The program would maintain equal water quality benefits as properly implemented LID BMPs when partial LID BMPs are coupled with a mitigation project or in-lieu funding.

The Order includes specific minimum requirements so that the program will achieve similar water quality benefits. Any program which allows development projects to forgo LID BMP implementation must include provisions which will achieve similar water quality benefits. To ensure that this is the case for the LID BMP waiver program, minimum provisions for the program have been added to the Order

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<sup>192</sup> For example, see the California Stormwater BMP Handbook guidelines for Extended Detention Basins (TC-22) at <http://www.cabmphandbooks.org>.

<sup>193</sup> Marco Metzger. "Managing Mosquitoes in Stormwater Treatment Devices." University of California Division of Agriculture and Natural Resources Publication No. 8125. Available at <http://anrcatalog.ucdavis.edu>.

**Section F.1.d.(8).** (BMP Design Standards) addresses a need for the Copermittees to develop and apply consistent criteria for the design and maintenance of structural treatment BMPs. Correct BMP design is critical to ensure that BMPs are effective and perform as intended. Without design criteria, there is no assurance that this will occur, since there is no standard for design or review. As an example, Ventura County has developed a BMP manual that includes standard design procedure forms for BMPs. Ventura County's *Technical Guidance Manual for Storm Water Quality Control Measures* is available at <http://www.vcstormwater.org/publications.htm>.<sup>194</sup> California Stormwater Quality Association (CASQA) also confirms the necessity of design criteria when it includes such criteria in its New Development and Redevelopment BMP Handbook.<sup>195</sup> This issue is noted in the ROWD, and the Copermittees propose to develop standard design checklist/plans/details for selected source control and treatment BMPs.

**Section F.1.d.(9).** (Implementation process) requires the Copermittee to implement a process to verify compliance with SSMP requirements. As part of the SSMP, requires identification at what point in the planning process that projects must meet SUSMP requirements and what are roles/responsibilities of municipal departments. The intent of this requirement is to provide consistency in the application of the SSMPs between the Copermittees. This requirement was included in previous Order No. R9-2002-0001.

**Section F.1.d.(10)** (Annual Review of Treatment BMPs) requires Copermittees to keep their SSMPs up to date with BMP effectiveness studies for low-impact design and treatment control BMPs. The ROWD includes commitments to develop a library of BMP performance reports and to revise the model WQMP table for the latest information on BMPs. This requirement will ensure that two important types of information be included in those efforts: Site design BMPs and treatment BMPs that are assessed as part of contracts with the State Board and Regional Board. The later types of projects include those funded with Clean Beach Initiative grants and other grants. Projects funded with such state grants must include effectiveness assessments using a quality assurance plan. As a result, such studies generally provide reliable sources of local data and should be included in local SSMPs.

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<sup>194</sup> Ibid.

<sup>195</sup> California Stormwater Quality Association, 2003. Stormwater Best Management Practice Handbook – New Development and Redevelopment.

**Sections F.1.e and F.1.f.** (BMP Verification and Treatment BMP Maintenance Tracking) are included in the Order to improve the effectiveness of the BMP requirements. They are included in response to findings from the Audits<sup>196</sup> and recommendations from USEPA.<sup>197</sup> The Copermittees recognize a need to improve the verification of post-construction BMPs. The 2007 DAMP proposes to verify 90 percent of WQMPs (including structural and non-structural BMPs) by inspection, self-certifications, surveys or other means. The Regional Board finds that 90 percent is a reasonable annual target, but considers inspections to be essential to achieve optimal results. Therefore, the Order requires high priority sites to be inspected annually, and allows other measures to be used for lower priority treatment control BMPs.

**Section F.1.h.** (Hydromodification) expands and clarifies current requirements for control of MS4 discharges to limit hydromodification effects caused by changes in runoff resulting from development and urbanization. The requirements are based on findings and recommendations of the Orange County Storm Water Program, the Stormwater Monitoring Coalition (SMC),<sup>198,199</sup> and the Storm Water Panel on Numeric Effluent Limits (Numeric Effluent Panel).<sup>200</sup> Added specificity is needed due to the current lack of a clear standard for controlling hydromodification resulting from development. More specific requirements are also warranted because hydromodification is increasingly recognized as a major factor affecting water quality and beneficial uses, and the Copermittees have proposed only vague and voluntary modifications to the Model WQMP. The Order is intended to ensure the intent of the proposed modifications is incorporated into each Copermittees' SSMP.

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<sup>196</sup> The 2005 audits performed by Tetra Tech, Inc. found that cities are not tracking post-construction BMPs. The final audit report recommended (Section 2.1.2) that each city should develop a system to verify implementation and track post-construction BMPs to ensure that they are adequately maintained.

<sup>197</sup> Federal Register / Vol. 64, No. 235 / Wednesday, December 8, 1999 / Rules and Regulations. P. 68845. USEPA recommends such practices in the Phase II storm water regulations, promoting "inspections during construction to verify BMPs are built as designed."

<sup>198</sup> Coleman, Derrick, et al. 2005. *Effect of Increases in Peak Flows and Imperviousness on the Morphology of Southern California Streams*. Technical Report No. 450 of the Southern California Coastal Water Research Project.

<sup>199</sup> Stein, Eric and Susan Zaleski. 2005. *Managing Runoff to Protect Natural Streams: The Latest Developments on Investigation and Management of Hydromodification in California*. Proceedings of a special technical workshop co-sponsored by California Stormwater Quality Association (CASQA), Stormwater Monitoring Coalition (SMC), and University of Southern California Sea Grant (USC Sea Grant). Technical Report No. 475 of the Southern California Coastal Water Research Project.

<sup>200</sup> Storm Water Panel Recommendations to the California State Water Resources Control Board. 2006. *The Feasibility of Numeric Effluent Limits Applicable to Discharges of Storm Water Associated with Municipal, Industrial, and Construction Activities*.

Hydromodification is the change in a watershed's runoff characteristics resulting from development, together with associated morphological changes to channels receiving the runoff. As the total area of impervious surfaces increases, infiltration of rainfall decreases, causing more water to run off the surface and at a higher velocity. Runoff from developed areas can produce erosive flows in channels under rainfall conditions which were not previously problematic. Moreover, runoff from developed areas increases the duration of time that channels are exposed to erosive flows. The increase in the volume of runoff and the length of time that erosive flows occur ultimately intensify sediment transport, causing changes in sediment transport characteristics and the hydraulic geometry (width, depth, and slope) of channels.<sup>201</sup>

These types of changes have been documented in southern California. It has been reported that researchers studying flood frequencies in Riverside County have found that increases in watershed imperviousness of only 9-22 percent can result in increases in peak flow rates for the two-year storm event of up to 100 percent.<sup>202</sup> Such changes in runoff have significant impacts on channel morphology. It has recently been found that ephemeral/intermittent channels in southern California appear to be more sensitive to changes in imperviousness than channels in other areas. Morphology of small channels in southern California was found to change with only 2-3 percent watershed imperviousness, as opposed to 7-10 percent watershed imperviousness in other parts of the nation.<sup>203</sup>

Effects of hydromodification are evident in southern Orange County and recognized by the Copermittees. Analyses of bioassessment data, for example, indicate that physical changes to stream channels caused by hydromodification are likely responsible, in part, for the low bioassessment scores in urbanized settings.<sup>204</sup> It is important to recognize that the physical changes are a direct result of MS4 discharges, but that two separate mechanisms are involved. First, is a change in the flow regime caused by the increase in impervious surfaces and loss of natural conveyance systems. Discharges to receiving waters from the MS4 outfalls do not mimic the natural discharges from former tributaries to that receiving water, and the change results in erosion. Second, the physical stream habitat in many places has been severely modified in order to efficiently convey those increased storm water discharges to the ocean. Where streams are hardened and/or buried to convey storm water, they cannot provide adequate water quality and other necessary conditions to support beneficial uses. Both of these issues are addressed in the Order.

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<sup>201</sup> Santa Clara Valley Urban Runoff Pollution Prevention Program, 2005. Hydromodification Management Plan. P. 1-1.

<sup>202</sup> Schueler and Holland, 2000. Storm Water Strategies for Arid and Semi-Arid Watersheds (Article 66). The Practice of Watershed Protection.

<sup>203</sup> Coleman, et. al., 2005. Effect of Increases in Peak Flows and Imperviousness on the Morphology of Southern California Streams. P. iv.

<sup>204</sup> See Chapter 11 of the ROWD and the 2005-06 Unified Annual Report for the analyses.

The Copermitees' recognize the need to improve management of hydromodification. The ROWD proposes to revise the Model WQMP to incorporate additional information from ongoing hydromodification studies conducted by the SMC. The Order allows the Copermitees to adopt criteria consistent with future SMC findings in the development of their Hydromodification Management Plan (see below).

Section F.1.h. requires the Copermitees to submit a Hydromodification Management Plan (HMP) within two years of permit adoption. This is consistent with other Southern California MS4 permits and in direct response to comments from the USEPA on Tentative Order R9-2008-001.

Section F.1.h (1) describes several elements that must be included in the HMP. For example, the HMP must identify a method for assessing susceptibility of channel segments which receive runoff discharges from Priority Development Projects, and include a channel standard to ensure that the stability of the channel is not compromised as a result of discharges from the Priority Development Projects. The HMP must also identify a range of flows where Priority Development Projects could cause hydromodification effects and subsequent stream instability.

Additionally, the HMP must require Priority Development Projects to implement hydrologic control measures (such as LID or detention basins) to prevent hydromodification and resultant degradation of stream conditions downstream of project sites. To compare post-project flow rates and durations to pre-project flow rates and durations, the HMP must specify that the pre-developed (naturally occurring) flow rates and durations shall be used when assessing pre-project conditions, so that the naturally occurring hydrology is eventually restored.

In cases where a stream has been armored with concrete, rip rap, or other man-made materials, the HMP shall require the assessment of a comparable soft-bottom channel as the channel standard, as opposed to using the characteristics of the hardened channel as the channel standard. This is to ensure that hydromodification management measures are already in place should any portion of the hardened channel be returned to its natural state, thereby restoring the physical integrity of the creek and its Beneficial Uses. For this reason, the waiver provision for hydromodification management measures for projects discharging into hardened channels was deleted from the Tentative Order. The remaining exception is for projects that discharge storm water runoff into underground storm drains discharging directly into bays or the ocean and for projects discharging to waters where the entire channel bed and banks have been concrete lined all the way to ocean receiving waters.

The HMP must also include metrics for assessing impacts to downstream watercourses from Priority Development Projects, as well as assessing improvements to these watercourses. One metric that must be included is the Index of Biotic Integrity (IBI) score for benthic macroinvertebrates. This is because historic hydromodification

impacts, such as concrete lining and channelization, have impacted the natural physical habitat of urban streams resulting in low IBI scores. The Copermittee's 2006-2007 monitoring indicated decreased IBI scores in the urbanized watersheds. In the absence of water chemistry and toxicity impacts, these low scores were attributed to be a result of poor physical habitat conditions.<sup>205</sup> Therefore, the IBI score will be a useful metric in terms of assessing both impacts to streams from Priority Development Projects and improvements due to implementation of management measures.

In addition to the hydrologic control measures that must be included in the HMP to prevent or minimize hydromodification effects from Priority Development Projects, the HMP must also include additional measures to be used on Priority Development Projects based on a prioritized consideration of the following elements in this order: 1) site-design hydrologic control measures, 2) on-site management measures, 3) the use of regional controls upstream of receiving waters, and lastly, 4) in-stream controls (not to include reinforcement with non-naturally occurring materials). The suite of management measures must also include stream restoration as a viable option to achieve the channel standard and subsequently restore Beneficial Uses.

Section F.1.h (5) describes interim hydromodification criteria that must be implemented by the Copermittees within one year of adoption of the Tentative Order and concurrent to development of the local HMP. The values chosen for the interim criteria are those currently being implemented by Copermittees in the San Diego area.

Finally, the requirements included in section F.1.h do not supersede the requirements for LID presented in section F.1.d. (4). In certain situations, the requirements to incorporate LID will satisfy the requirements for hydromodification management. For example, detention basins are a common BMP used to manage high flow rates but behave hydrologically different than distributed systems used in LID. Using LID is a viable option for both accomplishing hydromodification management and pollutant load reductions.

## F.2. Construction

The following legal authority applies to section F.2:

**Broad Legal Authority:** CWA sections 402(p)(3)(B)(ii-iii), CWC section 13377, and Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(B, C, E, and F) and 40 CFR 122.26(d)(2)(iv).

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<sup>205</sup> Orange County Copermittees, November 15, 2007. 2006-2007 Unified Annual Progress Report Program Effectiveness Assessment (San Diego Region).

**Specific Legal Authority:** Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(D) provides that the proposed management program include “A description of a program to implement and maintain structural and non-structural best management practices to reduce pollutants in storm water runoff from construction sites to the municipal storm sewer system.”

Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(D)(1) provides that the proposed management program include “A description of procedures for site planning which incorporate consideration of potential water quality impacts.”

Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(D)(2) provides that the proposed management program include “A description of requirements for nonstructural and structural best management practices.”

Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(D)(3) provides that the proposed management program include “A description of procedures for identifying priorities for inspecting sites and enforcing control measures which consider the nature of the construction activity, topography, and the characteristics of soils and receiving water quality.”

Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(D)(4) provides that the proposed management program include “A description of appropriate educational and training measures for construction site operators.”

Federal NPDES regulation 40 CFR 122.26(d)(2)(i)(A) provides that each Copermitttee must demonstrate that it can control “through ordinance, permit, contract, order or similar means, the contribution of pollutants to the municipal storm sewer by storm water discharges associated with industrial activity and the quality of storm water discharged from site of industrial activity.”

Federal NPDES regulation 40 CFR 122.26(b)(14) provides that “The following categories of facilities are considered to be engaging in ‘industrial activity’ for the purposes of this subsection: [...] (x) Construction activity including cleaning, grading and excavation activities [...].”

Federal NPDES regulation 40 CFR 122.44(d)(1)(i) requires NPDES permits to include limitations to “control all pollutants or pollutant parameters (either conventional, nonconventional, or toxic pollutants) which the Director determines are or may be discharged at a level which will cause, have reasonable potential to cause, or contribute to an excursion above any State water quality standard, including State narrative criteria for water quality.”

**Section F.2** has additions to ensure the protection of threatened and endangered species and requires the consideration of potential impacts from the use of Active Treatment Systems. These requirements were added to ensure additional protection of the Beneficial Uses of waters of the State.

**Section F.2.a.** (Ordinance Update) requires each Copermittee to review and update its grading and storm water ordinances as necessary to comply with the MS4 permit. By updating the grading and storm water ordinances, the Copermittees will have the necessary legal authority to require construction sites to implement effective BMPs that will reduce pollutant discharges to the maximum extent practicable. The Order allows the Copermittees 365 days to review and update their ordinances. The 365 days should be adequate to allow for the relatively minor changes that might be needed since their ordinances were last updated under Order No. R9-2002-0001.

**Section F.2.b.** (Source Identification) requires the Copermittees to develop and update a watershed based inventory of all construction sites regardless of size or ownership. This section has been modified to require the inventory be updated regularly, rather than annually. More frequent updates will ensure the Copermittees have a more accurate inventory of construction sites within their jurisdiction. A regularly updated inventory of active construction sites will assist the Copermittees in ensuring that all sites are inspected per Order requirements. The Order does not specify the frequency of updates, and instead relies on each Copermittee to develop updates appropriate to local construction activity. The 2007 DAMP proposes that the inventory be updated “at a minimum” prior to the start of the rainy season. Such a minimum standard may not be appropriate for each Copermittee. Failure to maintain a useful inventory would be a violation of the Order.

**Section F.2.c.** (Site Planning and Project Approval Process) requires Copermittees to incorporate consideration of potential water quality impacts prior to approval and issuance of construction and grading permits. The Copermittees<sup>206</sup> and our program evaluations in 2005<sup>207</sup> recommend that storm water requirements need to be better incorporated into the pre-construction process.

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<sup>206</sup> Orange County Storm Water Copermittees. 2006. Report of Waste Discharge (San Diego Region), Section 7, New Development.

<sup>207</sup> Tetra Tech, Inc. 2005. Program Evaluation Report. Orange County Storm Water Program: Cities of Laguna Beach, Laguna Hills, Lake Forest, and Rancho Santa Margarita.

This section now requires the Copermittees to review project proponents' runoff management plans for compliance with local regulations, policies, and procedures. USEPA recommends that it is often easier and more effective to incorporate storm water quality controls during the site plan review process or earlier.<sup>208</sup> In the Phase I storm water regulations, USEPA states that a primary control technique is good site planning.<sup>209</sup> USEPA goes on to say that the most efficient controls result when a comprehensive storm water management system is in place.<sup>210</sup> To determine if a construction site is in compliance with construction and grading ordinances and permits, USEPA states that the "MS4 operator should review the site plans submitted by the construction site operator before ground is broken."<sup>211</sup> Site plan review aids in compliance and enforcement efforts since it alerts the "MS4 operator early in the process to the planned use or non-use of proper BMPs and provides a way to track new construction activities."<sup>212</sup> During audits of Orange County Copermittee storm water programs, it was found that site plan and SWPPP review were inadequate and inconsistent.<sup>213</sup>

**Section F.2.d.** (BMP Implementation) includes modifications to the requirements for each Copermittee to designate and ensure implementation of a set of minimum BMPs at construction sites. These modifications are based on Regional Board findings and experience during implementation of Order No. R9-2002-0001.

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<sup>208</sup> USEPA, 1992. Guidance 833-8-92-002. Section 6.3.2.1.

<sup>209</sup> Federal Register / Vol. 55, No. 222 / Friday, November 16, 1990 / Rules and Regulations. P. 48034.

<sup>210</sup> Ibid.

<sup>211</sup> USEPA, 2000. Guidance 833-R-00-002. Section 4.6.2.4, P. 4-30.

<sup>212</sup> Ibid., P. 4-31.

<sup>213</sup> Tetra Tech, Inc. 2005. Program Evaluation Report. Orange County Storm Water Program: Cities of Laguna Beach, Laguna Hills, Lake Forest, and Rancho Santa Margarita.

Unlike Order No. R9-2002-0001, this Order does not require the Copermittee to designate a set of minimum BMPs for high, medium, and low threat to water quality construction sites. This change was made in recognition of most Copermittees' application of one consistent set of BMPs throughout their jurisdictions. The Copermittees also desire to move toward a risk-based approach to BMP requirements.<sup>214</sup> As a result, the Order requires a minimum set of BMPs to be designated for all sites and that enhanced BMPs, including advanced treatment systems, be designated for sites upstream of 303(d) impairments and ESAs. Advanced treatment has been effectively implemented extensively in the other states and in the Central Valley Region of California.<sup>215</sup> In addition, the Regional Board's inspectors have observed advanced treatment being effectively implemented at large sites greater than 100 acres and at small, less than 5 acre, in-fill sites. Advanced treatment is often necessary for Copermittees to ensure that discharges from construction sites are not causing or contributing to a violation of water quality standards. For example, the Basin Plan lists the water quality objective for turbidity as 20 NTU for all hydrologic areas and subareas except for the Coronado HA (10.10) and the Tijuana Valley (11.10). For certain construction sites with large slopes and exposed areas, the only technology that is likely to meet 20 NTU is advanced treatment combined with erosion and sediment controls. To ensure the MEP standard and water quality standards are met, the requirement for implementation of advanced treatment at high threat construction sites has been added to the Order, while still providing sufficient flexibility for each Copermittee's unique program.

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<sup>214</sup> Orange County Storm Water Copermittees. 2006. Report of Waste Discharge (San Diego Region), Section 8, Construction

<sup>215</sup> SWRCB, 2004. Conference on Advanced Treatment at Construction Sites.

The Order does not include seasonal restrictions on grading. Seasonal restrictions on grading for storm water are difficult to implement due to the conflict between seasonal grading restrictions, endangered birds' breeding seasons and the seasonal passage of endangered salmonids; therefore the seasonal grading restrictions have not been included with the other BMPs in the Order. Found in southern California, the Least Bell's Vireo and the Coastal California Gnatcatcher are listed as federally endangered and threatened, respectively.<sup>216</sup> Permits issued by the California Department of Fish and Game (CDFG) restrict grading during these birds' breeding seasons, which is from April 10 to August 31 for the Least Bell's Vireo<sup>217</sup> and from February 15 to August 31 for the Coastal California Gnatcatcher.<sup>218</sup> Ideally storm water restrictions on grading would be during the wet season from October 1 through April 30.<sup>219</sup> Combined, these restrictions would limit construction grading to be during the month of September, which is infeasible. Section D.2.d of the Order still requires project proponents to minimize grading during the wet season and coincide grading with seasonal dry weather periods to the extent feasible.

**Section F.2.e.** (Inspections) establishes criteria for inspections based on risk factors including size, season, and location of the construction site. Modifications have been made to requirements of Order No. R9-2002-0001 based on the experience of the Copermitees and Regional Board construction programs.

The Order requires sites in active grading during the wet season that are over 30 acres be inspected every two weeks, rather than sites over 50 acres being inspected weekly. In south Orange County approximately 15 percent (34 sites) of construction sites over one acre are larger than 30 acres, whereas about 9 percent (21 sites) of sites are over 50 acres.<sup>220</sup> This may result in a net decrease of inspections of large sites, although more sites will be covered. The reduction in inspection frequency for sites greater than 50 acres is justified because the sites have generally improved their erosion and sediment control measures since adoption of Order No. R9-2002-0001. Biweekly inspections of these sites in the future should be sufficient to ensure compliance with local regulations.

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<sup>216</sup> State of California, Department of Fish and Game, 2005. State and Federally Listed Endangered and Threatened Animals of California.

<sup>217</sup> United States Department of the Interior, Fish and Wildlife Service, 2001. Least Bell's Vireo Survey Guidelines.

<sup>218</sup> United States Department of the Interior, Fish and Wildlife Service, 1997. Coastal California Gnatcatcher (*Polioptila californica californica*) Presence/Absence Survey Guidelines.

<sup>219</sup> Regional Board, 2001. Order No. 2001-01, San Diego County MS4 Permit. Directive F.2.g.(2).

<sup>220</sup> Based on the State Board's database of sites covered by the Construction Storm Water General NPDES Permit, Order No. 99-08-DWQ. That general permit requires sites disturbing over one acre to file for coverage, so it provides a good basis for assessment.

The Order lowers the size of construction sites adjacent to or discharging directly to ESAs that receive scrutiny. Order No. R9-2002-0001 requires such sites five acres and more to be inspected weekly during the wet season. This Order requires such sites one acre and above to be inspected every two weeks during the wet season and once during August or September. The lower size threshold is consistent with Phase II storm water permits.

The Order omits Order No. R9-2002-0001's provision allowing a Copermittee to decrease the inspection frequency for high priority sites if the Copermittee certifies in writing to the Regional Board that they have recorded the site's Waste Discharge Identification Number, reviewed the site's Storm Water Pollution Prevention Plan (SWPPP), assured the site's SWPPP is in compliance, and assured the SWPPP is properly implemented at the site. Under Order No. R9-2002-0001, the Regional Board never received from any of the Copermittees a certification to decrease the inspection frequency at high priority sites. Since the certification process was never used, the language has been deleted from the Order.

This section also requires the Copermittees to track the number of inspections for each inventoried construction site. This requirement has been added to ensure that the Copermittees can demonstrate that construction sites are inspected at the minimum frequencies.

**Section F.2.g.2** includes an additional requirement for notification to the Regional Board regarding construction sites has been added to this section. Copermittees are required to annually notify the Regional Board of construction sites that have suspected violations. This was added to enhance Regional Board and Permittee communication and coordination in regulating construction sites.

### F.3 Existing Development

#### **F.3.a. Municipal**

The following legal authority applies to section D.3.a:

**Broad Legal Authority:** CWA sections 402(p)(3)(B)(ii-iii), CWC section 13377, and Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(B, C, E, and F) and 40 CFR 122.26(d)(2)(iv).

**Specific Legal Authority:** Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(A)(1) provides that the proposed management program include "A description of maintenance activities and a maintenance schedule for structural controls to reduce pollutants (including floatables) in discharges from municipal separate storm sewers."

Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(A)(3) provides that the proposed management program include “A description for operating and maintaining public streets, roads and highways and procedures for reducing the impact on receiving waters of discharges from municipal storm sewer systems, including pollutants discharged as a result of de-icing activities.”

Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(A)(4) provides that the proposed management program include “A description of procedures to assure that flood management projects assess the impacts on the water quality of receiving water bodies and that existing structural flood control devices have been evaluated to determine if retrofitting the device to provide additional pollutant removal from storm water is feasible.”

Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(A)(5) provides that the proposed management program include “A description of a program to monitor pollutants in runoff from operating or closed municipal landfills or other treatment, storage or disposal facilities for municipal waste, which shall identify priorities and procedures for inspections and establishing and implementing control measures for such discharges.”

Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(A)(6) provides that the proposed management program include “A description of a program to reduce to the maximum extent practicable, pollutants in discharges from municipal separate storm sewers associated with the application of pesticides, herbicides, and fertilizer which will include, as appropriate, controls such as educational activities, permits, certifications, and other measures for commercial applicators and distributors, and controls for application in public right-of-ways and at municipal facilities.”

Federal NPDES regulation 40 CFR 122.44(d)(1)(i) requires NPDES permits to include limitations to “control all pollutants or pollutant parameters (either conventional, nonconventional, or toxic pollutants) which the Director determines are or may be discharged at a level which will cause, have reasonable potential to cause, or contribute to an excursion above any State water quality standard, including State narrative criteria for water quality.”

**Section F.3.a.2.** (General BMP Implementation) requires the Copermittees to designate minimum BMPs for general municipal areas and activities, regardless of their threat to water quality. The requirement that different types of BMPs be designated for different threats to water quality categories of municipal areas and activities has been removed from the Order. This was done to help simplify and clarify the Order’s requirements. BMPs required to be implemented at a site can now be based on the sources or activities present at the site. This is closer to the approach taken by the Copermittees in their JRMPs. Threat to water quality is used to determine inspection frequencies in section F.3.a.(7).

**Section F.3.a.3, F.3.a.4, and F.3.a.5.** (Specific BMP Implementation Categories) establishes requirements for specific categories of activities and areas. These are selected based on the CWA and findings of the Permittees in annual reports and ROWD that identify these activities as warranting special attention.

Pesticides, Herbicides, and Fertilizers. 40 CFR 122.26(d)(2)(iv)(A)(6) requires a description of a storm water program for pesticides, herbicides, and fertilizers. In addition, water quality data demonstrates widespread presence of such pollutants in receiving waters and MS4 discharges. In response to similar requirements of Order No. R9-2002-0001, the Copermitees have developed a specific model Integrated Pest Management, Pesticides, and Fertilizer guidelines.

Flood Control Structures. In order to more closely meet the intent of the federal regulations and guidance, the requirement has been modified. 40 CFR 122.26(d)(2)(iv)(A)(4) requires "A description of procedures to assure that flood management projects assess the impacts on the water quality of receiving water bodies and that existing structural flood control devices have been evaluated to determine if retrofitting the device to provide additional pollutant removal from storm water is feasible." Retrofitting flood control devices can reduce storm water pollutants and improve water quality. Copermitees have conducted many flood control retrofit projects, many of which have been partially funded with State grant awards.

USEPA expands on the federal provision with the following information: "Storm water management devices and structures that focus solely on water quantity are usually not designed to remove pollutants, and may sometimes harm aquatic habitat and aesthetic values" (1992). As flood control structures and other elements of the MS4 age and retrofitting becomes necessary, opportunities for water quality improvements arise.

Conveyance systems which take water quality consideration into account (such as grassed swales, vegetated detention ponds, etc.) can often cost less to construct than traditional concrete systems. Evaluation of the applicability of such systems during retrofitting must occur to ensure that pollutants in storm water runoff are reduced to the maximum extent practicable. USEPA supports utilizing BMPs for pollution reduction in flood management projects, stating that "The proposed management program must demonstrate that flood management projects take into account the effects on the water quality of receiving water bodies. [...] Opportunities for pollutant reduction should be considered".<sup>221</sup>

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<sup>221</sup> USEPA, 1992. Guidance Manual for the Preparation of Part II of the NPDES Permit Applications for Discharges from Municipal Separate Storm Sewer Systems. Washington D.C. EPA/833-B-92-002.

Existing Copermittee projects include two types of retrofits. The first type involves adding an engineered device to an existing structure in order to treat or divert runoff. Examples include catch basin inlet filters/screens, ultraviolet disinfection facilities, hydrodynamic separators, and diversions to the sanitary sewer. The second type involves re-installing pervious or natural treatment features to facilities. Examples include removing concrete portions of conveyances to create pervious conveyances; and creating treatment wetlands within flood detention facilities. The later type of retrofit is preferred by the Regional Board. They are likely more sustainable over the long-term because they may require less rigorous operation and maintenance than the former. They may also provide the additional benefit of providing significant or incidental opportunities for beneficial uses (e.g., recreation, wildlife, water supply).<sup>222,223</sup>

Sweeping of Municipal Areas. Sweeping municipal areas would likely be done in the absence of the Order. However, in certain cases it is an important component of a jurisdictional runoff management program. The Order contains requirements to ensure that the use of street sweeping is optimized for runoff applications if it is to be used and reported as a BMP. The criteria in the Order are taken from industry guidance as reported by the Permittees in the Aliso Creek watershed.<sup>224</sup>

**Section F.3.a.(6).** (Operation and Maintenance of MS4 and Structural Controls) requires the Copermittees to inspect and remove waste from their MS4s prior to the rainy season.

Maintenance is critical to the successful implementation of every storm water runoff management program. USEPA finds that "Lack of maintenance often limits the effectiveness of storm water structural controls such as detention/retention basins and infiltration devices. [...] The proposed program should provide for maintenance logs and identify specific maintenance activities for each class of control, such as removing sediment from retention ponds every five years, cleaning catch basins annually, and removing litter from channels twice a year.

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<sup>222</sup> Burton, Carmen et al. 2005. Assessing Water Source and Channel Type as Factors Affecting Benthic Macroinvertebrate and Periphyton Assemblages in the Highly Urbanized Santa Ana River Basin, California. American Fisheries Society Symposium. Vol.47 pp.239-262.

<sup>223</sup> Stromberg, Juliet C. 2001. Restoration of Riparian Vegetation in the South-Western United States: the importance of flow regimes and fluvial dynamism. Journal of Arid Environments. Vol49, pp.17-34.

<sup>224</sup> See 20<sup>th</sup> and 21<sup>st</sup> quarterly reports for the Aliso Creek watershed bacteria investigation, prepared by the Orange County Copermittees within the Aliso Creek watershed.

If maintenance activities are scheduled infrequently, inspections must be scheduled to ensure that the control is operating adequately. In cases where scheduled maintenance is not appropriate, maintenance should be based on inspections of the control structure or frequency of storm events. If maintenance depends on the results of inspections or if it occurs infrequently, the applicant must provide an inspection schedule. The applicant should also identify the municipal department(s) responsible for the maintenance program".<sup>225</sup> The MS4 maintenance requirements are based on the above USEPA recommendations. This maintenance will help ensure that structural controls are in adequate condition to be effective year round, but especially at the beginning of and throughout the rainy season.

Two requirements have been added to the Order that were not within Order No. 2002-0001. Subsection (3) allows a decreased inspection frequency for facilities that are routinely clean, and Subsection (4) requires trash to be removed from channels in a timely manner. Typically, Copermittees have reported annual or semi-annual creek cleanups as significant BMPs. The large volumes of trash reported to be removed during these events demonstrates the significant amount of trash that accumulates in the channels. In addition, storm water runoff is a leading contributor to the accumulation of trash and debris along the beaches of Orange County.<sup>226</sup> In order to reduce the effect of the trash, the Order requires that trash be removed more frequently.

**Section F.3.a.(7).** (Sewage Infiltration) requires the Copermittees to implement controls and measures to prevent and eliminate sewage infiltration or seepage from municipal sanitary sewers to MS4s through thorough, routine preventive maintenance of the MS4. This requirement is in Order No. R9-2002-0001 in the section on Illicit Discharge Detection and Elimination (section F.5.i).

**Sections F.3.a.(8) and F.3.a.(9).** (Inspections and Enforcement) establishes a minimum set of municipal areas and activities for oversight and inspection by the Copermittees and requires that Copermittees properly enforce runoff requirements at municipal areas and activities.

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<sup>225</sup> USEPA, 1992. Guidance Manual for the Preparation of Part II of the NPDES Permit Applications for Discharges from Municipal Separate Storm Sewer Systems. Washington D.C. EPA/833-B-92-002.

<sup>226</sup> Moore, S.L., D. Gregorio, M. Carreon, S B. Weisberg, and M. K. Leecaster. 2001. *Composition and distribution of beach debris in Orange County, California*. Marine Pollution Bulletin 42(3): 241-245..

**F.3.b. Industrial and Commercial**

The following legal authority applies to section F.3.b:

**Broad Legal Authority:** CWA sections 402(p)(3)(B)(ii-iii), CWC section 13377, and Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(B, C, E, and F) and 40 CFR 122.26(d)(2)(iv).

**Specific Legal Authority:** Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(C) provides that the proposed management program include “A description of a program to monitor and control pollutants in storm water discharges to municipal systems from municipal landfills, hazardous waste treatment, disposal and recovery facilities, industrial facilities that are subject to section 313 of title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA), and industrial facilities that the municipal permit applicant determines are contributing a substantial pollutant loading to the municipal storm sewer system.”

Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(C)(1) provides that the Copermittee must “identify priorities and procedures for inspections and establishing and implementing control measures for such discharges.”

Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(C)(2) provides that the proposed management program shall “Describe a monitoring program for storm water discharges associated with the industrial facilities identified in paragraph (d)(2)(iv)(C) of this section, to be implemented during the term of the permit, including the submission of quantitative data on the following constituents: any pollutants limited in effluent guidelines subcategories, where applicable; any pollutant listed in an existing NPDES permit for a facility; oil and grease, COD, pH, BOD5, TSS, total phosphorus, total Kjeldhal nitrogen, nitrate plus nitrite nitrogen, and any information on discharges required under 40 CFR 122.21(g)(7)(iii) and (iv).”

Federal NPDES regulation 40 CFR 122.26(d)(2)(ii) provides that the Copermittee “Provide an inventory, organized by watershed of the name and address, and a description (such as Standard Industrial Classification [SIC] codes) which best reflects the principal products or services provided by each facility which may discharge, to the municipal separate storm sewer, storm water associated with industrial activity.”

Federal NPDES regulation 40 CFR 122.44(d)(1)(i) requires NPDES permits to include limitations to “control all pollutants or pollutant parameters (either conventional, nonconventional, or toxic pollutants) which the Director determines are or may be discharged at a level which will cause, have reasonable potential to cause, or contribute to an excursion above any State water quality standard, including State narrative criteria for water quality.”

Federal NPDES regulation 40 CFR 122.26(d)(2)(i)(A) provides that each Copermitttee must demonstrate that it can control “through ordinance, permit, contract, order or similar means, the contribution of pollutants to the municipal storm sewer by storm water discharges associated with industrial activity and the quality of storm water discharged from site of industrial activity.”

Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(A) provides that the Copermitttee develop a proposed management program which includes “A description of structural and source control measures to reduce pollutants from runoff from commercial and residential areas that are discharged from the municipal storm sewer system that are to be implemented during the life of the permit, accompanied with an estimate of the expected reduction of pollutant loads and a proposed schedule for implementing such controls.”

**Section F.3.b.** (Industrial and Commercial) requires the Copermitttees to implement an industrial and commercial program to reduce pollutants in storm water runoff from all industrial and commercial sites/sources. The industrial and commercial sections of Order No. 2002-0001 have been combined into one section in this Order. This change will streamline and simplify the Order, without negatively impacting water quality. This change is not unprecedented because industrial and commercial facilities are commonly addressed together. For example, the Southern Riverside County MS4 Permit<sup>227</sup> combined industrial and commercial programs into one section. In addition, in their Annual Reports and ROWD,<sup>228</sup> the Copermitttees jointly address industrial and commercial components. USEPA contractor Tetra Tech also evaluated and reported on the industrial and commercial programs jointly during their program evaluations.<sup>229</sup>

**Section F.3.b.(1)(a)** (Source Identification) requires that building material retailers and storage, animal facilities, and power washing services be included in the Copermitttees' inventory of commercial sites/sources. These activities have been identified annual MS4 program reports and quarterly Aliso Creek watershed reports as potentially significant sources of pollutants. This is not a significant change because Order No. R9-2002-0001 requires that any commercial site or source determined by a Copermitttee to contribute a significant pollutant load to the MS4 be added to its inventory of commercial sites. Furthermore, the commercial BMP fact sheets developed by the Copermitttees generally address the types of activities occurring at these facilities and practices.

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<sup>227</sup> Regional Board, 2004. Order No. R9-2004-001; Riverside County MS4 Permit. Section H.2; P. 24.

<sup>228</sup> Orange County Storm Water Copermitttees. 2006. Report of Waste Discharge (San Diego Region). Section 9.

<sup>229</sup> Tetra Tech, Inc., 2005. Program Evaluation Reports Orange County Storm Water Programs: Cities of Laguna Beach, Laguna Hills, Lake Forest, and Rancho Santa Margarita.

The Order has revised requirements for identifying industrial sites/sources. The revised requirements are identical to those found in the Southern Riverside County MS4 permit.<sup>230</sup> USEPA requires the same identification: "Measures to reduce pollutants in storm water discharges to municipal separate storm sewers from municipal landfills, hazardous waste treatment, disposal and recovery facilities, industrial facilities that are subject to section 313 of title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA)."<sup>231</sup> USEPA "also requires the municipal storm sewer permittee to describe a program to address industrial dischargers that are covered under the municipal storm sewer permit."<sup>232</sup> In order to more closely follow USEPA's guidance, this Order also includes operating and closed landfills, and hazardous waste treatment, disposal, storage and recovery facilities.

**Section F.3.b.3.** (Mobile Businesses) requires each Copermittee to develop and implement a program to reduce the discharge of storm water pollutants from mobile businesses to the MEP and to prevent the discharge of non-storm water. Mobile businesses are service industries that travel to the customer to perform the service rather than the customer traveling to the business to receive the service. Examples of mobile businesses are power washing, mobile vehicle washers, carpet cleaners, port-a-potty servicing, pool and fountain cleaning, mobile pet groomers, and landscapers. These mobile services produce waste streams that could potentially impact water quality if appropriate BMPs are not implemented.

Order No. R9-2002-0001 also requires BMP implementation for certain mobile businesses (e.g., mobile vehicle washing and mobile carpet cleaning). These storm water requirements of Order No. R9-2009-0002 are not significantly different from the existing requirements. The Order specifies mobile businesses must prevent non storm water dry weather flows from entering the MS4 (see C.1.b) for special attention based on reports from the Copermittees that mobile businesses have been difficult to control with existing programs.

Mobile businesses present a unique difficulty in storm water regulation. Due to the transient nature of the business, the regular, effective practice of unannounced inspections is difficult to implement. Also, tracking these mobile businesses is difficult because they are often not permitted or licensed and their services cross Copermittee jurisdictions. Mobile businesses that operate within a municipality may be based in another municipality or even outside the Region. The Order takes into account the difficulties in regulating mobile businesses.

Because BMPs have been developed already, but communication with mobile businesses may be difficult, the Order provides broad flexibility to the Copermittees for developing a targeted program within the Commercial portion of each JRMP.

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<sup>230</sup> Regional Board, 2004. Order No. R9-2004-001; Riverside County MS4 Permit. Section H.2.b)(2); P. 25.

<sup>231</sup> Federal Register / Vol. 55, No. 222 / Friday, November 16, 1990 / Rules and Regulations. P. 48056.

<sup>232</sup> Ibid.

**Section F.3.b.4.** (Inspections) includes requirements for inspections of industrial and commercial sites/sources. The Order is similar to the Southern Riverside County MS4 permit<sup>233</sup> in requiring that inspections check for coverage under the General Industrial Permit; assessment of compliance with Copermittee ordinances and permits related to storm water and non-storm water runoff; assessment of BMP implementation, maintenance, and effectiveness; visual observations for non-storm water discharges, potential illicit connections, and potential discharge of pollutants in storm water runoff; and education and outreach on storm water pollution prevention. The Order also requires that inspections include review of BMP implementation plans if the site uses or is required to use such a plan, and the review of facility monitoring data if the site monitors its runoff. Order No. 2002-0001 did not contain requirements for inspection procedures.

Changes in the Order's requirements for inspection procedures mimic USEPA's guidance: "Site inspections should include (1) an evaluation of the pollution prevention plan and any other pertinent documents, and (2) an onsite visual inspection of the facility to evaluate the potential for discharges of contaminated storm water from the site and to assess the effectiveness of the pollution prevention plan."<sup>234</sup> In 1999, USEPA "recognized visual inspection as a baseline BMP for over 10 years," and "visual inspections are an effective way to identify a variety of problems. Correcting these problems can improve the water quality of the receiving water."<sup>235</sup> Most, if not all, of the Order's procedures are being conducted by the Copermittees that follow the Model Existing Development Program of the DAMP.

With the exception of restaurants, the Order allows Copermittees to establish inspection frequencies, as long as at least 20 percent of the sites are inspected annually. Restaurants are now required to be inspected annually. Inspection frequencies in the Order have been modified from Order No. R9-2002-0001. Order No. R9-2002-0001 specifies frequencies for inspecting industrial sites based on threat to water quality and requires high priority commercial sites to be inspected as needed. Copermittees have been inspecting industrial sites according to Order No. R9-2002-0001. The Copermittees have been inspecting restaurants annually as part of the County Health Department inspections. For other commercial sites, the Copermittees have been focusing annual activities on certain commercial sectors, such as automobiles, with the goal of inspecting every high priority site at least once during the permit term. This change is not considered significant because it should allow the Copermittees to continue existing programs.

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<sup>233</sup> Regional Board, 2004. Order No. R9-2004-001; Riverside County MS4 Permit. Section H.2.d)(3);

<sup>234</sup> USEPA, 1992. Guidance 833-8-92-002, section 6.3.3.4 "Inspection and Monitoring".

<sup>235</sup> USEPA, 1999. 832-F-99-046, "Storm Water Management Fact Sheet – Visual Inspection".

Reports from the Aliso Creek watershed Copermittees demonstrate that as-needed inspections for restaurants means at least annually. Restaurants have been found to present many threats to water quality and standard educational efforts are not effective because restaurants are subject to frequent management changes. For these reasons, the Order requires restaurants to be inspected annually.

An additional notification to the Regional Board regarding industrial sites has been added. Copermittees are required to annually notify the Regional Board of industrial sites that have suspected violations. This was added to enhance Regional Board and Permittee communication and coordination in regulating industrial sites.

**Section F.3.b.(6).** (Training and Education) requires training and education measures generally consistent with the existing storm water programs. One distinction is that the Order requires each Copermittee to notify the owner/operator of each inventoried industrial and commercial site/source of the BMP requirements applicable to the site/source. This requirement is necessary to ensure that the owners and operators of commercial sites stay informed of appropriate BMPs. This is especially important because sites may be inspected as little as once every five years.

**Section F.3.c.** (Residential Component)

The following legal authority applies to section F.3.c:

**Broad Legal Authority:** CWA sections 402(p)(3)(B)(ii-iii), CWC section 13377, and Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(B, C, E, and F) and 40 CFR 122.26(d)(2)(iv).

**Specific Legal Authority:** Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(A) provides that the Copermittee develop a proposed management program which includes "A description of structural and source control measures to reduce pollutants from runoff from commercial and residential areas that are discharged from the municipal storm sewer system that are to be implemented during the life of the permit, accompanied with an estimate of the expected reduction of pollutant loads and a proposed schedule for implementing such controls."

Federal NPDES regulation 40 CFR 122.44(d)(1)(i) requires NPDES permits to include limitations to "control all pollutants or pollutant parameters (either conventional, nonconventional, or toxic pollutants) which the Director determines are or may be discharged at a level which will cause, have reasonable potential to cause, or contribute to an excursion above any State water quality standard, including State narrative criteria for water quality."

**Section F.3.c** (Residential Component) moves the common interest areas / homeowners' association component and the requirement for proper management of used oil, toxic materials, and other household hazardous wastes to the residential section of the Order, since these requirements generally apply to residential areas. These changes improve the organization of the Order and have no net effect on its implementation and enforcement. Other requirements for prioritization, BMP implementation, and enforcement are consistent with Order No. R9-2002-01.

**Section F.3.d.** (Retrofitting Existing Development)

**Legal Authority:** The legal authority for retrofitting existing development is the same legal authority as that identified for municipal, industrial, commercial and residential development sections (See fact sheet discussion on those sections, F.3.a – c). In particular, CWA sections 402(p)(3)(B)(ii-iii), and CWC section 13377 give the Regional Board the legal authority to require retrofitting of existing development.

A section has been added to require the retrofit of existing development (see Finding D.3.i and Discussion). This section contains specific requirements for the retrofit process. Retrofitting existing development is a widespread practice across the United States. Successful retrofitting programs have been implemented in such diverse locations as Seattle, Washington<sup>236</sup>; Portland Oregon<sup>237</sup>, Santa Monica, California<sup>238</sup>; Kansas City, Kansas<sup>239</sup>; and Montgomery County, MD<sup>240</sup>. When appropriately applied as the draft Tentative Order, retrofitting existing development meets the maximum extent practicable standard.

Existing BMPs are not sufficient, as evidenced by 303(d) listings and exceedances of Water Quality Objectives from the Copermitees monitoring reports. More advanced BMPs, including the retrofitting of existing development with LID, are part of the iterative process. Previous permits limited the requirement of treatment control BMPs to new development and redevelopment. Based on the current rate of redevelopment compared to existing BMPs, the use of LID only on new and redevelopment will not adequately address current water quality problems, including downstream hydromodification. Retrofitting existing development is practicable for a municipality through a systematic evaluation, prioritization and implementation plan focused on impaired water bodies, pollutants of concern, areas of downstream hydromodification, feasibility and effective communication and cooperation with private property owners.

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<sup>236</sup> SEA Street, [http://www.seattle.gov/dpd/Planning/CityDesign/What\\_We\\_Do/Outreach/Folio/DPDS\\_008014.asp](http://www.seattle.gov/dpd/Planning/CityDesign/What_We_Do/Outreach/Folio/DPDS_008014.asp)

<sup>237</sup> Clean River Rewards, <http://www.portlandonline.com/BES/index.cfm?c=edeef>

<sup>238</sup> City of Santa Monica, Urban Runoff program,

<http://www.smgov.net/Departments/OSE/categories/content.aspx?id=4007>

<sup>239</sup> 10,000 Rain Gardens, <http://www.rainkc.com/>

<sup>240</sup> Rainscapes, <http://www.montgomerycountymd.gov/Content/DEP/Rainscapes/home.html>

#### F.4. Illicit Discharge Detection and Elimination

The following legal authority applies to section F.4:

**Broad Legal Authority:** CWA sections 402(p)(3)(B)(ii-iii), CWC section 13377, and Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(B, C, E, and F) and 40 CFR 122.26(d)(2)(iv).

**Specific Legal Authority:** Federal NPDES regulations 40 CFR 122.26(d)(2)(iv)(B) provides that the proposed management program “shall be based on a description of a program, including a schedule, to detect and remove (or require the discharger to the municipal storm sewer to obtain a separate NPDES permit for) illicit discharges and improper disposal into the storm sewer.”

Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(B)(1) provides that the Copermitttee include in its proposed management program “a program, including inspections, to implement and enforce an ordinance, orders or similar means to prevent illicit discharges to the municipal storm sewer system.”

Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(B)(2) provides that the Copermitttee include in its proposed management program “a description of procedures to conduct on-going field screening activities during the life of the permit, including areas or locations that will be evaluated by such field screens.”

Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(B)(3) provides that the Copermitttee include in its proposed management program “procedures to be followed to investigate portions of the separate storm sewer system that, based on the results of the field screen, or other appropriate information, indicate a reasonable potential of containing illicit discharges or other sources of non-storm water.”

Federal NPDES regulations 40 CFR 122.26(d)(2)(iv)(B)(4) provides that the Copermitttee include in its proposed management program “a description of procedures to prevent, contain, and respond to spills that may discharge into the municipal separate storm sewer.”

Federal NPDES regulations 40 CFR 122.26(d)(2)(iv)(B)(5) provides that the Copermitttee include in its proposed management program “a description of a program to promote, publicize, and facilitate public reporting of the presence of illicit discharges or water quality impacts associated with discharges from municipal separate storm sewers.”

Federal NPDES regulations 40 CFR 122.26(d)(2)(iv)(B)(6) provides that the Copermittee include in its proposed management program “a description of educational activities, public information activities, and other appropriate activities to facilitate the proper management and disposal of used oil and toxic materials.”

Federal NPDES regulations 40 CFR 122.26(d)(2)(iv)(B)(7) provides that the Copermittee include in its proposed management program “a description of controls to limit infiltration of seepage from municipal sanitary sewers to municipal separate storm sewer systems where necessary.”

**Section F.4.a-b.** (Prevent and Detect Illicit Discharges) requires the Copermittees to implement a program to actively seek and eliminate illicit connections and discharges (IC/ID). Additional wording has been added to this section to clarify and ensure that all appropriate (i.e., field personnel) municipal personnel are utilized in the program to observe and report these illicit discharges and connections. requirement has been added requiring submittal of the GIS layers of the MS4 map within 365 days of Order adoption.

**Section F.4.e** (Investigations) requires the Copermittees to conduct follow up investigations and inspect portions of the MS4 for illicit discharges and connections, based on dry weather effluent analytical monitoring results. The section also requires the Copermittees to establish criteria for triggering follow up investigations. Additional language has been added to this section to clarify the minimum level of effort and timeframes for follow up investigations when dry weather limitations are exceeded. Timely investigation and follow up of exceedances is necessary to identify sources of illicit discharges, especially since many of the discharges are transitory. The requirements for a 48-hour minimum response time when action levels are exceeded and for immediate response to obvious illicit discharges is necessary to ensure timely response by the Copermittees.

The Copermittees currently use action levels to facilitate the determination of when source investigation studies are warranted based on data from the dry-weather monitoring program. One set of criteria is based on regional averages of constituent concentrations that were developed based on randomly selected storm drains. Another set of criteria is based on trends at a particular station. These are reasonable criteria if decision-makers are properly trained and action levels set by the County are in compliance with dry weather non-storm water action levels as required in Section C. The ability of the local managers to interpret dry-weather monitoring data collected by the County has greatly improved in the last two years, and continued training is required in section F.4.i.

**Section F.4.h.** (Spill Response) requires each Copermittee to implement measures to prevent and respond to spills into its MS4. These requirements are similar to Order No. R9-2002-0001 and based on federal regulations at 40 CFR 122.26(d)(2)(iv)(B)(4). Those federal NPDES regulations clearly require that owners and operators of MS4s have procedures to prevent, contain, and respond to spills that may discharge into the municipal separate storm sewer.

The Tentative Order includes sewage and non-sewage spills in the requirement for spill prevention and response. Federal regulations clearly define sewage as an illicit discharge that must be addressed by municipalities (see Phase II Final Rule, p.68758). Sewage is an illicit discharge to the MS4 that threatens public health. As such, the Copermittees must implement measures to prevent sewage from entering the MS4 system and must respond to illicit discharges that have entered the system. This section has been revised to clarify that management measures and procedures must be implemented to prevent, respond to, and cleanup spills.

This same requirement was adopted by the Regional Board in Order No, 2002-0001, but was subsequently stayed by the State Board in Order WQO 2002-0014. The City of Mission Viejo challenged the requirement to prevent and respond to sewage spills on the grounds that since the sanitary sewer systems in the City are operated by three water districts already regulated by a NPDES permit from the Regional Board, this requirement would cause delayed spill responses as the City and agencies try to determine jurisdiction and responsibilities. The State Board found that the costs of this requirement did not constitute harm, but agreed that harm could ensue from potential response delay and confusion. Although the entire permit requirement was stayed, neither the State Board, nor the Petitioner discussed spills other than sewage.

Subsequently, the Copermittees and the local sewer agencies have developed mature relationships and implemented procedures for spill response and sewage spill response.<sup>241</sup> As a result, the concerns expressed by the State Water Board are no longer warranted. The Model Sewage Spill Response Procedure is outlined in the Copermittees' Proposed 2007 Drainage Area Management Plan (DAMP). According to the 2007 DAMP, regardless of where the spill originates, if the spill has entered or may enter the storm drain system, the Copermittees respond to assist with the cleanup and remediation of the area.

Only three Permittees (Laguna Beach, San Clemente, and San Juan Capistrano) own or operate their own sewage collection systems, yet all Copermittees implement the programs for spill response. For the Copermittees that do not own or operate sewage systems, the Regional Board expects that they will continue to respond appropriately to reported or identified spills to the MS4 system.

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<sup>241</sup> Sections 10.2.4 and 10.2.5 in the 2007 DAMP.

Section F.3.a.7 of the Tentative Order includes requirements for measures that must be taken to prevent sewage spills. Examples of measures being implemented by Copermittees include inspections of fats, oils, and grease management at restaurants. Other preventative measures can be implemented during routine planning efforts for new development and redevelopment projects. Similarly, building permit inspections should be used to verify the integrity of the sanitary and storm sewer infrastructure and ensure that cross-connections between the two are avoided.

## G. Watershed Runoff Management Programs

The following legal authority applies to section G:

**Broad Legal Authority:** CWA sections 402(p)(3)(B)(ii-iii), CWC section 13377, and Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(B, C, E, and F) and 40 CFR 122.26(d)(2)(iv).

**Specific Legal Authority:** Federal NPDES regulation 40 CFR 122.26(a)(3)(ii) states: “The Director may [...] issue distinct permits for appropriate categories of discharges [...] including, but not limited to [...] all discharges within a system that discharge to the same watershed [...]”

Federal NPDES regulations 40 CFR 122.26(a)(3)(v) states: “Permits for all or a portion of all discharges from large or medium municipal separate storm sewer systems that are issued on a system-wide, jurisdiction-wide, watershed, or other basis may specify different conditions relating to different discharges covered by the permit, including different management programs for different drainage areas [watersheds] which contribute storm water to the system.”

Federal NPDES regulation 40 CFR 122.26(a)(5) states: “The Director may issue permits for municipal separate storm sewers that are designated under paragraph (a)91)(v) of this section on a system-wide basis, a jurisdiction-wide basis, watershed basis, or other appropriate basis.”

Federal NPDES regulation 40 CFR 122.26(d)(2)(iv) states: “Proposed programs may impose controls on a system-wide basis, a watershed basis, a jurisdiction basis, or on individual outfalls.”

**Section G.** (Watershed Runoff Management Program) requires Copermittees to continue implementation of their watershed runoff management programs (WRMPs), however the implementation approach has changed. Order No. R9-2002-01 required watershed RMPs to include a collaborative strategy to abate the sources and reduce the discharges causing high priority water quality problems. This strategy was to guide Watershed Copermittee’s selection and implementation of Watershed Activities, so that the activities selected and implemented would remove that pollutant contribution responsible for the identified high priority water quality problem. Outcomes of these requirements were not able to demonstrate improvements to water quality.

Revised language in Order R9-2009-002 attempts to focus watershed copermittee's efforts and resources on addressing the highest water quality problems in the watershed by focusing attention on the health of the receiving water body and the most efficient use of the Watershed Copermittee's time and resources. Order R9-2009-002 requires the Watershed Copermittee's to follow a workplan approach towards assessing receiving water body conditions, prioritizing the Watershed Management Area's (WMAs) highest priority water quality problems, implementing effective BMPs, and measuring water quality improvement in the receiving water.

**G1.** (Lead Watershed Copermittee Identification) requires the watershed copermittee's to identify a Lead Watershed Copermittee for their WMA.

This requirement is the same to that found in Order 2002-01.

**G.2 a-f.** (Watershed Workplan) requires the Watershed Copermittees to develop and implement a collective watershed strategy to assess and prioritize the water quality problems within the watershed's receiving waters, identify and model sources of the highest priority water quality problem(s), develop a watershed-wide BMP implementation strategy to abate highest priority water quality problems, and a monitoring strategy to evaluate BMP effectiveness and changing water quality prioritization in the WMA. Development of a workplan rather than watershed activities will allow the Copermittees flexibility to iteratively modify their watershed strategy over the course of future planning years as priorities change.

**G.3.** Watershed Workplan Implementation – Watershed Copermittee's shall begin implementing the Watershed Workplan within 30-days of approval by the Regional Board Executive Officer. Since the Copermittees are already familiar with the watershed program requirements implementing the watershed workplan within 30-days of approval by the Regional Board Executive Officer is reasonable.

**G.4.** Copermittee Collaboration – Watershed Copermittees shall collaborate to develop and implement the Watershed Workplan. Watershed Copermittee collaboration shall include frequent regularly scheduled meetings.

This requirement is the same to that found in Order 2002-01.

**G.5.** Public Participation – Watershed Copermittees shall implement a watershed-specific public participation mechanism within each watershed. A required component of the watershed-specific public participation shall be a minimum 30-day public review of the Watershed Workplan. Opportunity for the public to review and comment on the Watershed Workplan must occur before the workplan is implemented.

This requirement is similar to that found in Order 2002-01.

**G.6.** Watershed Workplan Review and Updates – Watershed Copermittees shall

review and update the Watershed Workplan annually to identify need changes to the prioritized water quality problem(s) listed in the workplan. All updates to the Watershed Workplan shall be presented during an Annual Watershed Review Meeting. Annual Watershed Review Meetings shall be conducted by the Watershed Copermittees, open to the public and adequately noticed, and occur once every calendar year. Individual Watershed Copermittees shall also review and modify their jurisdictional programs and JRMP Annual Reports, as necessary, so that they are consistent with the updated Watershed Workplan.

This section requires the copermittee's to review and update their workplan each year to incorporate changing priorities and evolving watershed strategies. This requirement is meant to take the place of Order No. 2002-01 requirement to submit Watershed Annual Reports.

**G.7.** Aliso Creek Watershed RMP Provisions. This requirement is the same to that found in Order 2002-01.

## H. Fiscal Analysis

The following legal authority applies to section H:

**Broad Legal Authority:** CWA sections 402(p)(3)(B)(ii-iii), CWC section 13377, and Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(B, C, E, and F) and 40 CFR 122.26(d)(2)(iv).

**Specific Legal Authority:** Federal NPDES regulation 40 CFR 122.26(d)(2)(vi) provides that “[The Copermittee must submit] for each fiscal year to be covered by the permit, a fiscal analysis of the necessary capital and operation and maintenance expenditures necessary to accomplish the activities of the programs under paragraphs (d)(2)(iii) and (iv) of this section. Such analysis shall include a description of the source of funds that are proposed to meet the necessary expenditures, including legal restrictions on the use of such funds.”

**Section H** has been expanded in order to develop more useful and meaningful fiscal reporting. The Copermittees have identified a need to assess the current fiscal reporting process and have proposed to prepare a fiscal reporting strategy to better define the expenditure and budget line items included in the fiscal reports.<sup>242</sup> The Regional Board agrees that the process should be improved. A revamped fiscal reporting strategy will provide the Regional Board and the Copermittees with better capability to manage performance of the programs.

The Copermittees’ effort is expected to provide standardization of reporting so that figures between Copermittees are comparable, which is one of many types of information which can be used by the Regional Board to better understand Copermittee program implementation. Standardization and comparison of fiscal analysis reporting is supported by the State Board funded NPDES Stormwater Cost Survey, which finds that “standards for reporting costs and stormwater activities are needed to allow accurate cost comparisons to be made between stormwater activities.”<sup>243</sup> This document also provides guidance regarding categorization of expenditures for tracking and reporting.

The Order establishes criterion for when Copermittees must add narrative evaluations to the tables. This will address some of the variability in reporting and will provide the public and Regional Board with improved understanding of how resources are shifted in response to annual assessments. This will also help ensure that projected annual costs adequately reflect planned program modifications described in the annual reports.

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<sup>242</sup> Orange County Storm Water Copermittees. 2006. Report of Waste Discharge (San Diego Region), section 2.3.4.

<sup>243</sup> Currier, et al., 2005. *NPDES Storm Water Cost Survey Final Report*. Prepared for California State Water Resources Control Board by Office of Water Programs, California State University, Sacramento. P. 63.

The Regional Board has chosen not to require a description of fiscal benefits realized from implementation of the storm water protection program. This is a recommendation from the National Association of Flood and Stormwater Management Agencies.<sup>244</sup> For instance, the current fiscal assessment does not address city-wide fiscal benefits of protection (e.g., public health, tourism, property values, economic activity, beneficial uses, etc.), even though many costs currently reported to the Regional Board are for related activities. This type of assessment may help Copermittees improve the allocation of resources and it may help the Copermittees secure adequate funding for the program. Finally, it will provide a clearer picture of the storm water and non-storm water runoff program to the public and Regional Board. However, qualitative assessments could be overly subjective and most Copermittees likely lack the ability to provide accurate quantitative assessments. The Regional Board encourages Copermittees to consider means for conducting assessments of fiscal benefits derived from the programs. Such assessments could be conducted on a regional scale similar to studies of program costs conducted by the State Water Board<sup>245</sup> or community indicators by the Community Indicators Project.<sup>246</sup>

Currently, each Orange County municipality's annual report includes a table based on a template developed by the principal Copermittee. The template was meant to facilitate reporting consistency among the 13 Copermittees. The annual report table contains estimates of spending during the reported period and estimates of the next year's spending. The tables separate capital costs from operations and maintenance costs and are arranged by program element. In addition to the tables, each municipality reports on the sources of the funds, (e.g., general fund, special fee, grants, etc.) to demonstrate that resources have been secured. There is very heavy reliance on general funds.

Review of the fiscal analysis tables included in the annual reports has not been as straightforward as expected, and the value of the information is moderate. Generally, questions regarding the financial reporting process of individual Permittees have been adequately resolved during meetings to discuss the annual reports. Based on those meetings, the Regional Board staff has found that cities do not use consistent methods to fill in the tables because they use different accounting and budgeting processes, and certain stormwater program expenditures are not easily categorized into the table formats. Furthermore, stormwater permit-related activities involve several departments, which makes it difficult for the storm water manager to gather and decipher actual costs.

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<sup>244</sup> National Association of Flood and Stormwater Management Agencies. 2006. *Guidance for Municipal Stormwater Funding*. Prepared under a grant provided by the USEPA.

<sup>245</sup> State Water Board, 2005. NPDES Stormwater Cost Survey.

<sup>246</sup> Orange County 2006 Community Indicators Project. 2006. Sponsored by the County of Orange, the Orange County Business Council, and the Children and Families Commission of Orange County. Available on-line at [www.oc.ca.gov/ceocommunity.asp](http://www.oc.ca.gov/ceocommunity.asp)

These issues also make it difficult for the Copermittees to accurately compartmentalize expenditures within the format. The Copermittees are aware of the reporting discrepancies and have planned to modify the reporting template and guidelines. As a result, the current financial reporting provides estimates at best and cannot be reliably used to compare program implementation among most municipalities.

## I. Total Maximum Daily Loads

This section has been added to address any TMDLs that are adopted by the Regional Board. See Finding E.10 and Discussion.

## J. Program Effectiveness Component

The following legal authority applies to section J:

**Broad Legal Authority:** CWA sections 402(p)(3)(B)(ii-iii), CWC section 13377, and Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(B, C, E, and F) and 40 CFR 122.26(d)(2)(iv).

**Specific Legal Authority:** Federal NPDES regulation 40 CFR 122.26(d)(2)(v) provides that the Copermittees must include “Estimated reductions in loadings of pollutants from discharges of municipal storm sewer constituents from municipal storm sewer systems expected as the result of the municipal storm water quality management program. The assessment shall also identify known impacts of storm water controls on ground water.” Under Federal NPDES regulation 40 CFR 122.42(c) applicants must provide annual reports on the progress of their storm water management programs.

**Section J.1** (jurisdictional program effectiveness assessments) of the Order requires the Copermittees to assess the effectiveness of the implementation of their jurisdictional programs and activities. The section requires that the effectiveness strategy of the programs be designed around four classes of objectives and that the results are used to direct program modifications. The section does not specify the assessments to be conducted, but does require that assessment measures conform to the guidance developed by the California Storm Water Quality Association (CASQA). The Orange County Storm Water Program is supportive of the CASQA effort, and use of CASQA assessment techniques is consistent with the methodology proposed in the ROWD.<sup>247 248</sup>

The section is also consistent with the plan of the Copermittees to improve the efficacy of the assessment process.<sup>249</sup> The Copermittees currently report a series of metrics for spatial and temporal assessments across the County. The Program Effectiveness requirements of the Order provide the Copermittees with the framework for improving their standard assessment metrics.

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<sup>247</sup> The structure of planned program effectiveness is proposed in section 1.2.2 of the 2007 ROWD. The ROWD then identifies current and potential assessment outcome levels within each major program chapter (e.g., new development, construction, etc.).

<sup>248</sup> CASQA 2007. Municipal Stormwater Program Effectiveness Assessment Guidance.

<sup>249</sup> Orange County Storm Water Copermittees. 2006. Report of Waste Discharge (San Diego Region), section 3.3.2.

The Order provides focus to the assessment methodology by requiring that impaired waterbodies and environmentally-sensitive areas are specifically addressed. In this way, the high priority water quality issues will receive a high level of attention, consistent with USEPA and CASQA guidance for prioritization. The Order provides flexibility to establish the actual metrics for each assessment outcome level. The Order also provides the Copermittees flexibility to develop objectives for the general program components based on the CASQA guidance, as is proposed in the ROWD and DAMP.

In addition, Section J.1 requires that an effectiveness assessment strategy is developed and implemented in response to actions taken by a Copermittee to comply with Section A.3 (Prohibitions and Receiving Water Limitations) of the Order. Section A.3 outlines the procedure for addressing instances when jurisdictional programs implement control actions in response to determinations that discharges from the MS4 are causing or contributing to violations of water quality standards.

This section includes a requirement for the Copermittees to develop and implement a workplan identifying and addressing the highest priority issues in the watershed. The workplan requirement in the JRMP section has been added to ensure Copermittees are allocating resources and effort to address priority problems and pollutants identified in the watershed analysis. This section has been added to ensure Copermittees use the annual watershed water quality assessment to assess, adjust and tailor their JRMP programs.

**Section J.2** (program modification) of the Order requires the Copermittees to improve jurisdictional activities or BMPs when they are found to be ineffective or when water quality impairments are continuing. This requirement fulfills the purpose of conducting effectiveness assessments – to improve and refine the Copermittees' programs. The requirement is consistent with USEPA's Phase II regulations, which state: "If the permittee determines that its original combination of BMPs are not adequate to achieve the objectives of the municipal program, the MS4 should revise its program to implement BMPs that are adequate [...]."<sup>250</sup>

**Section J.3** (reporting) of the Order describes the information required to be submitted in jurisdictional annual reports pertaining to program effectiveness assessments, review, and response. The reporting will demonstrate whether Copermittees have appropriately responded to the effectiveness assessments.

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<sup>250</sup> Federal Register / Vol. 64, No. 235 / Wednesday, December 8, 1999 / Rules and Regulations. P. 68762.

## K. Reporting

The following legal authority applies to section K:

**Broad Legal Authority:** CWA sections 402(p)(3)(B)(ii-iii), CWC section 13377, and Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(B, C, E, and F) and 40 CFR 122.26(d)(2)(iv).

**Specific Legal Authority:** Federal NPDES regulation 40 CFR 122.42(c) requires that “The operator of a large or medium municipal separate storm sewer system or a municipal separate storm sewer system that has been designated by the director under § 122.26(a)(1)(v) of this part must submit an annual report by the anniversary of the date of the issuance of the permit for such system. The report shall include: (1) The status of implementing the components of the storm water management program that are established as permit conditions; (2) Proposed changes to the storm water management program that are established as permit condition. Such proposed changes shall be consistent with § 122.26(d)(2)(iii) of this part; (3) Revisions, if necessary, to the assessment of controls and the fiscal analysis reported in the permit application under § 122.26(d)(2)(iv) and (d)(2)(v) of this part; (4) A summary of data, including monitoring data, that is accumulated throughout the reporting year; (5) Annual expenditures and budget for year following each annual report; (6) A summary describing the number and nature of enforcement actions, inspections, and public education programs; (7) Identification of water quality improvements or degradation.”

California Water Code section 13267 provides that “the Regional Board may require than any person who has discharged [...] shall furnish, under penalty of perjury, technical or monitoring reports which the regional board requires.”

**Section K.1** (Jurisdictional Runoff Management Plans and Watershed Workplans) outlines the process and due dates for submitting plans. The information to be included in the Jurisdictional and Watershed plans must be sufficient to demonstrate the capacity to implement the requirements of Section G and Section J, respectively, of the Order.

Two general modifications from Order No. R9-2002-0001 result in reduced reporting effort by the Copermittees. First, in many cases, the requirements of the Order should not necessitate a complete rewrite of the plans, as was basically done in 2003. Only sections of the Order which are new or have been significantly changed should warrant rewriting of plans' sections. Second, the WRMP annual reporting is no longer due in January. Annual reporting will occur during a watershed review meeting conducted some time during the calendar year. The Regional Board plans to work with the Copermittees and provide guidance regarding where JRMPs must be updated in accordance with the Order. This will help ensure that rewriting, reporting, and review efforts are minimized.

The reporting requirements include two significant additions. The first addition is a summary reporting checklist which has been added to the reporting requirements. The checklist has been added to ensure that Copermittees evaluate and demonstrate compliance with all requirements in the Order.

**Section K.2** (Other Required Reports) include requirements for information to be included in the SSMP update and the Report of Waste Discharge for the next permit reissuance. The Order requires submittal of a ROWD prior to the expiration of the Order. The section identifies the minimum information to be included in the ROWD, based on USEPA's May 17, 1996 guidance "Interpretive Policy Memorandum on Reapplication Requirements for Municipal Separate Storm Sewer Systems."

**Section K.3** (Annual Reports) outlines the process and roles of the Copermittees for developing and submitting the JRMP annual report. Information to be included in the annual reports is described in Section K.3.a.3. The due dates have been changed. The JRMP is due approximately six weeks earlier than under Order No. R9-2002-0001. This change is necessary because the existing timelines prevented efficient response by the Copermittees to comments from the Regional Board and the Copermittees' own review. However, the Copermittees may propose alternate reporting criteria and schedules, as part of their updated JRMP, for the Executive Officer's acceptance.

Each Copermittee is required to maintain records demonstrating that Permit activity requirements have been met, which allows the Regional Board to confirm compliance as needed, such as via inspections, program audits, or requests for information per California Water Code Sections 13225 and 13267.

Reporting requirements in the Order focus on results and responses to the effectiveness assessments conducted by the Copermittees. This will allow the Regional Board to determine how appropriately municipalities adapt and tailor their programs to findings from activities and monitoring results. Assessment of progress toward meeting the objectives is possible because the data collected by the Copermittees under Order No. R9-2002-0001 can be used to establish baseline conditions. Compared to activity-based reporting, this will greatly enhance the ability of the Regional Board, Copermittees, and the public to determine whether the programs are successful.

The Order reduces the amount of program activity-based reporting from Order No. R9-2002-0001. Under the CASQA assessment model, activity-based reporting includes primarily outcomes that document compliance with permit requirements (Level 1 outcomes), rather than being indicators of the impact of activity implementation.<sup>251</sup> This approach is consistent with guidance from the USEPA, which notes that annual reports should highlight program effectiveness as well as describing activities.<sup>252</sup> This emphasis is also consistent with recommendations from the National Academy of Public Administration in its report to USEPA on Evaluating Environmental Progress, which suggest that reviewing activities data provides limited value when evaluating the effectiveness of programs and resulting environmental conditions.<sup>253</sup>

The Order maintains some reporting requirements for certain activity-based outcomes. These are mostly focused on activities that establish or revise municipal processes related to storm water runoff and management. The processes required by the Order are especially important in situations where sustaining water quality improvements may require activities that extend beyond the five-year period of the NPDES permit.

In addition, the Order maintains many activity-based reporting requirements related to enforcement of local requirements, with an emphasis on the results from such activities. This is intended to facilitate review of the contributions that inspection and enforcement activities have made toward meeting the goals of the Order. Reporting of these types of activities is supported by recommendations from the National Academy of Public Administration in its report to the USEPA: *Evaluating Environmental Progress: How EPA and the States Can Improve the Quality of Enforcement and Compliance Information* (June 2001).<sup>254</sup> Other activity-based reporting has been reduced to selected items based on consideration of program priorities.

Another source of prioritization for activity-based reporting is the *Storm Water Panel Recommendations to the California State Water Resources Control Board The Feasibility of Numeric Effluent Limits Applicable to Discharges of Storm Water Associated with Municipal, Industrial and Construction Activities* (June 19, 2006). In particular, the panel highlighted needs to improve the design, maintenance, and inspections of best management practices.

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<sup>251</sup> Level 1 outcomes under the CASQA guidance include documentation that required activities have been implemented.

<sup>252</sup> USEPA 2007. *MS4 Program Evaluation Guidance*. USEPA Office of Wastewater Management EPA-833-R-07-003. January 2007 field test version.

<sup>253</sup> National Academy of Public Administration 2001. *Evaluating Environmental Progress: How EPA and the States Can Improve the Quality of Enforcement and Compliance Information* (June 2001). <http://www.napawash.org>

<sup>254</sup> The National Academy of Public Administration report is available on-line at <http://www.napawash.org>

## L. Modification of Programs

The following legal authority applies to section L:

**Broad Legal Authority:** CWA sections 402(p)(3)(B)(ii-iii), CWC section 13377, and Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(B, C, E, and F) and 40 CFR 122.26(d)(2)(iv).

**Section L** of the Order provides a process for the Copermittees to modify their runoff management programs. This process will be useful so that the Copermittees can continue to refine and improve their programs based on the findings of their annual program effectiveness assessments. The process allows for minor modifications to the Copermittees' programs where the Copermittees can exhibit that the modifications meet or exceed existing legal requirements under the Order. Such a process avoids lengthy and time consuming formal approvals of proposed modifications before the Regional Board, while still ensuring compliance with applicable legal standards and the Order. The process included in the Order is based on a process utilized by the San Francisco Bay Area Regional Water Quality Control Board in their MS4 permit for Alameda County.<sup>255</sup>

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<sup>255</sup> San Francisco Bay Area Regional Water Quality Control Board, 2003. Order No. R2-2003-0021. P. 45.

**M. Principal Permittee Responsibilities**

The following legal authority applies to section M:

**Broad Legal Authority:** CWA sections 402(p)(3)(B)(ii-iii), CWC section 13377, and Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(B, C, E, and F) and 40 CFR 122.26(d)(2)(iv).

**Specific Legal Authority:** Federal NPDES regulation 40 CFR 122.26(a)(3)(iii)(C) provides that "A regional authority may be responsible for submitting a permit application."

Federal NPDES regulation 40 CFR 122.26(d)(2)(i)(D) provides that "[The Copermitttee must demonstrate that it can control] through interagency agreements among coapplicants the contribution of pollutants from one portion of the municipal system to another portion of the municipal system."

No significant changes were made to this section.

**N. Receiving Waters Monitoring and Reporting**

**The following legal authority applies to section N:**

**Broad Legal Authority:** CWA sections 402, 402(p)(3)(B)(ii-iii), CWC section 13377, and Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(B, C, E, and F) and 40 CFR 122.26(d)(2)(iv).

**Specific Legal Authority:** Copermitees must conduct a comprehensive monitoring program as required under Federal NPDES regulations 40 CFR 122.26(d)(2)(iii) and 122.44.

See section T of this Fact Sheet/Technical Report for a discussion of changes to the Receiving Waters Monitoring and Reporting Program.

## O. Standard Provisions, Reporting Requirements, And Notifications

The following legal authority applies to section O:

**Broad Legal Authority:** CWA sections 402(p)(3)(B)(ii-iii), CWC section 13377, and Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(B, C, E, and F) and 40 CFR 122.26(d)(2)(iv).

**Specific Legal Authority:** Standard provisions, reporting requirements, and notifications are consistent to all NPDES permits and are generally found in Federal NPDES regulation 40 CFR 122.41.

**Section L.2** of the Order has been changed to remove the statement that all plans and reports submitted in compliance with the Order are an enforceable part of the Order. This statement has been removed because it is unnecessary. The Order itself contains sufficient detailed requirements to ensure that compliance with discharge prohibitions, receiving water limitations, non-storm water action levels and the narrative standard of MEP for storm water are achieved. Implementation by the Copermittees of programs in compliance with the Order's requirements, prohibitions, and receiving water limitations is the pertinent compliance standard to be used under the Order, as opposed to assessing compliance by reviewing the Copermittees' implementation of their plans alone.

Rather than being substantive components of the Order itself, the Copermittees' management plans are simply descriptions of their runoff management programs required under the Order. These plans serve as procedural correspondence which guides program implementation and aids the Copermittees and Regional Board in tracking implementation of the programs. In this manner, the plans are not functional equivalents of the Order. For these reasons, the Copermittees' runoff management plans need not be an enforceable part of the Order.

**P. Attachment A – Basin Plan Prohibitions**

The following legal authority applies to Attachment A:

**Broad Legal Authority:** CWA sections 402(p)(3)(B)(ii-iii), CWC section 13377, and Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(B, C, E, and F) and 40 CFR 122.26(d)(2)(iv).

**Specific Legal Authority:** California Water Code Section 13243 provides that “A regional board, in a water quality control plan or in waste discharge requirements, may specify certain conditions or areas where the discharge of waste, or certain types of waste, will not be permitted.”

California Water Code Section 13263(a) provides that waste discharge requirements prescribed by the SDRWQCB implement the Basin Plan.

No significant changes were made to this attachment.

**Q. Attachment B – Standard Provisions**

The following legal authority applies to Attachment B:

**Broad Legal Authority:** CWA sections 402(p)(3)(B)(ii-iii), CWC section 13377, and Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(B, C, E, and F) and 40 CFR 122.26(d)(2)(iv).

**Specific Legal Authority:** Standard provisions, reporting requirements, and notifications are consistent to all NPDES permits and are generally found in Federal NPDES regulation 40 CFR 122.41.

Attachment B includes Standard Provisions which have been developed by the State Board. These Standard Provisions ensure that NPDES permits are consistent and compatible with USEPA's federal regulations. Some Standard Provisions sections specific to publicly owned sewage treatment works are not included in Attachment B.

## R. Attachment C – Definitions

The following legal authority applies to Attachment C:

**Broad Legal Authority:** CWA sections 402(p)(3)(B)(ii-iii), CWC section 13377, and Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(B, C, E, and F) and 40 CFR 122.26(d)(2)(iv).

Attachment C contains definitions for terms found in the Order. In addition, definitions for terms previously defined in Order No. R9-2002-0001 Attachment D, but which are not found in the current Order, have been deleted.

An additional section which includes acronyms and abbreviations has been added. This is to ensure clarity and prevent confusion of terms. Definitions have been added for new terms used in the permit to provide a clear understanding of their meaning and use.

**S. Attachment D – Summary of Submittals**

The following legal authority applies to Attachment D:

**Broad Legal Authority:** CWA sections 402(p)(3)(B)(ii-iii), CWC section 13377, 13383, and Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(B, C, E, and F) and 40 CFR 122.26(d)(2)(iv) and 122.44(i).

**Specific Legal Authority:** Federal NPDES regulation 40 CFR 122.42(c) requires that “The operator of a large or medium municipal separate storm sewer system or a municipal separate storm sewer system that has been designated by the director under § 122.26(a)(1)(v) of this part must submit an annual report by the anniversary of the date of the issuance of the permit for such system. The report shall include: (1) The status of implementing the components of the storm water management program that are established as permit conditions; (2) Proposed changes to the storm water management program that are established as permit condition. Such proposed changes shall be consistent with § 122.26(d)(2)(iii) of this part; (3) Revisions, if necessary, to the assessment of controls and the fiscal analysis reported in the permit application under § 122.26(d)(2)(iv) and (d)(2)(v) of this part; (4) A summary of data, including monitoring data, that is accumulated throughout the reporting year; (5) Annual expenditures and budget for year following each annual report; (6) A summary describing the number and nature of enforcement actions, inspections, and public education programs; (7) Identification of water quality improvements or degradation.”

California Water Code section 13267 provides that “the regional board may require than any person who has discharged [...] shall furnish, under penalty of perjury, technical or monitoring reports which the regional board requires.”

Attachment D to the Order provides a table summary of scheduled submittals required by the Order. Unscheduled submittals are no longer added to the table, since there is no proper due date for such submittals. A task summary has not been created for the Order, since the previous task summary was found to be redundant, repeating information found in the submittal summary and elsewhere in the Order.

A Jurisdictional Runoff Management Program (JRMP) Annual Report Checklist has been added to the reporting requirements. This addition is to determine and ensure that all requirements of the permit are being met. A Jurisdictional Runoff Management Program (JRMP) Annual Report Checklist has been added to the reporting requirements. This addition is to determine and ensure that all requirements of the permit are being met.

## T. Attachment E - Receiving Waters and MS4 Discharge Monitoring and Reporting Program

The following legal authority applies to the Receiving Waters and MS4 Discharge Monitoring and Reporting Program:

**Broad Legal Authority:** CWA sections 402, 402(p)(3)(B)(ii-iii), CWC section 13377, and Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(B, C, E, and F) and 40 CFR 122.26(d)(2)(iv), 122.44 and 122.45.

**Specific Legal Authority:** Copermittees must conduct a comprehensive monitoring program as required under Federal NPDES regulations 40 CFR 122.26(d)(2)(iii).

Federal NPDES regulation 40 CFR 122.42(c) requires that "The operator of a large or medium municipal separate storm sewer system or a municipal separate storm sewer system that has been designated by the director under § 122.26(a)(1)(v) of this part must submit an annual report by the anniversary of the date of the issuance of the permit for such system. The report shall include: (1) The status of implementing the components of the storm water management program that are established as permit conditions; (2) Proposed changes to the storm water management program that are established as permit condition. Such proposed changes shall be consistent with § 122.26(d)(2)(iii) of this part; (3) Revisions, if necessary, to the assessment of controls and the fiscal analysis reported in the permit application under § 122.26(d)(2)(iv) and (d)(2)(v) of this part; (4) A summary of data, including monitoring data, that is accumulated throughout the reporting year; (5) Annual expenditures and budget for year following each annual report; (6) A summary describing the number and nature of enforcement actions, inspections, and public education programs; (7) Identification of water quality improvements or degradation."

California Water Code section 13267 provides that "the regional board may require than any person who has discharged [...] shall furnish, under penalty of perjury, technical or monitoring reports which the regional board requires."

### 1. Purpose

According to USEPA, the benefits of sampling data include, but are not limited to:

1. Providing a means for evaluating the environmental risk of storm water discharges by identifying types and amounts of pollutants present;
2. Determining the relative potential for storm water discharges to contribute to water quality impacts or water quality standard violations;
3. Identifying potential sources of pollutants; and

4. Eliminating or controlling identified sources more specifically through permit conditions.<sup>256</sup>

Equally important, monitoring programs are an essential link in the improvement of storm water management efforts. Data collected from monitoring programs can be assessed to determine the effectiveness of management programs and practices, which is vital for the success of the iterative approach used to meet the MEP standard for storm water. Specifically, when data indicates that a particular BMP or program component is not effective, improved efforts can be selected and implemented. Also, when water quality data indicate that water quality standards or objectives are being exceeded, particular pollutants, sources, and drainage areas can be identified and targeted for specific management efforts.

Considering the benefits described above, the Receiving Waters Monitoring and Reporting Program (MRP) has been designed to determine impacts to receiving water quality and beneficial uses from storm water runoff and to use the results to refine the Copermittees' storm water runoff management programs for the reduction of storm water pollutant loadings to the MEP. For non-storm water discharges, monitoring has been designed for the identification of prohibited illicit discharges and to determine appropriate actions to take in response to dry weather non-storm water action levels. Additionally, the results from dry weather non-storm water monitoring can be used to evaluate exempted non-storm water discharges as a source or conveyance of pollutants. The primary goals of the MRP include:

1. Assess compliance with Order No. R9-2009-0002;
2. Measure and improve the effectiveness of the Copermittees' runoff management programs;
3. Assess the chemical, physical, and biological impacts of receiving waters from MS4 discharges;
4. Characterize storm water runoff discharges;
5. Identify sources of specific pollutants;
6. Prioritize drainage and sub-drainage areas that need management actions;
7. Detect and eliminate illicit discharges and illicit connections to the MS4;
8. Assess the overall health of receiving waters; and
9. Provide information to implement required BMP improvements

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<sup>256</sup> USEPA, 1992. NPDES Storm Water Sampling Guidance Document. EPA/833-B-92-001.

Each of the components of the MRP is necessary to meet the objectives listed above. In addition, the MRP has been designed in accordance with the guidance provided by the Southern California Stormwater Monitoring Coalition's Model Monitoring Technical Committee in its August 2004 "Model Monitoring Program for Municipal Separate Storm Sewer Systems in Southern California." This guidance document was developed in response to Senate Bill 72 (Kuehl), which addressed the standardization of sampling and analysis protocols in municipal stormwater monitoring programs. The technical committee which developed the guidance included representatives from Southern California Regional Water Quality Control Boards (including San Diego), municipal storm water Permittees (including the County of Orange), Heal the Bay, and the Southern California Coastal Water Research Project.

As its title suggests, the guidance essentially developed a model municipal storm water monitoring program for use in Southern California. The model program is structured around five fundamental management questions, outlined below. The MRP is designed as an iterative step towards ensuring that the Copermittees' monitoring program can fully answer each of the five management questions.

1. Are conditions in receiving waters protective, or likely to be protective, of beneficial uses?
2. What is the extent and magnitude of the current or potential receiving water problems?
3. What is the relative storm water runoff contribution to the receiving water problem(s)?
4. What are the sources of storm water runoff that contribute to receiving water problem(s)?
5. Are conditions in receiving waters getting better or worse?

The justifications for each component of the monitoring program are discussed below.

## **2. Monitoring Program**

### Mass Loading Station Monitoring

The intent of current mass loading monitoring as conducted by the Copermittees is to use water chemistry data from storm events and dry weather flows to calculate pollutant loads and to assess water quality with respect to applicable acute and chronic toxicity criteria from the California Toxics Rule (CTR).<sup>257</sup>

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<sup>257</sup> Orange County Storm Water Permittees. 2006. Report of Waste Discharge, section C-11.3.2.

**Section II.A.1** of the MRP requires mass loading and toxicity monitoring at monitoring stations located at the bottom of major watersheds within Orange County. The mass loading monitoring will provide data representing event mean concentrations of pollutants, total pollutant loadings, and toxicity conditions from specific drainage areas. Mass loading monitoring stations are recommended by the Model Monitoring Technical Committee in order to answer management questions 1, 2, and 5.<sup>258</sup> The stations are also expected to contribute towards meeting MRP goals 1, 2, 3, 4, 6, and 8. The locations of the mass loading monitoring stations are not changed from Order No. R9-2002-0001. However, the frequency of monitoring has been changed, and some revisions to the constituents have been made.

The frequency of mass loading monitoring in Order No. 2009-0002 has been modified to include two wet and two dry weather events. Currently three wet events have been targeted (though usually two or less have been sampled). This modification is not expected to affect long-term trend analyses for storm events since the monitoring to date has been sporadic.<sup>259</sup> Dry weather monitoring is necessary because dry-weather flows in these watersheds are now perennial and changes have been made to the Order for non-storm water discharges. The addition of dry weather monitoring provides a more comprehensive temporal view of the watershed, which will improve the Copermittees' ability to understand the dynamics of annual pollutant loading.

In addition, the required constituents include some revisions to Order No. R9-2002-0001. The changes are made to be compatible with the federal NPDES regulations and in response to data collected during the current permit term. The changes include:

1. All events must now include Biological Oxygen Demand, 5-day Chemical Oxygen Demand, Total Organic Carbon, Dissolved Organic Carbon. These are specifically identified in 40 CFR 122.26(d)(2)(iii)(B), but were omitted from Order No. R9-2002-01.
2. Carbamate and Pyrethroid pesticides must initially be monitored in Prima Deshecha and Segunda Deshecha watersheds. If carbamate and/or pyrethroid pesticides are found to correlate with observed acute or chronic toxicity, then sampling and analysis for that pesticide must be added to all stations displaying toxicity. The Copermittees suggest adding these pesticides to Prima and Segunda Deshecha watersheds in an attempt to find a cause for observed persistent toxicity at those stations.<sup>260</sup> If these pesticides are found in these watersheds, then they will likely be present in the other developed watersheds of the Region.

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<sup>258</sup> Model Monitoring Technical Committee, 2004. Model Monitoring Program for Municipal Separate Storm Sewer Systems in Southern California. Chapter 5.

<sup>259</sup> Mass loading monitoring has been hampered by technical difficulties. For instance, only four of six stations were operational during the 2004-05 season, and only three stations were operational during 2002-04 season.

<sup>260</sup> Orange County Storm Water Permittees. 2006. Report of Waste Discharge, section C-11.4.1.

3. Impaired water body pollutants. Specific pollutants have been added in response to the U.S. Environmental Protection Agency approval of California's 2004-2006 Section 303(d) Water Quality Limited Waters List. Monitoring for these pollutants is specific to the watershed in which the impairment is located.
4. Dimethoate monitoring has been eliminated because data collected to date has not observed any significant levels at the mass emissions stations.
5. A requirement to collect a grab sample for total petroleum hydrocarbons whenever a sheen is observed has been added at the suggestion of the County of Orange.

### Bioassessment

**Section II.A.2** of the MRP requires the Copermitttees to conduct bioassessment monitoring. Bioassessment monitoring is a cost-effective tool that measures the effects of water quality over time.<sup>261</sup> It is an important indicator of stream health and impacts from storm water and non-storm water runoff. It can detect impacts that chemical and toxicity monitoring cannot. USEPA encourages permitting authorities to consider requiring biological monitoring methods to fully characterize the nature and extent of impacts from runoff.<sup>262</sup> Therefore, the Regional Board commonly requires bioassessment monitoring in MS4 and other types of discharge permits.

Bioassessment is the direct measurement of the biological condition, physical condition, and attainment of beneficial uses of receiving waters (typically using benthic macroinvertebrates, periphyton, and fish). Bioassessment monitoring integrates the effects of both water chemistry and physical habitat impacts (e.g., sedimentation or erosion) of various discharges on the biological community native to the receiving waters. Moreover, bioassessment is a direct measurement of the impact of cumulative, sub-lethal doses of pollutants that may be below reasonable water chemistry detection limits, but that still have biological affects.

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<sup>261</sup> California Department of Fish and Game, 2002. California Regional Water Quality Control Board, San Diego Region 2002 Biological Assessment Report: Results of May 2001 Reference Site Study and Preliminary Index of Biotic Integrity.

<sup>262</sup> USEPA, 1999. Rapid Bioassessment Protocols for Use in Wadeable Streams and Rivers. EPA 841-B-99-002. P. 2-5.

Because bioassessment focuses on communities of living organisms as integrators of cumulative impacts resulting from water quality or habitat degradation, it defines the ecological risks resulting from storm water and non-storm water MS4 runoff. Bioassessment not only identifies that an impact has occurred, but also measures the effect of the impact and tracks recovery when control or restoration measures have been taken. These features make bioassessment a powerful tool to assess compliance, evaluate the effectiveness of BMPs, and to track both short and long-term trends (MRP goals 1,2,3, and 8). Bioassessment can also help answer management questions 1, 2, and 5.

The Order also identifies the most current established protocol to be used in identifying bioassessment reference stations. The protocol referenced in the Order is specified because it provides a qualitative and repeatable method for identifying reference sites. Moreover, the protocol is well established, since it has been peer reviewed and published.

The Order includes four modifications to the bioassessment monitoring required under Order 2002-0001. These changes include:

1. Bioassessment monitoring must utilize the targeted riffle composite approach, which is consistent with the State Board's Surface Water Ambient Monitoring Program (SWAMP) Quality Assurance Management Plan (QAMP), as amended. Through SWAMP, various bioassessment methods were evaluated and it was found that the targeted riffle composite approach was a particularly efficient method, providing accurate data in a cost efficient manner.
2. Bioassessment monitoring to include assessment of periphyton (algae). Advantages of bioassessment using periphyton include: (1) they have rapid reproduction rates and very short life cycles, making them valuable indicators of short-term impacts; (2) as primary producers, they are most directly affected by physical and chemical factors; (3) sampling is easy and inexpensive; and (4) algal assemblages are sensitive to some pollutants which may not visibly affect other aquatic assemblages.<sup>263</sup> Future bioassessment must use algal IBI scores, when developed.

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<sup>263</sup> USEPA, 1999. Rapid Bioassessment Protocols for Use in Wadeable Streams and Rivers. EPA 841-B-99-002. P. 3-3.

3. One of the two required annual monitoring events has been eliminated for streams exhibiting perennial flows. The Copermittees suggest this approach in response to analyses that indicate that the physical habitat conditions are better correlated than aquatic chemistry data with IBI scores.<sup>264</sup> The Copermittees analyses indicate that although biological communities are different in the Fall and Spring, both seasonal communities indicate the same common relationships to spatial biological patterns and potential variables that explain the differences. For instance, downstream urbanized locations which exhibit perennial flows display lower IBI scores than reference sites regardless of the season, even if the biological community at a downstream site differs between the Fall and Spring.
4. The number of bioassessment stations has been reduced from 12 to six. This will allow resources to be available to implement the Stormwater Monitoring Coalition's program for Regional Monitoring of Southern California's Coastal Watersheds (Section II.D.3). The Regional Monitoring program calls for six sites to be sampled each year and includes each of the basic elements within the Copermittees' bioassessment monitoring program. Although the amount of toxicity tests are reduced, wetland status analyses will also be analyzed. The Regional Monitoring program is discussed in Section II.D.3 below.

### Follow-up Analyses and Actions

**Section II.A.3** of the MRP requires the Copermittees to use the results of the chemistry, toxicity, and bioassessment monitoring to determine if impacts from MS4 discharges are occurring and when follow-up actions are necessary. The triad approach allows a wide range of measurements to be combined to more efficiently identify pollutants, their sources, and appropriate follow-up actions. Results from the three types of monitoring shall be assessed to evaluate the extent and causes of pollution in receiving waters and to prioritize management actions to eliminate or reduce the sources. The framework provided is to be used to determine conclusions from the data and appropriate follow-up actions. The framework is proposed by the Copermittees and derived from the Model Monitoring Program for Municipal Separate Storm Sewer Systems in Southern California.<sup>265</sup> These follow-up actions are expected to primarily help answer management questions 2 and 4, as well as address MRP goals 2, 4, 5, 6 and 7.

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<sup>264</sup> Orange County Storm Water Copermittees. 2006. Report of Waste Discharge (San Diego Region), section 11 and 2005-06 Annual Report section 11.3

<sup>265</sup> Model Monitoring Technical Committee, 2004. Model Monitoring Program for Municipal Separate Storm Sewer Systems in Southern California. P. 5-61.

When, based on the framework in Table 2 of the M&R Program, data indicates the presence of toxic pollutants in runoff, the Copermittees are required to conduct a Toxicity Identification Evaluation (TIE). A TIE is a set of procedures used to identify the specific chemical(s) responsible for toxicity to aquatic organisms. When discharges are toxic to a test organism, a TIE must be conducted to confirm potential constituents of concern and rule out others, therefore allowing Copermittees to determine and prioritize appropriate management actions. If a sample is toxic to more than one species, it is necessary to determine the toxicant(s) affecting each species. If the type and source of pollutants can be identified based on the data alone and an analysis of potential sources in the drainage area, a TIE is not necessary.

When a TIE identifies a pollutant associated with MS4 discharge as a cause of toxicity, it is then necessary to conduct follow-up actions to identify the causative agents of toxicity, isolate the sources of toxicity, evaluate the effectiveness of toxicity control options, and then confirm the reduction in toxicity. Follow-up actions should analyze all potential source(s) causing toxicity, potential BMPs to eliminate or reduce the pollutants causing toxicity, and suggested monitoring to demonstrate that toxicity has been removed.

#### Ambient Coastal Receiving Waters Monitoring

The Copermittees have been implementing a phased Ambient Coastal Monitoring Program that initially involved monitoring chemistry and aquatic toxicity of dry and storm water discharges to ecologically sensitive areas along the coastline. Later, aerial photographs of storm water plumes were taken to estimate the spatial extent of the impact of storm water runoff. The results were used to identify storm drains for source and toxicity identification studies, including sampling of storm water plumes.

**Section II.A.4** of the MRP allows the Copermittees to continue the existing program, while requiring that the special studies be consistent with the MRP goals and that stations be located within Areas of Special Biological Significance.

#### Coastal Storm Drain Monitoring

**Section II.A.5** of the MRP has been extensively modified and changed to a Regional Monitoring Program.

**Section II.A.5.a.** Coastal storm drain monitoring has been replaced with a Regional Bacteria Monitoring section. Coastal storm drain monitoring is critical because one of the primary impacts to coastal receiving waters is the loss of recreational beneficial uses resulting from high levels of bacteria in storm water and non-storm water MS4 runoff. The regional monitoring program is expected to help answer management questions 1, 2, 3, 4 and 5, as well as address MRP goals 1, 2, 3, 4, 5, 6, 7, and 8.

The changes to the coastal storm drain monitoring program have been made in response to the Copermittees' request. The Copermittees recommend participation in the regional program to save cost, prevent redundancy, improve notification times and provide more effort toward intensive investigations of problematic storm drains.<sup>266</sup>

This section has been modified to allow the Copermittees to participate in the development and subsequent regional bacteria monitoring program upon review and approval from the Executive Officer. An adaptive approach is consistent with the Model Monitoring Technical Committee's recommendations.

#### High Priority Inland Aquatic Habitats

**Section II.A.6** of the MRP has been removed.

#### Wet Weather MS4 Runoff Discharge Monitoring

**Section II.B** of the MRP requires the Copermittees to develop and implement a program to monitor and characterize pollutant discharges from MS4 outfalls. Currently the Copermittees do not monitor the discharge of storm water from the MS4 outfalls. As a result, a substantial amount of information regarding the quality of MS4 effluent is unknown. The collection of wet-weather data will enable the Copermittees to assess the effectiveness of existing storm water BMP measures. This data can be used to more effectively target storm water management program efforts. The MRP also requires compliance with Section D of the Order for Storm Water Action Levels.

The monitoring of outfalls is expected to be used to identify storm drains that are discharging pollutants in concentrations that may pose a threat to receiving waters. Source investigations are expected to be conducted as a response to the data.

The MRP provides the Copermittees great flexibility in assigning stations for wet-weather monitoring. Copermittees are to choose the number and frequency of monitoring stations, thus determining the overall cost of their program.

The monitoring requirements also include a requirement to measure receiving water hardness when comparing storm water MS4 discharge data to Storm Water Action Levels for priority pollutants (e.g. metals). The effect of these constituents upon receiving waters will vary depending upon the hardness of receiving waters.

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<sup>266</sup> Ibid

**Section II.B.2** requires the Copermittees to develop and implement a program to identify sources of discharges of pollutants causing the high priority water quality problems within each watershed. This requirement should be easily met because of the foundation already developed by the Copermittees in response to Order No. R9-2002-0001. To some extent, the Copermittees do conduct follow-up monitoring in response to dry-weather outfall data. The ROWD and 2007 DAMP describe some guidance that is provided by the County to the Copermittees, and it is expected that the Copermittees will develop follow-up monitoring programs for storm water discharges. The ROWD does recommend that additional training be provided for the municipalities with respect to interpreting and using the data collected by the County. In addition, many of the Copermittees have developed procedures and experience in conducting follow-up investigations in response to the bacteria investigations in the Aliso Creek watershed.<sup>267</sup>

Identification of sources causing high priority water quality problems is a central purpose of storm water runoff management programs. Monitoring which enables the Copermittees to identify sources of water quality problems aids the Copermittees in focusing their management efforts, improving their programs and choosing additional and/or better BMPs. In turn, the Copermittees' programs can abate identified sources, which will improve the quality of storm water runoff discharges and receiving waters. This monitoring is needed to address management question 4. Moreover, in its review of the San Diego County Copermittees' monitoring proposal, Tetra Tech, Inc. finds that "after some years of assessment monitoring, it is time to look more systematically at determining the relative urban contributions and the sources of urban runoff that contribute to identified receiving water problems."<sup>268</sup>

#### Non-storm Water Dry Weather Action Levels

**Section II.C** of the MRP describes the monitoring to be conducted by the Copermittees to determine compliance with dry weather, non-storm water action levels.

Section II.B.3 has been changed by removal of the Dry Weather Field Screening and Analytical Monitoring and subsequent replacement with section II.C for Dry Weather Non-Storm Water Action Level Monitoring. This change is required to assess compliance with action levels for non-storm water discharges from the MS4 into receiving waters. The required sampling frequency has been changed to allow Copermittees to sample a representative number of discharge points and the sampling methodology has been changed to grab sampling. This is expected to allow Copermittees to maintain a cost-neutral dry weather monitoring program that is similar to their existing IC/ID monitoring program.

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<sup>267</sup> Copermittees in the Aliso Creek watershed include the County of Orange and the Cities of Aliso Viejo, Laguna Beach, Laguna Hills, Laguna Niguel, Laguna Woods, Lake Forest, and Mission Viejo.

<sup>268</sup> Tetra Tech Inc., 2006. Review of San Diego County MS4 Monitoring Program.

### Special Studies

**Section II.D.1** of the MRP absorbs the bacteria monitoring and reporting program currently in place in the Aliso Creek watershed.<sup>269</sup> This monitoring effort has been required by the Regional Board pursuant to authorities provided under California Water Code sections 13225 and 13267. The monitoring and reporting is focused solely on the MS4s in the Aliso Creek watershed and has effectively been integrated already into the Copermittees' programs. Inclusion of it into the MRP is done for organizational purposes and will have no other net effect.

**Section II.D.3** includes a requirement to participate in the program for Regional Monitoring of Southern California's Coastal Watersheds developed by the Stormwater Monitoring Coalition. That program calls for the sampling of six locations within the Permit area each year. All sampling will be SWAMP comparable. Sampling includes water chemistry, aquatic toxicity (*Ceriodaphnia dubia*), physical habitat, benthic macroinvertebrates, wetland status (based on California Rapid Assessment Method protocols), and periphyton.

**Section II.D.4** includes a requirement that the Copermittees conduct a sediment toxicity special study. This study has been added to the Monitoring and Reporting requirements to assess the quality of urban stream sediments and possible contamination due to runoff from the MS4. Toxicity tests focusing on aqueous toxicity may not account for the full toxicity of receiving waters if constituents, such as heavy metals or pesticides, are bound to sediments. Southern California studies have shown that stream sediments can exhibit significant levels of toxic metals and pesticides.<sup>270,271</sup>

**Section II.D.5** includes a requirement that the Copermittees conduct a Trash and Litter Impairment Investigation (see Finding C.8 and Discussion).

### Monitoring Provisions

**Section II.E** of the MRP includes monitoring provisions which are standard requirements for all municipal storm water permits.

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<sup>269</sup> On October 12, 2005, the Regional Board accepted the revised Aliso Creek watershed bacteria monitoring plan proposal from the MS4 Permittees. The Regional Board concluded that the scope of the current bacteria monitoring in the watershed was no longer warranted and that the proposed changes would constitute an effective interim program until adoption of a Total Maximum Daily Load, requiring a bacteria reduction and assessment program for the watershed. In addition, the Regional Board recognized that as a result of reduced monitoring costs, the municipalities expect to direct additional resources toward implementation of management practices to reduce indicator bacteria and pathogens.

<sup>270</sup> Holmes, R.W., Anderson, B.S., Phillips, B.M., Hunt, J.W., Crane, D.B., Mekebri, A. and V. Connor. 2008. Statewide Investigation of the Role of Pyrethroid Pesticides in Sediment Toxicity in California's Urban Waterways. *Environmental Science Technology* 42: 7003-7009..

<sup>271</sup> Crane, D.B. and C. Younghans-Haug. 1992. Oxadiazon residue concentrations in sediment, fish, and shellfish from a combined residential/agricultural area in Southern California. *Bulletin of Environmental Contamination and Toxicology*. Volume 48, no. 4.

## 2. Reporting Program

**Section III** of the MRP discusses submittal of the Jurisdictional Runoff Management Program Annual Reports and the Receiving Waters Monitoring Annual Reports. In effect, a description of the monitoring program will be submitted with the Jurisdictional RMPs, and the monitoring data and assessment will be submitted one month later. The MRP continues the reporting approach utilized under the requirements of Order No. R9-2002-0001, where Lead Permittees for each watershed submit their annual reports to the Principal Permittee to be unified into one document.

The reporting requirements for the Aliso Creek watershed are also specified in this section. These reporting requirements are identical to the current reporting required by the Regional Board for the bacteria investigation. They are specified in this section because the requirements are more specific than reporting required for other watershed RMPs.

**U. Attachment F - Source Data**

Attachment F contains data utilized for the development of Storm Water Action Levels and Non-storm Water Action Levels.

**California Regional Water Quality Control Board  
San Diego Region**

**Waste Discharge Requirements for  
Discharges from the  
Municipal Separate Storm Sewer Systems (MS4s)  
Draining the County of Riverside, the Incorporated  
Cities of Riverside County, and the Riverside  
County Flood Control and Water Conservation  
District within the San Diego Region**

**Order No. R9-2010-0016  
NPDES No. CAS0108766**

*November 10, 2010*

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
SAN DIEGO REGION**

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Documents also are available at: <http://www.waterboards.ca.gov/sandiego>

**Waste Discharge Requirements for  
Discharges from the  
Municipal Separate Storm Sewer Systems (MS4s)  
Draining the County of Riverside, the Incorporated Cities of  
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and Water Conservation District within the San Diego Region**

Adopted by the  
California Regional Water Quality Control Board  
San Diego Region  
on  
November 10, 2010

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Attachment E – Receiving Waters And MS4 Discharge Monitoring And Reporting

Program No. R9-2010-0016

Attachment F – Data

The California Regional Water Quality Control Board, San Diego Region (hereinafter San Diego Water Board), finds that:

#### **A. BASIS FOR THE ORDER**

1. This Order is based on the federal Clean Water Act (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 Water Board), the Water Quality Control Plan for the San Diego Basin adopted by the San Diego Water Board (Basin Plan), the California Toxics Rule, and the California Toxics Rule Implementation Plan.
2. This Order reissues National Pollutant Discharge Elimination System (NPDES) Permit No. CAS0108766, which was first adopted by the San Diego Water Board on July 16, 1990 (Order No. 90-38), and then reissued on May 13, 1998 (Order No. 98-02). On May 26, 1998, the United States Environmental Protection Agency (USEPA), Region IX, objected to Order No. 98-02 due to concerns regarding Receiving Water Limitations (RWL) language. The USEPA concluded that the RWL language in the permit did not comply with the CWA and its implementing regulations. On April 27, 1999, the USEPA reissued the MS4 permit, which the San Diego Water Board adopted as Addendum No. 1 to Order No. 98-02 on November 8, 2000. On July 14, 2004, the San Diego Water Board adopted the third term MS4 permit, Order No. R9-2004-001. On January 15, 2009, the Riverside County Flood Control and Water Conservation District (RCFCD), as the Principal Copermitee, submitted a Report of Waste Discharge (ROWD) for reissuance of the municipal separate storm sewer system (MS4) Permit.
3. This Order is consistent with the following precedential Orders adopted by the State Water Board addressing MS4 NPDES Permits: Order 99-05, Order WQ-2000-11, Order WQ 2001-15, and Order WQO 2002-0014.<sup>1</sup>

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<sup>1</sup> In July 2010, the court in Los Angeles County v. State Water Resources Control Board remanded the Los Angeles Water Board's MS4 permit underlying Order WQ 2009-0008 for procedural reasons occurring during the permit adoption process. The court did not evaluate or rule upon the substantive findings and reasoning set forth in Order WQ 2009-0008. The State Water Board rescinded and voided Order WQ 2009-0008 to comply with the court's order. While the San Diego Water Board may no longer cite Order WQ 2009-0008, the San Diego Water Board has independently considered whether the requirement to eliminate non-storm water discharges is subject to the MEP standard. The San Diego Water Board concludes that the MEP standard does not apply to non-storm water discharges for the same reasons expressed by the State Water Board.

4. The Fact Sheet / Technical Report for the Order No. R9-2010-0016, NPDES No. CAS0108766, Waste Discharge Requirements for Discharges from the MS4s Draining the County of Riverside, the Incorporated Cities of Riverside County, and the Riverside County Flood Control and Water Conservation District within the San Diego Region, includes cited regulatory and legal references and additional explanatory information and data in support of the requirements of this Order. This information, including any supplements thereto, is hereby incorporated by reference into these findings.

## B. REGULATED PARTIES

Each of the persons in Table 1 below, hereinafter called Copermittees or dischargers, owns or operates an MS4, through which it discharges into waters of the United States (U.S.) within the San Diego Region. These MS4s fall 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) a small MS4 that is “interrelated” to a medium or large MS4; or (3) an MS4 that contributes to a violation of a water quality standard; or (4) an MS4 which is a significant contributor of pollutants to waters of the U.S.

Table 1. Municipal Copermittees

1. City of Murrieta	4. County of Riverside
2. City of Temecula	5. Riverside County Flood Control and Water Conservation District
3. City of Wildomar	

The Cities of Murrieta, Menifee and Wildomar also discharge into the waters of the U.S. in the California Regional Water Quality Control Board, Santa Ana Region (Santa Ana Water Board), so are located partially within both the San Diego and Santa Ana Water Board boundaries. Water Code (WC) section 13228 provides a way to streamline the regulation of entities whose jurisdictions straddle the border of two or more Regions. WC section 13228 is implemented in this Order to ease the regulatory burden on Storm Water Agencies and Municipalities that lie in both the San Diego Water Board and the adjacent Santa Ana Water Board’s jurisdiction. As allowed by California Water Code (CWC) §13228, the Cities of Murietta, Menifee, and Wildomar submitted written requests to be regulated for MS4 purposes under a permit adopted by only one Water Board. As authorized by CWC §13228 and pursuant to written agreements dated September 28, 2010 between the San Diego Water Board and the Santa Ana Water Board, the Cities of Murrieta and Wildomar are wholly regulated by the San Diego Water Board under this Order, including those portions of the Cities jurisdiction not within the San Diego Water Board’s region. Similarly, the City of Menifee is wholly regulated by the Santa Ana Water Board under Order No. R8-2010-0033, including those portions of the City of Menifee within the San Diego Water Board’s region.

**C. DISCHARGE CHARACTERISTICS**

1. Discharges from the MS4 contain waste, as defined in the CWC, and pollutants that adversely affect the quality of the waters of the State. The discharge from an MS4 is a “discharge of pollutants from a point source” into waters of the U.S. as defined in the CWA.
2. MS4 storm water and non-storm water discharges are likely to contain pollutants that cause or threaten to cause a violation of water quality standards, as outlined in the Basin Plan. Storm water and non-storm water discharges from the MS4 are subject to the conditions and requirements established in the Basin Plan for point source discharges.
3. The most common categories of pollutants in 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), detergents, and trash.
4. The discharge of pollutants and/or increased flows from MS4s may cause or threaten to cause the concentration of pollutants to exceed applicable receiving water quality objectives and/or impair or threaten to impair designated beneficial uses resulting in a condition of pollution (i.e., unreasonable impairment of water quality for designated beneficial uses), contamination, or nuisance.
5. Pollutants in runoff can threaten and adversely affect human health. Human illnesses have been clearly linked to recreating near storm drains flowing to receiving waters. Also, runoff pollutants in receiving waters can bioaccumulate in the tissues of invertebrates and fish, which may be eventually consumed by humans.
6. Runoff discharges from MS4s often contain pollutants that cause toxicity to aquatic organisms (i.e., adverse responses of organisms to chemicals or physical agents ranging from mortality to physiological responses such as impaired reproduction or growth anomalies). Toxic pollutants impact the overall quality of aquatic systems and beneficial uses of receiving waters.
7. The Copermittees discharge runoff into lakes, drinking water reservoirs, rivers, streams, creeks, bays, estuaries, coastal lagoons, the Pacific Ocean, and tributaries thereto within one of the eleven hydrologic units (Santa Margarita Hydrologic Unit) comprising the San Diego Region as shown in Table 2. Some of the receiving water bodies have been designated as impaired by the San Diego Water Board in 2009 pursuant to CWA section 303(d).

Table 2. Common Watersheds and CWA Section 303(d) Impaired Waters in the San Diego Region.

Hydrologic Area (HA) or Hydrologic Subarea (HSA) of the Santa Margarita Hydrologic Unit	Major Receiving Water Bodies	303(d) Pollutant(s)/Stressor or Water Quality Effect <sup>2</sup>
DeLuz Creek HSA (902.21)	De Luz Creek	Iron, Manganese, Nitrogen, Sulfates
Murrieta HSA (902.32)	Long Canyon Creek (tributary to Murrieta Creek)	Chlorpyrifos, E. Coli, Fecal Coliform, Iron, Manganese
Wolf HSA (902.52)	Murrieta Creek	Chlorpyrifos, Copper, Iron, Manganese, Nitrogen, Toxicity
Pauba HSA (902.51)	Redhawk Channel	Chlorpyrifos, Copper, Diazinon, E. Coli, Fecal Coliform, Iron, Manganese, Nitrogen, Phosphorus, Total Dissolved Solids
Gavilan HSA (902.22)	Sandia Creek	Iron, Sulfates
Gertrudis HSA (902.42)	Santa Gertrudis Creek	Chlorpyrifos, Copper, E. Coli, Fecal Coliform, Iron, Phosphorous
Lower Ysidora HSA (902.11)	Santa Margarita Lagoon	Eutrophic
Lower Ysidora HSA (902.11)	Santa Margarita River (Lower)	Enterococcus, Fecal Coliform, Phosphorus, Total Nitrogen as N
Gavilan HSA (902.22)	Santa Margarita River (Upper)	Toxicity
Pauba HSA (902.51)	Temecula Creek	Chlorpyrifos, Copper, Phosphorus, Total Dissolved Solids, Toxicity
French HSA (902.33)	Warm Springs Creek (Riverside County)	Chlorpyrifos, E. Coli, Fecal Coliform, Iron, Manganese, Phosphorus, Total Nitrogen as N

<sup>2</sup> The listed 303(d) pollutant(s) do not necessarily reflect impairment of the entire corresponding WMA or all corresponding major surface water bodies. The specific impaired portions of each WMA are listed in the State Water Resources Control Board's 2008 Section 303(d) List of Water Quality Limited Segments.

- 8.** Trash is a persistent pollutant that can enter receiving waters from the MS4, accumulate, and be transported downstream into receiving waters over time. Trash poses a serious threat to the beneficial uses of the receiving waters, including, but not limited to, human health, rare and endangered species, navigation and human recreation.
- 9.** The Copermittees' water quality monitoring data submitted to date documents persistent violations of Basin Plan water quality objectives for various runoff-related pollutants (indicator bacteria, dissolved solids, turbidity, metals, pesticides, etc.) at various watershed monitoring stations. Persistent toxicity has also been observed at some watershed monitoring stations. In addition, bioassessment data indicate that the majority of the monitored receiving waters have Poor to Very Poor Index of Biotic Integrity ratings. In sum, the above findings indicate that runoff discharges are causing or contributing to water quality impairments, and are a leading cause of such impairments in Riverside County.
- 10.** When natural vegetated pervious ground cover is converted to impervious surfaces such as paved highways, streets, rooftops, and parking lots, the natural absorption and infiltration abilities of the land are lost. Therefore, runoff leaving a developed area is significantly greater in runoff volume, velocity, and peak flow rate than pre-development runoff from the same area. Runoff durations can also increase as a result of flood control and other efforts to control peak flow rates. Increased volume, velocity, rate, and duration of runoff, and decreased natural clean sediment loads, greatly accelerate the erosion of downstream natural channels. Significant declines in the biological integrity and physical habitat of streams and other receiving waters have been found to occur with as little as a 3-5 percent conversion from natural to impervious surfaces. The increased runoff characteristics from new development must be controlled to protect against increased erosion of channel beds and banks, sediment pollutant generation, or other impacts to beneficial uses and stream habitat due to increased erosive force.
- 11.** Development creates new pollution sources as human population density increases and brings with it proportionately higher levels of car emissions, car maintenance wastes, municipal sewage, pesticides, household hazardous wastes, pet wastes, trash, etc. which can either be washed or directly dumped into the MS4. As a result, the runoff leaving the developed urban area is significantly greater in pollutant load than the pre-development runoff from the same area. These increased pollutant loads must be controlled to protect downstream receiving water quality.

12. Development and urbanization especially threaten environmentally sensitive areas (ESAs), such as water bodies designated as supporting a RARE beneficial use (supporting rare, threatened or endangered species) and CWA 303(d)-impaired water bodies. Such areas have a much lower capacity to withstand pollutant loads than other, more sensitive areas. In essence, development that is ordinarily insignificant in its impact on the environment may become significant in a particularly sensitive environment. Therefore, additional controls to reduce storm water pollutants from new and existing development may be necessary for areas adjacent to or discharging directly to an ESA.
13. Although dependent on several factors, the risks typically associated with properly managed infiltration of runoff (especially from residential land use areas) are not significant. The risks associated with infiltration can be managed by many techniques, including (1) designing landscape drainage features that promote infiltration of runoff, but do not “inject” runoff (injection bypasses the natural processes of filtering and transformation that occur in the soil); (2) taking reasonable steps to prevent the illegal disposal of wastes; (3) protecting footings and foundations; (4) ensuring that each drainage feature is adequately maintained in perpetuity; and (5) pretreatment.
14. Non-storm water (dry weather) discharge from the MS4 is not considered a storm water (wet weather) discharge and therefore is not subject to regulation under the Maximum Extent Practicable (MEP) standard from CWA 402(p)(3)(B)(iii), which is explicitly for “Municipal ... *Stormwater Discharges* (emphasis added)” from the MS4. Rather, non-storm water discharges into the storm sewers, per CWA 402(p)(3)(B)(ii), are to be effectively prohibited. Such dry weather non-storm water discharges have been shown to contribute significant levels of pollutants and flow in arid, developed Southern California watersheds and are to be effectively prohibited under the CWA.
15. Non-storm water discharges to the MS4 granted an influent exception [i.e., which are exempt from the effective prohibition requirement set forth in CWA section 402(p)(3)(B)(ii)] under 40 CFR 122.26 are included within this Order. Any exempted discharges identified by Copermittees as a source of pollutants are subsequently required to be *addressed* (emphasis added) as illicit discharges through prohibition and incorporation into existing IC/ID programs. Furthermore, the USEPA contemplates that permitting agencies such as the San Diego Water Board may also identify exempted discharges as a source of pollutants required to be addressed as illicit discharges (See Vol. 55 Fed. Reg. 48037). The San Diego Water Board and the Copermittees have identified landscape irrigation, irrigation water and lawn water, previously exempted discharges, as a source of pollutants and conveyance of pollutants to waters of the U.S.

## **D. RUNOFF MANAGEMENT PROGRAMS**

### **1. General**

- a. This Order specifies requirements necessary for the Copermitees to reduce the discharge of pollutants in storm water to the MEP. However, since MEP is a dynamic performance standard, which evolves over time as runoff management knowledge increases, the Copermitees' runoff management programs must continually be assessed and modified to incorporate improved programs, control measures, best management practices (BMPs), etc. in order to achieve the evolving MEP standard. Absent evidence to the contrary, this continual assessment, revision, and improvement of runoff management program implementation is expected to ultimately achieve compliance with water quality standards in the Region.
- b. The Copermitees have generally been implementing the jurisdictional runoff management programs (JRMPs) required pursuant to Order No. R9-2004-001 since July 14, 2005. Prior to that, the Copermitees were regulated by Order No. 98-02, since May 13, 1998. MS4 discharges, however, continue to cause or contribute to violations of water quality standards as evidenced by the Copermitees' monitoring results.
- c. This Order contains new or modified requirements that are necessary to improve Copermitees' efforts to reduce the discharge of pollutants in storm water runoff to the MEP and achieve water quality standards. Some of the new or modified requirements, such as the revised Watershed Water Quality Workplan (Watershed Workplan) section, are designed to specifically address high priority water quality problems. Other requirements, such as for unpaved roads, are a result of San Diego Water Board's identification of water quality problems through investigations and complaints during the previous permit period. Other new or modified requirements address program deficiencies that have been noted during audits, report reviews, and other San Diego Water Board compliance assessment activities. Additional changes in the monitoring program provide consistency with the Code of Federal Regulations, USEPA guidance, State Water Board guidance, and the Southern California Monitoring Coalition recommendations.
- d. Updated individual Storm Water Management Plans (Individual SWMP or JRMP), and Watershed Stormwater Management Plans (watershed SWMPs or Watershed Workplans), which, together with references in the DAMP, describe the Copermitees' runoff management programs in their entirety, are needed to guide the Copermitees' runoff management efforts and aid the Copermitees in tracking runoff management program implementation. Hereinafter, the individual SWMP is referred to as the JRMPs and the Watershed SWMP is referred to as the Watershed Workplan. It is practicable for the Copermitees to update the

JRMPs and Watershed Workplans within the timeframe specified in this Order, since significant efforts to develop these programs have already occurred.

- e. Pollutants can be effectively reduced in storm water runoff by the application of a combination of pollution prevention, source control, and treatment control BMPs. Pollution prevention is the reduction or elimination of pollutant generation at its source and is the best “first line of defense.” Source control BMPs (both structural and non-structural) minimize the contact between pollutants and flows (e.g., rerouting run-on around pollutant sources or keeping pollutants on-site and out of receiving waters). Treatment control BMPs remove pollutants that have been mobilized by wet-weather or dry-weather flows.
- f. Runoff needs to be addressed during the three major phases of urban development (planning, construction, and use) in order to reduce the discharge of pollutants from storm water to the MEP, effectively prohibit non-storm water discharges and protect receiving waters. Development which is not guided by water quality planning policies and principles can unnecessarily result in increased pollutant load discharges, flow rates, and flow durations which can negatively impact receiving water beneficial uses. Construction sites without adequate BMP implementation result in sediment runoff rates which greatly exceed natural erosion rates of undisturbed lands, causing siltation and impairment of receiving waters. Existing development generates substantial pollutant loads which are discharged in runoff to receiving waters.
- g. Annual reporting requirements included in this Order are necessary to meet federal requirements and to evaluate the effectiveness and compliance of the Copermittees’ programs.
- h. This Order establishes Storm Water Action Levels (SALs) for selected pollutants based on USEPA Rain Zone 6 (arid southwest) Phase I MS4 monitoring data for pollutants in storm water. The SALs were computed as the 90<sup>th</sup> percentile of the data set, utilizing the statistical based population approach, one of three approaches recommended by the State Water Board’s Storm Water Panel in its report, ‘The Feasibility of Numerical Effluent Limits Applicable to Discharges of Storm Water Associated with Municipal, Industrial and Construction Activities (June 2006). SALs are identified in Section D of this Order. Copermittees must implement a timely, comprehensive, cost-effective storm water pollution control program to reduce the discharge of pollutants in storm water from the permitted areas so as not to exceed the SALs. Exceedance of SALs may indicate inadequacy of programmatic measures and BMPs required in this Order.

## **2. Development Planning**

- a. The Standard Storm Water Mitigation Plan (SSMP) requirements contained in this Order are consistent with Order WQ-2000-11 adopted by the State Water Board on October 5, 2000. In the precedential order, the State Water Board

found that the design standards, which essentially require that runoff generated by 85 percent of storm events from specific development categories be infiltrated or treated, reflect the MEP standard. The order also found that the SSMP requirements are appropriately applied to the majority of the Priority Development Project categories that are also contained in Section F.1 of this Order. The State Water Board also gave California Regional Water Quality Control Boards (Regional Water Boards) the needed discretion to include additional categories and locations, such as retail gasoline outlets (RGOs), in SSMPs.

- b. Controlling runoff pollution by using a combination of onsite source control and site design BMPs augmented with treatment control BMPs before the runoff enters the MS4 is important for the following reasons: (1) Many end-of-pipe BMPs (such as diversion to the sanitary sewer) are typically ineffective during significant storm events. (2) Whereas, onsite source control BMPs can be applied during all runoff conditions end-of-pipe BMPs are often incapable of capturing and treating the wide range of pollutants which can be generated on a sub-watershed scale; (3) End-of-pipe BMPs are more effective when used as polishing BMPs, rather than the sole BMP to be implemented; (4) End-of-pipe BMPs do not protect the quality or beneficial uses of receiving waters between the pollutant source and the BMP; and (5) Offsite end-of-pipe BMPs do not aid in the effort to educate the public regarding sources of pollution and their prevention.
- c. Use of Low-Impact Development (LID) site design BMPs at new development, redevelopment and retrofit projects can be an effective means for minimizing the impact of storm water runoff discharges from the development projects on receiving waters. LID is a site design strategy with a goal of maintaining or replicating the pre-development hydrologic regime through the use of design techniques. LID site design BMPs help preserve and restore the natural hydrologic cycle of the site, allowing for filtration and infiltration which can greatly reduce the volume, peak flow rate, velocity, and pollutant loads of storm water runoff. Current runoff management, knowledge, practices and technology have resulted in the use of LID BMPs as an acceptable means of meeting the storm water MEP standard.
- d. RGOs are significant sources of pollutants in storm water runoff. RGOs are points of convergence for motor vehicles for automotive related services such as repair, refueling, tire inflation, and radiator fill-up and consequently produce significantly higher loadings of hydrocarbons and trace metals (including copper and zinc) than other developed areas.
- e. Industrial sites are significant sources of pollutants in runoff. Pollutant concentrations and loads in runoff from industrial sites are similar or exceed pollutant concentrations and loads in runoff from other land uses, such as commercial or residential land uses. As with other land uses, LID site design,

source control, and treatment control BMPs are needed at industrial sites in order to meet the MEP standard. These BMPs are necessary where the industrial site is larger than 10,000 square feet. The 10,000 square feet threshold is appropriate, since it is consistent with requirements in other Phase I NPDES storm water regulations throughout California.

- f. If not properly designed or maintained, certain BMPs implemented or required by municipalities for runoff management may create a habitat for vectors (e.g. mosquitoes and rodents). Proper BMP design and maintenance to avoid standing water, however, can prevent the creation of vector habitat. Nuisances and public health impacts resulting from vector breeding can be prevented with close collaboration and cooperative effort between municipalities, local vector control agencies, and the California Department of Public Health during the development and implementation of runoff management programs.
- g. The increased volume, velocity, frequency and discharge duration of storm water runoff from developed areas has the potential to greatly accelerate downstream erosion, impair stream habitat in natural drainages, and negatively impact beneficial uses. Development and urbanization increase pollutant loads in storm water runoff and the volume of storm water runoff. Impervious surfaces can neither absorb water nor remove pollutants and thus lose the purification and infiltration provided by natural vegetated soil. Hydromodification measures for discharges to hardened channels are needed for the future restoration of the hardened channels to their natural state, thereby restoring the chemical, physical, and biological integrity and beneficial uses of local receiving waters.

### **3. Construction and Existing Development**

- a. In accordance with federal NPDES regulations and to ensure the most effective oversight of industrial and construction site discharges, discharges of runoff from industrial and construction sites are subject to dual (State and local) storm water regulation. Under this dual system, each Copermitttee is responsible for enforcing its local permits, plans, and ordinances, and the San Diego Water Board is responsible for enforcing the General Construction Activities Storm Water Permit, State Water Board Order 2009-0009-DWQ, NPDES No. CAS000002 (General Construction Permit) and the General Industrial Activities Storm Water Permit, State Water Board Order 97-03 DWQ, NPDES No. CAS000001 (General Industrial Permit) and any reissuance of these permits. NPDES municipal regulations require that municipalities develop and implement measures to address runoff from industrial and construction activities. Those measures may include the implementation of other BMPs in addition to those BMPs that are required under the statewide general permits for activities subject to both State and local regulation.

- b. Identification of sources of pollutants in runoff (such as municipal areas and activities, industrial and commercial sites/sources, construction sites, and residential areas), development and implementation of BMPs to address those sources, and updating ordinances and approval processes are necessary for the Copermittees to ensure that discharges of pollutants from its MS4 in storm water are reduced to the MEP and that non-storm water discharges are not occurring. Inspections and other compliance verification methods are needed to ensure minimum BMPs are implemented. Inspections are especially important at areas that are at high risk for pollutant discharges.
- c. Historic and current development makes use of natural drainage patterns and features as conveyances for runoff. Urban streams used in this manner are part of the municipalities' MS4s regardless of whether they are natural, anthropogenic, or partially modified features. In these cases, the urban stream is both an MS4 and receiving water.
- d. As operators of the MS4s, the Copermittees cannot passively receive and discharge pollutants from third parties. By providing free and open access to an MS4 that conveys discharges to waters of the U.S., the operator essentially accepts responsibility for discharges into the MS4 that it does not prohibit or otherwise control. These discharges may cause or contribute to a condition of contamination or a violation of water quality standards.
- e. Waste and pollutants which are deposited and accumulate in MS4 drainage structures will be discharged from these structures to waters of the U.S. unless they are removed. These discharges may cause or contribute to, or threaten to cause or contribute to, a condition of pollution in receiving waters. For this reason, pollutant discharges from storm water into MS4s must be reduced using a combination of management measures, including source control and an effective MS4 maintenance program implemented by each Copermittee.
- f. Enforcement of local runoff related ordinances, permits, and plans is an essential component of every runoff management program and is specifically required in the federal storm water regulations and this Order. Each Copermittee is individually responsible for adoption and enforcement of ordinances and/or policies, implementation of identified control measures/BMPs needed to prevent or reduce pollutants in storm water runoff, and for the allocation of funds for the capital, operation and maintenance, administrative, and enforcement expenditures necessary to implement and enforce such control measures/BMPs under its jurisdiction. Education is an important aspect of every effective runoff management program and the basis for changes in behavior at a societal level. Education of municipal planning, inspection, and maintenance department staffs is especially critical to ensure that in-house staffs understand how their activities impact water quality, how to accomplish their jobs while protecting water quality, and understand 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.

- g. Public participation during the development of runoff management programs is necessary to ensure that all stakeholder interests and a variety of creative solutions are considered.
- h. Retrofitting existing development with storm water treatment controls, including LID, is necessary to address storm water discharges from existing development that may cause or contribute to a condition of pollution or a violation of water quality standards. Although SSMP BMPs are required for redevelopment, the current rate of redevelopment will not address water quality problems in a timely manner. Cooperation with private landowners is necessary to effectively identify, implement and maintain retrofit projects for the preservation, restoration, and enhancement of water quality.

#### **4. Watershed Runoff Management**

- a. Since runoff within a watershed can flow from and through multiple land uses and political jurisdictions, watershed-based runoff management can greatly enhance the protection of receiving waters. Such management provides a means to focus on the most important water quality problems in each watershed. By focusing on the most important water quality problems, watershed efforts can maximize protection of beneficial use in an efficient manner. Effective watershed-based runoff management actively reduces pollutant discharges and abates pollutant sources causing or contributing to watershed water quality problems. Watershed-based runoff management that does not actively reduce pollutant discharges and abate pollutant sources causing or contributing to watershed water quality problems can necessitate implementation of the iterative process outlined in section A.3 of this Order. Watershed management of runoff does not require Copermittees to expend resources outside of their jurisdictions. In some cases, however, this added flexibility provides more, and possibly more effective, alternatives for minimizing waste discharges. Watershed management requires the Copermittees within a watershed to develop a watershed-based management strategy, which can then be implemented on a jurisdictional basis.
- b. Some runoff issues, such as general education and training, can be effectively addressed on a regional basis. Regional approaches to runoff management can improve program consistency and promote sharing of resources, which can result in implementation of more efficient programs.

- c. It is important for the Copermitees to coordinate their water quality protection and land use planning activities to achieve the greatest protection of receiving water bodies. Copermitee coordination with other watershed stakeholders, especially the State of California Department of Transportation, the U.S. federal government, sovereign American Indian tribes, and water and sewer districts, is also important.

## **E. STATUTE AND REGULATORY CONSIDERATIONS**

1. The RWL language specified in this Order is consistent with language recommended by the USEPA and established in State Water Board Order WQ-99-05, *Own Motion Review of the Petition of Environmental Health Coalition to Review Waste Discharge Requirements Order No. 96-03, NPDES Permit No. CAS0108740*, adopted by the State Water Board on June 17, 1999. The RWL language in this Order requires compliance with water quality standards, which for storm water discharges is to be achieved through an iterative approach requiring the implementation of improved and better-tailored BMPs over time. Compliance with receiving water limits based on applicable water quality standards is necessary to ensure that MS4 discharges will not cause or contribute to violations of water quality standards and the creation of conditions of pollution, contamination, or nuisance.
2. The Basin Plan, identifies the following existing and potential beneficial uses for surface waters in Riverside County: Municipal and Domestic Supply (MUN), Agricultural Supply (AGR), Industrial Process Supply (PROC), Hydropower Generation (POW), Industrial Service Supply (IND), Ground Water Recharge (GWR), Contact Water Recreation (REC1), Non-contact Water Recreation (REC2), Warm Freshwater Habitat (WARM), Cold Freshwater Habitat (COLD), Wildlife Habitat (WILD), Rare, Threatened, or Endangered Species (RARE), Spawning, Reproduction and/or Early Development (SPWN) and Preservation of Biological Habitats of Special Significance (BIOL).
3. This Order is in conformance with State Water Board Resolution No. 68-16, *Statement of Policy with Respect to Maintaining High Quality Waters in California*, and the federal Antidegradation Policy described in 40 CFR 131.12.
4. Section 6217(g) of the Coastal Zone Act Reauthorization Amendments of 1990 (CZARA) requires coastal states with approved coastal zone management programs to address non-point pollution impacting or threatening coastal water quality. CZARA addresses five sources of non-point pollution: agriculture, silviculture, urban, marinas, and hydromodification. This NPDES permit addresses the management measures required for the urban category, with the exception of septic systems. The adoption and implementation of this NPDES permit relieves the Copermitee from developing a non-point source plan, for the urban category, under CZARA. The San Diego Water Board addresses septic systems through the administration of other programs.

5. Section 303(d)(1)(A) of the CWA requires that “Each state shall identify those waters within its boundaries for which the effluent limitations...are not stringent enough to implement any water quality standard (WQS) applicable to such waters.” The CWA also requires states to establish a priority ranking of impaired water bodies known as Water Quality Limited Segments and to establish Total Maximum Daily Loads (TMDLs) for such waters. This priority list of impaired water bodies is called the Section 303(d) List. The 2006 Section 303(d) List was approved by the State Water Board on October 25, 2006. On June 28, 2007, the 2006 303(d) List for California was given final approval by the USEPA. The 303(d) List was recently updated, and on December 16, 2009, the 2008 303(d) List was approved by the San Diego Water Board. The 2008 303(d) List for the San Diego Region was approved by the State Water Board on August 4, 2010. The 2008 303(d) List is awaiting USEPA approval.
  
6. This Order does not constitute an unfunded local government mandate subject to subvention under Article XIII B, Section (6) of the California Constitution for several reasons, including, but not limited to, the following. First, this Order implements federally mandated requirements under CWA §402. (33 U.S.C. § 1342(p)(3)(B).) Second, the local agency Copermittees’ obligations under this Order are similar to, and in many respects less stringent than, the obligations of non-governmental and new dischargers who are issued NPDES permits for storm water and non-storm water discharges. Third, the local agency Copermittees have the authority to levy service charges, fees, or assessments sufficient to pay for compliance with this Order. Fourth, the Copermittees have requested permit coverage in lieu of compliance with the complete prohibition against the discharge of pollutants contained in CWA §301, subdivision (a) (33 U.S.C. § 1311(a)) and in lieu of numeric restrictions on their MS4 discharges (i.e. effluent limitations). 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 XIII B, Section (6) of the California Constitution. Likewise, the provisions of this Order to implement TMDLs are federal mandates. The CWA requires TMDLs to be developed for water bodies that do not meet federal water quality standards. (33 U.S.C. sec. 1313(d).) Once the USEPA 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. sec. 122.44(d)(1)(vii)(B).)
  
7. Runoff treatment and/or mitigation must occur prior to the discharge of runoff into receiving waters. Treatment BMPs must not be constructed in waters of the U.S. or State unless the runoff flows are sufficiently pretreated to protect the values and functions of the water body. Federal regulations at 40 CFR 131.10(a) state that in no case shall a state adopt waste transport or waste assimilation as a designated use for any waters of the U.S. Authorizing the construction of an runoff treatment facility within a water of the U.S., or using the water body itself as a treatment system or for conveyance to a treatment system, would be tantamount to accepting waste assimilation as an appropriate use for that water body. Furthermore, the

construction, operation, and maintenance of a pollution control facility in a water body can negatively impact the physical, chemical, and biological integrity, as well as the beneficial uses, of the water body. Without federal authorization (e.g., pursuant to CWA § 404), waters of the U.S. may not be converted into, or used as, waste treatment or conveyance facilities. Similarly, waste discharge requirements pursuant to CWC §13260 are required for the conversion or use of waters of the State as waste treatment or conveyance facilities. Diversion from waters of the U.S./State to treatment facilities and subsequent return to waters of the U.S. is allowable, provided that the effluent complies with applicable NPDES requirements.

8. The issuance of waste discharge requirements and an NPDES permit for the discharge of runoff from MS4s to waters of the U.S. is exempt from the requirement for preparation of environmental documents under the California Environmental Quality Act (CEQA) (Public Resources Code, Division 13, Chapter 3, section 21000 et seq.) in accordance with the CWC section 13389.
9. Storm water discharges from developed and developing areas in Riverside County are significant sources of certain pollutants that cause, may be causing, threatening to cause or contributing to water quality impairment in the waters of Riverside County. Furthermore, as delineated in the CWA section 303(d) list in Table 2, the San Diego Water Board has found that there is a reasonable potential that municipal storm water and non-storm water discharges from MS4s cause or may cause or contribute to an excursion above water quality standards for the following pollutants: Indicator Bacteria (including Fecal Coliform and E. Coli), Copper, Manganese, Iron, Chlorpyrifos, Diazinon, Sulfates, Phosphorous, Nitrogen, Total Dissolved Solids (TDS), and Toxicity. In accordance with CWA section 303(d), the San Diego Water Board is required to establish TMDLs for these pollutants to these waters to eliminate impairment and attain water quality standards. Therefore, certain early pollutant control actions and further pollutant impact assessments by the Copermittees are warranted and required pursuant to this Order.
10. This Order requires each Copermittee to effectively prohibit all types of unauthorized discharges of non-storm water into its MS4. However, historically pollutants have been identified as present in dry weather non-storm water discharges from the MS4s through 303(d) listings, monitoring conducted by the Copermittees under Order No. R9-2004-0001, and there are others expected to be present in dry weather non-storm water discharges because of the nature of these discharges. This Order includes action levels for pollutants in non-storm water, dry weather discharges from the MS4. The non-storm water action levels are designed to ensure that the Order's requirement to effectively prohibit all types of unauthorized discharges of non-storm water into the MS4 is being complied with. Non-storm water action levels in the Order are based upon numeric or narrative water quality objectives and criteria as defined in the Basin Plan, the State Water Board's Water Quality Control Plan for Ocean Waters of California (Ocean Plan), and the State Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (State Implementation Policy or SIP). An exceedance of an action level

requires specified responsive action by the Copermittees. This Order describes what actions the Copermittees must take when an exceedance of an action level is observed. Exceedances of non-storm water action levels do not alone constitute a violation of this Order but could indicate non-compliance with the requirement to effectively prohibit all types of unauthorized non-storm water discharges into the MS4 or other prohibitions established in this Order. Failure to undertake required source investigation and elimination action following an exceedance of a non-storm water action level (NAL or action level) is a violation of this Order. The San Diego Water Board recognizes that use of action levels will not necessarily result in detection of all unauthorized sources of non-storm water discharges because there may be some discharges in which pollutants do not exceed established action levels. However, establishing NALs at levels appropriate to protect water quality standards is expected to lead to the identification of significant sources of pollutants in dry weather non-storm water discharges.

- 11.** In addition to federal regulations cited in the Fact Sheet / Technical Report for the Order No. R9-2010-0016, monitoring and reporting required under Order No. R9-2010-0016 is required pursuant to authority under CWC section 13383.
- 12.** With this Order, the San Diego Water Board has completed the re-issuance of the fourth iteration of the Phase I MS4 NPDES Permits for the Copermittees in the portions of San Diego County, Orange County, and Riverside County within the San Diego Region. The NPDES Permit requirements issued to the Copermittees in each county have substantially the same core requirements such as discharge prohibitions, receiving water limitations, jurisdictional components, and monitoring. In addition, the Copermittees cooperate regionally to develop monitoring with the Southern California Stormwater Monitoring Coalition and to develop program effectiveness with the California Stormwater Quality Association. Regional programs could improve the Copermittees' compliance with other permit components such as development of the Hydromodification Management Plans and Retrofitting Existing Development with more consistent implementation and cost sharing. Re-issuing the NPDES Permit requirements within five years for three counties under three different permits requires the San Diego Water Board to expend significant time and resources for issuance of the permits through three separate public proceedings, thereby greatly reducing the time and resources available to oversee compliance. Multiple permits also create confusion for determining compliance among regulated entities, especially the land development community. The San Diego Water Board recognizes that issuing a single MS4 permit for all Phase I entities in the San Diego Region will provide consistent implementation, improve communication among agencies within watersheds crossing multiple jurisdictions, and minimize staff resources spent with each permit renewal. The San Diego Water Board plans to develop a single regional MS4 permit prior to the expiration of this Order that will transfer the Copermittees' enrollment to the regional permit upon expiration of this Order.

**F. PUBLIC PROCESS**

1. The San Diego Water Board has notified the Copermitees, all known interested parties, and the public of its intent to consider adoption of an Order prescribing waste discharge requirements that would serve to renew an NPDES permit for the existing MS4 discharges of pollutants in waters of the U.S.
2. The San Diego Water Board has held a public hearing on November 10, 2010 and heard and considered all comments pertaining to the terms and conditions of this Order.

**IT IS HEREBY ORDERED** that the Copermittees, in order to meet the provisions contained in Division 7 of the CWC and regulations adopted thereunder, and the provisions of the CWA and regulations adopted thereunder, must each comply with the following:

#### **A. PROHIBITIONS AND RECEIVING WATER LIMITATIONS**

1. Discharges into and from MS4s in a manner causing, or threatening to cause, a condition of pollution, contamination, or nuisance (as defined in CWC section 13050), in receiving waters of the state are prohibited.<sup>3</sup>
2. Storm water discharges from MS4s containing pollutants which have not been reduced to the MEP are prohibited.<sup>3</sup>
3. Discharges from MS4s that cause or contribute to the violation of water quality standards (designated beneficial uses, water quality objectives developed to protect beneficial uses, and the State policy with respect to maintaining high quality waters) are prohibited.
  - a. Each Copermittee must comply with section A.3 and section A.4 as it applies to Prohibition 5 in Attachment A of this Order through timely implementation of control measures and other actions to reduce pollutants in storm water discharges in accordance with this Order, including any modifications. If exceedance(s) of water quality standards persist notwithstanding implementation of this Order, the Copermittee must assure compliance with section A.3 and section A.4 as it applies to Prohibition 5 in Attachment A of this Order by complying with the following procedure:
    - (1) Upon a determination by either the Copermittee or the San Diego Water Board that storm water MS4 discharges are causing or contributing to an exceedance of an applicable water quality standard, the Copermittee must notify the San Diego Water Board within 30 days and thereafter submit a report to the San Diego Water Board that describes best management practices (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 Report unless the San Diego Water Board<sup>4</sup> directs an earlier submittal. The report must include an implementation

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<sup>3</sup> This prohibition does not apply to MS4 discharges which receive subsequent treatment to reduce pollutants in storm water discharges to the MEP prior to entering receiving waters (e.g., low flow diversions to the sanitary sewer). Runoff treatment and/or mitigation must occur prior to the discharge of runoff into receiving waters per finding E.7.

<sup>4</sup> The San Diego Water Board by prior resolution has delegated all matters that may legally be delegated to its Executive Officer to act on its behalf pursuant to CWC §13223. Therefore, the Executive Officer is authorized to act on the San Diego Water Board's behalf on any matter within this Order unless such delegation is unlawful under CWC §13223 or this Order explicitly states otherwise.

schedule. The San Diego Water Board may require modifications to the report

- (2) Submit any modifications to the report required by the San Diego Water Board within 30 days of notification;
  - (3) Within 30 days following acceptance of the report described above by the San Diego Water Board, the Copermittee must revise its JRMP 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
  - (4) Implement the revised JRMP and monitoring program in accordance with the approved schedule.
- b. The Copermittee must repeat the procedure set forth above to comply with the receiving water limitations for continuing or recurring exceedances of the same water quality standard(s) following implementation of scheduled actions unless directed to do otherwise by the San Diego Water Board's Executive Officer.
  - c. Nothing in section A.3 prevents the San Diego Water Board from enforcing any provision of this Order while the Copermittee prepares and implements the above report.
4. In addition to the above prohibitions, discharges from MS4s are subject to all Basin Plan prohibitions cited in Attachment A to this Order.

## **B. NON-STORM WATER DISCHARGES**

1. Each Copermittee must effectively prohibit all types of non-storm water discharges into its MS4 unless such discharges are either authorized by a separate NPDES permit; or not prohibited in accordance with sections B.2 and B.3 below.
2. The following categories of non-storm water discharges are not prohibited unless a Copermittee or the San Diego Water Board identifies the discharge category as a source of pollutants to waters of the U.S. Where the Copermittee(s) have identified a category as a source of pollutants, the category must be addressed as an illicit discharge and prohibited through ordinance, order or similar means. The San Diego Water Board may identify categories of discharge that either require prohibition, or other controls for non-anthropogenic sources. For a discharge category determined to be a source of pollutants, the Copermittee, under direction of the San Diego Water Board, must either prohibit the discharge category or develop and implement appropriate control measures for non-anthropogenic sources to prevent the discharge of pollutants to the MS4 and report to the San Diego Water Board pursuant to Section K.1 and K.3 of this Order. The discharge categories are:

- a. Diverted stream flows;
  - b. Rising ground waters;
  - c. Uncontaminated ground water infiltration [as defined at 40 CFR 35.2005(20)] to MS4s;
  - d. Uncontaminated pumped ground water<sup>5</sup>;
  - e. Foundation drains<sup>5</sup>;
  - f. Springs;
  - g. Water from crawl space pumps<sup>5</sup>;
  - h. Footing drains<sup>5</sup>;
  - i. Air conditioning condensation;
  - j. Flows from riparian habitats and wetlands;
  - k. Water line flushing<sup>6,7</sup>;
  - l. Discharges from potable water sources not subject to NPDES Permit No. CAG679001, other than water main breaks;
  - m. Individual residential car washing; and
  - n. Dechlorinated swimming pool discharges<sup>8</sup>.
3. Emergency fire fighting flows (i.e., flows necessary for the protection of life or property) do not require BMPs and need not be prohibited.
- a. As part of the JRMP, each Copermittee must develop and implement a program to address pollutants from non-emergency fire fighting flows (i.e., flows from controlled or practice blazes and maintenance activities) identified as significant sources of pollutants to waters of the U.S.
  - b. Building fire suppression system maintenance discharges (e.g. sprinkler line flushing) contain waste. Therefore, such discharges are to be prohibited by the Copermittees as illicit discharges through ordinance, order, or similar means.
4. Each Copermittee must examine all dry weather effluent analytical monitoring results collected in accordance with section F.4 of this Order and Receiving Waters and MS4 Discharge Monitoring and Reporting Program No. R9-2010-0016 to identify water quality problems which may be the result of any non-prohibited discharge category(ies) identified above in section B.2. Follow-up investigations must be conducted to identify and control, pursuant to section B.2, any non-prohibited discharge category(ies) listed above.

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<sup>5</sup> Requires enrollment under Order R9-2008-002. Discharges into the MS4 require authorization from the owner and operator of the MS4 system.

<sup>6</sup> This exemption does not include fire suppression sprinkler system maintenance and testing discharges. Those discharges may be regulated under Section B.3.

<sup>7</sup> Requires enrollment under Order R9-2002-0020.

<sup>8</sup> Excluding saline swimming pool discharges.

**C. NON-STORM WATER DRY WEATHER ACTION LEVELS**

1. Each Copermittee, beginning no later than July 1, 2012, must implement the non-storm water dry weather action level (NAL) monitoring as described in Attachment E of this Order.
2. In response to an exceedance of an NAL, the Copermittee(s) having jurisdiction must investigate and seek to identify the source of the exceedance in a timely manner. However, if any Copermittee identifies a number of NAL exceedances that prevents it from adequately conducting source investigations at all sites in a timely manner, then that Copermittee may submit a prioritization plan and timeline that identifies the timeframe and planned actions to investigate and report its findings on all of the exceedances. Depending on the source of the pollutant exceedance, the Copermittee(s) having jurisdiction must take action as follows:
  - a. If the Copermittee identifies the source of the exceedance as natural (non-anthropogenically influenced) in origin and in conveyance into the MS4; then the Copermittee must report its findings and documentation of its source investigation to the San Diego Water Board in its Annual Report.
  - b. If the Copermittee identifies the source of the exceedance as an illicit discharge or connection, then the Copermittee must eliminate the discharge to its MS4 pursuant to Section F.4.f and report the findings, including any enforcement action(s) taken, and documentation of the source investigation to the San Diego Water Board in the Annual Report. If the Copermittee is unable to eliminate the source of discharge prior to the Annual Report submittal, then the Copermittee must submit, as part of its Annual Report, its plan and timeframe to eliminate the source of the exceedance. Those dischargers seeking to continue such a discharge must become subject to a separate NPDES permit prior to continuing any such discharge.
  - c. If the Copermittee identifies the source of the exceedance as an exempted category of non-storm water discharge, then the Copermittees must determine if this is an isolated circumstance or if the category of discharges must be addressed through the prevention or prohibition of that category of discharge as an illicit discharge. The Copermittee must submit its findings including a description of the steps taken to address the discharge and the category of discharge, to the San Diego Water Board for review in its Annual Report. Such description must include relevant updates to or new ordinances, orders, or other legal means of addressing the category of discharge, and the anticipated schedule for doing so. The Copermittees must also submit a summary of its findings with the Report of Waste Discharge.
  - d. If the Copermittee identifies the source of the exceedance as a non-storm water discharge in violation or potential violation of an existing separate NPDES permit

- (e.g. the groundwater dewatering permit), then the Copermittee must report, within three business days, the findings to the San Diego Water Board including all pertinent information regarding the discharger and discharge characteristics.
- e. If the Copermittee is unable to identify the source of the exceedance after taking and documenting reasonable steps to do so, then the Copermittee must perform additional focused sampling. If the results of the additional sampling indicate a recurring exceedance of NALs with an unidentified source, then the Copermittee must update its programs within a year to address the common contributing sources that may be causing such an exceedance. The Copermittee's annual report must include these updates to its programs including, where applicable, updates to their watershed workplans (Section G.2), retrofitting consideration (Section F.3.d) and program effectiveness work plans (Section J.4).
  - f. The Copermittees, or any interested party, may evaluate existing NALs and propose revised NALs for future Board consideration.
3. NALs can help provide an assessment of the effectiveness of the prohibition of non-storm water discharges and of the appropriateness of exempted non-storm water discharges. An exceedance of an NAL does not alone constitute a violation of the provisions of this Order. An exceedance of an NAL may indicate a lack of compliance with the requirement that Copermittees effectively prohibit all types of unauthorized non-storm water discharges into the MS4 or other prohibitions set forth in Sections A and B of this Order. Failure to timely implement required actions specified in this Order following an exceedance of an NAL constitutes a violation of this Order. Neither the absence of exceedances of NALs nor compliance with required actions following observed exceedances, excuses any non-compliance with the requirement to effectively prohibit all types of unauthorized non-storm water discharges into the MS4s or any non-compliance with the prohibitions in Sections A and B of this Order. During any annual reporting period in which one or more exceedances of NALs have been documented the Copermittee must report in response to Section C.2 above, a description of whether and how the observed exceedances did or did not result in a discharge from the MS4 that caused, or threatened to cause or contribute to a condition of pollution, contamination, or nuisance in the receiving waters.
4. Monitoring of effluent will occur at the end-of-pipe prior to discharge into the receiving waters, with a focus on Major Outfalls, as defined in 40 CFR 122.26(B 5-6) and Attachment E of this Order. The Copermittees must develop their monitoring plans to sample a representative percentage of major outfalls and identified stations within each hydrologic subarea. At a minimum, outfalls that exceed any NALs once during any year must be monitored in the subsequent year. Any station that does not exceed an NAL, or only has exceedances that are identified as natural in origin and conveyance into the MS4 pursuant to Section C.2.a, for 3 successive years may be replaced with a different station.

5. Each Copermittee must monitor for the non-storm water dry weather action levels, which are incorporated into this Order as follows:

Action levels for discharges to inland surface waters:

Table 3.a: General Constituents

Parameter	Units	AMAL	MDAL	Instantaneous Maximum	Basis
Fecal Coliform	MPN/ 100 ml	200 <sup>A</sup> 400 <sup>B</sup>	-		BPO
Enterococci	MPN/ 100 ml	33	-	61 <sup>C</sup>	BPO
Turbidity	NTU	-	20		BPO
pH	Units	Within limit of 6.5 to 8.5 at all times			BPO
Dissolved Oxygen	mg/L	Not less than 5.0 in WARM waters and not less than 6.0 in COLD waters			BPO
Total Nitrogen	mg/L	-	1.0	See MDAL	BPO
Total Phosphorus	mg/L	-	0.1	See MDAL	BPO
Methylene Blue Active Substances	mg/L	-	0.5	See MDAL	BPO
Iron	mg/L	-	0.3	See MDAL	BPO
Manganese	mg/L	-	0.05	See MDAL	BPO

A – Based on a minimum of not less than five samples for any 30-day period  
 B – No more than 10 percent of total samples may exceed 400 per 100 ml during any 30 day period  
 C – This Value has been set to Basin Plan Criteria for Designated Beach Areas  
 BPO – Basin Plan Objective  
 MDAL – Maximum Daily Action Level  
 AMAL – Average Monthly Action Level

Table 3.b: Priority Pollutants

Parameter	Units	Freshwater (CTR)	
		MDAL	AMAL
Cadmium	ug/L	**	**
Copper	ug/L	*	*
Chromium III	ug/L	**	**
Chromium VI (hexavalent)	ug/L	16	8.1
Lead	ug/L	*	*
Nickel	ug/L	**	**
Silver	ug/L	*	*
Zinc	ug/L	*	*

CTR – California Toxic Rule  
 \*- Action Levels developed on a case-by-case basis (see below)  
 \*\*- Action Levels developed on a case-by-case basis (see below), but calculated criteria are not to exceed Maximum Contaminant Levels under the California Code of Regulations<sup>9</sup>

<sup>9</sup> California Code of Regulations, Title 22, Division 4, Chapter 15, Article 4, Section 64431.

The NALs for Cadmium, Copper, Chromium (III), Lead, Nickel, Silver and Zinc will be developed on a case-by-case basis because the freshwater criteria are based on site-specific water quality data (receiving water hardness). For these priority pollutants, the following equations (40 CFR 131.38.b.2) will be required:

Cadmium (Total Recoverable)	= $\exp(0.7852[\ln(\text{hardness})] - 2.715)$
Chromium III (Total Recoverable)	= $\exp(0.8190[\ln(\text{hardness})] + .6848)$
Copper (Total Recoverable)	= $\exp(0.8545[\ln(\text{hardness})] - 1.702)$
Lead (Total Recoverable)	= $\exp(1.273[\ln(\text{hardness})] - 4.705)$
Nickel (Total Recoverable)	= $\exp(.8460[\ln(\text{hardness})] + 0.0584)$
Silver (Total Recoverable)	= $\exp(1.72[\ln(\text{hardness})] - 6.52)$
Zinc (Total Recoverable)	= $\exp(0.8473[\ln(\text{hardness})] + 0.884)$

#### D. STORM WATER ACTION LEVELS

1. The Copermittees must implement the Wet Weather MS4 Discharge Monitoring as described in Attachment E of this Order, and beginning three years after the Order adoption date, the Copermittees must annually evaluate their data compared to the Stormwater Action Levels (SALs). At each monitoring station, a running average of twenty percent or greater of exceedances of any discharge of storm water from the MS4 to waters of the U.S. that exceed the SALs for each of the pollutants listed in Table 4 (below) requires the Copermittee(s) having jurisdiction to affirmatively augment and implement all necessary storm water controls and measures to reduce the discharge of the associated class of pollutants(s) to the MEP. The Copermittees must utilize the exceedance information when adjusting and executing annual work plans, as required by this Order. Copermittees must take the magnitude, frequency, and number of constituents exceeding the SAL(s), in addition to receiving water quality data and other information, into consideration when prioritizing and reacting to SAL exceedances in an iterative manner. Failure to appropriately consider and react to SAL exceedances in an iterative manner creates a presumption that the Copermittee(s) have not reduced pollutants in storm water discharges to the MEP.

Table 4. Storm Water Action Levels

Pollutant	Action Level
Turbidity (NTU)	126
Nitrate & Nitrite total (mg/L)	2.6
P total (mg/L)	1.46
Cd total ( $\mu\text{g/L}$ )	3.0
Cu total ( $\mu\text{g/L}$ )	127
Pb total ( $\mu\text{g/L}$ )	250
Zn total ( $\mu\text{g/L}$ )	976

2. The end-of-pipe assessment points for the determination of SAL compliance are major outfalls, as defined in 40 CFR 122.26(b)(5) and (b)(6) and Attachment E of this Order. The Copermittees must develop their monitoring plans to sample a representative percentage of the major outfalls within each hydrologic subarea. At a minimum, outfalls that exceed SALs must be monitored in the subsequent year. Any station that does not exceed an SAL for 3 successive years may be replaced with a different station. SAL samples must be 24 hour time-weighted composites.
3. The absence of SAL exceedances does not relieve the Copermittees from implementing all other required elements of this Order.
4. This Order does not regulate natural sources and conveyances into the MS4 of constituents listed in Table 5. To be relieved of the requirements to take action as described in D.1 above, the Copermittee must demonstrate that the likely and expected cause of the SAL exceedance is not anthropogenic in nature. This demonstration does not need to be repeated for subsequent exceedances of the same SAL at the same monitoring station.
5. The SALs will be reviewed and updated at the end of every permit cycle. The data collected pursuant to D.2 above and Attachment E can be used to create SALs based upon local data. The purpose of establishing the SALs is that through the iterative and MEP process, outfall storm water discharges will meet all applicable water quality standards.

## **E. LEGAL AUTHORITY**

1. Each Copermittee must establish, maintain, and enforce adequate legal authority within its jurisdiction to control pollutant discharges into and from its MS4 through ordinance, statute, permit, contract or similar means. Nothing herein shall authorize a Copermittee or other discharger regulated under the terms of this order to divert, store or otherwise impound water if such action is reasonably anticipated to harm downstream water rights holders in the exercise of their water rights. This legal authority must, at a minimum, authorize the Copermittee to:
  - a. Control the contribution of pollutants in discharges of runoff associated with industrial and construction activity to its MS4 and control the quality of runoff from industrial and construction sites. This requirement applies both to industrial and construction sites which have coverage under the statewide general industrial or construction storm water permits, as well as to those sites which do not. Grading ordinances must be updated and enforced as necessary to comply with this Order;
  - b. Prohibit all identified illicit discharges not otherwise allowed pursuant to section B.2;
  - c. Prohibit and eliminate illicit connections to the MS4;

- d. Control the discharge of spills, dumping, or disposal of materials other than storm water to its MS4;
  - e. Require compliance with conditions in Copermittee ordinances, permits, contracts or orders (i.e., hold dischargers to its MS4 accountable for their contributions of pollutants and flows);
  - f. Utilize enforcement mechanisms to require compliance with Copermittee storm water ordinances, permits, contracts, or orders;
  - g. Control the contribution of pollutants from one portion of the shared MS4 to another portion of the MS4 through interagency agreements among Copermittees;
  - h. Control of the contribution of pollutants from one portion of the shared MS4 to another portion of the MS4 through interagency agreements with other owners of the MS4 such as the State of California Department of Transportation, the U.S. federal government, or sovereign Native American Tribes is encouraged;
  - i. Carry out all inspections, surveillance, and monitoring necessary to determine compliance and noncompliance with local ordinances and permits and with this Order, including the prohibition on illicit discharges to the MS4. This means the Copermittee must have authority to enter, monitor, inspect, take measurements, review and copy records, and require regular reports from industrial facilities discharging into its MS4, including construction sites;
  - j. Require the use of BMPs to prevent or reduce the discharge of pollutants into MS4s from storm water to the MEP; and
  - k. Require documentation on the effectiveness of BMPs implemented to reduce the discharge of storm water pollutants to the MS4 to the MEP.
2. Each Copermittee must submit on or before June 30, 2012, a statement certified by its chief legal counsel that the Copermittee has taken the necessary steps to obtain and maintain full legal authority within its jurisdiction to implement and enforce each of the requirements contained in 40 CFR 122.26(d)(2)(i)(A-F) and this Order. These statements must include:
- a. Citation of runoff related ordinances and the reasons they are enforceable;
  - b. Identification of the local administrative and legal procedures available to mandate compliance with runoff related ordinances and therefore with the conditions of this Order, and a statement as to whether enforcement actions can be completed administratively or whether they must be commenced and completed in the judicial system; and
  - c. A brief description of how runoff related ordinances are adopted and the process by which they may be challenged.

## **F. JURISDICTIONAL RUNOFF MANAGEMENT PROGRAM (JRMP)**

Each Copermittee must implement all requirements of section F of this Order no later than July 1, 2012, unless otherwise specified. Upon adoption of this Order and until an updated JRMP is developed and implemented or July 1, 2012, whichever occurs first, each Copermittee must at a minimum implement its JRMP document, as the document was developed and amended to comply with the requirements of Order No. R9-2004-001.

Each Copermittee must develop and implement an updated JRMP for its jurisdiction no later than July 1, 2012. Each updated JRMP must meet the requirements of section F of this Order, reduce the discharge of storm water pollutants from the MS4 to the MEP, effectively prohibit non-storm water discharges, and prevent runoff discharges from the MS4 from causing or contributing to a violation of water quality standards. In addition, each Copermittee's JRMP must identify all departments and positions within its jurisdiction that conduct runoff related activities, and their roles and responsibilities under this Order. This identification must include an up to date organizational chart specifying these departments and key personnel.

### **1. DEVELOPMENT PLANNING COMPONENT**

Each Copermittee must implement a program which meets the requirements of this section and (1) reduces Development Project discharges of storm water pollutants from the MS4 to the MEP; (2) prevents Development Project discharges from the MS4 from causing or contributing to a violation of water quality standards; (3) prevents illicit discharges into the MS4; and (4) manages increases in runoff discharge rates and durations from Development Projects that are likely to cause increased erosion of stream beds and banks, silt pollutant generation, or other impacts to beneficial uses and stream habitat due to increased erosive force.

#### **a. GENERAL PLAN**

Each Copermittee must revise as needed its General Plan or equivalent plan (e.g., Comprehensive, Master, or Community Plan) to include water quality and watershed protection principles and policies that direct land-use decisions and require implementation of consistent water quality protection measures for all development, redevelopment, and retrofit projects. Examples of water quality and watershed protection principles and policies to be considered include the following:

- (1) Minimize the amount of impervious surfaces and directly connected impervious surfaces in areas of new development and redevelopment and where feasible slow runoff and maximize on-site infiltration of runoff.

- (2) Implement pollution prevention methods supplemented by pollutant source controls and treatment BMPs. Use small collection strategies located at, or as close as possible to, the source (i.e., the point where water initially meets the ground) to minimize the transport of urban runoff and pollutants offsite and into an MS4.
- (3) Preserve, and where possible, create, or restore areas that provide important water quality benefits, such as riparian corridors, wetlands, and buffer zones. Encourage land acquisition of such areas.
- (4) Limit disturbances of natural water bodies and natural drainage systems caused by development including roads, highways, and bridges.
- (5) Prior to making land use decisions, utilize methods available to estimate increases in pollutant loads and flows resulting from projected future development. Require incorporation of BMPs to mitigate the projected increases in pollutant loads and flows.
- (6) Avoid development of areas that are particularly susceptible to erosion and sediment loss; or establish development guidance that identifies these areas and protects them from erosion and sediment loss.
- (7) Reduce pollutants associated with vehicles and increasing traffic resulting from development.
- (8) Post-development runoff from a site must not contain pollutant loads that cause or contribute to an exceedance of receiving water quality objectives and which have not been reduced to the MEP.

**b. ENVIRONMENTAL REVIEW PROCESS**

Each Copermittee must revise as needed its current environmental review processes to accurately evaluate water quality impacts and cumulative impacts and identify appropriate measures to avoid, minimize, and mitigate those impacts for all Development Projects.

**c. APPROVAL PROCESS CRITERIA AND REQUIREMENTS FOR ALL DEVELOPMENT PROJECTS**

For all proposed Development Projects, each Copermittee, during the planning process, and prior to project approval and issuance of local permits, must prescribe the necessary requirements so that Development Project discharges of storm water pollutants from the MS4 will be reduced to the MEP, will not cause or

contribute to a violation of water quality standards, and will comply with the Copermittee's ordinances, permits, plans, and requirements, and with this Order.

Performance Criteria: Discharges from each approved development project must be subject to the following management measures:

- (1) Source control BMPs that reduce storm water pollutants of concern in runoff; prevent illicit discharges into the MS4; prevent irrigation runoff; storm drain system stenciling or signage; properly design outdoor material storage areas; properly design outdoor work areas; and properly design trash storage areas.
- (2) The following LID BMPs listed below must be implemented at all Development Projects where applicable and feasible.
  - (a) Conserve natural areas, including existing trees, other vegetation, and soils;
  - (b) Construct streets, sidewalks, or parking lot aisles to the minimum widths necessary, provided that public safety is not compromised;
  - (c) Minimize the impervious footprint of the project;
  - (d) Minimize soil compaction to landscaped areas;
  - (e) Minimize disturbances to natural drainages (e.g., natural swales, topographic depressions, etc.); and
  - (f) Disconnect impervious surfaces through distributed pervious areas.
- (3) Buffer zones for natural water bodies, where technically feasible. Where buffer zones are technically infeasible, require project proponent to implement other buffers such as trees, access restrictions, etc.
- (4) Other measures necessary so that grading or other construction activities meet the provisions specified in section F.2 of this Order.
- (5) Submittal of documentation of a mechanism under which ongoing long-term maintenance of all structural post-construction BMPs will be conducted.

#### (6) Infiltration and Groundwater Protection

To protect groundwater quality, each Copermittee must apply restrictions to the use of treatment control BMPs that are designed to primarily function as large, centralized infiltration devices (such as large infiltration trenches and infiltration basins). Such restrictions must be designed so that the use of such infiltration treatment control BMPs does not cause or contribute to an exceedance of groundwater quality objectives. At a minimum, each treatment control BMP designed to primarily function as a centralized infiltration device must meet the restrictions below, unless the Development Project demonstrates to the Copermittee that a restriction is not necessary to protect groundwater quality. The Copermittees may collectively or individually

#### DIRECTIVES F: JURISDICTIONAL RUNOFF MANAGEMENT PROGRAM F.1 DEVELOPMENT COMPONENT

##### F.1.c. APPROVAL PROCESS CRITERIA AND REQUIREMENTS FOR ALL DEVELOPMENT PROJECTS

- develop alternative restrictions on the use of treatment control BMPs which are designed to primarily function as centralized infiltration devices. Alternative restrictions developed by the Copermittees can partially or wholly replace the restrictions listed below. The restrictions do not apply to small infiltration systems dispersed throughout a development project.
- (a) Runoff must undergo pretreatment such as sedimentation or filtration prior to infiltration;
  - (b) All dry weather flows containing significant pollutant loads must be diverted from infiltration devices and treated through other BMPs;
  - (c) Pollution prevention and source control BMPs must be implemented at a level appropriate to protect groundwater quality at sites where infiltration treatment control BMPs are to be used;
  - (d) Infiltration treatment control BMPs must be adequately maintained so that they remove storm water pollutants to the MEP;
  - (e) The vertical distance from the base of any infiltration treatment control BMP to the seasonal high groundwater mark must be at least 10 feet. Where groundwater basins do not support beneficial uses, this vertical distance criteria may be reduced, provided groundwater quality is maintained;
  - (f) The soil through which infiltration is to occur must have physical and chemical characteristics (such as appropriate cation exchange capacity, organic content, clay content, and infiltration rate) which are adequate for proper infiltration durations and treatment of runoff for the protection of groundwater beneficial uses;
  - (g) Infiltration treatment control BMPs must not be used for areas of industrial or light industrial activity; and other high threat to water quality land uses and activities as designated by each Copermittee unless first treated or filtered to remove pollutants prior to infiltration; and
  - (h) Infiltration treatment control BMPs must be located a minimum of 100 feet horizontally from any water supply wells.
- (7) Where feasible, landscaping with native or low water species shall be preferred in areas that drain to the MS4 or to waters of the U.S.
- (8) Rain water harvesting and water reuse, where feasible, must be encouraged as part of the site design and construction to reduce pollutants in storm water discharges to the MEP.

**d. STANDARD STORM WATER MITIGATION PLANS (SSMPs) – APPROVAL PROCESS  
CRITERIA AND REQUIREMENTS FOR PRIORITY DEVELOPMENT PROJECTS**

On or before June 30, 2012, the Copermittees must submit an updated SSMP, to the San Diego Water Board's Executive Officer for a 30 day public review and comment period. The San Diego Water Board's Executive Officer has the discretion to determine whether to hold a public hearing or to limit public input to written comments. Within 180 days of determination that the SSMP is in compliance with this Order's provisions, each Copermittee must amend its local ordinances consistent with the updated SSMP, and begin implementing the updated SSMP. Any updated local ordinances must be submitted to the San Diego Water Board with the Annual Report. The SSMP must meet the requirements of section F.1.d of this Order to (1) reduce Priority Development Project discharges of storm water pollutants from the MS4 to the MEP, and (2) prevent Priority Development Project runoff discharges from the MS4 from causing or contributing to a violation of water quality standards.<sup>10</sup>

**(1) Definition of Priority Development Project:**

Priority Development Projects are:

- (a) All new Development Projects that fall under the project categories or locations listed in section F.1.d.(2), and
- (b) Those redevelopment projects that create, add, or replace at least 5,000 square feet of impervious surfaces on an already developed site and the existing development and/or the redevelopment project falls under the project categories or locations listed in section F.1.d.(2). 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 SSMP requirements, the numeric sizing criteria discussed in section F.1.d.(6) applies only to the addition or replacement, and not to the entire development. Where redevelopment

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<sup>10</sup> Updated SSMP and hydromodification requirements must apply to all priority projects or phases of priority projects which have not yet begun grading or construction activities at the time any updated SSMP or hydromodification requirement commences. If lawful prior approval of a project exists, whereby application of an updated SSMP or hydromodification requirement to the project is illegal, the updated SSMP or hydromodification requirement need not apply to the project. Updated Development Planning requirements set forth in Sections F.1. (a) through (h) of this Order must apply to all projects or phases of projects, unless, at the time any updated Development Planning requirement commences, the projects or project phases meet any one of the following conditions: (i) the project or phase has begun grading or construction activities; or (ii) a Copermittee determines that lawful prior approval rights for a project or project phase exist, whereby application of the Updated Development Planning requirement to the project is legally infeasible. Where feasible, the Permittees must utilize the SSMP and hydromodification update periods to ensure that projects undergoing approval processes include application of the updated SSMP and hydromodification requirements in its plans.

results in an increase of more than fifty percent of the impervious surfaces of a previously existing development, the numeric sizing criteria applies to the entire development.

- (c) One acre threshold: In addition to the Priority Development Project Categories identified in section F.1.d.(2), Priority Development Projects must also include all other post-construction pollutant-generating new Development Projects that result in the disturbance of one acre or more of land by July 1, 2012.<sup>11</sup>

## (2) Priority Development Project Categories

Where a new Development Project feature, such as a parking lot, falls into a Priority Development Project Category, the entire project footprint is subject to SSMP requirements.

- (a) New development projects that create 10,000 square feet or more of impervious surfaces (collectively over the entire project site) including commercial, industrial, residential, 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 Copermittees.
- (b) Automotive repair shops. This category is defined as a facility that is categorized in any one of the following Standard Industrial Classification (SIC) codes: 5013, 5014, 5541, 7532-7534, or 7536-7539.
- (c) Restaurants. This category is defined as a facility that sells prepared foods and drinks for consumption, including stationary lunch counters and refreshment stands selling prepared foods and drinks for immediate consumption (SIC code 5812), where the land area for development is greater than 5,000 square feet. Restaurants where land development is less than 5,000 square feet must meet all SSMP requirements except for structural treatment BMP and numeric sizing criteria requirement F.1.d.(6) and hydromodification requirement F.1.h.
- (d) All hillside development greater than 5,000 square feet. This category is defined as any development which creates 5,000 square feet of impervious surface which is located in an area with known erosive soil conditions, where the development will grade on any natural slope that is twenty-five percent or greater.
- (e) Environmentally Sensitive Areas (ESAs). All development located within, or directly adjacent to, or discharging directly to an ESA (where

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<sup>11</sup> Pollutant generating Development Projects are those projects that generate pollutants at levels greater than natural background levels.

discharges from the development or redevelopment will enter receiving waters within the ESA), which either creates 2,500 square feet of impervious surface on a proposed project site or increases the area of imperviousness of a proposed project site to 10 percent or more of its naturally occurring condition. "Directly adjacent" means situated within 200 feet of the ESA. "Discharging directly to" means outflow from a drainage conveyance system that is composed entirely of flows from the subject development or redevelopment site, and not commingled with flows from adjacent lands.

- (f) Impervious parking lots 5,000 square feet or more and potentially exposed to runoff. Parking lot is defined as a land area or facility for the temporary parking or storage of motor vehicles used personally, for business, or for commerce.
- (g) Street, roads, highways, and freeways. This category includes any paved impervious surface that is 5,000 square feet or greater used for the transportation of automobiles, trucks, motorcycles, and other vehicles. To the extent that the Copermittees develop revised standard roadway design and post-construction BMP guidance that comply with the provisions of Section F.1 of the Order, then public works projects that implement the revised standard roadway sections do not have to develop a project specific SSMP. The standard roadway design and post-construction BMP guidance must be submitted with the Copermittee's updated SSMP.
- (h) Retail Gasoline Outlets (RGOs). This category includes RGOs that meet the following criteria: (a) 5,000 square feet or more or (b) a projected Average Daily Traffic (ADT) of 100 or more vehicles per day.

### (3) Pollutants of Concern

As part of its local SSMP, each Copermittee must implement an updated procedure for identifying pollutants of concern for each Priority Development Project. The procedure must address, at a minimum: (1) Receiving water quality (including pollutants for which receiving waters are listed as impaired under CWA section 303(d)); (2) Land-use type of the Development Project and pollutants associated with that land use type; and (3) Pollutants expected to be present on site.

#### (4) Low Impact Development BMP Requirements

Each Copermitttee must require each Priority Development Project to implement LID BMPs which will collectively minimize directly connected impervious areas, limit loss of existing infiltration capacity, and protect areas that provide important water quality benefits necessary to maintain riparian and aquatic biota, and/or are particularly susceptible to erosion and sediment loss.

(a) The Copermitttees must take the following measures to ensure that LID BMPs are implemented at Priority Development Projects:

- (i) Each Copermitttee must require LID BMPs or make a finding of technical infeasibility for each Priority Development Project in accordance with the LID waiver program in Section F.1.d.(7);
- (ii) Each Copermitttee must incorporate formalized consideration, such as thorough checklists, ordinances, and/or other means, of LID BMPs into the plan review process for Priority Development Projects; and
- (iii) On or before July 1, 2012, each Copermitttee must review its local codes, policies, and ordinances and identify barriers therein to implementation of LID BMPs. Following the identification of these barriers to LID implementation, where feasible, the Copermitttee must take, by the end of the permit cycle, appropriate actions to remove such barriers. The Copermitttees must include this review with the updated JRMP.

(b) The following LID BMPs must be implemented at each Priority Development Project:

- (i) Maintain or restore natural storage reservoirs and drainage corridors (including depressions, areas of permeable soils, swales, and ephemeral and intermittent streams) to the extent feasible<sup>12</sup>.
- (ii) Projects with landscaped or other pervious areas must, where feasible, properly design and construct the pervious areas to effectively receive and infiltrate, retain and/or treat runoff from impervious areas, prior to discharge to the MS4. Soil compaction for these areas must be minimized. The amount of the impervious areas that are to drain to pervious areas must be based upon the total size, soil conditions, slope, and other pertinent factors.
- (iii) Projects with low traffic areas and appropriate soil conditions must be constructed with permeable surfaces.

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<sup>12</sup> Priority Development Projects proposing to dredge or fill materials in waters of the U.S. must obtain a CWA Section 401 Water Quality Certification. Priority Development Projects proposing to dredge or fill waters of the State must obtain Waste Discharge Requirements.

## (c) LID BMPs sizing criteria:

- (i) LID BMPs must be sized and designed to ensure onsite retention without runoff, of the volume of runoff produced from a 24-hour 85<sup>th</sup> percentile storm event<sup>13</sup> (“design capture volume”);
- (ii) If onsite retention<sup>14</sup> LID BMPs are technically infeasible per section F.1.d.(7)(b), other LID BMPs may treat any volume that is not retained onsite provided that the total volume of the other LID BMPs, including pore spaces and pre-filter detention volume, are sized to hold at least 0.75 times the portion of the design capture volume that is not retained onsite. The LID BMPs must be designed for an appropriate surface loading rate to prevent erosion, scour and channeling within the BMP.

(d) If it is shown to be technically infeasible per Section F.1.d.(7)(b) to retain and/or treat the remaining volume up to and including the design capture volume using LID BMPs, then the project must implement conventional treatment control BMPs in accordance with Section F.1.d.(6) below and must participate in the LID waiver program in Section F.1.d.(7).

(e) All LID BMPs must be designed and implemented with measures to avoid the creation of nuisance or pollution associated with vectors, such as mosquitoes, rodents, and flies.

#### (5) Source Control BMP Requirements

Each Copermittee must require each Priority Development Project to implement applicable source control BMPs. The source control BMPs to be required must:

- (a) Prevent illicit discharges into the MS4;
- (b) Minimize storm water pollutants of concern in runoff;
- (c) Eliminate irrigation runoff;

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<sup>13</sup> This volume is not a single volume to be applied to all of Riverside County. The size of the 85<sup>th</sup> percentile storm event is different for various parts of the County. The Copermittees are encouraged to calculate the 85<sup>th</sup> percentile storm event for each of its jurisdictions using local rain data pertinent to its particular jurisdiction (0.6 inch standard is a rough average for the County and should only be used where appropriate rain data is not available). In addition, isopluvial maps may be used to extrapolate rainfall data to areas where insufficient data exists in order to determine the volume of the local 85<sup>th</sup> percentile storm event in such areas. Where the Copermittees will use isopluvial maps to determine the 85<sup>th</sup> percentile storm event in areas lacking rain data, the Copermittees must describe their method for using isopluvial maps in its SSMPs.

<sup>14</sup> Infiltration LID BMPs are the preferred method for onsite retention, but does not preclude the use and implementation of all other retention LID BMPs (e.g. evapotranspiration, evaporation, and/or harvest), where technically feasible, prior to considering biofiltration LID BMPs for treatment of the design capture volume that is not otherwise retained onsite.

- (d) Include storm drain system stenciling or signage;
- (e) Include properly designed outdoor material storage areas;
- (f) Include properly designed outdoor work areas;
- (g) Include properly designed trash storage areas; and
- (h) Include water quality protection requirements applicable to individual priority project categories.

(6) Treatment Control BMP Requirements

Each Copermittee must require each Priority Development Project that meets the Copermittee's technical infeasibility criteria in Section F.1.d(7) below, to implement conventional treatment control BMPs to treat the portion of the "design capture volume" that was not treated by LID BMPs per Section F.1.d(4) above. Conventional treatment control BMPs must meet the following requirements:

- (a) All treatment control BMPs for a single Priority Development Project must collectively be sized to comply with the following numeric sizing criteria:
  - (i) Volume-based treatment control BMPs must be designed to mitigate (infiltrate, filter, or treat) the remaining portion of the design capture volume that was not retained and/or treated with LID BMPs; or
  - (ii) Flow-based treatment control BMPs must be designed to mitigate (filter, or treat) either: a) 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 b) the maximum flow rate of runoff produced by the 85<sup>th</sup> percentile hourly rainfall intensity (for each hour of a storm event), as determined from the local historical rainfall record, multiplied by a factor of two.
- (b) All treatment control BMPs for Priority Development Projects must, at a minimum:
  - (i) Be ranked with high or medium pollutant removal efficiency for the project's most significant pollutants of concern, as the pollutant removal efficiencies are identified in the Copermittees' SSMP. Treatment control BMPs with a low removal efficiency ranking must only be approved by a Copermittee when a feasibility analysis has been conducted which exhibits that implementation of treatment control BMPs with high or medium removal efficiency rankings are infeasible for a Priority Development Project or portion of a Priority Development Project.
  - (ii) Be correctly sized and designed so as to remove storm water pollutants to the MEP.

- (c) Target removal of pollutants of concern from runoff.
- (d) Be implemented close to pollutant sources, and prior to discharging into waters of the U.S.
- (e) Include proof of a mechanism under which ongoing long-term maintenance will be conducted to ensure proper maintenance for the life of the project. The mechanisms may be provided by the project proponent or Copermittee.
- (f) Be designed and implemented with measures to avoid the creation of nuisance or pollution associated with vectors, such as mosquitoes, rodents, and flies.

(7) Low Impact Development (LID) BMP Waiver Program

The Copermittees must develop, collectively or individually, a LID waiver program for incorporation into the SSMP, which would allow a Priority Development Project to substitute implementation of all or a portion of required LID BMPs in Section F.1.d(4) with implementation of treatment control BMPs and either 1) on-site mitigation, 2) an off-site mitigation project, and/or 3) other mitigation developed by the Copermittees. The Copermittees must submit the LID waiver program as part of their updated SSMP. At a minimum, the program must meet the requirements below:

- (a) Prior to implementation, the LID waiver program must clearly exhibit that it will not allow Priority Development Projects to result in a net impact (after consideration of any mitigation) from pollutant loadings over and above the impact caused by projects meeting the onsite LID retention requirements;
- (b) For each Priority Development Project participating, the Copermittee must find that it is technically infeasible to implement LID BMPs that comply with the requirements of Section F.1.(d)(4). The Copermittee(s) must develop criteria to determine the technical feasibility of implementing LID BMPs. Each Priority Development Project participating must demonstrate that LID BMPs were implemented as much as feasible given the site's unique conditions. Technical infeasibility may result from conditions including, but not limited to:
  - (i) Locations that cannot meet the infiltration and groundwater protection requirements in section F.1.c.(6) for large, centralized infiltration BMPs. Where infiltration is technically infeasible, the project must still examine the feasibility of other onsite LID BMPs;
  - (ii) Insufficient demand for storm water reuse;

- (iii) Smart growth and infill or redevelopment locations where the density and/or nature of the project would create significant difficulty for compliance with the LID BMP requirements; and
  - (iv) Other site, geologic, soil, or implementation constraints identified in the Copermittees updated SSMP document.
- (c) Each Priority Development Project that participates in the LID waiver program must mitigate for the pollutant loads expected to be discharged due to not implementing the LID retention BMPs in section F.1.d.(4). The pollutant loading must be estimated for each project participating in the LID waiver program. The estimated impacts from not implementing the required LID retention BMPs in section F.1.d.(4) must be fully mitigated. Mitigation projects must be implemented within the same hydrologic unit as the Priority Development Project. Mitigation projects outside of the hydrologic subarea but within the same hydrologic unit may be approved provided that the project proponent demonstrates that mitigation projects within the same hydrologic subarea are infeasible and that the mitigation project will address similar beneficial use impacts as expected from the Priority Development Projects pollutant load. Onsite mitigation may include increasing the conventional treatment sizing factors to achieve pollutant load removal equal to or greater than the pollutant load removal expected from implementing onsite retention of the design capture volume. Offsite mitigation projects may include green streets projects, existing development retrofit projects, retrofit incentive programs, regional BMPs and/or riparian restoration projects. Project applicants seeking to utilize these alternative compliance provisions may propose other offsite mitigation projects, which the Copermittees may approve if they meet the requirements of this subpart.
- (d) A Copermittee may choose to implement additional mitigation programs (e.g., pollutant credit system, mitigation fund) as part of the LID waiver program provided that the mitigation program clearly exhibits that it will not allow Priority Development Projects to result in a net impact from pollutant loadings over and above the impact caused by projects meeting LID requirements. Any additional mitigation programs that a Copermittee chooses to implement must be submitted to the San Diego Water Board Executive Officer for review and acceptance prior to implementation.

#### (8) LID and Treatment Control BMP Standards

- (a) As part of the SSMP, each Copermittee must develop and require Priority Development Projects to implement siting, design, and maintenance criteria for each LID and treatment control BMP listed in the SSMP to determine feasibility and applicability and so that implemented LID and treatment control BMPs are constructed correctly and are effective at pollutant removal, runoff control, and vector minimization. Development of

BMP design worksheets which can be used by project proponents is encouraged.

- (b) LID and treatment control BMPs implemented at any Priority Development Projects must mitigate (treat through infiltration, settling, filtration or other unit processes) the required volume or flow of runoff from all developed portions of the project, including landscaped areas.
- (c) All LID and treatment control BMPs must be located so as to remove pollutants from runoff prior to its discharge to any receiving waters. Multiple Priority Development Projects may use shared post-construction BMPs as long as construction of any shared BMP is completed prior to the use or occupation of any Priority Development Project from which the BMP will receive runoff. Post construction BMPs must not be constructed within a waters of the U.S. or waters of the State.

(9) Implementation Process

- (a) As part of its local SSMP, each Copermittee must implement a process to verify compliance with SSMP requirements. The process must identify at what point in the planning process Priority Development Projects will be required to meet SSMP requirements and at a minimum, the Priority Development Project must implement the required post-construction BMPs prior to occupancy and/or the intended use of any portion of that project. The process must also include identification of the roles and responsibilities of various municipal departments in implementing the SSMP requirements, as well as any other measures necessary for the implementation of SSMP requirements.
- (b) Each Copermittee must establish a mechanism not only to track post-construction BMPs, but also to ensure that appropriate easements and ownerships are properly recorded in public records and the information is conveyed to all appropriate parties when there is a change in project or site ownership.

(10) Post-construction BMP Review

- (a) The Copermittees must review and update the BMPs that are listed in their SSMP as options for treatment control. At a minimum, the update must include removal of obsolete or ineffective BMPs and addition of LID BMPs that can be used for treatment, such as bioretention cells, bioretention swales, etc. The update must also add appropriate LID BMPs to any tables or discussions in the local SSMPs addressing pollutant removal efficiencies of treatment control BMPs. In addition, the update must include review and revision where necessary of treatment control BMP pollutant removal efficiencies.

(b) The update must incorporate findings from BMP effectiveness studies conducted by the Copermittees for projects funded wholly or in part by the State Water Board or Regional Water Boards.

(c) Each Copermittee must implement a mechanism for annually incorporating findings from local treatment BMP effectiveness studies (e.g., ones conducted by, or on-behalf of, public agencies in Riverside County) into SSMP project reviews and permitting.

**e. BMP CONSTRUCTION VERIFICATION**

Prior to occupancy and/or intended use of any portion of the Priority Development Project subject to SSMP requirements, each Copermittee must inspect the constructed site design, source control, and treatment control BMPs applicable to the constructed portion of the project to verify that they have been constructed and are operating in compliance with all specifications, plans, permits, ordinances, and this Order.

**f. BMP MAINTENANCE TRACKING**

(1) Inventory of SSMP projects: Each Copermittee must develop and maintain a watershed-based database to track and inventory all projects constructed within their jurisdiction, that have a final approved SSMP (SSMP projects), and its structural post-construction BMPs implemented therein since July, 2005. LID BMPs implemented on a lot by lot basis at single family residential houses, such as rain barrels, are not required to be tracked or inventoried. At a minimum, the database must include information on BMP type(s), location, watershed, date of construction, party responsible for maintenance, dates and findings of maintenance verifications, and corrective actions, including whether the site was referred to the local vector control agency or department.

(2) Each Copermittee must verify that approved post-construction BMPs are operating effectively and have been adequately maintained by implementing the following measures:

(a) The designation of high priority SSMP Projects must consider the following:

- (i) BMP size,
- (ii) Recommended maintenance frequency,
- (iii) Likelihood of operational and maintenance issues,
- (iv) Location,

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**F.1e. BMP CONSTRUCTION VERIFICATION**

**F.1.f. BMP MAINTENANCE TRACKING**

- (v) Receiving water quality,
- (vi) Compliance record,
- (vii) Land use, and
- (viii) Other pertinent factors;

At a minimum, high priority projects include those projects that generate pollutants (prior to treatment) within the tributary area of and within the same hydrologic subarea as a 303(d) listed waterbody impaired for that pollutant; or those projects generating pollutants within the tributary area for and within the same hydrologic subarea as an observed action level exceedance of that pollutant.

- (b) Beginning on July 1, 2012, each Copermittee must verify that the required structural post-construction BMPs on the inventoried SSMP projects have been implemented, are maintained, and are operating effectively through inspections, self-certifications, surveys, or other equally effective approaches with the following conditions:
  - (i) The implementation, operation, and maintenance of all (100 percent) approved and inventoried final project public and private SSMPs (a.k.a. WQMPs) must be verified every five years;
  - (ii) All (100 percent) projects with BMPs that are high priority must be inspected by the Copermittee annually prior to each rainy season;
  - (iii) All (100 percent) Copermittee projects with BMPs must be inspected by the Copermittee annually;
  - (iv) At the discretion of the Copermittee, its inspections may be coordinated with the facility inspections implemented pursuant to section F.3. of this Order;
  - (v) For verifications performed through a means other than direct Copermittee inspection, adequate documentation must be submitted to the Copermittee to provide assurance that the required maintenance has been completed;
  - (vi) Appropriate follow-up measures (including re-inspections, enforcement, maintenance, etc.) must be conducted to ensure the treatment BMPs continue to reduce storm water pollutants as originally designed; and
  - (vii) Inspections must note observations of vector conditions, such as mosquitoes. Where conditions are identified as contributing to mosquito production, the Copermittee must notify its local vector control agency.

**g. ENFORCEMENT OF DEVELOPMENT SITES**

Each Copermittee must enforce its storm water ordinance for all development projects as necessary to maintain compliance with this Order. Copermittee ordinances or other regulatory mechanisms must include appropriate sanctions to achieve compliance. Sanctions must include the following tools or their equivalent: Non-monetary penalties, fines, bonding requirements, liens, and/or permit or occupancy denials for non-compliance.

**h. HYDROMODIFICATION – LIMITATIONS ON INCREASES OF RUNOFF DISCHARGE RATES AND DURATIONS<sup>15</sup>**

Each Copermittee shall collaborate with the other Copermittees to develop and implement a Hydromodification Management Plan (HMP) to manage increases in runoff discharge rates and durations from all Priority Development Projects. The HMP must be incorporated into the SSMP and implemented by each Copermittee so that estimated post-project runoff discharge rates and durations must not exceed pre-development discharge rates and durations. Where the proposed project is located on an already developed site, the pre-project discharge rate and duration must be that of the pre-developed, naturally occurring condition. The draft HMP must be submitted to the San Diego Water Board on or before June 30, 2013. The HMP will be made available for public review and comment and the San Diego Water Board Executive Officer will determine whether to hold a public hearing before the full San Diego Water Board or whether public input will be through written comments to the Executive Officer only.

(1) The HMP must:

- (a) Identify a method for assessing susceptibility and geomorphic stability of channel segments which receive runoff discharges from Priority Development Projects. A performance standard must be established that ensures that the geomorphic stability within the channel will not be compromised as a result of receiving runoff discharges from Priority Development Projects.

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<sup>15</sup> Updated SSMP and hydromodification requirements must apply to all Priority Development Projects or phases of Priority Development Projects which have not yet begun grading or construction activities at the time any updated SSMP or hydromodification requirement commences. If a Copermittee determines that lawful prior approval of a project exists, whereby application of an updated SSMP or hydromodification requirement to the project is legally infeasible, the updated SSMP or hydromodification requirement need not apply to the project. The Copermittees must utilize the SSMP and hydromodification update periods to ensure that projects undergoing approval processes include application of the updated SSMP and hydromodification requirements in its plans.

- (b) Identify a range of runoff flows<sup>16</sup> based on continuous simulation of the entire rainfall record (or other analytical method proposed by the Copermittees and deemed acceptable by the San Diego Water Board) for which Priority Development Project post-project runoff flow rates and durations must not exceed pre-development (naturally occurring) runoff flow rates and durations by more than 10 percent, where the increased flow rates and durations will result in increased potential for erosion or other significant adverse impacts to beneficial uses. The lower boundary of the range of runoff flows identified must correspond with the critical channel flow that produces the critical shear stress that initiates channel bed movement or that erodes the toe of channel banks. The identified range of runoff flows may be different for specific watersheds, channels, or channel reaches. In the case of an artificially hardened (concrete lined, rip rap, etc.) channel, the lower boundary of the range of runoff flows identified must correspond with the critical channel flow that produces the critical shear stress that initiates channel bed movement or that erodes the toe of channel banks of a comparable natural channel (i.e. non-hardened, pre-development).
- (c) Identify a method to assess and compensate for the loss of sediment supply to streams due to development. A performance and/or design standard must be created and required to be met by Priority Development Projects to ensure that the loss of sediment supply due to development does not cause or contribute to increased erosion within channel segments downstream of Priority Development Project discharge points.
- (d) Designate and require Priority Development Projects to implement control measures so that (1) post-project runoff flow rates and durations do not exceed pre-development (naturally occurring) runoff flow rates and durations by more than 10 percent for the range of runoff flows identified under section F.1.h.(1)(b), where the increased flow rates and durations will result in increased potential for erosion or other significant adverse impacts to beneficial uses; (2) post-project runoff flow rates and durations do not result in channel conditions which do not meet the channel standard developed under section F.1.h.(1)(a) for channel segments downstream of Priority Development Project discharge points; and (3) the design of the project and/or control measures compensate for the loss of sediment supply due to development.

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<sup>16</sup> The identified range of run off flows to be controlled should be expressed in terms of peak flow rates of rainfall events, such as "10% of the pre-development 2-year runoff event up to the pre-development 10-year runoff event."

- (e) Include a protocol to evaluate potential hydrograph change impacts to downstream watercourses from Priority Development Projects to meet the range of runoff flows identified under Section F.1.h.(1)(b).
- (f) Include other performance criteria (numeric or otherwise) for Priority Development Projects as necessary to prevent runoff from the projects from increasing and/or continuing unnatural rates of erosion of channel beds and banks, silt pollutants generation, or other impacts to beneficial uses and stream habitat due to increased erosive force.
- (g) Include a review of pertinent literature.
- (h) Identify areas within the Santa Margarita Hydrologic Unit for potential opportunities to restore or rehabilitate stream channels with historic hydromodification of receiving waters that are tributary to documented low or very low Index of Biotic Integrity (IBI) scores.
- (i) Include a description of how the Copermitees will incorporate the HMP requirements into their local approval processes.
- (j) Include criteria on selection and design of management practices and measures (such as detention, retention, and infiltration) to control flow rates and durations and address potential hydromodification impacts.
- (k) Include technical information, including references, supporting any standards and criteria proposed.
- (l) Include a description of inspections and maintenance to be conducted for management practices and measures to control flow rates and durations and address potential hydromodification impacts.
- (m) Include a description of monitoring and other program evaluations to be conducted to assess the effectiveness of implementation of the HMP. Monitoring and other program evaluations must include an evaluation of changes to physical (e.g., cross-section, slope, discharge rate, vegetation, pervious/impervious area) and biological (e.g., habitat quality, benthic flora and fauna, IBI scores) conditions of receiving water channels as areas with Priority Development Projects are constructed (i.e. pre- and post-project), as appropriate.
- (n) Include mechanisms for assessing and addressing cumulative impacts of Priority Development Projects within a watershed on channel morphology.

(2) In addition to the control measures that must be implemented by Priority Development Projects per section F.1.h.(1)(d), the HMP must include a suite of management measures that can be used on Priority Development Projects to mitigate hydromodification impacts, protect and restore downstream beneficial uses and prevent or further prevent adverse physical changes to downstream channels. The measures must be based on a prioritized consideration of the following elements in this order:

- (a) Site design control measures;
- (b) On-site management measures;
- (c) Regional control measures located upstream of receiving waters; and
- (d) In-stream management and control measures.

Where stream channels are adjacent to, or are to be modified as part of a Priority Development Project, management measures must include buffer zones and setbacks. The suite of management measures must also include stream restoration as a viable option to achieve the channel standard in section F.1.h.(1)(a). In-stream controls used as management measures to protect and restore downstream beneficial uses and for preventing or minimizing further adverse physical changes must not include the use of non-naturally occurring hardscape materials such as concrete, riprap, gabions, etc. to reinforce stream channels.

(3) As part of the HMP, the Copermittees may develop a waiver program that allows a redevelopment Priority Development Project, as defined in Section F.1.d.(1)(b), to implement offsite mitigation measures. A waiver may be granted if onsite management and control measures are technically infeasible to fully achieve post-project runoff flow rates and durations that do not exceed the pre-development (naturally occurring) runoff flow rates and durations. Redevelopment projects that are granted a waiver under the program must not have post-project runoff flow rates and durations that exceed the pre-project runoff flow rates and durations. The estimated incremental hydromodification impacts from not achieving the pre-development (naturally occurring) runoff flow rates and durations for the project site must be fully mitigated. The offsite mitigation must be within the same stream channel system to which the project discharges. Mitigation projects not within the same stream channel system but within the same hydrologic unit may be approved provided that the project proponent demonstrates that mitigation within the same stream channel is infeasible and that the mitigation project will address similar impacts as expected from the project.

(4) Each individual Copermittee has the discretion to not require Section F.1.h. at Priority Development Projects where the project:

- (a) Discharges storm water runoff into underground storm drains discharging directly to water storage reservoirs and lakes;

- (b) Discharges storm water runoff into conveyance channels whose bed and bank are concrete lined all the way from the point of discharge to water storage reservoirs and lakes; or
- (c) Discharges storm water runoff into other areas identified in the HMP as acceptable to not need to meet the requirements of Section F.1.h by the San Diego Water Board Executive Officer.

(5) HMP Reporting and Implementation

- (a) On or before June 30, 2013, the Copermittees must submit to the San Diego Water Board a draft HMP that has been reviewed by the public, including the identification of the appropriate limiting range of flow rates per section F.1.h.(1)(b).
- (b) Within 180 days of receiving San Diego Water Board comments on the draft HMP, the Copermittees must submit a final HMP that addressed the San Diego Water Board's comments.
- (c) Within 90 days of receiving a determination of adequacy from the San Diego Water Board, each Copermittee must incorporate and implement the HMP for all Priority Development Projects.
- (d) Prior to acceptance of the HMP by the San Diego Water Board, the early implementation measures likely to be included in the HMP must be encouraged by the Copermittees.

(6) Interim Hydromodification Criteria

Immediately following adoption of this Order and until the final HMP required by this Order has been determined by the San Diego Water Board to be adequate, each Copermittee must ensure that all Priority Development Projects are implementing the hydromodification (aka Hydrologic Condition of Concern) requirements found in Section 4.4 of the 2006 Riverside County WQMP (updated in 2009) unless one of the following conditions in lieu of those specified in the WQMP are met:

- (a) Runoff from the Priority Development Project discharges (1) directly to a conveyance channel or storm drain that is concrete lined all the way from the point of discharge to the ocean, bay, lagoon, water storage reservoir or lake; and (2) the discharge is in full compliance with Copermittee requirements for connections and discharges to the MS4 (including both quality and quantity requirements); and (3) the discharge will not cause increased upstream or downstream erosion or adversely impact downstream habitat; and (4) the discharge is authorized by the Copermittee.

- (b) The Priority Development Project disturbs less than one acre. The Copermittee has the discretion to require a project specific WQMP to address hydrologic condition concerns on projects less than one acre on a case by case basis. The disturbed area calculation should include all disturbances associated with larger common plans of development.
- (c) The runoff flow rate, volume, velocity, and duration for the post-development condition of the Priority Development Project do not exceed the pre-development (i.e. naturally occurring) condition for the 2-year, 24-hour and 10-year, 24-hour rainfall events. This condition must be substantiated by hydrologic modeling acceptable to the Copermittee.

Once a final HMP is determined to be adequate and is required to be implemented, compliance with the final HMP is required by this Order and compliance with the 2004 WQMP (updated in 2009) or the in-lieu interim hydromodification criteria set forth above no longer satisfies the requirements of this Order.

- (7) No part of section F.1.h eliminates the Copermittees' responsibilities for implementing the Low Impact Development requirements under section F.1.d.(4).

#### **i. UNPAVED ROADS DEVELOPMENT**

The Copermittees must develop, where they do not already exist, and implement or require implementation of erosion and sediment control BMPs after construction of new unpaved roads. At a minimum, the BMPs must include the following, or alternative BMPs that are equally effective:

- (1) Practices to minimize road related erosion and sediment transport;
- (2) Grading of unpaved roads to slope outward where consistent with road engineering safety standards;
- (3) Installation of water bars as appropriate; and
- (4) Unpaved roads and culvert designs that do not impact creek functions and where applicable, that maintain migratory fish passage.

## 2. CONSTRUCTION COMPONENT

Each Copermittee must implement a construction program which meets the requirements of this section, prevents illicit discharges into the MS4, implements and maintains structural and non-structural BMPs to reduce pollutants in storm water runoff from construction sites to the MS4, reduces construction site discharges of storm water pollutants from the MS4 to the MEP, and prevents construction site discharges from the MS4 from causing or contributing to a violation of water quality standards.

### a. ORDINANCE UPDATE

By July 1, 2012, each Copermittee must review and update its grading ordinances and other ordinances as necessary to achieve full compliance with this Order, including requirements for the implementation of all designated BMPs and other measures.

### b. SOURCE IDENTIFICATION

Each Copermittee must maintain an updated watershed-based inventory of all construction sites within its jurisdiction. The use of an automated database system, such as Geographical Information Systems (GIS) is strongly encouraged.

### c. SITE PLANNING AND PROJECT APPROVAL PROCESS

Each Copermittee must incorporate consideration of potential water quality impacts prior to approval and issuance of construction and grading permits.

- (1) Each construction and grading permit must require proposed construction sites to implement designated BMPs and other measures so that illicit discharges into the MS4 are prevented, storm water pollutants discharged from the site will be reduced to the MEP, and construction discharges from the MS4 are prevented from causing or contributing to a violation of water quality standards.
- (2) Prior to permit issuance, the project proponent's runoff management plan (or equivalent construction BMP plan) must be required to comply, and reviewed to verify compliance with the local grading ordinance, other applicable local ordinances, and this Order.
- (3) Prior to permit issuance, each Copermittee must verify that project proponents subject to California's statewide General NPDES Permit for Storm Water Discharges Associated With Construction Activities, (hereinafter General Construction Permit), have existing coverage under the General Construction Permit.

**d. BMP IMPLEMENTATION**

(1) Designate BMPs: Each Copermittee must designate a minimum set of BMPs and other measures to be implemented at all construction sites. The designated minimum set of BMPs must include:

(a) Management Measures:

- (i) Pollution prevention, where appropriate;
- (ii) Development and implementation of a runoff management plan;
- (iii) Minimization of areas that are cleared and graded to only the portion of the site that is necessary for construction;
- (iv) Minimization of exposure time of disturbed soil areas;
- (v) Minimization of grading during the rainy season and correlation of grading with seasonal dry weather periods to the extent feasible;
- (vi) Limitation of grading to a maximum disturbed area as determined by each Copermittee before either temporary or permanent erosion controls are implemented to prevent storm water pollution. The Copermittee has the option of temporarily increasing the size of disturbed soil areas by a set amount beyond the maximum, if the individual site is in compliance with applicable storm water regulations and the site has adequate control practices implemented to prevent storm water pollution;
- (vii) Temporary stabilization and reseeded of disturbed soil areas as rapidly as feasible;
- (viii) Wind erosion controls;
- (ix) Tracking controls;
- (x) Non-stormwater management measures to prevent illicit discharges and control storm water pollution sources;
- (xi) Waste management measures;
- (xii) Preservation of natural hydrologic features where feasible;
- (xiii) Preservation of riparian buffers and corridors where feasible;
- (xiv) Evaluation and maintenance of all BMPs, until removed; and
- (xv) Retention, reduction, and proper management of all storm water pollutant discharges on site to the MEP standard.

(b) Erosion and Sediment Controls:

- (i) Erosion prevention. Erosion prevention is to be used as the most important measure for keeping sediment on site during construction;
- (ii) Sediment controls. Sediment controls are to be used as a supplement to erosion prevention for keeping sediment on-site during construction;

- (iii) Slope stabilization must be used on all active slopes during rain events regardless of the season and on all inactive slopes during the rainy season and during rain events in the dry season;
  - (iv) Permanent revegetation or landscaping as early as feasible; and
  - (v) Erosion and sediment controls must be required during the construction of unpaved roads.
- (2) Each Copermittee must implement, or require implementation of, enhanced<sup>17</sup> measures to address the threat to water quality posed by all construction sites tributary to CWA section 303(d) water body segments impaired for sediment or turbidity. Each Copermittee must also implement, or require implementation of, enhanced, measures for construction sites within, or adjacent to, or discharging directly to receiving waters within environmentally sensitive areas (as defined in Attachment C of this Order).
- (3) Active/Passive Sediment Treatment (AST): Each Copermittee must require implementation of AST for sediment at construction sites (or portions thereof) that are determined by the Copermittee to be an exceptional threat to water quality. In evaluating the threat to water quality, the following factors must be considered by the Copermittee:
- (a) Soil erosion potential or soil type;
  - (b) The site's slopes;
  - (c) Project size and type;
  - (d) Sensitivity of receiving water bodies;
  - (e) Proximity to receiving water bodies;
  - (f) Non-storm water discharges;
  - (g) Ineffectiveness of other BMPs;
  - (h) Proximity and sensitivity of aquatic threatened and endangered species of concern;
  - (i) Known effects of AST chemicals; and
  - (j) Any other relevant factors.
- (4) Implement BMPs: Each Copermittee must implement, or require the implementation of, the designated minimum BMPs and any additional measures necessary to comply with this Order at each construction site within its jurisdiction year round. BMP implementation requirements, however, can vary based on wet and dry seasons. Dry season BMP implementation must plan for and address unseasonal rain events that may occur during the dry season (May 1 through September 30).

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<sup>17</sup> Enhanced BMPs are control actions specifically targeted to the pollutant or condition of concern and of higher quality and effectiveness than the minimum control measures otherwise required. Enhanced in this Order means better, not simply more, BMPs.

**e. INSPECTION OF CONSTRUCTION SITES**

Each Copermittee must conduct construction site inspections for compliance with its ordinances (grading, storm water, etc.), permits (construction, grading, etc.), and this Order. Priorities for inspecting sites must consider the nature and size of the construction activity, topography, and the characteristics of soils and receiving water quality.

- (1) During the rainy season, each Copermittee must inspect at least every two weeks, all construction sites within its jurisdiction meeting any of the following criteria:
  - (a) All sites 30 acres or more in size with rough grading or with active, unstabilized slopes occurring during the rainy season;
  - (b) All sites one acre or more, and within the same hydrologic subarea and tributary to a CWA section 303(d) water body segment impaired for sediment; or within, directly adjacent to, or discharging directly to a receiving water within an ESA; and
  - (c) Other sites determined by the Copermittees or the San Diego Water Board as a significant threat to water quality. In evaluating threat to water quality, the following factors must be considered: (1) soil erosion potential; (2) site slope; (3) project size and type; (4) sensitivity of receiving water bodies; (5) proximity to receiving water bodies; (6) non-storm water discharges; (7) known past record of non-compliance by the operators of the construction site; and (8) any other relevant factors.
- (2) During the rainy season, each Copermittee must inspect at least monthly, all construction sites with one acre or more of soil disturbance not meeting the criteria specified above in section F.2.e.(1).
- (3) During the rainy season, each Copermittee must inspect construction sites less than one acre in size as needed to ensure compliance with its ordinances and this Order.
- (4) Each Copermittee must inspect all construction sites as needed during the dry season. Sites meeting the criteria in section F.2.e.(1) must be inspected at least once in August or September each year.
- (5) Re-inspections: Based upon site inspection findings, each Copermittee must implement all follow-up actions (i.e., re-inspection, enforcement) necessary to comply with this Order. Reinspection frequencies must be determined by each Copermittee based upon the severity of deficiencies, the nature of the construction activity, and the characteristics of soils and receiving water quality.

- (6) Inspections of construction sites must include, but not be limited to:
- (a) Check for coverage under the General Construction Permit (Notice of Intent (NOI) and/or Waste Discharge Identification No.) during initial inspections;
  - (b) Assessment of compliance with Copermittee ordinances and permits related to runoff, including the implementation and maintenance of designated minimum BMPs;
  - (c) Assessment of BMP effectiveness;
  - (d) Visual observations for non-storm water discharges, potential illicit connections, and potential discharge of pollutants in storm water runoff;
  - (e) Review of site monitoring data results, if the site monitors its runoff
  - (f) Education and outreach on storm water pollution prevention, as needed; and
  - (g) Creation of a written or electronic inspection report.
- (7) The Copermittees must track the number of inspections for each inventoried construction site throughout the reporting period to verify that each site is inspected at the minimum frequencies required.

**f. ENFORCEMENT OF CONSTRUCTION SITES**

- (1) Each Copermittee must develop and implement an escalating enforcement process that achieves prompt corrective actions at construction sites for violations of the Copermittee's water quality protection permits, requirements, and ordinances. This enforcement process must include authorizing the Copermittee's construction site inspectors to take immediate enforcement actions when appropriate and necessary. The enforcement process must include appropriate sanctions such as stop work orders, non-monetary penalties, fines, bonding requirements, and/or permit denials for non-compliance.
- (2) Each Copermittee must be able to respond to construction complaints received from third-parties and to ensure the San Diego Water Board that corrective actions have been implemented, if warranted.

**g. REPORTING OF NON-COMPLIANT SITES**

- (1) In addition to the notification requirements in Attachment B, each Copermittee must notify the San Diego Water Board when the Copermittee issues high level enforcement (as defined in the Copermittee's JRMP) to a construction site that poses a significant threat to water quality in its jurisdiction as a result of violations of its storm water ordinances.
- (2) Each Copermittee must annually notify the San Diego Water Board, prior to the commencement of the rainy season, of all construction sites with alleged violations that pose a significant threat to water quality. Information may be

provided as part of the JRMP annual report if submitted prior to the rainy season. Information provided must include, but not be limited to, the following:

- (a) WDID number if enrolled under the General Construction Permit
- (b) Site Location, including address
- (c) Current violations or suspected violations

### **3. EXISTING DEVELOPMENT COMPONENT**

#### **a. MUNICIPAL**

Each Copermittee must implement a municipal program for the Copermittee's areas and activities that meets the requirements of this section, prevents illicit discharges into the MS4, reduces municipal discharges of storm water pollutants from the MS4 to the MEP, and prevents municipal discharges from the MS4 from causing or contributing to a violation of water quality standards.

#### **(1) Source Identification / Inventory**

Each Copermittee must maintain an updated watershed-based inventory of all its municipal areas and those activities that have the potential to generate pollutants. The inventory must include the name, address (if applicable), and a description of the area/activity; which pollutants are potentially generated by the area/activity; whether the area/activity is adjacent to an ESA; and identification of whether the area/activity is tributary to and within the same hydrologic subarea as a CWA section 303(d) water body segment and generates pollutants for which the water body segment is impaired. Linear facilities, such as roads, streets, and highways, do not need to be individually inventoried. The use of an automated database system, such as Geographical Information Systems (GIS) is highly recommended.

#### **(2) General BMP Implementation**

- (a) **Pollution Prevention:** Each Copermittee must implement pollution prevention methods in its municipal program and must require their use by appropriate departments, personnel, and contractors.
- (b) **Designate Minimum BMPs:** Each Copermittee must designate a minimum set of BMPs for all municipal areas and those activities that have the potential to generate pollutants. The designated minimum BMPs for municipal areas and activities must be area or activity specific as appropriate.

- (c) Each Copermittee must designate BMPs for special events that are expected to generate significant trash and litter. Controls to consider must include:
- (i) Temporary screens on catch basins and storm drain inlets;
  - (ii) Temporary fencing to prevent windblown trash from entering adjacent water bodies and MS4 channels;
  - (iii) Proper management of trash and litter;
  - (iv) Catch basin cleaning following the special event and prior to an anticipated rain event;
  - (v) Street sweeping of roads, streets, highways and parking facilities following the special event; and
  - (vi) Other equivalent controls.
- (d) Designate BMPs for ESAs and 303(d) Impairments: Each Copermittee must designate enhanced measures for its municipal areas and activities tributary to and within the same hydrologic subarea as CWA section 303(d) impaired water body segments when an area or those activities have the potential to generate pollutants for which the water body segment is impaired. Each Copermittee must also designate additional controls for its municipal areas and activities within or directly adjacent to or discharging directly to receiving waters within environmentally sensitive areas (as defined in Attachment C of this Order).
- (e) Implement BMPs: Each Copermittee must implement, or require the implementation of, the designated minimum and enhanced BMPs and any additional measures necessary based on its inventory to comply with this Order for each of its municipal area and those activities that have the potential to discharge pollution.

(3) BMP Implementation for Management of Pesticides, Herbicides, and Fertilizers

Each Copermittee must implement BMPs to reduce the contribution of storm water pollutants to the MEP associated with the application, storage, and disposal of pesticides, herbicides and fertilizers from its municipal areas and activities to MS4s and receiving waters. Such BMPs must include, at a minimum:

- (a) Educational activities, permits, certifications and other measures for municipal applicators and distributors;
- (b) Integrated Pest Management (IPM) measures that rely on non-chemical solutions;
- (c) The use of native vegetation;
- (d) Schedules for irrigation and chemical application; and

- (e) The collection and proper disposal of unused pesticides, herbicides, and fertilizers.

(4) BMP implementation for Flood Control Structures

- (a) Each Copermittee must implement procedures to assure that flood management projects assess the impacts on the water quality of receiving water bodies.
- (b) Each Copermittee must include water quality protection measures, where feasible, when retrofitting existing flood control structural devices.
- (c) Each Copermittee must evaluate its existing flood control structures as part of ongoing routine maintenance, identify structures causing or contributing to a condition of pollution, implement measures to reduce or eliminate the structure's effect on pollution, and evaluate the feasibility of retrofitting the structural flood control device. The inventory and evaluation must be completed by and submitted to the San Diego Water Board in each JRMP Annual Report.

(5) BMP Implementation for Sweeping of Municipal Areas

Where municipal area sweeping is implemented as an MS4 BMP for municipal roads, streets, highways, and parking facilities, each Copermittee must design and implement the program based on the following criteria:

- (a) Roads, streets, highways, and parking facilities identified as consistently generating the highest volumes of trash and/or debris must be swept at least two times per month.
- (b) Roads, streets, highways, and parking facilities identified as consistently generating moderate volumes of trash and/or debris must be swept at least monthly.
- (c) Roads, streets, highways, and parking facilities identified as generating low volumes of trash and/or debris must be swept as necessary, but no less than once per year.

(6) Operation and Maintenance of Municipal Separate Storm Sewer System (MS4) and Treatment Controls

- (a) Treatment Controls: Each Copermittee must implement a schedule of inspection and maintenance activities to verify proper operation of all its municipal structural treatment controls designed to reduce storm water pollutant discharges to or from its MS4s and related drainage structures.

- (b) MS4 and Facilities: Each Copermittee must implement a schedule of maintenance activities for its MS4 and facilities (including but not limited to catch basins, storm drain inlets, detention basins, etc). The maintenance activities must, at a minimum, include:
- (i) Inspection and removal of accumulated waste at least once a year between May 1 and September 30 of each year for all MS4 facilities;
  - (ii) Additional facilities cleaning as necessary between October 1 and April 30 of each year;
  - (iii) Following two years of inspections, any MS4 facility that requires inspection and cleaning less than annually may be inspected as needed, but not less than every other year;
  - (iv) Open channels and basins must be cleaned of observed anthropogenic litter in a timely manner;
  - (v) Maintenance activities within open channels must not adversely impact beneficial uses;
  - (vi) Record keeping of the maintenance and cleaning activities including the overall quantity of waste removed;
  - (vii) Proper disposal of waste removed pursuant to applicable laws; and
  - (viii) Measures to eliminate waste discharges during MS4 maintenance and cleaning activities.

(7) Infiltration From Sanitary Sewer to MS4/Provide Preventive Maintenance

- (a) Each Copermittee must implement controls and measures to prevent and eliminate infiltration of seepage from sanitary sewers to MS4s through thorough, routine preventive maintenance of the MS4. Each Copermittee that operates both a municipal sanitary sewer system and a MS4 must implement controls and measures to prevent and eliminate infiltration of seepage from the sanitary sewers to the MS4s that must include overall sanitary sewer and MS4 surveys and thorough, routine preventive maintenance of both.
- (b) Each Copermittee must implement controls to limit infiltration of seepage from sanitary sewers to municipal separate storm sewer systems where necessary. Such controls must include:
- (i) Adequate plan checking for construction and new development;
  - (ii) Incident response training for its municipal employees that identify sanitary sewer spills;
  - (iii) Code enforcement inspections;
  - (iv) MS4 maintenance and inspections;
  - (v) Interagency coordination with sewer agencies; and

- (vi) Proper education of its municipal staff and contractors conducting field operations on the MS4 or its municipal sanitary sewer (if applicable).

(8) Inspection of Municipal Areas and Activities

- (a) At a minimum, each Copermittee must inspect the following high priority municipal areas and activities annually:

- (i) Roads, Streets, Highways, and Parking Facilities;
- (ii) Flood Management Projects and Flood Control Devices not otherwise inspected per Section F.3.a.(6)(b);
- (iii) Areas and activities tributary to and within the same hydrologic subarea as a CWA section 303(d) impaired water body segment, where an area or activity generates pollutants for which the water body segment is impaired;
- (iv) Areas and activities within or adjacent to or discharging directly to receiving waters within environmentally sensitive areas (as defined in Attachment C of this Order);
- (v) Municipal Facilities:
  - [a] Active or closed municipal landfills;
  - [b] Publicly owned treatment works (including water and wastewater treatment plants) and sanitary sewage collection systems;
  - [c] Solid waste transfer facilities;
  - [d] Land application sites;
  - [e] Corporate yards including maintenance and storage yards for materials, waste, equipment and vehicles; and
  - [f] Household hazardous waste collection facilities.
- (vi) Municipal airfields;
- (vii) Parks and recreation facilities;
- (viii) Special event venues following special events (festivals, sporting events, etc.);
- (ix) Power washing activities; and
- (x) Other municipal areas and activities that the Copermittee determines may contribute a significant pollutant load to the MS4.

- (b) Other municipal areas and activities must be inspected as needed and in response to water quality data, valid public complaints, and findings from municipal or contract staff.

- (c) Based upon site inspection findings, each Copermittee must implement all follow-up actions necessary to comply with this Order.

(9) Enforcement of Municipal Areas and Activities

Each Copermittee must enforce its storm water ordinance for all its municipal areas and activities as necessary to maintain compliance with this Order.

(10) Copermittee Maintained Unpaved Roads Maintenance

- (a) The Copermittees must develop, where they do not already exist, and implement or require implementation of BMPs for erosion and sediment control measures during their maintenance activities on Copermittee maintained unpaved roads, particularly in or adjacent to receiving waters.
- (b) The Copermittees must develop and implement or require implementation of appropriate BMPs to minimize impacts on streams and wetlands during their unpaved road maintenance activities.
- (c) The Copermittees must maintain as necessary their unpaved roads adjacent to streams and riparian habitat to reduce erosion and sediment transport;
- (d) Re-grading of unpaved roads during maintenance must be sloped outward where consistent with road engineering safety standards or alternative equally effective BMPs must be implemented to minimize erosion and sedimentation from unpaved roads; and
- (e) Through their maintenance of unpaved roads, the Copermittees must examine the feasibility of replacing existing culverts or design of new culverts or bridge crossings to reduce erosion and maintain natural stream geomorphology.

**b. COMMERCIAL / INDUSTRIAL**

Each Copermittee must implement a commercial / industrial program that meets the requirements of this section, prevents illicit discharges into the MS4, reduces commercial / industrial discharges of storm water pollutants from the MS4 to the MEP, and prevents commercial / industrial discharges from the MS4 from causing or contributing to a violation of water quality standards.

(1) Source Identification

- (a) Each Copermittee must maintain an updated watershed-based inventory of all industrial and commercial sites/sources within its jurisdiction (regardless of ownership) that could contribute a significant pollutant load to the MS4. The inventory must include the following minimum

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F.3.b. COMMERCIAL / INDUSTRIAL

information for each industrial and commercial site/source: name; address; pollutants potentially generated by the site/source; and identification of whether the site/source is tributary to a CWA §303(d) water body segment and generates pollutants for which the water body segment is impaired; and a narrative description including SIC codes which best reflects the principal products or services provided by each facility.

At a minimum, the following sites/sources must be included in the inventory:

(i) Commercial Sites/Sources:

- [a] Automobile repair, maintenance, fueling, or cleaning;
- [b] Airplane repair, maintenance, fueling, or cleaning;
- [c] Boat repair, maintenance, fueling, or cleaning;
- [d] Equipment repair, maintenance, fueling, or cleaning;
- [e] Automobile and other vehicle body repair or painting;
- [f] Mobile automobile or other vehicle washing;
- [g] Automobile (or other vehicle) parking lots and storage facilities;
- [h] Retail or wholesale fueling;
- [i] Pest control services;
- [j] Eating or drinking establishments, including such retail establishments with food markets;
- [k] Mobile carpet, drape or furniture cleaning;
- [l] Cement mixing or cutting;
- [m] Masonry;
- [n] Painting and coating;
- [o] Botanical or zoological gardens and exhibits;
- [p] Landscaping;
- [q] Nurseries and greenhouses;
- [r] Golf courses, parks and other recreational areas/facilities;
- [s] Cemeteries;
- [t] Pool and fountain cleaning;
- [u] Marinas;
- [v] Portable sanitary services;
- [w] Building material retailers and storage;
- [x] Animal boarding facilities and kennels;
- [y] Mobile pet services;
- [z] Power washing services;
- [aa] Plumbing services; and
- [bb] Other sites and sources with a history of un-authorized discharges to the MS4.

- (ii) Industrial Sites/Sources:
  - [a] Industrial Facilities, as defined at 40 CFR § 122.26(b)(14), including those subject to the General Industrial Permit or other individual NPDES permit;
  - [b] Operating and closed landfills;
  - [c] Facilities subject to SARA Title III; and
  - [d] Hazardous waste treatment, disposal, storage and recovery facilities.
  
- (iii) ESAs and 303(d) Listed Waterbodies: All other commercial or industrial sites/sources tributary to and within the same hydrologic subarea as a CWA Section 303(d) impaired water body segment, where the site/source generates pollutants for which the water body segment is impaired. All other commercial or industrial sites/sources within or directly adjacent to or discharging directly to receiving waters within environmentally sensitive areas (as defined in Attachment C of this Order) or that generate pollutants tributary to and within the same hydrologic subarea as an observed exceedance of an action level.
  
- (iv) All other commercial or industrial sites/sources that the Copermittee determines may contribute a significant pollutant load to the MS4.

## (2) General BMP Implementation

- (a) Pollution Prevention: Each Copermittee must require the use of pollution prevention methods by the inventoried industrial and commercial sites/sources.
  
- (b) Designate / Update Minimum BMPs: Each Copermittee must designate a minimum set of BMPs for all inventoried industrial and commercial sites/sources. Where BMPs have already been designated, each Copermittee must review and update its existing BMPs for adequacy no later than with the submittal of the JRMP. Copermittees may continue to regularly review and update their designated BMPs for adequacy and subsequently submit any updates in their Annual Report. The designated minimum BMPs must be specific to facility types and pollutant-generating activities, as appropriate.
  
- (c) Designate Enhanced BMPs for ESAs and 303(d) Impairments: Each Copermittee must designate enhanced measures for inventoried industrial and commercial sites/sources tributary to and within the same hydrologic subarea as CWA section 303(d) impaired water body segments (where a site/source generates pollutants for which the water body segment is

impaired). Each Copermitttee must also designate additional controls for industrial and commercial sites/sources within or directly adjacent to or discharging directly to coastal lagoons, the ocean, or other receiving waters within environmentally sensitive areas (as defined in Attachment C of this Order). Copermitttees may continue to regularly review and update their designated enhanced BMPs for adequacy and subsequently submit any updates in their next Annual Report.

- (d) Implement BMPs: Each Copermitttee must implement, or require the implementation of, the designated minimum and enhanced BMPs and any additional measures necessary based on inspections, incident responses, and water quality data to comply with this Order at each industrial and commercial site/source within its jurisdiction.

(3) Mobile Businesses Program

- (a) Each Copermitttee must develop and implement a program to reduce the discharge of storm water pollutants from mobile businesses to the MEP and to prohibit non-storm water discharges pursuant to Section B of this Order. Each Copermitttee must keep as part of its commercial source inventory a listing of mobile businesses known to operate within its jurisdiction that conduct services listed above in section F.3.b.(1)(a). The program must include:
- (i) Development and implementation of minimum standards and BMPs to be required for each of the various types of mobile businesses;
  - (ii) Development and implementation of an enforcement strategy which specifically addresses the unique characteristics of mobile businesses;
  - (iii) Notification of those mobile businesses known to operate within the Copermitttee's jurisdiction of the minimum standards and BMP requirements;
  - (iv) Development and implementation of an outreach and education strategy; and
  - (v) Inspection of mobile businesses as needed to implement the program.
- (b) If they choose to, the Copermitttees may cooperate in developing and implementing their programs for mobile businesses, including sharing of mobile business inventories, BMP requirements, enforcement action information, and education.

#### (4) Inspection of Industrial and Commercial Sites/Sources

Each Copermittee must conduct industrial and commercial site inspections for compliance with its ordinances, permits, and this Order. Mobile businesses must be inspected as needed pursuant to section F.3.b.(3).

(a) Inspection Procedures: Inspections must include but not be limited to:

- (i) Review of BMP implementation plans not including SSMPs required pursuant to section F.1.d, if the site uses or is required to use such a plan;
- (ii) Review of facility monitoring data, if the site monitors its runoff;
- (iii) Check for coverage under the General Industrial Permit (Notice of Intent (NOI) and/or Waste Discharge Identification Number), if applicable;
- (iv) Assessment of compliance with Copermittee ordinances and Copermittee issued permits related to runoff;
- (v) Assessment of the implementation, maintenance and effectiveness of the designated minimum and/or enhanced BMPs;
- (vi) Visual observations for non-storm water discharges, potential illicit connections, and potential discharge of pollutants in storm water runoff; and
- (vii) Education and training on storm water pollution prevention, as conditions warrant.

(b) Frequencies: At a minimum all sites determined to pose a high threat to water quality must be inspected each year. All inventoried sites must be inspected at least once during a five year period. In evaluating threat to water quality, each Copermittee must consider, at a minimum, the following:

- (i) Type of activity (SIC code);
- (ii) Materials used at the facility;
- (iii) Wastes generated;
- (iv) Pollutant discharge potential, including whether the facility generates a pollutant that exceeds an action level;
- (v) Non-storm water discharges;
- (vi) Size of facility;
- (vii) Proximity to receiving water bodies;
- (viii) Sensitivity of receiving water bodies;
- (ix) Whether the facility is subject to the General Industrial Permit or an individual NPDES permit;
- (x) Whether the facility has filed a No Exposure Certification/Notice of Non-Applicability;
- (xi) Facility design;

- (xii) Total area of the site, portion of the site where industrial or commercial activities occur, and area of the site exposed to rainfall and runoff;
  - (xiii) The facility's compliance history; and
  - (xiv) Any other relevant factors.
- (c) Third-Party Certifications: Each Copermitttee may propose to develop and implement a third party certification program subject to San Diego Water Board Executive Officer acceptance. This program would verify industrial and commercial site/source compliance with the Copermitttees' ordinances, permits, and this Order. To the extent that third party certifications are conducted to fulfill the requirements of Section F.3.b.(4) above, the Copermitttee retains responsibility for compliance with this Order and will be responsible for conducting and documenting quality assurance and quality control of the third-party certifications.

The Copermitttee's proposed third party certification program must include the following:

- (i) A description of the procedures and measures for quality assurance and quality control;
  - (ii) A listing of sites/sources that may and may not participate in the program;
  - (iii) The representative percentage of certifications that would qualify to satisfy the inspection requirements in section F.3.b(4)(c) above;
  - (iv) Photo documentation of potential storm water violations identified during the third party inspection;
  - (v) Reporting to the Copermitttee of identified significant potential violations, including imminent or observed illegal discharges, within 24 hours of the third party inspection;
  - (vi) Reporting to the Copermitttee of all findings within one week of the inspection being conducted; and
  - (vii) Copermitttee follow-up and/or enforcement actions for identified potential storm water violations within two business days of the potential violation report receipt.
- (d) Based upon site inspection findings, each Copermitttee must implement all follow-up actions and enforcement necessary to comply with this Order.
- (e) To the extent that the San Diego Water Board has conducted an inspection of an industrial site during a particular year, the requirement for the responsible Copermitttee to inspect this facility during the same year is deemed satisfied.

- (f) The Copermittees must track the number of inspections for the inventoried industrial and commercial sites/sources throughout the reporting period to verify that the sites/sources are inspected at the minimum frequencies listed in this Order.

(5) Enforcement of Industrial and Commercial Sites/Sources

Each Copermittee must enforce its storm water ordinance for all industrial and commercial sites/sources as necessary to maintain compliance with this Order. Copermittee ordinances or other regulatory mechanisms must include appropriate sanctions to achieve compliance. Sanctions must include the following tools or their equivalent: Non-monetary penalties, fines, bonding requirements, liens and/or permit denials for non-compliance.

(6) Reporting of Non-Compliant Sites

Each Copermittee must annually notify the San Diego Water Board, prior to the commencement of the wet season, of any unresolved high level enforcement action (as defined in the Copermittees' JRMP) that poses a significant threat to water quality in its jurisdiction as a result of violations of their storm water ordinances.

**c. RESIDENTIAL**

Each Copermittee must implement a residential program that meets the requirements of this section, prevents illicit discharges into the MS4, reduces residential discharges of storm water pollutants from the MS4 to the MEP, and prevents residential discharges from the MS4 from causing or contributing to a violation of water quality standards.

(1) Threat to Water Quality Prioritization

Each Copermittee must identify residential areas and activities that pose a high threat to water quality. At a minimum, these must include:

- (a) Automobile repair, maintenance, washing, and parking;
- (b) Home and garden care activities and product use (pesticides, herbicides, and fertilizers);
- (c) Disposal of trash, pet waste, green waste, and household hazardous waste (e.g., paints, cleaning products);
- (d) Any other residential source that the Copermittee determines may contribute a significant pollutant load to the MS4;

- (e) Any residential areas tributary to and within the same hydrologic subarea as a CWA section 303(d) impaired water body, where the residence generates pollutants for which the water body is impaired; and
- (f) Any residential areas within or directly adjacent to or discharging directly to receiving waters within an environmentally sensitive area (as defined in Attachment C of this Order)

(2) BMP Implementation

- (a) Pollution Prevention: Each Copermittee must actively encourage the use of pollution prevention methods by residents.
- (b) Designate BMPs: Each Copermittee must designate minimum BMPs for high-threat-to-water quality residential areas and activities. The designated minimum BMPs for high-threat-to-water quality residential areas and activities must be area or activity specific.
- (c) Hazardous Waste BMPs: Each Copermittee must facilitate the proper management and disposal of used oil, toxic materials, and other household hazardous wastes. Such facilitation must include educational activities, public information activities, and establishment of collection sites operated individually and/or jointly by the Copermittee(s) or a private entity. Curbside collection of household hazardous wastes is encouraged.
- (d) Implement BMPs: Each Copermittee must implement, or require implementation of, the designated minimum BMPs and any additional measures necessary to comply with Sections A and B of this Order.
- (e) Each Copermittee must implement, or require implementation of, BMPs for residential areas and activities that have not been designated a high threat to water quality, as necessary.

(3) Enforcement of Residential Areas and Activities

Each Copermittee must enforce its storm water ordinance for all residential areas and activities as necessary to maintain compliance with this Order.

(4) Common Interest Areas (CIA) / Home Owner Association (HOA) Areas, and Mobile Home Parks

Each Copermittee must ensure that effective measures exist and are implemented or required to be implemented to ensure that runoff within and from common interest developments, including areas managed by associations and mobile home parks, and meets the objectives of this section and Order.

- (a) BMP Implementation: Each Copermittee must implement or require implementation of management measures based on a review of pertinent factors, including:
- (i) Maintenance duties and procedures typically used by CIA/HOA maintenance associations within its jurisdiction;
  - (ii) Whether streets and storm drains are publicly or privately owned within the CIA/HOA or mobile home park;
  - (iii) Whether the CIA/HOA area or mobile home park has been identified as a high priority residential area based on an evaluation of the site potential to generate pollutants contributing to a 303(d) listed waterbody or an observed action level exceedance; and
  - (iv) Other activities conducted or authorized by the HOA that may pose a significant risk to inland receiving waters.
- (b) Legal Authority and Enforcement: By July 1, 2012, each Copermittee must review, and if necessary update, its Municipal Code to verify that they have the legal authority to implement and enforce its ordinances within CIA/HOA areas and mobile home parks.

#### **d. RETROFITTING EXISTING DEVELOPMENT**

Each Copermittee must develop and implement a retrofitting program that meets the requirements of this section. The goals of the existing development retrofitting program are to address the impacts of existing development through retrofit projects that reduce impacts from hydromodification, promote LID, support riparian and aquatic habitat restoration, reduce the discharges of storm water pollutants from the MS4 to the MEP, and prevent discharges from the MS4 from causing or contributing to a violation of water quality standards. Where feasible, at the discretion of the Copermittee, the existing development retrofitting program may be coordinated with flood control projects and other infrastructure improvement programs.

- (1) The Copermittee(s) must identify and inventory existing areas of development (i.e. municipal, industrial, commercial, residential) as candidates for retrofitting. Potential retrofitting candidates must include but are not limited to:
- (a) Areas of development that generate pollutants of concern to a TMDL or an ESA;
  - (b) Receiving waters that are channelized or otherwise hardened;
  - (c) Areas of development tributary to receiving waters that are channelized or otherwise hardened;

- (d) Areas of development tributary to receiving waters that are significantly eroded; and
  - (e) Areas of development tributary to an ASBS or SWQPA.
- (2) Each Copermittee must evaluate and rank the inventoried areas of existing developments to prioritize retrofitting. Criteria for evaluation must include but is not limited to:
- (a) Feasibility;
  - (b) Cost effectiveness;
  - (c) Pollutant removal effectiveness, including reducing pollutants exceeding action level;
  - (d) Tributary area potentially treated;
  - (e) Maintenance requirements;
  - (f) Landowner cooperation;
  - (g) Neighborhood acceptance;
  - (h) Aesthetic qualities;
  - (i) Efficacy at addressing concern; and
  - (j) Potential improvements on public health and safety.
- (3) Each Copermittee must consider the results of the evaluation in prioritizing work plans for the following year in accordance with Sections G.1 and J. Highly feasible projects expected to benefit water quality should be given a high priority to implement source control and treatment control BMPs. Where feasible, the retrofit projects may be designed in accordance with the SSMP requirements within sections F.1.d.(3) through F.1.d.(8) and the Hydromodification requirements in Section F.1.h.
- (4) The Copermittees must cooperate with private landowners to encourage site specific retrofitting projects. The Copermittee must consider the following practices in cooperating and encouraging private landowners to retrofit their existing development:
- (a) Demonstration retrofit projects;
  - (b) Retrofits on public land and easements that treat runoff from private developments;
  - (c) Education and outreach;
  - (d) Subsidies for retrofit projects;
  - (e) Requiring retrofit projects as enforcement, mitigation or ordinance compliance;
  - (f) Public and private partnerships; and
  - (g) Fees for existing discharges to the MS4 and reduction of fees for retrofit implementation.

- (5) The known completed retrofit BMPs must be tracked in accordance with Section F.1.f. Retrofit BMPs on publicly owned properties must be inspected per section F.1.f. Privately owned retrofit BMPs must be inspected as needed.
- (6) Where constraints on retrofitting preclude effective BMP deployment on existing developments at locations critical to protect receiving waters (as identified in section F.3.d.(1)), a Copermittee may propose a regional mitigation project to improve water quality. Such regional projects may include but are not limited to:
  - (a) Regional water quality treatment BMPs;
  - (b) Urban creek or wetlands restoration and preservation;
  - (c) Daylighting and restoring underground creeks;
  - (d) Localized rainfall storage and reuse to the extent such projects are fully protective of downstream water rights;
  - (e) Hydromodification project; and
  - (f) Removal of invasive plant species.
- (7) A retrofit project or regional mitigation project may qualify as a Watershed Water Quality Activity provided it meets the requirements in section G. Watershed Workplan.

#### **4. ILLICIT DISCHARGE DETECTION AND ELIMINATION**

Each Copermittee must implement a program that meets the requirements of this section to actively detect and eliminate illicit discharges and disposal into the MS4. The program must address all types of illicit discharges and connections excluding those non-storm water discharges not prohibited by the Copermittee in accordance with section B of this Order.

##### **a. PREVENT AND DETECT ILLICIT DISCHARGES AND CONNECTIONS**

Each Copermittee must implement measures to prevent and detect illicit discharges to the MS4.

- (1) Legal Authority: Each Copermittee must retain legal authority to prevent and eliminate illicit discharges and connections to the MS4.
- (2) Inspections: Each Copermittee must include use of appropriate Copermittee personnel and contractors to assist in identifying illicit discharges and connections during their daily activities.

- (a) Visual inspections for illegal discharges and connections must be conducted during routine maintenance of all MS4 facilities.
- (b) Copermittee staff and contractors conducting non-MS4 field operations must be trained to report suspected illegal discharges and connections to proper Copermittee staff.

**b. MAINTAIN MS4 MAP**

Each Copermittee must maintain an updated map of its entire MS4 and the corresponding drainage areas within its jurisdiction. The use of GIS is strongly encouraged. The MS4 map must include all segments of the storm sewer system owned, operated, and maintained by the Copermittee, as well as all known locations of inlets that discharge and/or collect runoff into the Copermittee's MS4, all known locations of connections with other MS4s (e.g. Caltrans), and all known locations of all the outfalls that discharge runoff from the Copermittee's MS4. The accuracy of the MS4 map must be confirmed during dry weather field screening and analytical monitoring and must be updated at least annually. The MS4 map including any GIS layers must be submitted with the updated JRMP.

**c. FACILITATE PUBLIC REPORTING OF ILLICIT DISCHARGES AND CONNECTIONS - PUBLIC HOTLINE**

Each Copermittee must promote, publicize and facilitate public reporting of illicit discharges or water quality impacts associated with discharges into or from MS4s. Each Copermittee must facilitate public reporting through development and operation of a public hotline. Public hotlines can be Copermittee-specific or shared by Copermittees. All storm water hotlines must be capable of receiving reports in both English and Spanish 24 hours per day and seven days per week. All reported incidents, and how each was resolved, must be summarized in each Copermittee's Annual Report.

**d. DRY WEATHER FIELD SCREENING AND ANALYTICAL MONITORING**

Each Copermittee must conduct dry weather field screening and analytical monitoring of MS4 outfalls and other portions of its MS4 within its jurisdiction to detect illicit discharges and connections in accordance with Receiving Waters and MS4 Discharge Monitoring and Reporting Program No. R9-2010-0016 in Attachment E of this Order.

**e. INVESTIGATION / INSPECTION AND FOLLOW-UP**

Each Copermittee must implement procedures to investigate and inspect portions of its MS4 that, based on the results of field screening, analytical monitoring, or other appropriate information, indicate a reasonable potential of containing illicit discharges, illicit connections, or other sources of pollutants in non-storm water.

- (1) Develop response criteria for data: Each Copermittee must develop, update, and use numeric criteria action levels (or other actions level criteria where appropriate) to determine when follow-up investigations will be performed in response to water quality monitoring. The criteria must include required non-storm water action levels (see Section C) and a consideration of 303(d)-listed waterbodies and environmentally sensitive areas (ESAs) as defined in Attachment C.
- (2) Respond to data: Each Copermittee must investigate portions of the MS4 for which water quality data or conditions indicates a potential illegal discharge or connection.
  - (a) Obvious illicit discharges (i.e. color, odor, or significant exceedances of action levels) must be investigated immediately.
  - (b) Field screen data: Within two business days of receiving dry weather field screening results that exceed action levels, the Copermittee(s) having jurisdiction must either initiate an investigation to identify the source of the discharge or document the rationale for why the discharge does not pose a threat to water quality and does not need further investigation. This documentation must be included in the Annual Report.
  - (c) Analytical data: Within five business days of receiving analytical laboratory results that exceed action levels, the Copermittee(s) having jurisdiction must either initiate an investigation to identify the source of the discharge or document the rationale for why the discharge does not pose a threat to water quality and does not need further investigation. This documentation must be included in the Annual Report.
- (3) Respond to notifications: Each Copermittee must respond to and resolve each reported incident (e.g., public hotline, staff notification, etc.) made to the Copermittee in a timely manner. Criteria may be developed to assess the validity of, and prioritize the response to, each report.

**f. ELIMINATION OF ILLICIT DISCHARGES AND CONNECTIONS**

Each Copermittee must take immediate action to initiate steps necessary to eliminate all detected illicit discharges, illicit discharge sources, and illicit connections after detection within its jurisdiction. Elimination measures may include an escalating series of enforcement actions for those illicit discharges that are not a serious threat to public health or the environment. Illicit discharges that pose a serious threat to the public's health or the environment must be eliminated immediately.

**g. ENFORCE ORDINANCES**

Each Copermittee must implement and enforce its ordinances, orders, or other legal authority to prevent illicit discharges and connections to its MS4 and to eliminate detected illicit discharges and connections to its MS4.

**h. PREVENT AND RESPOND TO SEWAGE SPILLS (INCLUDING FROM PRIVATE LATERALS AND FAILING SEPTIC SYSTEMS) AND OTHER SPILLS**

Each Copermittee must implement management measures and procedures (including a notification mechanism) to prevent, respond to, contain and clean up all sewage (see below) and other spills that may discharge into its MS4 from any source (including private laterals and failing septic systems). Copermittees must coordinate with spill response teams to prevent entry of spills into the MS4 and contamination of surface water, ground water and soil. Each Copermittee must coordinate spill prevention, containment and response activities throughout all appropriate Copermittee departments, programs and agencies so that maximum water quality protection is available at all times.

**5. PUBLIC PARTICIPATION COMPONENT**

Each Copermittee must incorporate a mechanism for public participation in the updating, development, and implementation of the JRMP.

**6. EDUCATION COMPONENT**

Each Copermittee must implement education programs to (1) measurably increase the knowledge regarding MS4s, impacts of runoff on receiving waters, and potential BMP solutions for the target audience; and (2) to measurably change the behavior of target communities and thereby reduce pollutants in storm water discharges and eliminate prohibited non-storm water discharges to MS4s and the environment. At a minimum, the education programs must meet the requirements of this section and address the following target communities:

DIRECTIVES F: JURISDICTIONAL RUNOFF MANAGEMENT PROGRAM  
F.4 ILLICIT DISCHARGE DETECTION AND ELIMINATION  
F.5 PUBLIC PARTICIPATION  
F.6 EDUCATION

- Copermittee Departments and Personnel
- New Development / Redevelopment Project Applicants, Developers, Contractors, Property Owners, and other Responsible Parties
- Construction Site Owners and Operators
- Commercial Owners and Operators
- Industrial Owners and Operators
- Residential Community and General Public

**a. GENERAL REQUIREMENTS**

(1) At a minimum, the Copermittee education programs must educate each target community on the following topics, as appropriate to the target community's potential storm water and non-storm water discharges to the MS4:

- (a) Applicable water quality laws, regulations, permits, and requirements;
- (b) Best management practices;
- (c) General runoff concepts;
- (d) Existing water quality, including local water quality conditions, impaired waterbodies and environmentally sensitive areas; and
- (e) Other topics, as determined by the Copermittee(s), such as public reporting mechanisms, water conservation, low-impact development techniques, and public health and vector issues associated with runoff.

(2) Each Copermittee must implement educational activities, public information activities, and other appropriate activities to facilitate the proper management and disposal of used oil and toxic materials.

**b. SPECIFIC REQUIREMENTS**

(1) Copermittee Departments and Personnel

- (a) Each Copermittee must implement an education program so its staff and contractors (and Planning Boards and Elected Officials, if applicable) responsible for implementing the requirements of this Order have an understanding of the following topics as applicable to their responsibilities:
  - (i) Applicable water quality laws and regulations;
  - (ii) The potential effects and impacts that Copermittee departments and personnel activities related to their job duties can have on water quality);
  - (iii) Plan review policies and procedures to verify consistent application;
  - (iv) Methods of minimizing impacts to receiving water quality resulting from development, construction, and other potential pollutant generating activities;

- (v) Proper implementation of erosion and sediment control, source control, treatment control, and other BMPs to minimize the impacts to receiving water quality resulting from development, construction, and other potential pollutant generating activities;
  - (vi) Applicable recordkeeping and tracking mechanisms; and
  - (vii) Inspection and enforcement procedures, BMP implementation, and review of monitoring data.
- (b) Each Copermittee must train its staff responsible for oversight and conducting storm water compliance inspections and enforcement of construction activities (e.g. construction, building, code enforcement, grading review staffs, inspectors, and other responsible construction staff) annually prior to the rainy season.
- (c) Each Copermittee must train its staff responsible for conducting storm water compliance inspections and enforcement of industrial and commercial facilities at least once a year.

(2) New Development / Redevelopment and Construction Sites

As early in the planning and development process as possible and all through the permitting and construction process, each Copermittee must notify parties responsible for the project about the importance of educating all construction workers in the field about storm water issues and BMPs, in addition to the topics under Section F.6.a.(1).

(3) Commercial and Industrial Sites / Sources

At least once during the five-year period of this Order, each Copermittee must notify the owner/operator of each of its inventoried commercial and industrial site/source of the BMP requirements applicable to the site/source.

(4) Residential and General Public

Each Copermittee shall collaboratively conduct or participate in development and implementation of a program to educate residential and general public target communities. The Copermittee residential and general public education programs must address potential pollutant generating activities (e.g., car washing, mobile operations, yard maintenance) and pollutant generating products (e.g., pesticides, fertilizers, household chemicals). The target audiences of the residential and general public education programs must include underserved target audiences (e.g., disadvantaged communities), residents and managers of CIA/HOA areas, and owners and residents of mobile home parks.

## **G. WATERSHED WATER QUALITY WORKPLAN**

Each Copermittee must collaborate with other Copermittees to develop and implement a Watershed Water Quality Workplan (Watershed Workplan) to identify, prioritize, address, and mitigate the highest priority water quality issues/pollutants in the Upper Santa Margarita Watershed.

### **1. Watershed Workplan Components**

The work plan must, at a minimum:

- a. Characterize the receiving water quality in the watershed. Characterization must include assessment and analysis of regularly collected water quality data, reports, monitoring and analysis generated in accordance with the requirements of the Receiving Waters Monitoring and Reporting Program, as well as applicable information available from other public and private organizations. This characterization must include an updated watershed map.
- b. Identify and prioritize water quality problem(s) in terms of constituents by location, in the watershed's receiving waters. In identifying water quality problem(s), the Copermittees must, at a minimum, give consideration to TMDLs, receiving waters listed on the CWA section 303(d) list, waters with persistent violations of water quality standards, toxicity, or other impacts to beneficial uses, and other pertinent conditions.
- c. Identify the likely sources, pollutant discharges and/or other factors causing the highest water quality problem(s) within the watershed. Efforts to determine such sources must include, but not be limited to: use of information from the construction, industrial/commercial, municipal, and residential source identification programs required within the JRMP of this Order; water quality monitoring data collected as part of the Receiving Water Monitoring and Reporting Program required by this Order, and additional focused water quality monitoring to identify specific sources within the watershed.
- d. Develop a watershed BMP implementation strategy to attain receiving water quality objectives in the identified highest priority water quality problem(s) and locations. The BMP implementation strategy must include a schedule for implementation of the BMPs to abate specific receiving water quality problems and a list of criteria to be used to evaluate BMP effectiveness. Identified watershed water quality problems may be the result of jurisdictional discharges that will need to be addressed with BMPs applied in a specific jurisdiction in order to generate a benefit to the watershed. This implementation strategy must include a map of any implemented and/or proposed BMPs.
- e. Develop a strategy to monitor improvements in receiving water quality directly

resulting from implementation of the BMPs described in the Watershed Workplan. The monitoring strategy must review the necessary data to report on the measured pollutant reduction that results from proper BMP implementation. Monitoring must, at a minimum, be conducted in the receiving water to demonstrate reduction in pollutant concentrations and progression towards attainment of receiving water quality objectives.

- f. Establish a schedule for development and implementation of the Watershed strategy outlined in the Workplan. The schedule must, at a minimum, include forecasted dates of planned actions to address Provisions E.2(a) through E.2(e) and dates for watershed review meetings through the remaining portion of this Permit cycle. Annual watershed workplan review meetings must be open to the public and appropriately publically noticed such that interested parties may come and provide comments on the watershed program.

## **2. Watershed Workplan Implementation**

Watershed Copermittee's must implement the Watershed Workplan within 90 days of submittal unless otherwise directed by the San Diego Water Board.

## **3. Copermittee Collaboration**

Watershed Copermittees must collaborate to develop and implement the accepted Watershed Workplan. Watershed Copermittee collaboration must include frequent regularly scheduled meetings. The Copermittees must pursue efforts to obtain any interagency agreements, or other coordination efforts, with non-Copermittee owners of the MS4 (such as Caltrans, Native American tribes, and school districts) to control the contribution of pollutants from one portion of the shared MS4 to another portion of the shared MS4. The Copermittees must, as appropriate, participate in watershed management efforts to address water quality issues within the entire Santa Margarita Watershed (such as the County of San Diego and U.S. Marine Corps Camp Pendleton).

## **4. Public Participation**

Watershed Copermittees must implement a watershed-specific public participation mechanism within each watershed. A required component of the watershed-specific public participation mechanism must be a minimum 30-day public review of and opportunity to comment on the Watershed Workplan prior to submittal to the San Diego Water Board. The Workplan must include a description of the public participation mechanisms to be used and identification of the persons or entities anticipated to be involved during the development and implementation of the Watershed Workplan.

## 5. Watershed Workplan Review and Updates

Watershed Copermittees must review and update the Watershed Workplan annually to identify needed changes to the prioritized water quality problem(s) listed in the workplan. All updates to the Watershed Workplan must be presented during an Annual Watershed Review Meeting. Annual Watershed Review Meetings must occur once every calendar year and be conducted by the Watershed Copermittees. Annual Watershed Review Meetings must be open to the public and adequately noticed. Individual Watershed Copermittees must also review and modify their jurisdictional programs and JRMP Annual Reports, as necessary, so that they are consistent with the updated Watershed Workplan.

## 6. Pyrethroid Toxicity Reduction Evaluation

The Watershed Copermittees must incorporate the pyrethroid pollutant reduction program<sup>18</sup> into the Watershed Workplan. The pyrethroid pollutant reduction program must include the following elements:

- a. Pursue state and federal regulatory change;
- b. Implement a set of source controls targeted specifically at urban pyrethroid use;
- c. Through the annual reporting process, monitor the implementation of those controls, assess effectiveness, and identify sources or areas where additional effort is needed;
- d. Implement additional controls as needed; and
- e. Continue to monitor implementation, as well as conditions within the target receiving waters, assess effectiveness, and re-evaluate control programs.

## H. FISCAL ANALYSIS

1. Secure Resources: Each Copermittee must exercise its full authority to secure the resources necessary to meet all requirements of this Order.
2. Annual Analysis: Each Copermittee must conduct an annual fiscal analysis of the necessary capital and operation and maintenance expenditures necessary to accomplish the activities of the programs required by this Order. The analysis must include estimated expenditures for the current reporting period, the preceding period, and the next reporting period.
  - a. Each analysis must include a description of the source of funds that are proposed to meet the necessary expenditures.
  - b. Each analysis must include a narrative description of circumstances resulting in a 25 percent or greater annual change for any budget line items.

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<sup>18</sup> The pyrethroid pollutant reduction program is described in the "Riverside County – Santa Margarita Region Pyrethroid Source Identification Toxicity Reduction Evaluation, Final Phase II Report", January 2009 by MACTEC.

3. Annual Reporting: Each Copermittee must submit its annual fiscal analysis with the annual JRMP report.

## **I. TOTAL MAXIMUM DAILY LOADS**

1. The waste load allocations (WLAs) of fully approved and adopted TMDLs are incorporated as Water Quality Based Effluent Limitations on a pollutant by pollutant, watershed by watershed basis. Early TMDL requirements, including monitoring, may be required and inserted into this Order pursuant to Finding E.10.
2. The Cities of Wildomar and Murrieta must comply with the requirements and WLAs assigned to the discharges from their MS4s contributing to the Lake Elsinore/Canyon Lake (San Jacinto Watershed) Nutrient TMDLs as specified in Section VI.D.2 of the Santa Ana Water Board's Order R8-2010-0033, including relevant sections of the fact sheet and findings, and subsequent revisions thereto.

## **J. PROGRAM EFFECTIVENESS ASSESSMENT AND REPORTING**

Beginning with the Annual Report due in 2013, each Copermittee must annually assess and report upon the effectiveness of its JRMP and Watershed Workplan implementation to (1) reduce the discharge of storm water pollutants from its MS4 to the MEP; (2) prohibit non-stormwater discharges; and (3) prevent runoff discharges from the MS4 from causing or contributing to a violation of water quality standards.

### **1. Program Effectiveness Assessments**

#### **a. IDENTIFY EFFECTIVENESS ASSESSMENTS**

With the JRMP and Watershed Workplan submittal, each Copermittee must establish assessment measures or methods for each of the six outcome levels described by CASQA<sup>19</sup>, using data from each JRMP program component, the MRP, and the Watershed Workplan.

- (1) Assessment interval: For each established assessment measure or method, an assessment interval must be established as appropriate to the measure or method.
- (2) Projected Timeframe: For each established assessment measure or method, each Copermittee must identify the projected timeframe within which the associated outcome level can adequately assess change.

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<sup>19</sup> Effectiveness assessment outcome levels as defined by CASQA are defined in Attachment C of this Order. See "*Municipal Stormwater Program Effectiveness Assessment Guidance*" (CASQA, May 2007) for guidance for assessing program activities at the various outcome levels.

**b. PERFORM ASSESSMENTS**

- (1) Annually: Each year, the Copermittee must perform each applicable assessment based on the associated assessment interval, and determine whether the desired outcome has been met.
- (2) With the submittal of the Report of Waste Discharge, the Copermittees must determine whether their program implementation is resulting in the protection and/or improvement of water quality through an Integrated Assessment.

**2. Respond to Assessments**

- a. Where the assessments indicate that the desired outcome level has not been achieved at the end of the projected timeframe, the Copermittee must review its applicable activities and BMPs to identify any modifications and improvements needed to maximize effectiveness, as necessary to comply with this Order. If the Copermittee determines that the existing activities/BMPs are adequate, or that the projected timeframe should be extended, justification and an updated timeframe for attainment of the outcome level must be provided in the Annual Report.
- b. Each Copermittee must develop and implement a work plan and schedule to address any program modifications and improvements in response to the findings of its assessment. The work plan and schedule must be provided and updated with the applicable Annual Report. The work plan must include, at a minimum, the following:
  - (1) The problems and priorities identified during the assessment;
  - (2) A list of priority pollutants and known or suspected sources;
  - (3) A brief description of the strategy employed to reduce, eliminate or mitigate the negative impacts;
  - (4) A description and schedule for new and/or modified BMPs. The schedule is to include dates for significant milestones;
  - (5) A description of how the selected activities will address an identified high priority problem. This will include a description of the expected effectiveness and benefits of the new and/or modified BMPs;
  - (6) A description of implementation effectiveness metrics;
  - (7) A description of how efficacy results will be used to modify priorities and implementation; and
  - (8) A review of past activities implemented, progress in meeting water quality standards, and planned program adjustments.

### 3. Assessment and Response Reporting

Each Copermittee must include a summary of its effectiveness assessments within each Annual Report. Beginning with the FY 2012-2013 Annual Report, the Program Effectiveness reporting must include:

- a. The results of each of the effectiveness assessments performed pursuant to J.1.b, including the demonstrated CASQA effectiveness level(s);
- b. Responses to effectiveness assessments: A description of any program modifications planned in accordance with section J.2, including the work plan and identified schedule for implementation. The description must include the basis for determining that each modified activity and/or BMP represents an improvement expected to result in improved water quality; and
- c. A description of any steps to be implemented to improve the Copermittee's ability to assess program effectiveness.

## K. REPORTING

The Copermittees may propose alternate reporting criteria and schedules, as part of their updated JRMP, for the Executive Officer's acceptance.

### 1. Runoff Management Plans

#### a. JURISDICTIONAL RUNOFF MANAGEMENT PLANS

- (1) The written account of the overall program to be conducted by each Copermittee to meet the jurisdictional requirements of section F of this Order is referred to as the Jurisdictional Runoff Management Plan (JRMP). Each Copermittee must revise and update its existing JRMP so that it describes all activities the Copermittee will undertake to implement the requirements of this Order. Each Copermittee must submit its updated and revised JRMP to the San Diego Water Board no later than June 30, 2012.
- (2) At a minimum, each Copermittee's JRMP must be updated and revised to demonstrate compliance with each applicable section of this Order.

**b. WATERSHED WORKPLANS**

Copermittees must update and revise the Watershed Workplan to describe any changes in water quality problems or priorities, and any necessary change to actions Copermittees will take to implement jurisdictional or watershed BMPs to address those identified. The Copermittees must assemble and submit the Watershed Workplan to the San Diego Water Board no later than June 30, 2012, and must implement the Workplan within 90 days unless otherwise directed by the San Diego Water Board.

**2. Other Required Reports and Plans****a. SSMP UPDATES**

- (1) Copermittees must submit their updated SSMP in accordance with the applicable requirements of section F.1 with the JRMP by June 30, 2012.
- (2) Within 180 days of determination that the SSMP is in compliance with this Order's provisions, each Copermittee must amend its ordinances consistent with the SSMP and implement the updated SSMP. Any amended or new ordinances must be submitted to the San Diego Water Board the applicable Annual Report.

**b. HMP**

- (1) By June 30, 2013, the Copermittees must submit to the San Diego Water Board Executive Officer a draft HMP that has been reviewed by the public, including identification of the appropriate limiting range of flow rates in accordance with the applicable requirements of section F.1.h.
- (2) Within 180 of receiving San Diego Water Board comments on the draft HMP, the Copermittees must submit a final HMP that addressed the San Diego Water Board's comments.
- (3) Within 90 days of receiving a finding of adequacy from the Executive Officer each Copermittee must incorporate and implement the HMP for all Priority Development Projects.
- (4) Prior to acceptance of the HMP by the San Diego Water Board, the early implementation measures likely to be included in the HMP shall be encouraged by the Copermittees.

**c. REPORT OF WASTE DISCHARGE**

The Copermittees must submit to the San Diego Water Board, no later than 180 days in advance of the expiration date of this Order, a Report of Waste Discharge (ROWD) as an application for issuance of new waste discharge requirements. The fourth annual report for this Order may supplement the ROWD, provided the ROWD contains the minimum information below.

At a minimum, the ROWD must include the following: (1) Proposed changes to the Copermittees' runoff management programs; (2) Proposed changes to monitoring programs; (3) Justification for proposed changes; (4) Name and mailing addresses of the Copermittees; (5) Names and titles of primary contacts of the Copermittees; (6) Any other information necessary for the reissuance of this Order and (7) Any other information required by federal regulations for permit reapplications.

**3. Annual Reports****JURISDICTIONAL RUNOFF MANAGEMENT PROGRAM (JRMP) ANNUAL REPORTS**

- a. Each Copermittee must generate individual JRMP Annual Reports that cover implementation of its jurisdictional activities during the past annual reporting period. Each Annual Report must verify and document compliance with this Order as directed in this section. Each Copermittee must retain records in accordance with the Standard Provisions in Attachment B of this Order, available for review, that document compliance with each requirement of this Order. The reporting period for these annual reports must be the previous fiscal year.
- b. Each Copermittee must submit its JRMP Annual Reports to the San Diego Water Board by October 31 of each year, beginning on October 31, 2013.
- c. Each JRMP Annual Report must contain, at a minimum, the following information, as applicable to the Copermittee:
  - (1) Information required to be reported annually in Section H (Fiscal Analysis) of this Order;
  - (2) Information required to be reported annually in Section J (Program Effectiveness) of this Order;
  - (3) The completed Reporting Checklist found in Attachment D; and
  - (4) Information for each program component as described in the following Table 5:

Table 5. Annual Reporting Requirements

Program Component	Reporting Requirement
New Development	1. All updated relevant sections of the General Plan and environmental review process and a description of any planned updates within the next annual reporting period, if applicable;
	2. All revisions to the SSMP, including where applicable: (a) Identification and summary of where the SSMP fails to meet the requirements of this Order; (b) Updated procedures for identifying pollutants of concern for each Priority Development Project; (c) Updated treatment BMP ranking matrix; (d) Updated site design and treatment control BMP design standards;
	3. Number of Priority Development Projects reviewed and approved during the reporting period. Brief description of BMPs required at approved Priority Development Projects. Verification that site design, source control, and treatment BMPs were required on all applicable Priority Development Projects;
	4. Name and location of all Priority Development Projects that were granted a waiver from implementing LID BMPs pursuant to section F.1.d.(4) during the reporting period;
	5. Updated watershed-based BMP maintenance tracking database of approved treatment control BMPs and treatment control BMP maintenance within its jurisdiction, including updates to the list of high-priority Priority Development Projects; and verification that the requirements of this Order were met during the reporting period;

Table 5. Annual Reporting Requirements (Cont'd)

Program Component	Reporting Requirement
New Development (Cont'd)	6. Name and brief description of all approved Priority Development Projects required to implement hydrologic control measures in compliance with section F.1.h including a brief description of the management measures planned to protect downstream beneficial uses and prevent adverse physical changes to downstream stream channels;
	7. Number and description of all enforcement activities applicable to the new development and redevelopment component and a summary of the effectiveness of those activities.
Construction	1. All updated relevant ordinances and description of planned ordinance updates within the next annual reporting period, if applicable;
	2. A description of any changes to procedures used for identifying priorities for inspecting sites and enforcing control measures that consider the nature of the construction activity, topography, and the characteristics of soils and receiving water quality;
	3. Any changes to the designated minimum and enhanced BMPs;
	4. Summary of the inspection program, including the following information: (a) Total number and date of inspections conducted at each facility; (b) Number, date, and types of enforcement actions by facility; (c) Brief description of each high-level enforcement actions at construction sites including the effectiveness of the enforcement.  Supporting paper (or electronic) files must be maintained by the Copermittees and made available upon San Diego Water Board request. Supporting files must include a record of inspection dates, the results of each inspection, photographs (if any), and a summary of any enforcement actions taken.
Municipal	1. Updated source inventory;
	2. All changes to the designated municipal BMPs;
	3. Descriptions of any changes to procedures to assure that flood management projects assess the impacts on the water quality of receiving water bodies;
	4. Summary and assessment of BMP retrofits implemented at flood control structures, including: (a) List of projects retrofitted; (b) List and description of structures evaluated for retrofitting; (c) List of structures still needing to be evaluated and the schedule for evaluation;

Table 5. Annual Reporting Requirements (Cont'd)

Program Component	Reporting Requirement
Municipal (Cont'd)	5. Summary of the municipal structural treatment control operations and maintenance activities, including: (a) Number of inspections and types of facilities; (b) Summary of findings;
	6. Summary of the MS4 and MS4 facilities operations and maintenance activities, including: (a) Number and types of facilities maintained; (b) Amount of material removed; (c) List of facilities planned for bi-annual inspections and the justification;
	7. Summary of the municipal areas/programs inspection activities, including: (a) Number and date of inspections conducted at each facility; (b) The BMP violations identified during the inspection by facility; (c) Number, date and types of enforcement actions by facility; (d) Summary of inspection findings and follow-up activities for each facility;
	8. Description of activities implemented to address sewage infiltration into the MS4;
	9. Description of BMPs and their implementation for unpaved roads construction and maintenance.
Commercial / Industrial	1. Updated inventory of commercial / industrial sources;
	2. Summary of the inspection program, including the following information: (a) Number and date of inspections conducted at each facility or mobile business; (b) The BMP violations identified during the inspection by facility; (c) Number, date, and types of enforcement actions by facility or mobile business; (d) Brief description of each high-level enforcement actions at commercial/industrial sites including the effectiveness of the enforcement and follow-up activities for each facility;
	3. All changes to designated minimum and enhanced BMPs;
	4. A list of industrial sites, including each name, address, and SIC code, that the Copermittee suspects may require coverage under the General Industrial Permit, but has not submitted an NOI.

Table 5. Annual Reporting Requirements (Cont'd)

Program Component	Reporting Requirement
Residential	1. All updated minimum BMPs required for residential areas and activities;
	2. Quantification and summary of applicable runoff and storm water enforcement actions within residential areas and activities;
	3. Description of efforts to manage runoff and storm water pollution in common interest areas and mobile home parks.
Retrofitting Existing Development	1. Updated inventory and prioritization of existing developments identified as candidates for retrofitting;
	2. Description of efforts to retrofit existing developments during the reporting year;
	3. Description of efforts taken to encourage private landowners to retrofit existing development;
	4. A list of all retrofit projects that have been implemented, including site location, a description of the retrofit project, pollutants expected to be treated, and the tributary acreage of runoff that will be treated;
	5. Any proposed retrofit or regional mitigation projects and timelines for future implementation;
	6. Any proposed changes to the Copermittee's overall retrofitting program.
Illicit Discharge Detection and Elimination	1. Any changes to the legal authority to implement Illicit Discharge Detection and Elimination activities;
	2. Any Changes to the established investigation procedures;
	3. Any changes to public reporting mechanisms, including phone numbers and web pages;
	4. Summaries of illicit discharges (including spills and water quality data events) and how each significant case was resolved;
	5. A description of instances when field screening and analytical data exceeded action levels, including those instances for which no investigation was conducted;
	6. A description of follow-up and enforcement actions taken in response to investigations of illicit discharges and a description of the outcome of the investigation/enforcement actions.
Workplans	Updated workplans including priorities, strategy, implementation schedule and effectiveness evaluation.

d. Each JRMP Annual Report must also include the following information regarding non-storm water discharges (see Section B.2. of this Order):

- (1) Identification of non-storm water discharge categories identified as a source of pollutants to waters of the U.S;
- (2) A description of any updates to ordinances, orders, or similar means to prohibit non-storm water discharge categories identified under section B.2 above ;
- (3) Identification of any control measures to be required and implemented for

non-storm water discharge categories identified as needing controls by the San Diego Water Board; and

- (4) A description of a program to address pollutants from non-emergency fire fighting flows identified by the Copermittee to be significant sources of pollutants.

#### **4. Interim Reporting Requirements**

For the reporting periods, prior to submittal of the JRMP, each JRMP Annual Report must be submitted in accordance with the requirements and deadlines described in Order No. 2004-001.

#### **5. Universal Reporting Requirements**

All submittals must include an executive summary, introduction, conclusion, recommendations, and signed certified statement. Each Copermittee must submit a signed certified statement covering its responsibilities for each applicable submittal. The Principal Copermittee must submit a signed certified statement covering its responsibilities for each applicable submittal and the sections of the submittals for which it is responsible.

### **L. MODIFICATION OF PROGRAMS**

Modifications of JRMPs and/or Watershed Workplan may be initiated by the Executive Officer of the San Diego Water Board or by the Copermittees. Requests by Copermittees must be made to the Executive Officer, and must be submitted during the annual review process. Requests for modifications should be incorporated, as appropriate, into the Annual Reports or other deliverables required or allowed under this Order.

1. Minor modifications to JRMPs, and/or Watershed Workplan, may be accepted by the Executive Officer where the Executive Officer finds the proposed modification complies with all discharge prohibitions, receiving water limitations, and other requirements of this Order.
2. Proposed modifications that are not minor require amendment of this Order in accordance with this Order's rules, policies, and procedures.

**M. PRINCIPAL COPERMITTEE RESPONSIBILITIES**

Within 180 days of adoption of this Order, the Copermittees must designate the Principal Copermittee and notify the San Diego Water Board of the name of the Principal Copermittee. The Principal Copermittee must, at a minimum:

1. Serve as liaison between the Copermittees and the San Diego Water Board on general permit issues, and when necessary and appropriate, represent the Copermittees before the San Diego Water Board.
2. Coordinate permit activities among the Copermittees and facilitate collaboration on the development and implementation of programs required under this Order.
3. Coordinate the submittal of the documents and reports as required by section K of this Order and Receiving Waters and MS4 Discharge Monitoring and Reporting Program No. R9-2010-0016 in Attachment E of this Order.

**N. RECEIVING WATERS AND MS4 DISCHARGE MONITORING AND REPORTING PROGRAM**

Pursuant to CWC section 13267, the Copermittees must comply with all the requirements contained in Receiving Waters and MS4 Discharge Monitoring and Reporting Program (MRP) No. R9-2010-0016 in Attachment E of this Order.

**O. STANDARD PROVISIONS, REPORTING REQUIREMENTS, AND NOTIFICATIONS**

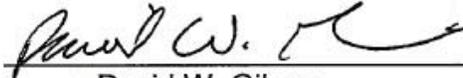
1. Each Copermittee must comply with Standard Provisions, Reporting Requirements, and Notifications contained in Attachment B of this Order. This includes 24 hour/5 day reporting requirements for any instance of non-compliance with this Order as described in section 5.e of Attachment B.
2. All plans, reports and subsequent amendments submitted in compliance with this Order must be implemented immediately (or as otherwise specified). All submittals by Copermittees must be adequate to implement the requirements of this Order.

DIRECTIVES M: PRINCIPAL COPERMITTEE RESPONSIBILITIES  
DIRECTIVES N: RECEIVING WATERS AND MS4 DISCHARGE MONITORING AND  
REPORTING PROGRAM  
DIRECTIVES O: STANDARD PROVISIONS, REPORTING REQUIREMENTS, AND  
NOTIFICATIONS

**P. ADDITIONAL PROVISIONS**

The Executive Officer shall meet with Camp Pendleton and other stakeholders at six (6) month intervals to identify and investigate water quality impacts, flow impacts, and impacts to water rights that may derive from the implementation of Low Impact Development BMPs required by Order R9-2010-0016 as they are developed by the storm water Copermittees. Any key issues or amendments to the Order that derive from those analyses and discussions will be promptly brought to the San Diego Water Board for their consideration.

I, David W. Gibson, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Diego Region, on November 10, 2010.



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David W. Gibson  
Executive Officer

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**ATTACHMENT A****BASIN PLAN PROHIBITIONS**

California Water Code Section 13243 provides that a Regional Board, in a water quality control plan, may specify certain conditions or areas where the discharge of waste or certain types of waste is not permitted. The following discharge prohibitions are applicable to any person, as defined by Section 13050(c) of the California Water Code, who is a citizen, domiciliary, or political agency or entity of California whose activities in California could affect the quality of waters of the state within the boundaries of the San Diego Region.

1. The discharge of waste to waters of the state in a manner causing, or threatening to cause a condition of pollution, contamination or nuisance as defined in California Water Code Section 13050, is prohibited.
2. The discharge of waste to land, except as authorized by waste discharge requirements or the terms described in California Water Code Section 13264 is prohibited.
3. The discharge of pollutants or dredged or fill material to waters of the United States except as authorized by a NPDES permit or a dredged or fill material permit (subject to the exemption described in California Water Code Section 13376) is prohibited.
4. Discharges of recycled water to lakes or reservoirs used for municipal water supply or to inland surface water tributaries thereto are prohibited, unless this Regional Board issues a NPDES permit authorizing such a discharge; the proposed discharge has been approved by the State Department of Health Services and the operating agency of the impacted reservoir; and the discharger has an approved fail-safe long-term disposal alternative.
5. The discharge of waste to inland surface waters, except in cases where the quality of the discharge complies with applicable receiving water quality objectives, is prohibited. Allowances for dilution may be made at the discretion of the Regional Board. Consideration would include streamflow data, the degree of treatment provided and safety measures to ensure reliability of facility performance. As an example, discharge of secondary effluent would probably be permitted if streamflow provided 100:1 dilution capability.
6. The discharge of waste in a manner causing flow, ponding, or surfacing on lands not owned or under the control of the discharger is prohibited, unless the discharge is authorized by the Regional Board.
7. The dumping, deposition, or discharge of waste directly into waters of the state, or adjacent to such waters in any manner which may permit its being transported into the waters, is prohibited unless authorized by the Regional Board.
8. Any discharge to a storm water conveyance system that is not composed entirely of "storm water" is prohibited unless authorized by the Regional Board. [The federal regulations, 40 CFR 122.26(b)(13), define storm water as storm water

- runoff, snow melt runoff, and surface runoff and drainage. 40 CFR 122.26(b)(2) defines an illicit discharge as any discharge to a storm water conveyance system that is not composed entirely of storm water except discharges pursuant to a NPDES permit and discharges resulting from fire fighting activities. [§122.26 amended at 56 FR 56553, November 5, 1991; 57 FR 11412, April 2, 1992].
9. The unauthorized discharge of treated or untreated sewage to waters of the state or to a storm water conveyance system is prohibited.
  10. The discharge of industrial wastes to conventional septic tank/subsurface disposal systems, except as authorized by the terms described in California Water Code Section 13264, is prohibited.
  11. The discharge of radioactive wastes amenable to alternative methods of disposal into the waters of the state is prohibited.
  12. The discharge of any radiological, chemical, or biological warfare agent into waters of the state is prohibited.
  13. The discharge of waste into a natural or excavated site below historic water levels is prohibited unless the discharge is authorized by the Regional Board.
  14. The discharge of sand, silt, clay, or other earthen materials from any activity, including land grading and construction, in quantities which cause deleterious bottom deposits, turbidity or discoloration in waters of the state or which unreasonably affect, or threaten to affect, beneficial uses of such waters is prohibited.
  15. The discharge of treated or untreated sewage from vessels to Mission Bay, Oceanside Harbor, Dana Point Harbor, or other small boat harbors is prohibited.

**ATTACHMENT B****STANDARD PROVISIONS, REPORTING REQUIREMENTS, AND NOTIFICATIONS****1. STANDARD PROVISIONS – PERMIT COMPLIANCE [40 CFR 122.41]**(a) *Duty to comply* [40 CFR 122.41(a)].

- (1) The Copermitee must comply with all of the conditions of this Order. Any noncompliance constitutes a violation of the Clean Water Act (CWA) and the California Water Code (CWC) and is grounds for enforcement action, for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application.
- (2) The Copermitee shall comply with effluent standards or prohibitions established under section 307(a) of the CWA toxic pollutants and with standards for sewage sludge use or disposal established under section 405(d) of the CWA within the time provided in the regulations that establish these standards or prohibitions or standards for sewage sludge use or disposal, even if the Order has not yet been modified to incorporate the requirement.

(b) *Need to halt or reduce activity not a defense* [40 CFR 122.41(c)]. It shall not be a defense for the Copermitee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this Order.(c) *Duty to mitigate* [40 CFR 122.41(d)]. The Copermitee shall take all reasonable steps to minimize or prevent any discharge or prevent any discharge or sludge use or disposal in violation of this Order that has a reasonable likelihood of adversely affecting human health or the environment.(d) *Proper operation and maintenance* [40 CFR 122.41(e)]. The Copermitee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Copermitee to achieve compliance with the conditions of this Order. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems that are installed by the Copermitee only when necessary to achieve compliance with the conditions of this Order.(e) *Property rights* [40 CFR 122.41(g)].

- (1) This Order does not convey any property rights of any sort or any exclusive privilege.
- (2) 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.

(f) *Inspection and entry* [40 CFR 122.41(i)]. The Copermitee shall allow the Regional Water Quality Control Board, San Diego Region (Regional Board), State Water Resources Control Board (SWRCB), United States Environmental Protection Agency

(USEPA), and/or their authorized representatives (including an authorized contractor acting as their representative), upon presentation of credentials and other documents as may be required by law, to:

- (1) Enter upon the Copermittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this Order;
- (2) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Order;
- (3) Inspect and photograph, at reasonable times, any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order; and
- (4) Sample or monitor, at reasonable times, for the purpose of assuring Order compliance or as otherwise authorized by the CWA or the CWC, any substances or parameters at any location.

(g) *Bypass* [40 CFR 122.41(m)]

(1) Definitions:

- i) "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility.
- ii) "Severe property damage" means substantial physical damage to property, damage to the treatment facilities, which causes them to become inoperable, or substantial and permanent loss of natural resources that can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

(2) Bypass not exceeding limitations - The Copermittee may allow any bypass to occur which does not cause exceedances of effluent limitations, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions listed in Standard Provisions – Permit Compliance (g)(3), (g)(4) and (g)(5) below.

(3) Prohibition of Bypass - Bypass is prohibited, and the Regional Board may take enforcement action against a Copermittee for bypass, unless:

- i) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
- ii) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and
- iii) The Copermittee submitted notice as required under Standard Provisions – Permit Compliance (g)(3) above.

## (4) Notice

- i) Anticipated bypass. If the Copermittee knows in advance of the need for a bypass, it shall submit a notice, if possible at least ten days before the date of the bypass.
  - ii) Unanticipated bypass. The Copermittee shall submit notice of an unanticipated bypass as required in Standard Provisions 5(e) below (24-hour notice).
- (h) *Upset* [40 CFR 122.41(n)] Upset means an exceptional incident in which there is unintentional and temporary noncompliance with technology based effluent limitations because of factors beyond the reasonable control of the Copermittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.
- (1) Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of Standard Provisions – Permit Compliance (h)(2) below are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.
- (2) Conditions necessary for a demonstration of upset. A Copermittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:
- i) An upset occurred and that the Copermittee can identify the cause(s) of the upset;
  - ii) The permitted facility was at the time being properly operated;
  - iii) The Copermittee submitted notice of the upset as required in Standard Provisions – Permit Compliance (5)(e)(ii)(B) below (24-hour notice); and
  - iv) The Copermittee complied with any remedial measures required under Standard Provisions – Permit Compliance 1(c) above.
- (3) Burden of Proof. In any enforcement proceeding, the Copermittee seeking to establish the occurrence of an upset has the burden of proof.

**2. STANDARD PROVISIONS – PERMIT ACTION**

- (a) *General* [40 CFR 122.41(f)] This Order may be modified, revoked and reissued, or terminated for cause. The filing of a request by the Copermittee for modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any Order condition.
- (b) *Duty to reapply* [40 CFR 122.41(b)]. If the Copermittee wishes to continue an activity regulated by this Order after the expiration date of this Order, the Copermittee must apply for and obtain new permit.
- (c) *Transfers*. This Order is not transferable to any person except after notice to the Regional Board. The Regional Board may require modification or revocation and

reissuance of the Order to change the name of the Copermittee and incorporate such other requirements as may be necessary under the CWA and the CWC.

### 3. STANDARD PROVISIONS – MONITORING

- (a) Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. [40 CFR Section 122.41 (j) (1)]
- (b) Monitoring results must be conducted according to test procedures under 40 CFR Part 136, or in the case of sludge use or disposal, approved under 40 CFR Part 136 unless otherwise specified in 40 CFR Part 503 unless other test procedures have been specified in this Order [40 CFR Section 122.41(j)(4)][40 CFR Section 122.44(i)(1)(iv)].

### 4. STANDARD PROVISIONS – RECORDS

- (a) Except for records of monitoring information required by this Order related to the Copermittee's sewage sludge use and disposal activities, which shall be retained for a period of at least five years (or longer as required by 40 CFR Part 503), the Copermittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this Order, and records of all data used to complete the application for this Order, for a period of at least three (3) years from the date of the sample, measurement, report or application, This period may be extended by request of the Regional Water Board Executive Officer at any time [40 CFR Section 122.41(j)(2)].
- (b) *Records of monitoring information* [40 CFR 122.41(j) (3)] shall include:
  - (1) The date, exact place, and time of sampling or measurements;
  - (2) The individual(s) who performed the sampling or measurements;
  - (3) The date(s) analyses were performed;
  - (4) The individual(s) who performed the analyses;
  - (5) The analytical techniques or methods used; and
  - (6) The results of such analyses.
- (c) *Claims of confidentiality* [40 CFR Section 122.7(b)] of the following information will be denied:
  - (1) The name and address of any permit applicant or Copermittee; and
  - (2) Permit applications and attachments, permits and effluent data.

### 5. STANDARD PROVISIONS – REPORTING

- (a) *Duty to provide information* [40 CFR 122.41(h)]. The Copermittee shall furnish to the Regional Board, SWRCB, or USEPA within a reasonable time, any information which the Regional Board, SWRCB, or USEPA may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Order or to determine compliance with this Order. Upon request, the Copermittee shall also furnish to the Regional Board, SWRCB, or USEPA, copies of records required to be kept by this Order.

(b) *Signatory and Certification Requirements* [40 CFR 122.41(k)]

- (1) All applications, reports, or information submitted to the Regional Board, SWRCB, or USEPA shall be signed and certified in accordance with Standard Provisions – Reporting 5(b)ii), 5(b)iii), 5(b)iv), and 5(b) (see 40 CFR 122.22)
- (2) *Applications* [40 CFR 122.22(a)(3)] All permit applications shall be signed by either a principal executive officer or ranking elected official.
- (3) *Reports* [40 CFR 122.22(b)]. All reports required by this Order, and other information requested by the Regional Board, SWRCB, or USEPA shall be signed by a person described in Standard Provisions – Reporting 5(b)(2) above, or by a duly authorized representative of that person. A person is a duly authorized representative only if:
  - i) The authorization is made in writing by a person described in Standard Provisions-Reporting 5(b)(2) above;
  - ii) The authorization specifies 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,
  - iii) The written authorization is submitted to the Regional Water Board and State Water Board.
- (4) *Changes to authorization* [40 CFR Section 122.22(c)] If an authorization under Standard Provisions – Reporting 5(b)(3) of this reporting requirement is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of Standard Provisions – Reporting 5(b)(3) above must be submitted to the Regional Water Board and State Water Board prior to or together with any reports, information, or applications to be signed by an authorized representative.
- (5) *Certification* [40 CFR Section 122.22(d)] Any person signing a document under Standard Provisions – Reporting 5(b)(2), or 5(b)(3) above shall 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."

(c) *Monitoring reports.* [40 CFR 122.41(l)(4)]

- (1) Monitoring results shall be reported at the intervals specified in the Receiving Waters and Runoff Monitoring and Reporting Program No. R9-2009-0002.
- (2) Monitoring results must be reported on a Discharge Monitoring Report (DMR) form or forms provided or specified by the Regional Board or SWRCB for reporting results of mentoring of sludge use or disposal practices.
- (3) If the Copermittee monitors any pollutant more frequently than required by this Order using test procedures approved under 40 CFR Part 136 or, in the case of sludge use or disposal, approved under 40 CFR Part 136 unless otherwise specified in 40 CFR Part 503, or as specified in this Order, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR or sludge reporting form specified by the Regional Board.
- (4) Calculations for all limitations, which require averaging of measurements, shall utilize an arithmetic mean unless otherwise specified in this Order.

(d) *Compliance schedules.* [40 CFR Section 122.41(l)(5)] Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this Order shall be submitted no later than 14 days following each schedule date.

(e) *Twenty-four hour reporting* [40 CFR Section 122.41(l)(6)]

- (1) The Copermittee shall report any noncompliance that may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the Copermittee becomes aware of the circumstances. A written submission shall also be provided within five (5) days of the time the Copermittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.
- (2) The following shall be included as information, which must be reported within 24 hours under this paragraph:
  - i) Any unanticipated bypass that exceeds any effluent limitation in the Order (See 40 CFR 122.41(g)).
  - ii) Any upset which exceeds any effluent limitation in this Order.
- (3) The Regional Board may waive the above-required written report under this provision on a case-by-case basis if the oral report has been received within 24 hours.

(f) *Planned changes.* [40 CFR Section 122.41(l)(1)] The Copermittee shall give notice to the Regional Board as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required under this provision only when:

- (1) The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 CFR 122.29(b); or
  - (2) The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants, which are not subject to effluent limitations in this Order.
  - (3) The alteration or addition results in a significant change in the Copermittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing Order, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan.
- (g) *Anticipated noncompliance.* [40 CFR Section 122.41(l)(7)] The Copermittee shall give advance notice to the Regional Board or SWRCB of any planned changes in the permitted facility or activity, which may result in noncompliance with Order requirements.
- (h) *Other noncompliance* [40 CFR Section 122.41(l) 7)] The Copermittee shall report all instances of noncompliance not reported under Standard Provisions 5(c), 5(d), and 5(e) above, at the time monitoring reports are submitted. The reports shall contain the information listed in Standard Provision – Reporting 5(e) above.
- (i) *Other information* [40 CFR Section 122.41(l)(8)] When the Copermittee becomes 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 Board, SWRCB, or USEPA, the Copermittee shall promptly submit such facts or information.

## 6. STANDARD PROVISIONS – ENFORCEMENT

- (a) 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.

## 7. ADDITIONAL STANDARD PROVISIONS

- (a) *Municipal separate storm sewer systems* [40 CFR 122.42(c)]. The operator of a large or medium municipal separate storm sewer system or a municipal separate storm sewer that has been designated by the Director under 40 CFR 122.26(a)(1)(v) must submit an annual report by the anniversary of the date of the issuance of the permit for such system. The report shall include:
- (1) The status of implementing the components of the storm water management program that are established as permit conditions;
  - (2) Proposed changes to the storm water management programs that are established as permit conditions. Such proposed changes shall be consistent with 40 CFR 122.26(d)(2)(iii); and
  - (3) Revisions, if necessary, to the assessment of controls and the fiscal analysis reported in the permit application under 40 CFR 122.26(d)(2)(iv) and 40 CFR

122.26(d)(2)(v);

- (4) A summary of data, including monitoring data, that is accumulated throughout the reporting year;
  - (5) Annual expenditures and budget for year following each annual report;
  - (6) A summary describing the number and nature of enforcement actions, inspections, and public education programs; and
  - (7) Identification of water quality improvements or degradation.
- (b) *Storm water discharges* [40 CFR 122.42(d)]. The initial permits for discharges composed entirely of storm water issued pursuant to 40 CFR 122.26(e)(7) shall require compliance with the conditions of the permit as expeditiously as practicable, but in no event later than three years after the date of issuance of the permit.
- (c) *Other Effluent Limitations and Standards* [40 CFR 122.44(b)(1)]. If any toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is promulgated under Section 307(a) of the CWA for a toxic pollutant which is present in the discharge and that standard or prohibition is more stringent than any limitation on the pollutant in this Order, the Regional Board may institute proceedings under these regulations to modify or revoke and reissue the Order to conform to the toxic effluent standard or prohibition.
- (d) *Discharge is a privilege* [CWC section 13263(g)]. No discharge of waste into the waters of the State, whether or not such discharge is made pursuant to waste discharge requirements, shall create a vested right to continue such discharge. All discharges of waste into waters of the State are privileges, not rights.
- (e) *Review and revision of Order* [CWC section 13263(e)]. Upon application by any affected person, or on its own motion, the Regional Board may review and revise this permit.
- (f) *Termination or modification of Order* [CWC section 13381]. This permit may be terminated or modified for causes, including, but not limited to, all of the following:
- (1) Violation of any condition contained in this Order.
  - (2) Obtaining this Order by misrepresentation, or failure to disclose fully all relevant facts.
  - (3) A change in any condition that requires either a temporary or permanent reduction or elimination of the permitted discharge.
- (g) *Transfers*. When this Order is transferred to a new owner or operator, such requirements as may be necessary under the CWC may be incorporated into this Order.
- (h) *Conditions not stayed*. The filing of a request by the Copermitee for modification, revocation and reissuance, or termination of this Order, or a notification of planned change in or anticipated noncompliance with this Order does not stay any condition of this Order.

- (i) *Availability.* A copy of this Order shall be kept at a readily accessible location and shall be available to on-site personnel at all times.
- (j) *Duty to minimize or correct adverse impacts.* The Copermittees shall take all reasonable steps to minimize or correct any adverse impact on the environment resulting from noncompliance with this Order, including such accelerated or additional monitoring as may be necessary to determine the nature and impact of the noncompliance.
- (k) *Interim Effluent Limitations.* The Copermittee shall comply with any interim effluent limitations as established by addendum, enforcement action, or revised waste discharge requirements which have been, or may be, adopted by this Regional Board.
- (l) *Responsibilities, liabilities, legal action, penalties* [CWC sections 13385 and 13387]. The Porter-Cologne Water Quality Control Act provides for civil and criminal penalties comparable to, and in some cases greater than, those provided for under the CWA.

Nothing in this Order shall be construed to protect the Copermittee from its liabilities under federal, state, or local laws.

Except as provided for in 40CFR 122.41(m) and (n), nothing in this Order shall be construed to relieve the Copermittee from civil or criminal penalties for noncompliance.

Nothing in this Order shall be construed to preclude the institution of any legal action or relieve the Copermittee from any responsibilities, liabilities, or penalties to which the Copermittee is or may be subject to under Section 311 of the CWA.

Nothing in this Order shall be construed to preclude institution of any legal action or relieve the Copermittee from any responsibilities, liabilities, or penalties established pursuant to any applicable state law or regulation under authoring preserved by Section 510 of the CWA.

- (m) *Noncompliance.* Any noncompliance with this Order constitutes violation of the CWA and is grounds for denial of an application or modification of the Order (also see 40 CFR 122.41(a)).
- (n) *Director.* For purposes of this Order, the term "Director" used in parts of 40 CFR incorporated into this Order by reference and/or applicable to this Order shall have the same meaning as the term "Regional Board" used elsewhere in this Order, except that in 40 CFR 122.41(h) and (l), "Director" shall mean "Regional Board, SWRCB, and USEPA."
- (o) The Regional Board has, in prior years, issued a limited number of individual NPDES permits for non-storm water discharges to MS4s. The Regional Board or SWRCB may in the future, upon prior notice to the Copermittee(s), issue an NPDES permit for any non-storm water discharge (or class of non-storm water discharges) to a MS4. Copermittees may prohibit any non-storm water discharge (or class of non-storm water discharges) to a MS4 that is authorized under such separate NPDES permits.

- (p) *Effective date.* This Order shall become effective on the date of its adoption provided the USEPA has no objection. If the USEPA objects to its issuance, this Order shall not become effective until such objection is withdrawn. This Order supersedes Order No. 2001-01 upon the effective date of this Order.
- (q) *Expiration.* This Order expires five years after adoption.
- (r) *Continuation of expired order* [23 CCR 2235.4]. After this Order expires, the terms and conditions of this Order are automatically continued pending issuance of a new permit if all requirements of the federal NPDES regulations on the continuation of expired permits (40 CFR 122.6) are complied with.
- (s) *Applications.* Any application submitted by a Copermittee for reissuance or modification of this Order shall satisfy all applicable requirements specified in federal regulations as well as any additional requirements for submittal of a Report of Waste Discharge specified in the CWC and the California Code of Regulations.
- (t) *Confidentiality.* Except as provided for in 40 CFR 122.7, no information or documents submitted in accordance with or in application for this Order will be considered confidential, and all such information and documents shall be available for review by the public at the Regional Board office.
- (u) *Severability.* The provisions of this Order are severable, and if any provision of this Order, or the application of any provisions of this Order to any circumstance, is held invalid, the application of such provision to other circumstances and the remainder of this Order shall not be affected thereby.
- (v) *Report submittal.* The Copermittee shall submit reports and provide notifications as required by this Order to the following:

NORTHERN WATERSHED UNIT  
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
SAN DIEGO REGION  
9174 SKY PARK COURT, SUITE 100  
SAN DIEGO CA 92123-4340  
Telephone: (858) 467-2952 Fax: (858) 571-6972

EUGENE BROMLEY  
US ENVIRONMENTAL PROTECTION AGENCY  
REGION IX  
PERMITS ISSUANCE SECTION (W-5-1)  
75 HAWTHORNE STREET  
SAN FRANCISCO CA 94105

Unless otherwise directed, the Copermittee shall submit one hard copy for the official record and one electronic copy of each report required under this Order to the Regional Board and one electronic copy to the EPA.

**ATTACHMENT C****ACRONYMS AND ABBREVIATIONS**

ADT	Average Daily Traffic
AMAL	Average Monthly Action Level
ASBS	Area of Special Biological Significance
AST	Active/Passive Sediment Treatment
BMP	Best Management Practice
Basin Plan	Water Quality Control Plan for the San Diego Basin
BU	Beneficial Use
CASQA	California Stormwater Quality Association
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CWA	Clean Water Act
CWC	California Water Code
CZARA	Coastal Zone Act Reauthorization Amendments of 1990
DAMP	Drainage Area Management Plan
DNQ	Detected, but not Quantified
EIA	Effective Impervious Area
ESAs	Environmentally Sensitive Areas
GIS	Geographic Information System
HMP	Hydromodification Management Plan
IBI	Index of Biotic Integrity
JRMP	Jurisdictional Runoff Management Plan
LID	Low Impact Development
MDAL	Maximum Daily Action Level
MEP	Maximum Extent Practicable
ML	Minimum Level
MS4	Municipal Separate Storm Sewer System
NOI	Notice of Intent
NPDES	National Pollutant Discharge Elimination System
Copermittees	County of Riverside, the 4 incorporated cities within the County of Riverside in the San Diego Region, and the Riverside County Flood Control District
RGOs	Retail Gasoline Outlets
ROWD	Riverside County Copermittees' Report of Waste Discharge (application for NPDES reissuance)
RWLs	Receiving Water Limitations
SAL	Storm Water Action Level
San Diego Water Board	California Regional Water Quality Control Board, San Diego Region
SIC	Standard Industrial Classification Code
SSMP	Standard Urban Storm Water Mitigation Plan
State Board	State Water Resources Control Board
SWQPA	State Water Quality Protected Area
TMDL	Total Maximum Daily Load

USEPA	United States Environmental Protection Agency
WLA	Waste Load Allocation
WQMP	Water Quality Management Plan
WRMP	Watershed Runoff Management Plan

## DEFINITIONS

**Active/Passive Sediment Treatment** - Using mechanical, electrical or chemical means to flocculate or coagulate suspended sediment for removal from runoff from construction sites prior to discharge.

**Anthropogenic Litter** – Trash generated from human activities, not including sediment.

**Average Monthly Action Level** – the highest allowable average of daily discharges over a calendar month, calculated as the sum of all daily discharges measured during a calendar month divided by the number of daily discharges measured during that month.

**Basin Plan** – Water Quality Control Plan, San Diego Basin, Region 9, and amendments, developed by the Regional Board.

**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 tangible and intangible economic, social, and environmental goals. “Beneficial Uses” of the waters of the State 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 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 Management Practices (BMPs)** - 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.

**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.

**Biocriteria** - Under the CWA, numerical values or narrative expressions that define a desired biological condition for a water body that are legally enforceable. The USEPA

defines biocriteria as: “numerical values or narrative expressions that describe the reference biological integrity of aquatic communities inhabiting waters of a given designated aquatic life use... (that)...describe the characteristics of water body segments least impaired by human activities.”

**Biofiltration** - refers to practices that use vegetation and amended soils to detain and treat runoff from impervious areas. Treatment is through filtration, infiltration, adsorption, ion exchange, and biological uptake of pollutants.

**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)]** - The federal statute requiring municipal and industrial dischargers to obtain NPDES permits for their discharges of storm water.

**Clean Water Act Section 303(d) Water Body** - 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 runoff to these water bodies by the Copermittees 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 State are affected.”

**Critical Channel Flow (Qc)** – The channel flow that produces the critical shear stress that initiates bed movement or that erodes the toe of channel banks. When measuring Qc, it should be based on the weakest boundary material – either bed or bank.

**CWA** – Federal Clean Water Act

**CWC** – California Water Code

**Daily Discharge** – Daily Discharge is defined as either: (1) the total mass of the constituent discharged over the calendar day or any 24 hour period that reasonably represents a calendar day for purposes of sampling (as specified in the permit), for a constituent with limitations expressed in units of mass or; (2) the unweighted arithmetic mean measurement of the constituent over the day for a constituent with limitations expressed in other units of measurement (e.g. concentration.)

The Daily Discharge may be determined by the analytical results of a composite sample taken over the course of one day (a calendar day, or other 24 hour period other than a day), or by the arithmetic mean of analytical results from one or more grab samples taken over the course of a day.

**Detected, but not Quantified** – those sample results less than the reporting level, but greater than or equal to the laboratory's Method of Detection Limit (MDL.)

**Development Projects** - Construction, rehabilitation, redevelopment, or reconstruction of any public or private residential project, industrial, commercial, or any other projects.

**Dilution Credit** – the amount of dilution granted to a discharger in the calculation of a WQBEL, based on the allowance of a specific mixing zone. It is calculated from the dilution ratio, or determined through conducting of a mixing zone study, or modeling of the discharge and receiving water.

**Dry Season** – May 1 through September 30 of each year.

**Dry Weather** – weather is considered dry if the preceding 72 hours has been without precipitation.

**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 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.

**Enclosed Bays** – Enclosed bays are indentations along the coast that enclose an area of oceanic water within distinct headlands or harbor works. Enclosed bays include all

bays where the narrowest distance between the headlands or outermost bay works is less than 75 percent of the greatest dimension of the enclosed portion of the bay. Enclosed bays do not include inland surface waters or ocean waters.

**Erosion** – When land is diminished or worn away due to 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.

**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 San Diego Basin (1994) and amendments); State Water Quality Protected Areas; water bodies designated with the RARE beneficial use by the State Water Resources Control Board (Water Quality Control Plan for the San Diego Basin (1994) and amendments); areas designated as preserves or their equivalent under the Natural Communities Conservation Program within the Cities and County of Orange; and any other equivalent environmentally sensitive areas which have been identified by the Copermittees.

**Estuaries** – waters, including coastal lagoons, located at the mouth of streams that serve as areas of mixing fresh and ocean waters. Coastal lagoons and mouths of streams that are temporarily separated from the ocean by sandbars shall be considered estuaries. Estuarine waters shall be considered to extend from a bay or the open ocean to a point upstream where there is no significant mixing of fresh water and ocean water. Estuaries do not include inland surface waters or ocean waters.

**Feasibility Analysis** – Detailed description of the selection process for the treatment control BMPs for a Priority Development Project, including justification of why one BMP is selected over another. For a Priority Development Project where a treatment control BMP with a low removal efficiency ranking (as identified by the Model SUSMP) is proposed, the analysis shall include a detailed and adequate justification exhibiting the reasons implementation of a treatment control BMP with a higher removal efficiency is infeasible for the Priority Development Project or portion of the Priority Development Project.

**Flow Duration** – The long-term period of time that flows occur above a threshold that causes significant sediment transport and may cause excessive erosion damage to creeks and streams (not a single storm event duration). The simplest way to visualize this is to consider a histogram of pre- and post-project flows using long-term records of hourly data. To maintain pre-project flow duration means that the total number of hours (counts) within each range of flows in a flow-duration histogram cannot increase between the pre- and post-project condition. Flow duration within the range of geomorphologically significant flows is important for managing erosion.

**GIS** – Geographic Information System

**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 USEPA in 40 CFR 116 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** - Hazardous waste is 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, Article 1].

**Household Hazardous Waste** – Paints, cleaning products, and other wastes generated during home improvement or maintenance activities.

**Hydromodification** – 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 result in increased stream flows and sediment transport. In addition, alteration of stream and river channels, such as stream channelization, concrete lining, installation of dams and water impoundments, and excessive streambank and shoreline erosion are also considered hydromodification, due to their disruption of natural watershed hydrologic processes.

**Illicit Connection** – Any connection to the MS4 that conveys an illicit discharge.

**Illicit Discharge** - Any discharge to the MS4 that is not composed entirely of storm water except discharges pursuant to a NPDES permit and discharges resulting from fire fighting activities [40 CFR 122.26(b)(2)].

**Implementation Assessment** – Assessment conducted to determine the effectiveness of Copermittee programs and activities in achieving measurable targeted outcomes, and in determining whether priority sources of water quality problems are being effectively addressed.

**Inactive Slopes** – Slopes on which no grading or other soil disturbing activities are conducted for 10 or more days.

**Inland Surface Waters** – all surface waters of the State that do not include the ocean, enclosed bays, or estuaries.

**Integrated Assessment** – Assessment to be conducted to evaluate whether program implementation is properly targeted to and resulting in the protection and improvement of water quality.

**Jurisdictional Runoff Management Plan (JRMP)** – A written description of the specific jurisdictional runoff management measures and programs that each Copermittee will implement to comply with this Order and ensure that storm water pollutant discharges in runoff are reduced to the MEP and do not cause or contribute to a violation of water quality standards.

**Low Impact Development (LID)** – A storm water management and land development strategy that emphasizes conservation and the use of on-site natural features integrated with engineered, small-scale hydrologic controls to more closely reflect pre-development hydrologic functions.

**Low Impact Development Best Management Practices (LID BMPs)** – LID BMPs include schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the United States through storm water management and land development strategies that emphasize conservation and the use of on-site natural features integrated with engineered, small-scale hydrologic controls to more closely reflect pre-development hydrologic functions. LID BMPs include retention practices that do not allow runoff, such as infiltration, rain water harvesting and reuse, and evapotranspiration. LID BMPs also include flow-through practices such as biofiltration that may have some discharge of storm water following pollutant reduction.

**Maximum Daily Action Level (MDAL)** – is the highest allowable daily discharge of a pollutant, over a calendar day (or 24 hour period). For pollutants with action levels expressed in units of mass, the daily discharge is calculated as the total mass of the pollutant discharged over the day. For pollutants with action levels expressed in other units of measurement, the daily discharge is calculated as the arithmetic mean measurement of the pollutant over the day.

**Maximum Extent Practicable (MEP)** – The technology-based standard established by Congress in CWA section 402(p)(3)(B)(iii) for storm water 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 runoff management programs. Their total collective and individual activities conducted pursuant to the 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 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.”*

**Minimum Level** – the concentration at which the entire analytical system must give a recognizable signal and acceptable calibration point. The ML is the concentration in a sample that is equivalent to the concentration of the lowest calibration standard analyzed by a specific analytical procedure, assuming that all the method sample weights, volumes and processing steps have been followed.

**Monitoring Year** – the monitoring year includes a full wet season and dry season, beginning annually on October 1<sup>st</sup> and ending on September 30<sup>th</sup>.

**Municipal Separate Storm Sewer System (MS4)** – A conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains): (i) Owned or operated by a State, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State law) 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 or 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 122.26.

**National Pollutant Discharge Elimination System (NPDES)** - The national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits, and imposing and enforcing pretreatment requirements, under Sections 307, 318, 402, and 405 of the CWA.

**NOI** – Notice of Intent

**Non-Storm Water** - All discharges to and from a MS4 that do not originate from precipitation events (i.e., all discharges from a MS4 other than storm water). Non-storm water includes illicit discharges, non-prohibited discharges, and NPDES permitted discharges.

**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.”

**Ocean Waters** – the territorial marine waters of the State as defined by California law to the extent these waters are outside of enclosed bays, estuaries, and coastal lagoons. Discharges to ocean waters are regulated in accordance with the State Board's California Ocean Plan.

**Order** – Order No. R9-2009-0002 (NPDES No. CAS0108740)

**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. 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.

**Pollution** - As defined in the Porter-Cologne Water Quality Control Act: “the alteration of the quality of the waters of the State by waste, to a degree that unreasonably affects the either of the following: 1) The waters for beneficial uses; or 2) Facilities that serve these beneficial uses.” Pollution may include contamination.

**Pollutants of Concern** – 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 runoff. Pollutants commonly associated with 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 Prevention** - Pollution prevention is defined as practices and processes that reduce or eliminate the generation of pollutants, in contrast to source control BMPs, treatment control BMPs, 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 developments.

**Pre-Project or Pre-Development Runoff Conditions (Discharge Rates, Durations, Etc.)** – Runoff conditions that exist onsite immediately before the planned development activities occur. This definition is not intended to be interpreted as that period before any human-induced land activities occurred. This definition pertains to redevelopment as well as initial development.

**Principal Copermittee** – County of Orange

**Priority Development Projects** - New development and redevelopment project categories listed in Section F.1.d(2) of Order No. R9-2009-0002.

**Rainy Season** – (aka Wet Season) is the period of time from October 1 forward to April 30 when the San Diego region experiences the most rainfall.

**Receiving Waters** – Waters of the United States.

**Receiving Water Limitations (RWLs)** - Waste discharge requirements issued by the Regional Board 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 existing roadways; new sidewalk construction, pedestrian ramps, or bikelane on existing roads; and routine replacement of damaged pavement, such as pothole repair.

**Retain** – to keep or hold in a particular place, condition, or position without discharge to surface waters.

**Runoff** - All flows in a storm water conveyance system that consists of the following components: (1) storm water (wet weather flows) and (2) non-storm water including dry weather flows.

**San Diego Water Board** – As used in this document the term "San Diego Water Board" is synonymous with the term "Regional Board" as defined in Water Code section 13050(b) and is intended to refer to the California Regional Water Quality Control Board for the San Diego Region as specified in Water Code Section 13200.

**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.

**Shared Treatment Control BMP** - BMPs used by multiple developments to infiltrate, filter, or treat the required volume or flow prior to discharge to a receiving water. This could include, for example, a treatment BMP at the end of an enclosed storm drain that collects runoff from several commercial developments.

**Source Control BMP** – Land use or site planning practices, or structural or nonstructural measures that aim to prevent runoff pollution by reducing the potential for contamination at the source of pollution. Source control BMPs minimize the contact between pollutants and runoff.

**State Water Quality Protection Area** – A nonterrestrial marine or estuarine area designated to protect marine species or biological communities from an undesirable alteration in natural water quality, including, but not limited to, areas of special biological significance that have been designated by the State Water Resources Control Board through its water quality control planning process. Areas of special biological significance are a subset of State Water Quality Protection Areas, and require special protection as determined by the State Water Resources Control Board pursuant to the California Ocean Plan adopted and reviewed pursuant to Article 4 (commencing with Section 13160) of Chapter 3 of Division 7 of the California Water Code and pursuant to the Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Waters and Enclosed Bays and Estuaries of California (California Thermal Plan) adopted by the state board.

**Storm Water** – Per 40 CFR 122.26(b)(13), means storm water runoff, snowmelt runoff and surface runoff and drainage. Surface runoff and drainage pertains to runoff and drainage resulting from precipitation events.

**Standard Storm Water Mitigation Plan (SSMP)** – A plan developed to mitigate the impacts of runoff from Priority Development Projects.

**Third Party Inspectors** - Industrial and commercial facility inspectors who are not contracted or employed by a regulatory agency or group of regulatory agencies, such as the Regional Board or Copermittees. The third party inspector is not a regular facility employee self-inspecting their own facility. The third party inspector could be a contractor or consultant employed by a facility or group of businesses to conduct inspections.

**Total Maximum Daily Load (TMDL)** - 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). The water quality objectives for toxicity provided in the Water Quality Control Plan, San Diego Basin, Region 9, (Basin Plan), state in part...“All waters shall be free of toxic substances in concentrations that are toxic to, or that produce detrimental physiological responses in human, plant, animal, or aquatic life....The survival of aquatic life in surface waters subjected to a waste discharge or other controllable water quality factors, shall not be less than that for the same water body in areas unaffected by the waste discharge”.

**Treatment Control BMP** – Any engineered system designed to remove pollutants by simple gravity settling of particulate pollutants, filtration, biological uptake, media absorption or any other physical, biological, or chemical process.

**Unpaved Road** – is a long, narrow stretch without pavement used for traveling by motor passenger vehicle between two or more points. Unpaved roads are generally constructed of dirt, gravel, aggregate or macadam and may be improved or unimproved.

**Waste** - As defined in CWC 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, 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, non-hazardous solid waste, and inert waste.

**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 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 and Regional Water Boards in the Water Quality Control Plans. 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 CWA.)

**Water Quality Standards** - 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 State** - Any water, surface or underground, including saline waters within the boundaries of the State [CWC section 13050 (e)]. The definition of the Waters of the State is broader than that for the Waters of the United States in that all water in the State is considered to be a Waters of the State regardless of circumstances or condition. Under this definition, a MS4 is always considered to be a Waters of the State.

**Waters of the United States** - As defined in the 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).

**Watershed Runoff Management Plan (WRMP)** – A written description of the specific watershed runoff management measures and programs that each watershed group of Copermittees will implement to comply with this Order and ensure that storm water pollutant discharges in runoff are reduced to the MEP and do not cause or contribute to a violation of water quality standards.

**WDRs** – Waste Discharge Requirements

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**ATTACHMENT D****SCHEDULED SUBMITTALS SUMMARY AND REPORTING CHECKLIST**

<b>Submittal</b>	<b>Permit Section</b>	<b>Completion Date</b>	<b>Frequency</b>
Prohibitions on dry-weather discharges not listed in Section B.2	B.2	July 1, 2012, then in JRMP Annual Report	Annual
Submit Certified Statement of Adequate Legal Authority	E.2	June 30, 2012	One time
Updated SSMP	F.1.d, K.2.a	June 30, 2012	One time
Identify and remove barriers to LID implementation	F.1.d.(4)(a)(v)	With JRMP Annual Report	Annual
Hydromodification Management Plan	F.1.h.(5), K.2.b	June 30, 2013	One Time for Draft
Flood Control Structure BMP Inventory and Evaluation	F.3.a.(4)	With JRMP Annual Report	Annual
Retrofitting Program	F.3.d.(3)	With JRMP Annual Report	Annual
Updated Watershed Workplans	G.1 K.1.b	June 30, 2012	One time
Fiscal Analysis	H.3	With JRMP Annual Report	Annual
Updated Jurisdictional Runoff Management Plans	K.1.a	June 30, 2012	One time
Report of Waste Discharge	K.2.c	At least 180 days prior to expiration of this Order	One time
Principal Copermittee submits JRMP Annual Reports to Regional Board	K.3.a.(2)	October 31, 2013 and annually thereafter	Annual
Principal Copermittee submits Notification of Principal Copermittee	M	180 days after adoption of the Order	One Time

**Jurisdictional Runoff Management Program Annual Report Checklist**

In the JRMP Annual Report each Copermittee shall provide an Annual Report Checklist. The Annual Report Checklist must be no longer than 2 pages, be current as of the 1<sup>st</sup> day of the rainy season of that year, and include a signed certification statement. The Annual Report Summary Checklist must provide the following information:

Order Requirements

Were All Requirements of this Order Met?

Construction

Number of Active Sites  
Number of Inactive Sites  
Number of Sites Inspected  
Number of Inspections  
Number of Violations  
Number of Construction Enforcement Actions Taken

New Development

Number of Development Plan Reviews  
Number of Grading Permits Issued  
Number of Projects Exempted from Interim/Final Hydromodification Requirements

Post Construction Development

Number of Priority Development Projects  
Number of SUSMP Required Post-Construction BMP Inspections  
Number of SUSMP Required Post-Construction BMP Violations  
Number of SUSMP Required Post-Construction BMP Enforcement Actions Taken

Illicit Discharges and Connections

Number of IC/ID Inspections  
Number of IC/ID Detections by Staff  
Number of IC/ID Detections from the Public  
Number of IC/ID Eliminations  
Number of IC/ID Violations  
Number of IC/ID Enforcement Actions Taken

MS4 Maintenance

Number of Inspections Conducted  
Amount of Waste Removed  
Total Miles of MS4 Inspected

Municipal/Commercial/Industrial

Number of Facilities  
Number of Inspections Conducted  
Number of Facilities Inspected  
Number of Violations  
Number of Enforcement Actions Taken

**Attachment E**

**RECEIVING WATERS AND MS4 DISCHARGE MONITORING AND REPORTING  
PROGRAM NO. R9-2010-0016**

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## I. PURPOSE

- A. This Receiving Waters and MS4 Discharge Monitoring and Reporting Program (MRP) is intended to meet the following goals:
1. Assess compliance with Order No. R9-2010-0016;
  2. Measure and improve the effectiveness of the Copermittees' runoff management programs;
  3. Assess the chemical, physical, and biological impacts to receiving waters resulting from MS4 discharges;
  4. Characterize storm water discharges;
  5. Identify sources of specific pollutants;
  6. Prioritize drainage and sub-drainage areas that need management actions;
  7. Detect and eliminate illicit discharges and illicit connections to the MS4;
  8. Assess the overall health of receiving waters; and
  9. Provide information to implement required BMP improvements.
- B. This Receiving Waters and MS4 Discharges Monitoring and Reporting Program is designed to answer the following core management questions<sup>1</sup>:
1. Are conditions in receiving waters protective, or likely to be protective, of beneficial uses?
  2. What is the extent and magnitude of the current or potential receiving water problems?
  3. What is the relative MS4 discharge contribution to the receiving water problem(s)?
  4. What are the sources of MS4 discharge that contribute to receiving water problem(s)?
  5. Are conditions in receiving waters getting better or worse?

## II. MONITORING PROGRAM

The Monitoring Program is designed to assess the condition of receiving waters, monitor pollutants in storm and non-storm water effluent from the MS4, and conduct Special Studies to address conditions of concern. Where feasible, the Monitoring Program is designed to allow the Copermittees to combine required monitoring elements or efforts that are not mutually exclusive while still meeting the requirements of the Order.

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<sup>1</sup> Core management questions from "Model Monitoring Program for Municipal Separate Storm Sewer Systems in Southern California: A report from the Stormwater Monitoring Coalition's Model Monitoring Technical Committee." Technical Report No. 419. August 2004.

## **A. Receiving Waters Monitoring Program**

Each Copermittee must collaborate with the other Copermittees to develop, conduct, and report on a year-round watershed based Receiving Waters Monitoring Program. The monitoring program design, implementation, analysis, assessment, and reporting must be conducted on a watershed basis for the Santa Margarita Hydrologic Unit (HU) and must be designed to meet the goals and answer the questions listed in section I above. The monitoring program must include the following components:

### **1. MASS LOADING STATION (MLS) MONITORING**

- a. Locations: The following existing mass loading stations must continue to be monitored: Lower Temecula Creek, Lower Murrieta Creek at the USGS Weir, and a permanent reference station.<sup>2</sup> Copermittees may propose, for San Diego Water Board review and approval, changing the location of a mass loading station.
- b. Frequency: Each mass loading station must be monitored each year three times during wet weather events and twice during dry weather flow conditions.
- c. Timing: Each mass loading station must be monitored for the first wet weather event of the season which meets USEPA's criteria described in 40 CFR 122.21(g)(7). Monitoring of the third wet weather event must be conducted after February 1. Dry weather mass loading monitoring events must be sampled at least three months apart between May and October. If flows are not evident for the second event, then sampling must be conducted during non-rain events in the following wet weather season.
- d. Protocols: Protocols for mass loading sampling and analysis including analytical methods, target reporting limits, and data reporting formats must be compatible with the State Water Resources Control Board's (State Water Board's) State Surface Water Ambient Monitoring Program (SWAMP). If the mass loading sampling and analysis are determined to be impracticable with the SWAMP standards, the Copermittees must provide a written explanation and discussion in the submittal of the Planned Monitoring Program. Wet weather samples must be flow-weighted composites, collected for the duration of the entire runoff event. Where such monitoring is not practical, such as for large watersheds with significant groundwater recharge flows, composites must be collected at a minimum during the first 3 hours of

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<sup>2</sup> A map depicting mass loading stations can be found in the Fact Sheet for Order R9-2010-0016.

flow. Dry weather event sampling must be time-weighted composites composed of 24 discrete hourly samples, whereby the mass loads of pollutants are calculated as the product of the composite sample concentration and the total volume of water discharged past the monitoring point during the time of sample collection.

- (1) Automatic samplers must be used to collect samples from mass loading stations.
  - (2) Grab samples must be analyzed for temperature, pH, specific conductance, biochemical oxygen demand, oil and grease, E. coli , fecal coliform, enterococcus and for total petroleum hydrocarbons whenever a sheen is observed.
- e. Copermittees must measure or estimate flow rates and volumes for each mass loading station sampling event to determine mass loadings of pollutants. Data from nearby USGS gauging stations may be utilized, or flow rates may be estimated in accordance with the USEPA Storm Water Sampling Guidance Document (EPA-833-B-92-001), Section 3.2.1.
  - f. In the event that the required number of sampling events are not conducted during one monitoring year at any given station, the Copermittees must provide a written explanation for the reduced number of sampling events in the subsequent Receiving Waters Monitoring Annual Report. The explanation must include, at a minimum, streamflow data from the nearest USGS gauging station, a full description of any equipment failures and subsequent remedies if applicable, efforts made to resample a future event, and any quality assurance or quality control issues encountered. The explanation must also include a description of steps taken to prevent further sampling failures.
  - g. The following constituents must be analyzed for each monitoring event at each station:

Receiving Waters  
and MS4 Discharge Monitoring  
and Reporting Program  
No. R9-2010-0016

Table 1. Analytical Testing for Mass Loading (II.A.1) and Stream Assessment (II.A.2)

Conventionals, Nutrients, Hydrocarbons	Pesticides	Metals (Total and Dissolved)	Bacteriological (mass loading)
<ul style="list-style-type: none"> <li>• Total Dissolved Solids</li> <li>• Total Suspended Solids</li> <li>• Turbidity</li> <li>• Total Hardness</li> <li>• pH</li> <li>• Specific Conductance</li> <li>• Temperature</li> <li>• Dissolved Oxygen</li> <li>• Total Phosphorus</li> <li>• Dissolved Phosphorus</li> <li>• Nitrite <math>\overset{\circ}{\text{O}}</math></li> <li>• Nitrate <math>\overset{\circ}{\text{O}}</math></li> <li>• Total Kjeldahl Nitrogen</li> <li>• Ammonia</li> <li>• Biological Oxygen Demand, 5-day</li> <li>• Chemical Oxygen Demand</li> <li>• Total Organic Carbon</li> <li>• Dissolved Organic Carbon</li> <li>• Methylene Blue Active Substances</li> <li>• Oil and Grease</li> <li>• Sulfate</li> </ul>	<ul style="list-style-type: none"> <li>• Diazinon</li> <li>• Chlorpyrifos</li> <li>• Malathion</li> <li>• Carbamates</li> <li>• Pyrethroids</li> </ul>	<ul style="list-style-type: none"> <li>• Arsenic</li> <li>• Cadmium</li> <li>• Total Chromium</li> <li>• Hexavalent Chromium**</li> <li>• Copper</li> <li>• Lead</li> <li>• Iron</li> <li>• Manganese</li> <li>• Nickel</li> <li>• Selenium</li> <li>• Zinc</li> <li>• Mercury</li> <li>• Silver</li> <li>• Thallium</li> </ul>	<ul style="list-style-type: none"> <li>• E. coli</li> <li>• Fecal Coliform</li> <li>• Enterococcus</li> </ul>
<p><math>\overset{\circ}{\text{O}}</math> Nitrate and nitrite may be combined and reported as nitrate + nitrite.  ** Hexavalent Chromium sampling must occur only for mass loading stations for the 1<sup>st</sup> wet weather event and 1 dry weather event.</p>			

- h. Toxicity testing must be conducted for each monitoring event at each station according to the following Table 2:

Table 2. Toxicity Testing for Mass Loading (II.A.1) and Stream Assessment (II.A.2)

Program Component	Dry Weather Flows	Storm Water Flows
	Freshwater Organisms	Freshwater Organisms
Mass Loading	3 chronic* 3 acute*	3 acute*
Stream Assessment**	3 chronic* 3 acute*	n/a
Sediment Toxicity Special Study	1 chronic 1 acute	n/a

Table Notes  
 \* Toxicity testing must include use of *Pimephales promelas* (fathead minnow), *Hyalella azteca* and *Pseudokirchneriella subcapitata* (formerly *Selenastrum capricornutum*, unicellular algae).  
 \*\* Duplicative toxicity testing is not required for Stream Assessment Monitoring stations co-located at mass loading stations since Stream Assessment Monitoring must be conducted in conjunction with dry weather mass loading.

Species Notes:  
 1. Acute toxicity may be determined during the course of chronic toxicity monitoring per U.S. EPA protocols.

- i. The presence of acute toxicity must be determined in accordance with USEPA protocol (EPA-821-R-02-012). The presence of chronic freshwater toxicity must be determined in accordance with USEPA protocol (EPA-821-R-02-013).

**2. Stream Assessment Monitoring**

Copermittees must conduct Stream Assessment Monitoring using multiple lines of evidence to assess the condition of biological communities in freshwater receiving waters. Stream assessment must include the collection and reporting of the following specified instream biological, chemical, and physical (including habitat) data.

- a. Locations: At a minimum, the program must consist of station identification, sampling, monitoring, and analysis of data for six stream assessment stations in order to determine the biological, chemical and physical integrity of streams within the County of Riverside. The two existing mass loading stations at Murrieta and Temecula Creeks must continue to be monitored. Copermittees may propose, for San Diego Water Board review and approval, changing the location of stream assessment monitoring stations where the mass loading stations

location has changed pursuant to section II.A.1.a. Two reference stream assessment stations, including the existing Adobe Creek station, must be identified, sampled, monitored, and analyzed. Locations of reference stations must be identified according to protocols outlined in "A Quantitative Tool for Assessing the Integrity of Southern Coastal California Streams," by Ode, et al. 2005.<sup>3</sup>

- b. Frequency: Stream assessment stations must be monitored in May or June (to represent the influence of wet weather on the communities). The timing of monitoring of stream assessment stations located at mass loading stations must coincide with dry weather monitoring of those mass loading stations.
- c. Parameters / Methods: Stream assessment monitoring must include bioassessment, aquatic chemistry, and aqueous toxicity.
  - (1) Aquatic chemistry and aqueous toxicity must be conducted as outlined in Tables 1 and 2 using the same parameters and methods as the mass loading station monitoring.
  - (2) Bioassessment analysis procedures must include calculation of the Index of Biotic Integrity (IBI) for benthic macroinvertebrates for all bioassessment stations, as outlined in "A Quantitative Tool for Assessing the Integrity of Southern Coastal California Streams," by Ode, et al. 2005.
  - (3) Monitoring of stream assessment stations must be conducted according to the most current bioassessment Standard Operating Procedures (SOP) developed by the Surface Water Ambient Monitoring Program (SWAMP), and amendments, as applicable.<sup>4</sup> In collecting macroinvertebrate samples, the discharger must use the "Reachwide Benthos (Multihabitat) Procedure." The discharger must conduct, concurrently with all required macroinvertebrate collections, the "full" suite of physical/habitat characterization measurements specified in the SWAMP Bioassessment SOP, and as summarized in the *SWAMP Stream Habitat Characterization Form — Full Version*.<sup>5</sup>

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<sup>3</sup> Ode, et al. 2005. "A Quantitative Tool for Assessing the Integrity of Southern Coastal California Streams." Environmental Management. Vol. 35, No. 1, pp. 1-13.

<sup>4</sup> Ode, P.R.. 2007. Standard operating procedures for collecting macroinvertebrate samples and associated physical and chemical data for ambient bioassessments in California. California State Water Resources Control Board Surface Water Ambient Monitoring Program (SWAMP) Bioassessment SOP 001.

[http://www.swrcb.ca.gov/water\\_issues/programs/swamp/tools.shtml#monitoring](http://www.swrcb.ca.gov/water_issues/programs/swamp/tools.shtml#monitoring)

<sup>5</sup> Available at:

[http://www.waterboards.ca.gov/water\\_issues/programs/swamp/docs/reports/fieldforms\\_fullversion052908.pdf](http://www.waterboards.ca.gov/water_issues/programs/swamp/docs/reports/fieldforms_fullversion052908.pdf)

- (4) Monitoring of stream assessment stations must incorporate assessment of algae using SWAMP's SOP for Collecting Stream Algae Samples.<sup>6</sup> Assessment of freshwater algae must include algal taxonomic composition (diatoms and soft algae) and algal biomass. Future bioassessment must incorporate algal IBI scores, when developed.
- d. A qualified professional environmental laboratory must perform all sampling, laboratory, quality assurance, and analytical procedures in accordance with the Southern California Regional Watershed Monitoring Program Bioassessment Quality Assurance Project Plan.<sup>7</sup> The Copermittees must utilize future Quality Assurance Project Plans as developed by SWAMP.
- (1) The Copermittees must have and follow a quality assurance (QA) plan that covers the required stream assessment monitoring. External QA checks must be funded by the Copermittees, and performed by the California Department of Fish and Game's Aquatic Bioassessment Laboratory. An alternate laboratory with equivalent expertise and performance may be used if approved in advance in writing by San Diego Water Board.
- (2) Identified organisms must be archived (i.e., retained) by the Copermittee(s) for a period of not less than three years from the date that all QA steps are completed. The identified organisms must be relinquished to the San Diego Water Board upon request by the San Diego Water Board.
- (3) The macroinvertebrate results (i.e., taxonomic identifications consistent with the specified SAFIT STEs, and number of organisms within each taxa) must be submitted to the San Diego Water Board in electronic format. SWAMP is currently developing standardized formats for reporting bioassessment data. All bioassessment data collected after those formats become available must be submitted using the SWAMP formats. Until those formats are available, the biological data must be submitted in MS-Excel<sup>8</sup> (or equivalent) format.

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<sup>6</sup> Fetscher et al. 2009. Standard Operating Procedures for Collecting Stream Algae Samples and Associated Physical Habitat and Chemical Data for Ambient Bioassessments in California.

<sup>7</sup> Version 1.0 of the Southern California Regional Watershed Monitoring Program Bioassessment Quality Assurance Program Plan was released on June 25, 2009.

<sup>8</sup> Any version of Excel, 2000 or later, may be used.

The physical/habitat data must be reported using the standard format titled *SWAMP Stream Habitat Characterization Form — Full Version*.

**3. FOLLOW-UP ANALYSIS AND ACTIONS (TIE AND TRE TRIAD APPROACH)**

When results from the required monitoring indicate adverse water quality effects at a mass loading station or stream assessment station as defined in Table 3, Copermittees within the watershed(s) that discharge to that location must evaluate the extent and causes of MS4 discharge pollution to the adverse effects in receiving waters and prioritize and implement management actions to eliminate non-storm water discharges and/or reduce storm water sources from the MS4 as described in Table 3. Toxicity Identification Evaluations (TIEs) must be conducted to determine the cause of toxicity as outlined in Table 3 below. Other follow-up activities, which must be conducted by the Copermittees, are also identified in Table 3. Once the cause of toxicity has been identified by a TIE, the Copermittees must perform source identification projects as needed and implement the measures necessary to reduce or eliminate the pollutant discharges and abate the sources causing the toxicity.

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Table 3. Triad Approach to Determining Follow-Up Actions<sup>9</sup>

Chemistry	Toxicity	Benthic Alteration	Example Conclusions	Possible Actions or Decisions
1. Exceedance of water quality objectives	Evidence of toxicity	Indications of alteration	Strong evidence of pollution-induced degradation	Use TIE to identify contaminants of concern, based on TIE metric Initiate upstream source identification as a high priority
2. No persistent exceedances of water quality objectives	No evidence of toxicity	No indications of alteration	No evidence of current pollution-induced degradation Potentially harmful pollutants not yet concentrated enough to cause visible impact	No immediate action necessary Conduct periodic broad scans for new and/or potentially harmful pollutants
3. Exceedance of water quality objectives	No evidence of toxicity	No indications of alteration	Contaminants are not bioavailable Test organisms not sensitive to problem pollutants	TIE would not provide useful information with no evidence of toxicity Continue monitoring for toxic and benthic impacts Initiate upstream source identification as a low priority Consider whether different or additional test organisms should be evaluated
4. No persistent exceedances of water quality objectives	Evidence of toxicity	No indications of alteration	Unmeasured contaminant(s) or conditions have the potential to cause degradation Pollutant causing toxicity at very low levels	Recheck chemical analyses; verify toxicity test results Consider additional advanced chemical analyses Use TIE to identify contaminants of concern, based on TIE metric Initiate upstream source identification as a medium priority
5. No persistent exceedances of water quality objectives	No evidence of toxicity	Indications of alteration	Alteration may not be due to toxic contamination Test organisms not sensitive to problem pollutants	No action necessary due to toxic chemicals Initiate upstream source identification (for physical sources) as a high priority Consider whether different or additional test organisms should be evaluated
6. Exceedance of water quality objectives	Evidence of toxicity	No indications of alteration	Toxic contaminants are bioavailable, but in situ effects are not demonstrable Benthic analysis not sensitive enough to detect impact Potentially harmful pollutants not yet concentrated enough to change community	Determine if chemical and toxicity tests indicate persistent degradation Recheck benthic analyses; consider additional data analyses If recheck indicates benthic alteration, perform TIE to identify contaminants of concern, based on TIE metric Initiate upstream source identification as a high priority If recheck shows no effect, use TIE to identify contaminants of concern, based on TIE metric Initiate upstream source identification as a medium priority
7. No persistent exceedances of water quality objectives	Evidence of toxicity	Indications of alteration	Unmeasured toxic contaminants are causing degradation Pollutant causing toxicity at very low levels Benthic impact due to habitat disturbance, not toxicity	Recheck chemical analyses and consider additional advanced analyses Use TIE to identify contaminants of concern, based on TIE metric Initiate upstream source identification as a high priority Consider potential role of physical habitat disturbance
8. Exceedance of water quality objectives	No evidence of toxicity	Indications of alteration	Test organisms not sensitive to problem pollutants Benthic impact due to habitat disturbance, not toxicity	TIE would not provide useful information with no evidence of toxicity Initiate upstream source identification as a high priority Consider whether different or additional test organisms should be evaluated Consider potential role of physical habitat disturbance

#### 4. REGIONAL MONITORING PROGRAMS

The San Diego Water Board recognizes the importance and advantages of participation by Copermittees in Regional Monitoring Programs. As such, the Copermittees may propose participation in additional regional monitoring programs to supplement and/or replace monitoring required under this Order. The regional monitoring plan must be submitted to the San Diego Water Board<sup>10</sup> for review and approval. Documentation of participation and monitoring must be included in the annual report(s).

<sup>9</sup> Model Monitoring Program for Municipal Separate Storm Sewer Systems in Southern California. Stormwater Monitoring Coalition August 2004. See Table 5-4 for definitions.

<sup>10</sup> For the purposes of Receiving Waters and MS4 Discharge Monitoring and Reporting Program No. R9-2010-0016, review and approval by the San Diego Water Board of draft monitoring plans, proposals or protocols shall be conducted by the San Diego Water Board Executive Officer.

## **B. Wet Weather MS4 Discharge Monitoring**

Each Copermittee must collaborate with the other Copermittees to develop, conduct, and report on a year-round, watershed-based, Wet Weather MS4 Discharge Monitoring Program. The monitoring program design, implementation, analysis, assessment, and reporting must be conducted on a watershed basis for each of the hydrologic subareas within the Santa Margarita HU under jurisdiction of the Copermittees. The monitoring program must be designed to meet the goals, and answer the questions, listed in Section I above, as well as to implement required Storm Water Action Levels (SALs) in the Order. The monitoring program must include the following components;

### **1. MS4 OUTFALL MONITORING**

The Copermittees must collaborate to develop and implement a monitoring program to characterize pollutant discharges from MS4 outfalls in each watershed during wet weather. The program must include the rationale and criteria for selection of outfalls to be monitored. The program must, at a minimum, include collection of samples for pollutants listed in Table 4 (below). This monitoring program must be designed to sample a representative percentage<sup>11</sup> of the major outfalls within each hydrologic subarea and must begin no later than the 2012-2013 monitoring year.

- a. The program must comply with Section D of this Order for Storm Water Action Levels (SALs). Samples must be collected during the first 24 hours of the storm water discharge or for the entire storm water discharge if it is less than 24 hours.
  - (1) Grab samples may be utilized only for pH, indicator bacteria, DO, temperature and hardness.
  - (2) All other constituents must be sampled using 24-hour composite samples or for the entire storm water discharge if the storm event is less than 24 hours.
- b. Sampling to compare MS4 outfall discharges with total metal SALs must include a measurement of receiving water hardness at each outfall. If a total metal concentration exceeds a SAL in Section D of

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<sup>11</sup> A representative percentage determination must consider hydrologic conditions, total drainage area of the site, population density of the site, traffic density, age of the structures or buildings in the area, and land use types (commercial, residential and industrial).

the Order, that concentration must be compared to the California Toxic Rule criteria and the USEPA 1-hour maximum concentration for the detected level of receiving water hardness associated with that sample. If it is determined that the sample's total metal concentration for that specific pollutant exceeds the SAL but does not exceed the applicable 1-hour criteria for the measured level of hardness, then the SAL shall be considered not exceeded for that measurement.

Table 4. Analytical Testing for Wet Weather MS4 Discharges

<b>Conventionals, Nutrients, Hydrocarbons</b>	<b>Pesticides</b>	<b>Metals (Total and Dissolved)</b>	<b>Bacteriological</b>
<ul style="list-style-type: none"> <li>• Total Dissolved Solids</li> <li>• Total Suspended Solids</li> <li>• Turbidity*</li> <li>• Total Hardness</li> <li>• pH</li> <li>• Specific Conductance</li> <li>• Temperature</li> <li>• Dissolved Oxygen</li> <li>• Total Phosphorus*</li> <li>• Dissolved Phosphorus</li> <li>• Nitrite ◌*</li> <li>• Nitrate ◌*</li> <li>• Total Kjeldahl Nitrogen</li> <li>• Ammonia</li> <li>• Biological Oxygen Demand, 5-day</li> <li>• Chemical Oxygen Demand</li> <li>• Total Organic Carbon</li> <li>• Dissolved Organic Carbon</li> <li>• Oil and Grease</li> <li>• Sulfate</li> </ul>	<ul style="list-style-type: none"> <li>• Diazinon</li> <li>• Chlorpyrifos</li> <li>• Pyrethroids</li> </ul>	<ul style="list-style-type: none"> <li>• Arsenic</li> <li>• Cadmium*</li> <li>• Chromium</li> <li>• Copper*</li> <li>• Lead*</li> <li>• Nickel</li> <li>• Selenium</li> <li>• Zinc*</li> <li>• Mercury</li> <li>• Silver</li> <li>• Thallium</li> <li>• Iron</li> <li>• Manganese</li> </ul>	<ul style="list-style-type: none"> <li>• Fecal Coliform</li> <li>• Enterococcus</li> <li>• E. coli</li> </ul>
<p>◌ Nitrate and nitrite may be combined and reported as nitrate + nitrite.                      ★ Pollutant for which there is a Storm Water Action Level</p>			

2. SOURCE IDENTIFICATION MONITORING

The Copermittees must collaborate to develop and implement a monitoring program to identify sources of pollutants causing the priority water quality problems within each hydrologic subarea. The monitoring program must include focused monitoring which moves upstream into each watershed as necessary to identify sources. This monitoring program must be implemented within each hydrologic subarea and must begin no later than the 2012-2013 monitoring year.

### 3. COMMENCEMENT OF MS4 OUTFALL AND SOURCE IDENTIFICATION MONITORING

The Principal Copermittee must submit to the San Diego Water Board for review and approval, a detailed draft of the wet weather MS4 discharge monitoring program to be implemented. The description must identify and provide the rationale for all constituents monitored, locations of monitoring, frequency of monitoring, and analyses to be conducted with the data generated. The draft must be submitted with the proposed monitoring program (Section III.A.1).

#### **C. Non-Storm Water Dry Weather Action Levels and Illicit Discharge Detection and Elimination**

Each Copermittee must collaborate with the other Copermittees to conduct, and report on a year-round watershed based Dry Weather Non-storm Water MS4 Discharge Monitoring Program. The monitoring program's implementation, analysis, assessment, and reporting must be conducted to assess compliance with section B and C of this Order, meet the goals of the MRP, and conduct Illicit Discharge Detection and Elimination Activities under Section F.4 of this Order. The monitoring program must also be designed to assess the contribution of dry weather flows to Clean Water Act Section 303(d) listed impairments. The monitoring program must include the following components:

##### 1. MS4 OUTFALL MONITORING

Each Copermittee's program must be designed to determine levels of pollutants in effluent discharges from the MS4 into receiving waters. Each Copermittee must conduct the following dry weather field screening and analytical monitoring tasks:

##### a. Dry Weather Non-storm Water Effluent Analytical Monitoring Station Identification

(1) Sampling Stations must be located at major outfalls pursuant to section C of this Order. Other outfall sampling points (or any other point of access such as manholes) identified by the Copermittees as potential high risk sources of polluted effluent or as identified under Section C.4 of the Order must be sampled.

(2) Each Copermittee must clearly identify each dry weather effluent analytical monitoring station on its MS4 Map as either a separate GIS layer or a map overlay hereinafter referred to as a Dry Weather Non-storm Water Effluent Analytical Stations Map.

b. Develop Dry Weather Non-storm Water Effluent Analytical Monitoring Procedures

Each Copermittee must develop and/or update written procedures for effluent analytical monitoring including field observations, monitoring, and analyses to be conducted. These procedures must be consistent with 40 CFR part 136. At a minimum, the procedures must meet the following guidelines and criteria:

- (1) Determining Sampling Frequency: Effluent analytical monitoring must be conducted at major outfalls and identified stations. The Copermittees must sample a representative percentage of major outfalls and identified stations within each hydrologic subarea.<sup>12</sup> The sampling must be done to assess compliance with dry weather non-storm water action levels pursuant to section C of this Order. All monitoring conducted must be preceded by a minimum of 72 hours of dry weather.
- (2) Sampling of non-storm water discharges may be done utilizing grab samples. If a ponded MS4 discharge is observed at a monitoring station, the Copermittee(s) must record the observation and collect at least one (1) grab sample. If flow is evident, a 1-hour composite sample may be taken. The Copermittee(s) must estimate the discharge flow by measuring the width of water surface, approximate depth of water, and approximate flow velocity. A flow meter may also be utilized.
- (3) Effluent samples must undergo analytical laboratory analysis for (a) all constituents described in *Table 1. Analytical Testing for Mass Loading and Stream Assessment* of this Order; (b) Constituents with assigned non-storm water action levels under Section C of this Order; and (c) Total Residual Chlorine.
- (4) If the station is dry (i.e. no flowing or ponded MS4 discharge is observed), the Copermittee(s) must make and record all applicable observations on the MS4 outfall and receiving waters, including any evidence of past non-storm water flows and the presence of trash.

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<sup>12</sup> A representative percentage determination must consider hydrologic conditions, total drainage area of the site, population density of the site, traffic density, age of the structures or buildings in the area, and land use types (commercial, residential and industrial).

## 2. SOURCE IDENTIFICATION MONITORING

The Copermittees must collaborate to develop and implement a monitoring program to identify sources of pollutants in non-storm water discharges in accordance with Sections C and F.4 of this Order. The source identification portion of the monitoring program must include: the following components:

- a. Development and/or update of response criteria for dry weather non-storm water effluent analytical monitoring results:
  - (1) Response criteria must include action levels described in Section C of this Order.
  - (2) Response criteria must include evaluation of LC<sub>50</sub> levels for toxicity to appropriate test organisms.
- b. Develop and/or update Illicit Discharge Detection and Elimination response procedures for source identification follow up investigations and elimination in the event of exceedance of dry weather non-storm water effluent analytical monitoring response criteria (see above). These procedures must be consistent with procedures required in section C, F.4.d, and F.4.e. of this Order.

## 3. COMMENCEMENT OF MS4 OUTFALL AND SOURCE IDENTIFICATION MONITORING

The Copermittees must commence implementation of dry weather effluent analytical monitoring under the requirements of this Order no later than **July 1, 2012**. If monitoring indicates an illicit connection or illegal discharge, the Copermittee(s) must conduct the follow-up investigation and elimination activities described in sections C, F.4.d and F.4.e of this Order. In the interim period until the dry weather non-storm water effluent analytical monitoring program of this Order is implemented, each Copermittee must continue to implement dry weather field screening and analytical monitoring as it was most recently implemented pursuant to Order No. 2004-001.

### **D. High Priority Inland Aquatic Habitat Monitoring**

The Copermittees must develop and submit to the San Diego Water Board by April 01, 2012, an inland aquatic habitat monitoring program for areas supporting high priority aquatic and/or riparian species. The goal of the monitoring program is to assess if MS4 storm water and non-storm water

discharges are affecting high priority inland aquatic habitat. The monitoring will assist the Copermittees in preventing the degradation of high quality waters within the jurisdiction of this Order that support high priority species by identifying discharges from MS4s which may cause or have the potential to cause impairment of beneficial uses within these areas.<sup>13</sup> High priority species include those federally and/or state listed as endangered, threatened, or as a species of concern. The design and goal of the monitoring program must be consistent with the criteria listed in Section I.B of this Monitoring Program, including evaluation of the protection of high priority species in receiving waters. The Copermittees must implement the program unless otherwise directed in writing by the San Diego Water Board.

The monitoring program must include the following components:

1. OUTFALL AND RECEIVING WATER MONITORING

The program must be designed to determine levels of pollutants in storm water and non-storm water effluent discharges from the MS4 discharged into high priority inland aquatic habitat(s) and the level of those pollutants found in ambient receiving waters subject to the discharge. The Copermittees must conduct the following field screening and analytical monitoring tasks:

a. MS4 and Receiving Waters Monitoring Station Identification

- (1) MS4 discharge stations must be major outfalls that directly discharge into high priority inland aquatic habitat. MS4 discharge stations may be selected in conjunction with monitoring required under Section II.B and II.C of the Receiving Waters and MS4 Discharge Monitoring Program.
- (2) Receiving water station(s) must be located upstream and downstream of the discharge within the high priority inland aquatic habitat. Receiving water stations must be located to prevent any significant co-mingling of receiving water flows with other sources.

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<sup>13</sup> In accordance with requirements of State Water Resources Control Board Resolution No. 68-16, Statement of Policy with Respect to Maintaining High Quality Waters in California.

b. Develop Analytical Monitoring Procedures

Each Copermittee must develop procedures for analytical monitoring (these procedures must be consistent with 40 CFR part 136), including field observations, pollutants to be monitored, analyses to be conducted, and quality assurance/control. At a minimum, the procedures must meet the following guidelines and criteria:

- (1) Determining Sampling Frequency: The Copermittees must sample a representative number of major outfalls and receiving waters that are considered high priority inland aquatic habitat. Sampling of the discharge and receiving waters must be paired and occur during both storm and non-storm conditions.
- (2) Sampling in receiving waters may be done utilizing grab samples, though composite samples are encouraged. Sampling of storm and non-storm water discharges from the MS4 must be done in accordance with Section II.B and II.C. If ponded receiving waters is/are observed at a monitoring station, the Copermittees must make written observations and collect at least one (1) grab sample. The Copermittee(s) must estimate the flow by measuring the width of water surface, approximate depth of water, and approximate flow velocity
- (3) The proposed constituents for which samples will undergo analytical laboratory analysis.
- (4) Procedures for recording applicable observations when monitoring stations are dry (i.e. no flowing water or ponded conditions).

3. ASSESSMENT OF MONITORING RESULTS

The program must include a discussion of monitoring results within the monitoring annual report. The discussion must include an evaluation of the contribution of MS4 discharges to ambient water conditions within high priority inland aquatic habitats, as well as any actions taken to prevent and/or reduce sources of those pollutants.

4. SOURCE IDENTIFICATION MONITORING

The Copermittees must collaborate to conduct source identification monitoring in accordance with Section II.B and II.C of the Monitoring and Reporting Program of this Order.

## **E. Special Studies**

1. The Copermitees must conduct special studies, including any monitoring and/or modeling required for TMDL development and implementation, as directed by the San Diego Water Board.
2. Sediment Toxicity Study

The Copermitees must develop and submit to the San Diego Water Board by April 01, 2012, a special study workplan to investigate the toxicity of sediment in streams and potential impact on benthic macroinvertebrate IBI scores. The Sediment Toxicity Special Study must be implemented in conjunction with the Stream Assessment Monitoring in II.A.2. The Copermitees must implement the special study unless otherwise directed in writing by the San Diego Water Board.

The Sediment Toxicity Special Study must include the following elements:

- a. Sampling Locations: At least 4 stream assessment locations must be sampled, including 1 reference site and 1 mass loading site. Selection of sites must be done with consideration of subjectivity of receiving waters to discharges from residential and agricultural land uses.
- b. Frequency: At a minimum, sampling must occur once per year at each site for at least 2 years. Sampling must be done in conjunction with the stream assessment sampling required under Section II.A.2 of the Monitoring and Reporting Program of this Order.
- c. Parameters/Methods: At a minimum, sediment toxicity analysis must include the measurement of metals, pyrethroids and organochlorine pesticides. The analysis must include estimates of bioavailability based upon sediment grain size, organic carbon and receiving water temperature at the sampling site. Acute and chronic toxicity testing must be done using *Hyalella azteca* in accordance with Table 2.
- d. Results: Results and a Discussion must be included in the Monitoring Annual Report (see III.A). The Discussion must include an assessment of the relationship between observed IBI scores under Section II.A.2 and all variables measured.

### 3. Trash and Litter Investigation

The Copermittees must develop and submit to the San Diego Water Board by September 01, 2012, a special study workplan to assess trash (including litter) as a pollutant within receiving waters on a watershed based scale. Litter is defined in California Government Code 68055.1g as "...improperly discarded waste material, including, but not limited to, convenience food, beverage, and other product packages or container constructed of steel, aluminum, glass, paper, plastic and other natural and synthetic, materials, thrown or deposited on lands and waters of the state, but not including the properly discarded waste of the primary processing of agriculture, mining, logging, sawmilling, or manufacturing." A lead Copermittee must be selected for the Santa Margarita HU for the purposes of this Special Study. The Copermittees must implement the special study unless otherwise directed in writing by the San Diego Water Board

The Trash and Litter Investigation must include the following elements:

- a. Locations: The lead Copermittee must identify suitable sampling locations within the Santa Margarita HU.
- b. Frequency: Trash at each location must be monitored a minimum of twice during the wet season following a qualified monitoring storm event (minimum of 0.1 inches preceded by 72 hours of dry weather) and twice during the dry season.
- c. Protocol: The lead Copermittee for the Santa Margarita HU must use the "Final Monitoring Workplan for the Assessment of Trash in San Diego County Watersheds" and "A Rapid Trash Assessment Method Applied to Waters of the San Francisco Bay Region" to develop a monitoring protocol for the Santa Margarita HU.
- d. Results and Discussion from the Trash and Litter Study must be included in the Monitoring Annual Report. The Results and Discussion must, at a minimum, include source identification, an evaluation of BMPs for trash reduction and prevention, and a description of any BMPs implemented in response to study results.

### 4. Agricultural, Federal and Tribal Input Study

The Copermittees must develop and submit to the San Diego Water Board by September 01, 2012, a special study workplan to investigate the water quality of agricultural, federal and tribal runoff that is discharged into

their MS4 (see Finding D.3.c of the Order). The Copermittees must implement the special study unless otherwise directed in writing by the San Diego Water Board.

The Agricultural, Federal and Tribal Input Special Study must include the following elements:

- a. Locations: The Copermittees must identify a representative number of sampling stations within their MS4 that receive discharges of agricultural, federal, and tribal runoff that has not co-mingled with any other source. At least one station from each category must be identified.
- b. Frequency: One storm event must be monitored at each sampling location each year for at least 2 years.
- c. Parameters/Methods: At a minimum, analysis must include those constituents listed in Table 1 of the MRP (see II.A.1). Grab samples may be utilized, though composite samples are preferred. Copermittees must also measure or estimate flow rates and volumes of discharges into the MS4.
- d. Results: Results and Discussion from the Agricultural, Federal and Tribal Input Study must be included in the Monitoring Annual Report.

#### 5. MS4 and Receiving Water Maintenance Study

The Copermittees must develop and submit to the San Diego Water Board by April 01, 2012, a special study workplan to investigate receiving waters that are also considered part of the MS4 (see Finding D.3.c of the Order) and which are subject to continual vegetative clearance activities (e.g. mowing). The study must be designed to assess the effects of vegetation removal activities and water quality, including, but not limited to, modification of biogeochemical functions, in-stream temperatures, receiving water bed and bank erosion potential and sediment transport. The Copermittees must implement the special study unless otherwise directed in writing by the San Diego Water Board.

The MS4 and Receiving Water Maintenance Special Study must include the following elements:

- a. Locations: The Copermittees must identify suitable sampling locations, including at least one reference system that is not subject to maintenance activities.

- b. Parameters/Methods: At a minimum, the Copermittees must monitor pre and post maintenance activities for indicator bacteria, turbidity (NTU), temperature, dissolved oxygen and nutrients (Nitrite, Nitrate, Total Kjeldahl Nitrogen, Ammonia and Total Phosphorous). Copermittees must also measure or estimate flow rates and volumes.
- c. Results and Discussion from the MS4 and Receiving Water Maintenance Study must be included in the Annual Monitoring Report. The Discussion must include relevance of findings to CWA Section 303(d) listed impaired waters.

#### 6. Intermittent and Ephemeral Stream Perennial Conversion Study

The Copermittees must develop and submit to the San Diego Water Board by April 01, 2013, a special study workplan to investigate the extent of any impacts to beneficial uses from the conversion of historically ephemeral or intermittent receiving waters to perennially flowing waters due to the continued discharge of currently exempted non-storm water from the MS4 and/or discharges into MS4s covered under a separate NPDES permit into receiving waters. The goal of the study is to assess if any impacts to beneficial uses, including, but not limited to, WILD, WARM, COLD or RARE, have occurred due to continuous discharge of currently exempted non-storm water discharges, and if the discharges should no longer be exempt. The Copermittees must implement the special study unless otherwise directed in writing by the San Diego Water Board.

The Intermittent and Ephemeral Stream Perennial Conversion Special Study must include the following elements:

- a. Locations: The Copermittees must investigate their MS4 and adjacent downstream receiving waters to identify portions that have historically been ephemeral or intermittent but currently exhibit perennial flow due to exempted non-storm water discharges. Investigation must include historic habitat assessments, USGS gauging information, and historic aerial photography. Sampling must occur at a minimum of 2 identified perennially converted locations. Should the Copermittees be unable to locate any converted waters, a full description of the investigation must be documented in the annual report.

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- b. Parameters/Methods: The Copermitees must conduct water quality monitoring of the non-storm water discharge in accordance with Section C of this Order. In addition, the Copermitees must select a minimum of 2 downstream sampling points within the receiving waters subject the discharge and conduct the following:
    - (1) Grab samples must be taken and analyzed for indicator bacteria, nutrients (Nitrite, Nitrate, Total Kjeldahl Nitrogen, Ammonia and Total Phosphorous), turbidity (NTU), temperature, dissolved oxygen, total hardness, pH and 303(d) listed pollutants for all receiving waters at or downstream of the sampling site. The Copermitees must measure or estimate flow rates and volumes at each sampling point.
    - (2) Sampling at each site must include a quantitative and qualitative evaluation of beneficial uses. At a minimum, sampling must include observation estimation of active bed and bank erosion and erosion potential, invasive/non-native plant cover, aquatic non-native species, and potential vector control requirements.
  - c. Results and Discussion from the Intermittent and Ephemeral Stream Perennial Conversion Study must be included in the Annual Monitoring Report.
7. Stormwater Monitoring Coalition (SMC) Regional Monitoring of Southern California Coastal Watersheds:

The Copermitees must implement the monitoring program developed by the SMC for Regional Monitoring of the southern California coastal watersheds within the Santa Margarita Hydrologic Unit. Each Copermitee must evaluate the results of the monitoring program within and downstream of their jurisdiction and integrate the results into program assessments and modifications.

## **F. Monitoring Provisions**

All monitoring activities must meet the following requirements:

1. Where procedures are not otherwise specified in this Receiving Waters Monitoring and Reporting Program, sampling, analysis and quality assurance/quality control must be conducted in accordance with the Quality Assurance Management Plan (QAMP) for the State of California's Surface Water Ambient Monitoring Program (SWAMP), adopted by the State Water Resources Control Board (SWRCB).

2. Samples and measurements taken for the purpose of monitoring must be representative of the monitored activity [40 CFR 122.41(j)(1)].
3. The Copermitees must retain records of all monitoring information, including all calibration and maintenance of monitoring instrumentation, copies of all reports required by this Order, and records of all data used to complete the Report of Waste Discharge and application for this Order, for a period of at least five (5) years from the date of the sample, measurement, report, or application. This period may be extended by request of the San Diego Water Board or USEPA at any time and must be extended during the course of any unresolved litigation regarding this discharge. [40 CFR 122.41(j)(2), CWC section 13383(a)]
4. Records of monitoring information must 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.
5. All sampling, sample preservation, and analyses must be conducted according to test procedures approved under 40 CFR part 136, unless other test procedures have been specified in this Receiving Waters Monitoring and Reporting Program or approved by the San Diego Water Board [40 CFR 122.41(j)(4)].
6. 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 must, 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)]
7. Calculations for all limitations which require averaging of measurements must utilize an arithmetic mean unless otherwise specified in this Receiving Waters Monitoring and Reporting Program. [40 CFR 122.41(l)(4)(iii)]

8. All chemical, bacteriological, and toxicity analyses must be conducted at a laboratory certified for such analyses by the California Department of Health Services or a laboratory approved by the San Diego Water Board.
9. For priority toxic pollutants that are identified in the California Toxics Rule (CTR) (65 Fed. Reg. 31682), the Copermittees must instruct their laboratories to establish calibration standards that are equivalent to or lower than 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). If a Copermittee 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 Copermittee must submit documentation from the laboratory to the San Diego Water Board for approval prior to raising the ML for any priority toxic pollutant.
10. The San Diego Water Board may make revisions to this Receiving Waters and MS4 Discharge Monitoring and Reporting Program at any time during the term of Order No. R9-2010-0016 and may include a reduction or increase in the number of parameters to be monitored, locations monitored, the frequency of monitoring, or the number and size of samples collected.
11. 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 must, 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)]
12. Monitoring must be conducted according to the USEPA test procedures approved under 40 CFR 136, "Guidelines Establishing Test Procedures for Analysis of Pollutants under the Clean Water Act" as amended, unless other test procedures have been specified in this Receiving Waters and MS4 Discharge Monitoring and Reporting Program, in Order No. R9-2010-0016, or by the San Diego Water Board.
13. If a Copermittee(s) monitors any pollutant more frequently than required by the permit using test procedures approved under 40 CFR part 136, unless otherwise specified in the Order, the results of this monitoring must

be included in the calculation and reporting of the data submitted in the reports requested by the San Diego Water Board. [40 CFR 122.41(l)(4)(ii)]

### III. REPORTING PROGRAM

#### A. Monitoring Reporting

1. Planned Monitoring Program: The Principal Copermittee must submit to the San Diego Water Board by **June 1, 2012**, a proposed workplan describing the Receiving Waters and MS4 Discharge Monitoring Program to be implemented. Any updates to the planned monitoring program workplan proposed by the Copermittees shall be submitted with each Monitoring Annual Report. The Copermittees shall implement the proposed workplan unless otherwise directed in writing by the San Diego Water Board.
2. Monitoring Annual Report: The Principal Copermittee must submit the Receiving Waters and MS4 Discharge Monitoring Annual Report to the San Diego Water Board on October 1 of each year, beginning on **October 1, 2013**. Receiving Waters and MS4 Discharge Monitoring Annual Reports must include monitoring conducted under the previous fiscal year, must meet the following requirements:
  - a. Annual monitoring reports must include the data/results, methods of evaluating the data, graphical summaries of the data, and an explanation/discussion of the data for each monitoring program component.
  - b. Annual monitoring reports must include a watershed-based analysis of the findings of each monitoring program component (mass loading, bioassessment, etc...). Each watershed-based analysis must include:
    - (1) Identification and prioritization of water quality problems within each watershed.
    - (2) Identification and description of the nature and magnitude of potential sources of the water quality problems within each watershed.
    - (3) Evaluation and presentation of pollutant load and concentration increases or decreases at each mass loading station over time.
    - (4) Evaluation of pollutant loads and concentrations measured at mass loading stations with respect to land use, population, sources, and other characteristics of watersheds using tools such as multiple linear regression, factor analysis, and cluster analysis.

- (5) Identification of links between source activities/conditions and observed receiving water impacts.
  - (6) Identification of recommended future monitoring to identify and address sources of water quality problems.
  - (7) Results and discussion of any TIE conducted, together with actions that will be implemented to reduce the discharge of pollutants in storm water, eliminate any discharge of pollutants in non-storm water, and abate the sources causing the toxicity.
- c. Annual monitoring reports must include an analysis and interpretation of the data for each watershed with respect to the management questions listed in section I.B of this Receiving Waters Monitoring and Reporting Program.
  - d. Annual monitoring reports must include a discussion describing how each of the goals listed in section I.A of this MRP is addressed by the Copermittees' monitoring program for the monitoring year covered by the report.
  - e. Annual monitoring reports must include identification and analysis of any long-term trends in storm water or receiving water quality. Trend analysis must use nonparametric approaches, such as the Mann-Kendall test, including exogenous variables in a multiple regression model, and/or using a seasonal nonparametric trend model, where applicable.
  - f. Annual monitoring reports must provide an estimation of total pollutant loads (wet weather loads plus dry weather loads) due to MS4 Discharge for each of the hydrologic subareas, including for 303(d) pollutants specified in Table 2 of the Order.
  - g. Annual monitoring reports must, for each monitoring program component listed above, include an assessment of compliance with applicable water quality standards.
  - h. Annual monitoring reports must describe monitoring station locations by latitude and longitude coordinates, frequency of sampling, quality assurance/quality control procedures, and sampling and analysis protocols.

- i. Annual monitoring reports must use a standard report format and include the following elements:
    - (1) A stand alone comprehensive executive summary addressing all sections of the monitoring report;
    - (2) Comprehensive interpretations and conclusions; and
    - (3) Recommendations for future actions.
  - j. All monitoring reports submitted to the Principal Copermittee or the San Diego Water Board must contain the certified perjury statement described in Attachment B of this Order No. R9-2010-0016.
  - k. Annual monitoring reports must be reviewed prior to submittal to the San Diego Water Board by a committee of the Copermittees (consisting of no less than three different Copermittee members).
  - l. Annual monitoring reports must be submitted in both electronic and paper formats. Electronic formats must be CEDEN or SWAMP-uploadable.<sup>14</sup>
3. Monitoring programs and reports must comply with section II.F of Receiving Waters and MS4 Discharge Monitoring and Reporting Program No. R9-2010-0016 and Attachment B of this Order.
  4. Following completion of an annual cycle of monitoring in October, the Copermittees must make the monitoring data and results available to the San Diego Water Board at the San Diego Water Board's request. Following completion of the annual cycle of monitoring, the Copermittees must upload monitoring data and results into the California Environmental Data Exchange Network (CEDEN)<sup>15</sup>.

## **B. Interim Reporting Requirements**

For the October 2010 to October 2012 monitoring period, the Principal Copermittee must submit the Receiving Waters Monitoring Annual Report as required under Order No. 2004-001. The Receiving Waters Monitoring Annual Report must address the monitoring conducted to comply with the requirements of Order No. 2004-0001.

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<sup>14</sup> For updates to the SWAMP templates and formats, see <http://www.waterboards.ca.gov/swamp>.

<sup>15</sup> <http://www.ceden.org/>

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### C. Reporting Dates

Table 5. Table of Required MRP Reporting Dates and Frequencies.

<b>Submittal</b>	<b>Section</b>	<b>Completion Date</b>	<b>Frequency</b>
Description of Proposed Monitoring Program	III.A.1	June 1, 2012	One Time
Receiving Waters and MS4 Discharge Monitoring Annual Reports, Including Proposed Updates to the Monitoring Program	III.A.2	Starting October 1, 2013	Annual
Copermittees submit Interim Monitoring Program Annual Report	III.B	As required under Order No. 2004-001	One Time
Draft Wet Weather MS4 Discharge Monitoring Program	II.B	June 01, 2012	One Time
Draft High Priority Inland Aquatic Habitat Monitoring	II.D	April 01, 2012	One Time
Draft Sediment Toxicity Special Study	II.E.2	April 01, 2012	One Time
Draft Trash and Litter Special Study	II.E.3	September 01, 2012	One Time
Draft Agricultural, Federal and Tribal Input Study	II.E.4	September 01, 2012	One Time
Draft MS4 and Receiving Water Maintenance Study	II.E.5	April 01, 2012	One Time
Draft Intermittent and Ephemeral Stream Perennial Conversion Study	II.E.6	April 01, 2013	One Time

**Attachment F**

**SOURCE DATA**

I. STORM WATER ACTION LEVELS DATABASE .....2

II. NUMERIC ACTION LEVELS EVALUATION DATA<sup>1</sup> .....9

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<sup>1</sup> Represented data from monitoring conducted by the Copermittees and provided in the 2008-09 Annual Monitoring Report.

**I. STORM WATER ACTION LEVELS DATABASE**

<b>N02+NO3 (mg/l)</b>	<b>Phosphorous Total (mg/l)</b>	<b>Cadmium Total (ug/l)</b>	<b>Copper Total (ug/l)</b>	<b>Lead Total (ug/l)</b>	<b>Zinc Total (ug/l)</b>	<b>Turbidity (NTU)</b>
4.70	7.90	9.80	800.00	660.00	22500.00	10
4.20	7.19	6.00	340.00	620.00	18000.00	15
3.90	4.96	6.00	320.00	540.00	11000.00	15
3.90	4.50	6.00	270.00	520.00	9970.00	16
3.60	4.40	6.00	244.00	460.00	9100.00	22
3.60	4.24	6.00	230.00	450.00	8800.00	23
3.60	2.59	5.30	220.00	450.00	6500.00	23
3.50	2.59	5.00	220.00	440.00	5500.00	24
3.30	2.50	4.10	210.00	430.00	5000.00	24
3.30	2.50	4.00	210.00	400.00	4900.00	30
3.10	2.50	4.00	209.00	380.00	4600.00	31
3.00	2.27	4.00	209.00	360.00	4300.00	33
2.96	2.00	4.00	200.00	350.00	3800.00	36
2.90	2.00	4.00	200.00	330.00	3800.00	36
2.70	2.00	4.00	200.00	320.00	3400.00	39
2.70	2.00	3.90	200.00	320.00	3390.00	40
2.60	1.90	3.80	200.00	320.00	3100.00	45
2.60	1.90	3.40	180.00	310.00	2500.00	50
2.60	1.80	3.40	180.00	310.00	2200.00	50
2.50	1.80	3.20	166.00	310.00	2100.00	60
2.50	1.70	3.10	163.00	310.00	1829.00	61
2.32	1.70	3.00	160.00	300.00	1700.00	62
2.30	1.70	3.00	150.00	290.00	1500.00	65
2.20	1.60	3.00	140.00	280.00	1400.00	65
2.20	1.60	3.00	140.00	270.00	1300.00	66
2.10	1.60	3.00	140.00	270.00	1300.00	69
2.10	1.53	3.00	140.00	270.00	1285.00	70
2.10	1.50	3.00	140.00	270.00	1200.00	72
2.10	1.50	3.00	130.00	260.00	1100.00	80
2.00	1.47	3.00	130.00	260.00	1054.00	84
2.00	1.46	3.00	128.00	250.00	1000.00	97
2.00	1.40	3.00	120.00	250.00	980.00	111
2.00	1.40	3.00	120.00	250.00	960.00	140
1.90	1.40	3.00	120.00	245.00	850.00	151
1.90	1.30	2.90	120.00	230.00	850.00	157
1.90	1.30	2.80	120.00	230.00	850.00	590
1.90	1.30	2.70	111.00	225.00	850.00	
1.90	1.30	2.60	111.00	220.00	840.00	
1.80	1.30	2.50	110.00	220.00	780.00	
1.80	1.30	2.40	110.00	210.00	768.00	
1.70	1.24	2.40	110.00	210.00	760.00	
1.70	1.20	2.30	110.00	200.00	750.00	

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1.70	1.20	2.20	110.00	200.00	740.00	
1.70	1.20	2.10	110.00	190.00	740.00	
1.70	1.20	2.00	100.00	190.00	730.00	
1.70	1.10	2.00	100.00	190.00	720.00	
1.70	1.10	2.00	100.00	190.00	710.00	
1.60	1.10	2.00	100.00	170.00	710.00	
1.60	1.10	2.00	100.00	170.00	700.00	
1.60	1.06	2.00	100.00	170.00	700.00	
1.60	1.00	2.00	99.00	160.00	690.00	
1.60	0.96	2.00	94.00	160.00	690.00	
1.60	0.96	2.00	91.00	150.00	680.00	
1.60	0.94	2.00	91.00	150.00	680.00	
1.53	0.94	2.00	90.00	150.00	670.00	
1.50	0.92	2.00	90.00	150.00	660.00	
1.50	0.91	2.00	89.00	150.00	660.00	
1.50	0.85	2.00	87.00	140.00	660.00	
1.50	0.85	2.00	87.00	140.00	650.00	
1.50	0.85	2.00	84.00	140.00	630.00	
1.50	0.83	2.00	83.00	130.00	610.00	
1.40	0.83	2.00	82.00	130.00	610.00	
1.40	0.83	2.00	81.00	130.00	597.00	
1.40	0.81	2.00	81.00	130.00	590.00	
1.40	0.81	2.00	77.00	130.00	590.00	
1.40	0.81	2.00	77.00	123.00	576.00	
1.40	0.80	2.00	76.00	120.00	570.00	
1.40	0.80	2.00	74.00	120.00	570.00	
1.32	0.78	2.00	72.00	120.00	560.00	
1.30	0.78	1.90	72.00	120.00	560.00	
1.30	0.77	1.90	72.00	120.00	540.00	
1.30	0.77	1.90	72.00	115.00	540.00	
1.30	0.76	1.80	72.00	110.00	520.00	
1.30	0.76	1.80	71.00	110.00	520.00	
1.30	0.75	1.80	70.00	110.00	520.00	
1.30	0.75	1.70	70.00	110.00	510.00	
1.29	0.75	1.60	67.00	102.00	500.00	
1.20	0.74	1.60	66.00	100.00	500.00	
1.20	0.73	1.60	66.00	100.00	490.00	
1.20	0.72	1.60	66.00	100.00	480.00	
1.20	0.72	1.60	65.00	100.00	475.00	
1.20	0.72	1.60	65.00	100.00	470.00	
1.20	0.71	1.50	63.00	99.00	470.00	
1.20	0.71	1.50	63.00	97.00	462.00	
1.20	0.69	1.40	62.00	97.00	460.00	
1.20	0.68	1.30	62.00	97.00	460.00	
1.20	0.68	1.30	60.00	95.00	450.00	
1.20	0.68	1.20	60.00	91.00	440.00	
1.10	0.68	1.20	59.00	90.00	440.00	
1.10	0.68	1.20	56.59	90.00	440.00	

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1.10	0.67	1.20	55.00	87.00	430.00	
1.10	0.66	1.10	55.00	86.00	430.00	
1.10	0.66	1.10	54.00	86.00	430.00	
1.10	0.65	1.10	54.00	84.00	420.00	
1.10	0.65	1.10	54.00	82.00	420.00	
1.10	0.65	1.10	53.00	82.00	410.00	
1.10	0.65	1.00	53.00	81.00	409.00	
1.00	0.63	1.00	52.00	78.00	400.00	
1.00	0.62	1.00	51.00	78.00	400.00	
1.00	0.61	1.00	50.00	78.00	400.00	
1.00	0.60	1.00	50.00	77.00	390.00	
1.00	0.60	1.00	50.00	76.00	390.00	
1.00	0.59	1.00	50.00	76.00	390.00	
0.99	0.57	1.00	50.00	69.00	390.00	
0.99	0.57	1.00	50.00	69.00	390.00	
0.98	0.56	1.00	50.00	67.00	370.00	
0.97	0.56	1.00	50.00	66.00	370.00	
0.96	0.55	1.00	49.00	66.00	370.00	
0.96	0.55	1.00	49.00	66.00	360.00	
0.95	0.55	1.00	49.00	65.00	360.00	
0.95	0.53	1.00	48.00	64.00	360.00	
0.93	0.53	1.00	48.00	61.00	360.00	
0.93	0.53	1.00	47.00	57.00	350.00	
0.93	0.52	1.00	46.08	57.00	350.00	
0.93	0.52	1.00	46.00	56.00	350.00	
0.92	0.52	1.00	46.00	56.00	340.00	
0.90	0.52	1.00	44.25	53.00	340.00	
0.88	0.51	1.00	44.00	53.00	340.00	
0.87	0.51	1.00	44.00	52.60	340.00	
0.86	0.50	1.00	44.00	52.00	340.00	
0.85	0.49	1.00	44.00	51.00	340.00	
0.84	0.49	1.00	43.00	51.00	334.00	
0.83	0.48	1.00	43.00	50.00	330.00	
0.81	0.48	1.00	43.00	50.00	330.00	
0.81	0.48	1.00	42.00	50.00	330.00	
0.80	0.47	1.00	42.00	50.00	330.00	
0.80	0.47	1.00	42.00	50.00	330.00	
0.78	0.47	1.00	41.00	50.00	330.00	
0.78	0.46	1.00	40.00	50.00	330.00	
0.77	0.46	1.00	40.00	50.00	320.00	
0.77	0.46	1.00	40.00	50.00	320.00	
0.77	0.45	1.00	40.00	50.00	320.00	
0.74	0.45	1.00	40.00	50.00	320.00	
0.73	0.44	1.00	39.00	49.00	310.00	
0.72	0.44	1.00	39.00	47.00	310.00	
0.69	0.44	1.00	39.00	46.00	310.00	
0.69	0.44	1.00	39.00	46.00	308.00	
0.69	0.44	1.00	39.00	44.00	300.00	

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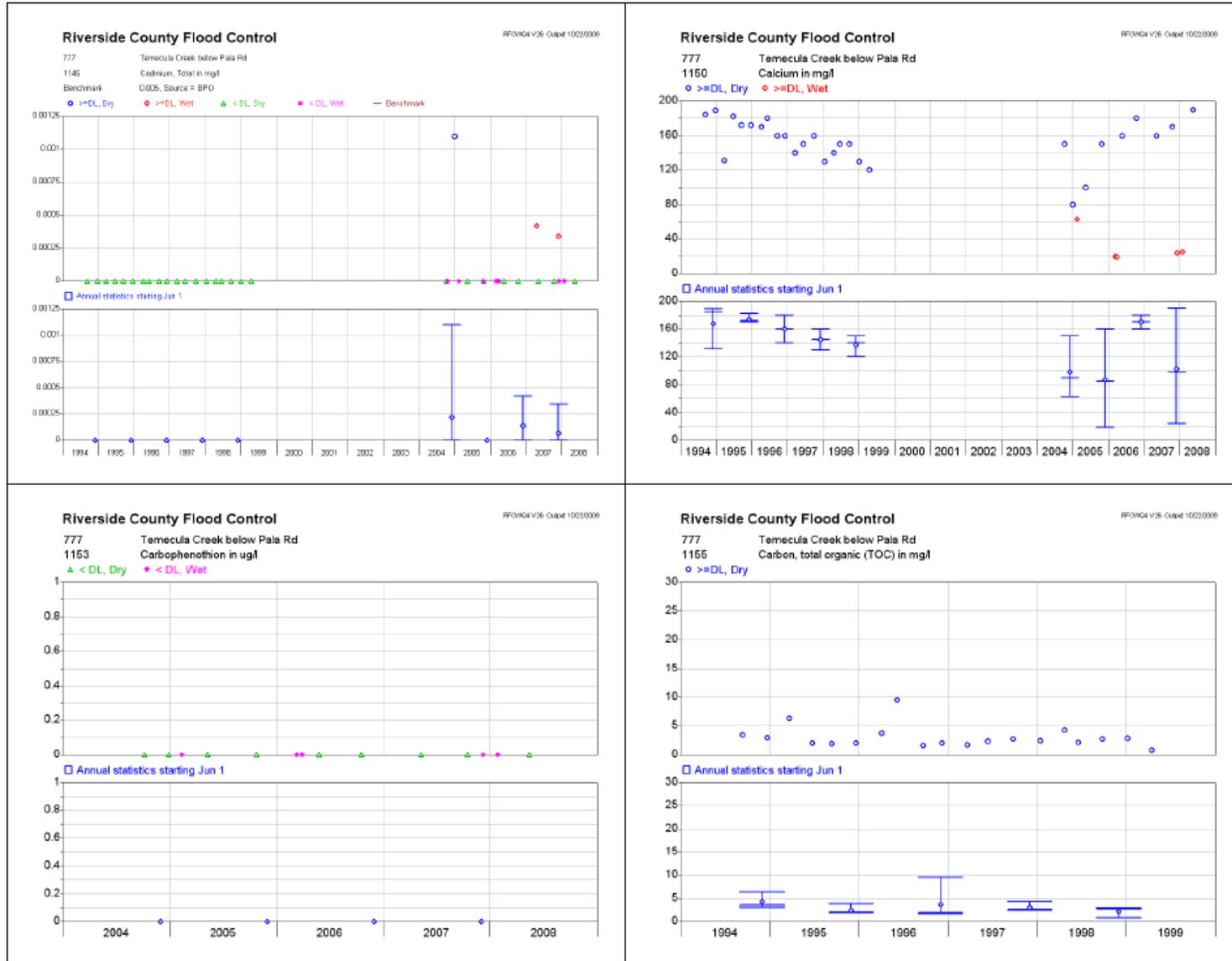
0.67	0.44	1.00	39.00	44.00	300.00	
0.67	0.44	1.00	37.00	43.00	300.00	
0.66	0.43	1.00	37.00	42.00	300.00	
0.66	0.42	1.00	37.00	41.00	290.00	
0.65	0.42	1.00	37.00	41.00	285.00	
0.63	0.41	1.00	37.00	41.00	280.00	
0.62	0.41	1.00	36.00	41.00	280.00	
0.62	0.41	1.00	36.00	41.00	280.00	
0.62	0.40	1.00	36.00	40.10	280.00	
0.60	0.40	1.00	36.00	40.00	280.00	
0.59	0.40	1.00	35.00	39.30	280.00	
0.59	0.40	1.00	35.00	39.00	280.00	
0.58	0.40	1.00	34.00	39.00	280.00	
0.57	0.40	1.00	34.00	39.00	280.00	
0.57	0.40	1.00	33.40	38.00	270.00	
0.55	0.40	1.00	33.00	38.00	270.00	
0.52	0.40	1.00	33.00	38.00	270.00	
0.50	0.40	1.00	33.00	37.00	270.00	
0.50	0.39	1.00	33.00	36.00	270.00	
0.46	0.39	1.00	33.00	36.00	270.00	
0.42	0.39	1.00	32.26	36.00	260.00	
0.42	0.38	1.00	32.01	36.00	260.00	
0.35	0.38	1.00	32.00	35.00	260.00	
0.10	0.38	1.00	32.00	34.00	260.00	
0.06	0.37	1.00	32.00	34.00	260.00	
	0.36	1.00	32.00	33.00	250.00	
	0.36	1.00	32.00	33.00	250.00	
	0.36	1.00	32.00	33.00	250.00	
	0.36	1.00	31.00	33.00	250.00	
	0.35	1.00	31.00	32.00	247.00	
	0.35	1.00	31.00	32.00	242.13	
	0.35	1.00	31.00	31.94	240.00	
	0.35	1.00	30.00	30.00	240.00	
	0.34	1.00	30.00	30.00	240.00	
	0.34	1.00	30.00	30.00	240.00	
	0.34	1.00	30.00	30.00	240.00	
	0.34	1.00	30.00	30.00	230.00	
	0.34	1.00	29.00	30.00	230.00	
	0.34	1.00	29.00	30.00	220.00	
	0.33	1.00	28.00	29.00	220.00	
	0.33	1.00	28.00	29.00	220.00	
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	0.33	0.94	28.00	29.00	210.00	
	0.33	0.94	27.19	28.00	210.00	
	0.33	0.92	27.00	28.00	210.00	
	0.32	0.90	27.00	28.00	210.00	
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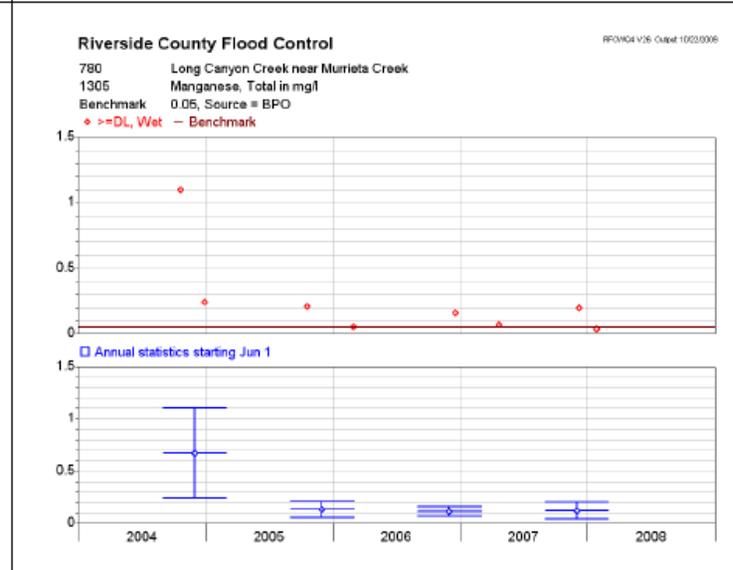
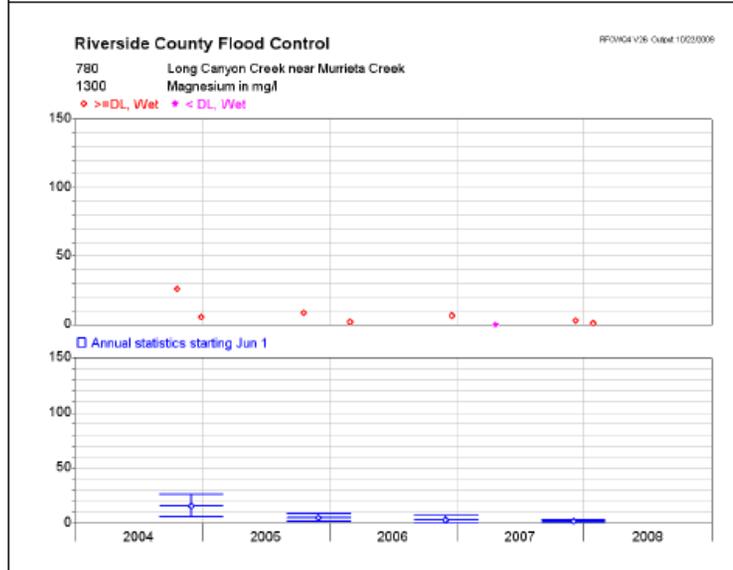
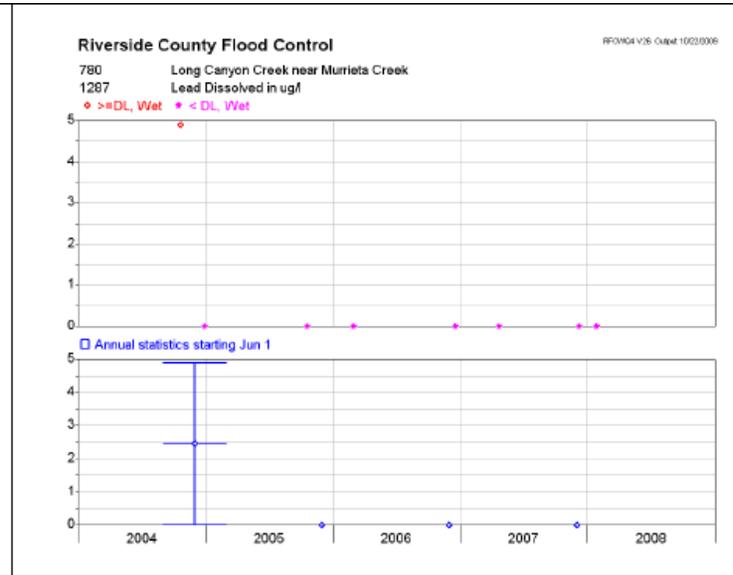
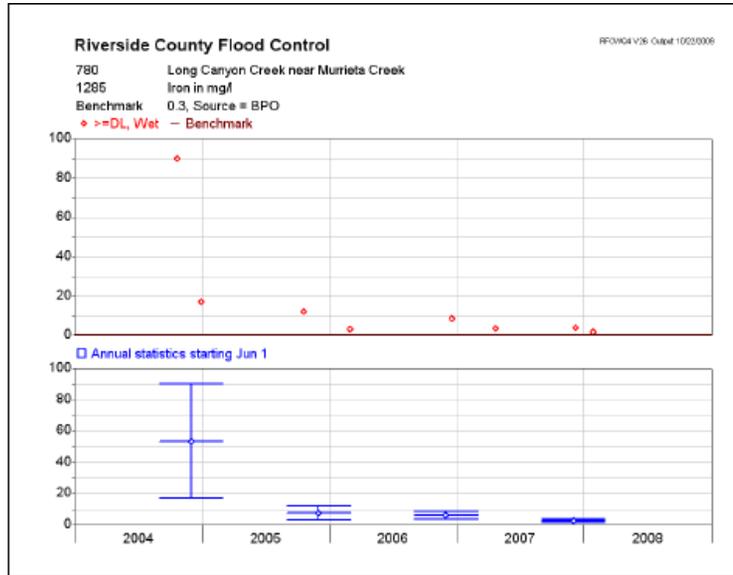
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	0.30	0.59	23.00	24.00	200.00	
	0.30	0.52	23.00	24.00	200.00	
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	0.29	0.50	21.00	23.00	190.00	
	0.29	0.50	21.00	23.00	184.13	
	0.29	0.50	21.00	23.00	180.00	
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	0.26	0.40	19.00	20.00	170.00	
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	0.15		7.00	9.00	100.00	
	0.15		7.00	8.00	100.00	
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	0.14		6.30	8.00	92.00	
	0.14		6.30	7.60	92.00	
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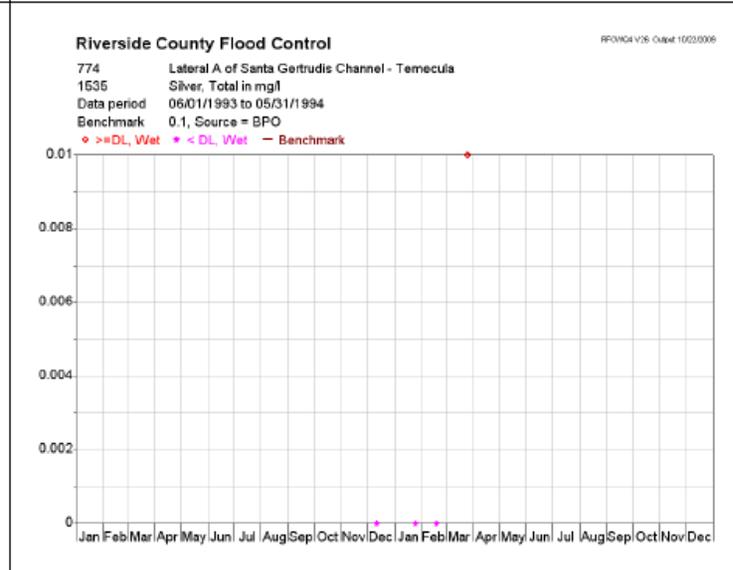
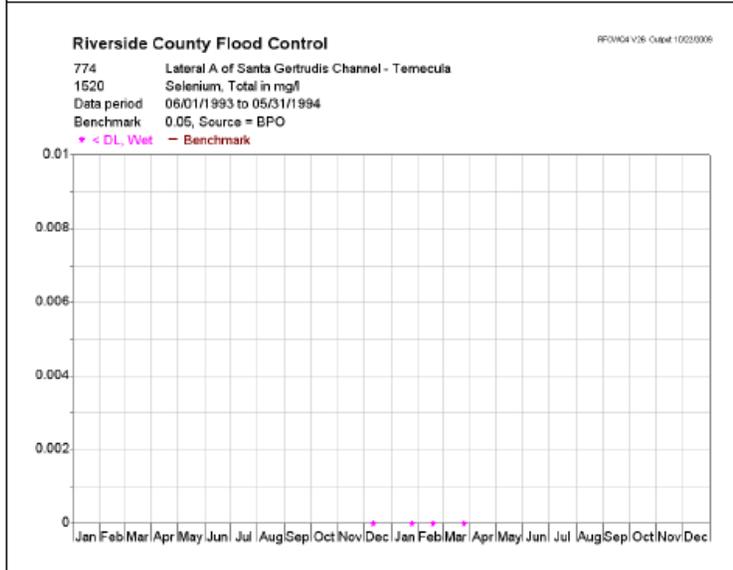
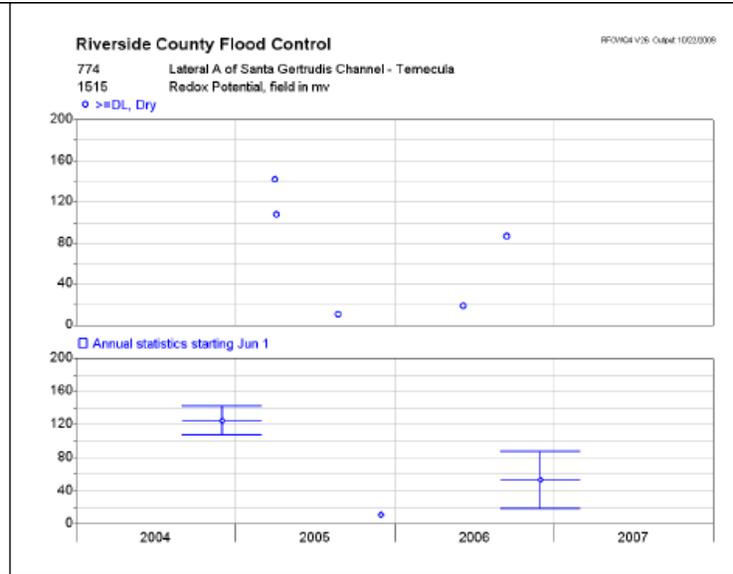
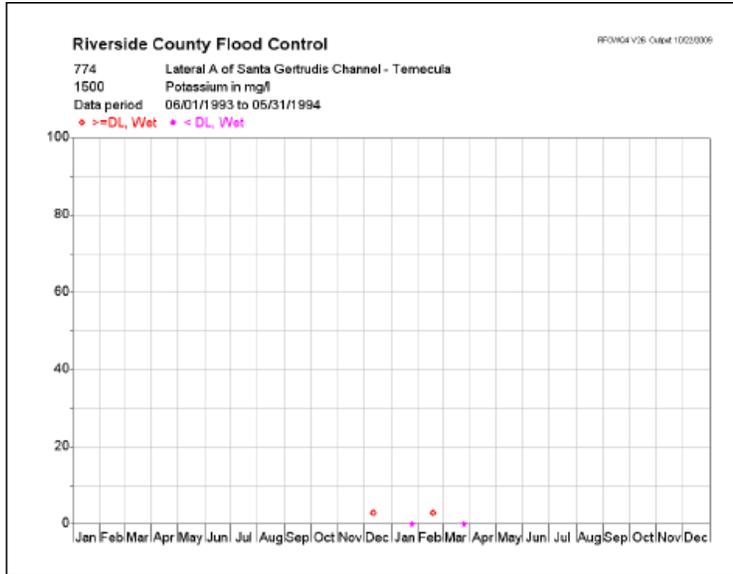
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	0.10		2.60	5.00	73.00	
	0.10		2.30	5.00	72.00	
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	0.10		2.00	4.80	70.00	
	0.09		1.70	4.70	70.00	
	0.08		1.50	4.60	70.00	
	0.06		1.50	4.00	64.00	
	0.03		1.50	4.00	63.00	
			1.40	3.80	61.00	
			1.40	3.00	60.00	
				3.00	56.00	
				2.30	44.00	
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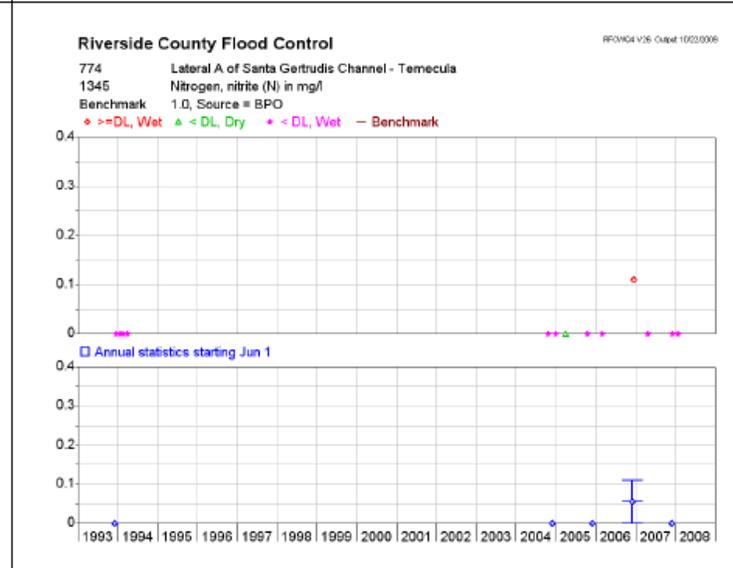
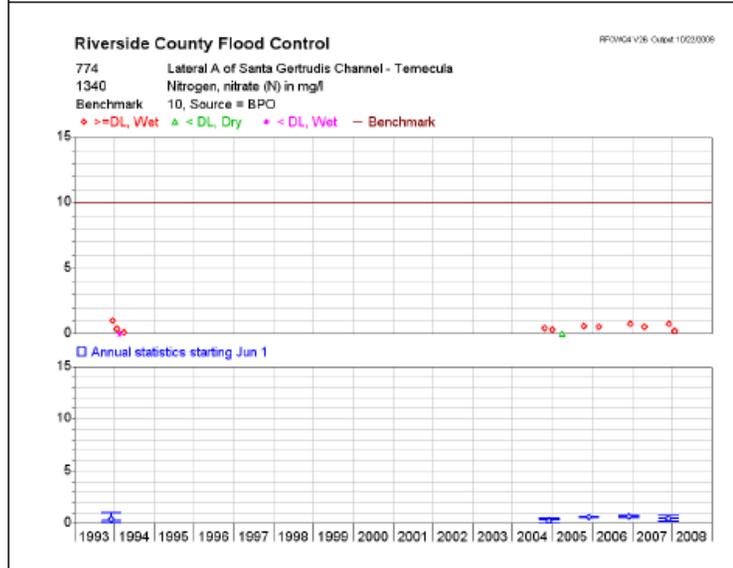
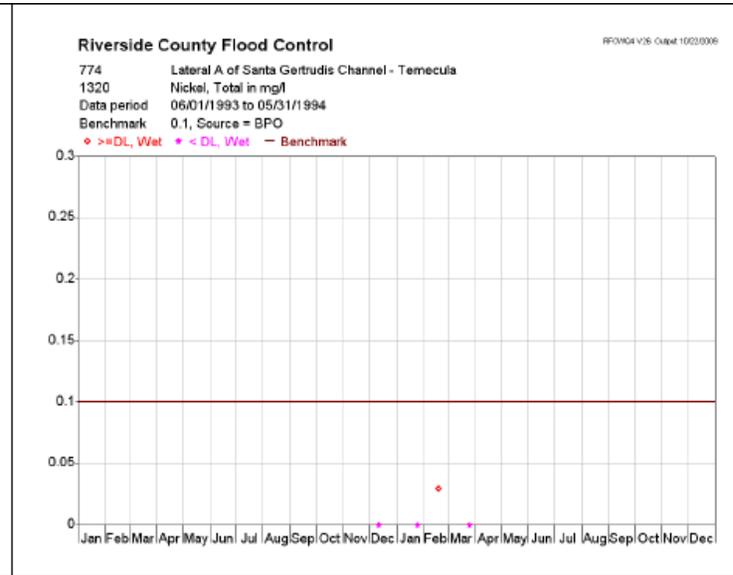
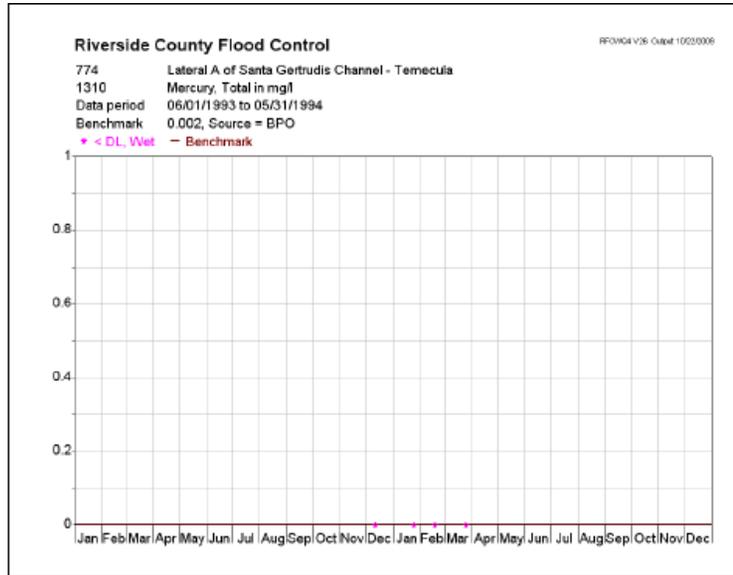
## II. NUMERIC ACTION LEVELS EVALUATION DATA

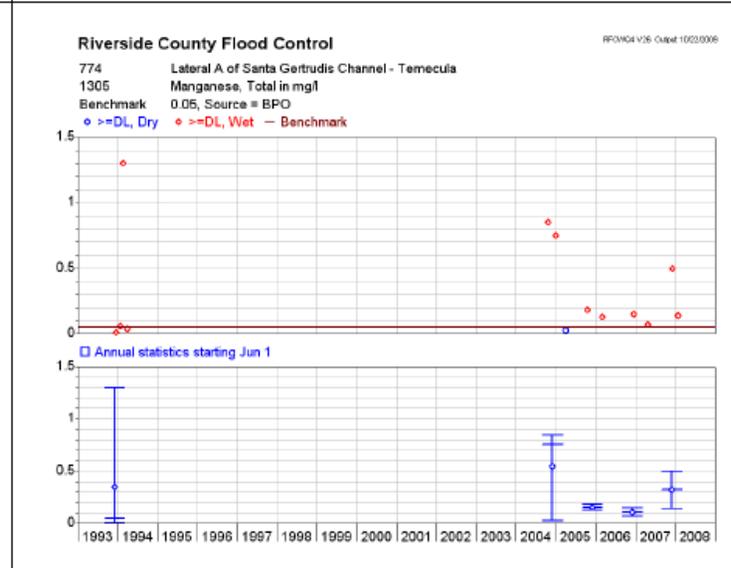
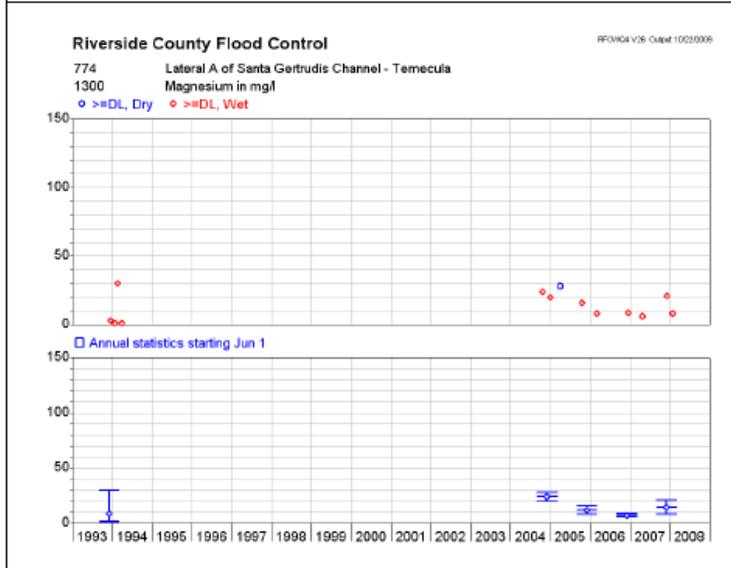
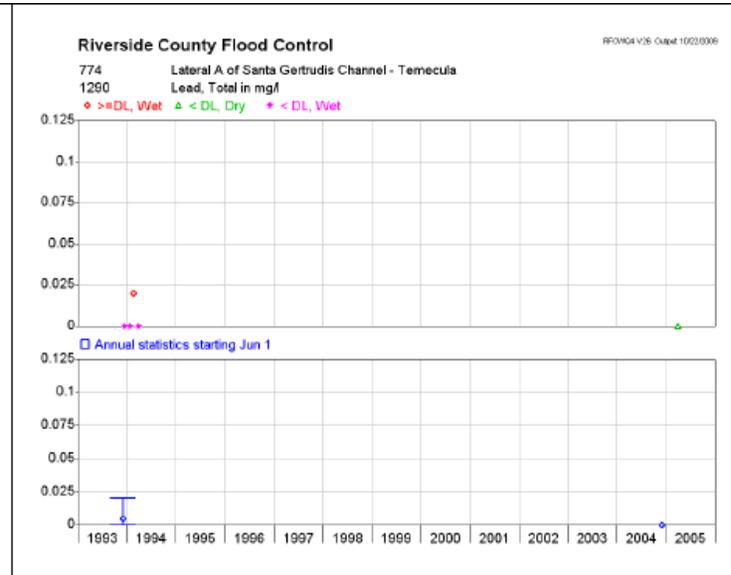
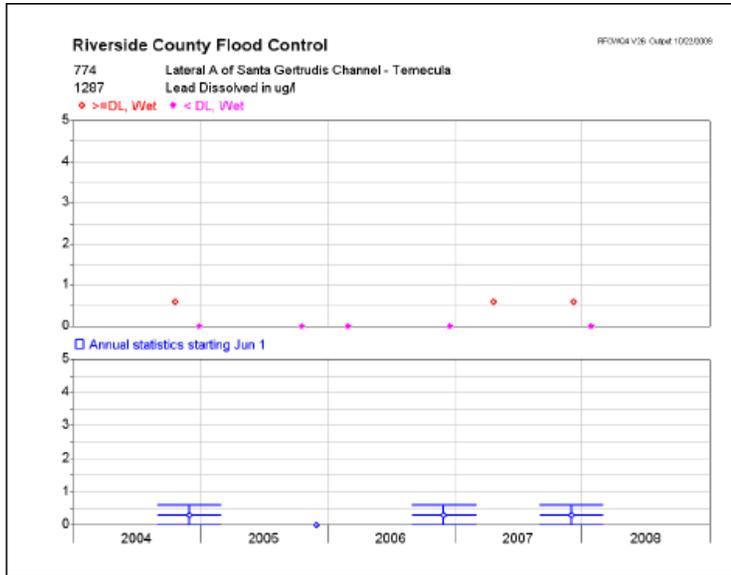




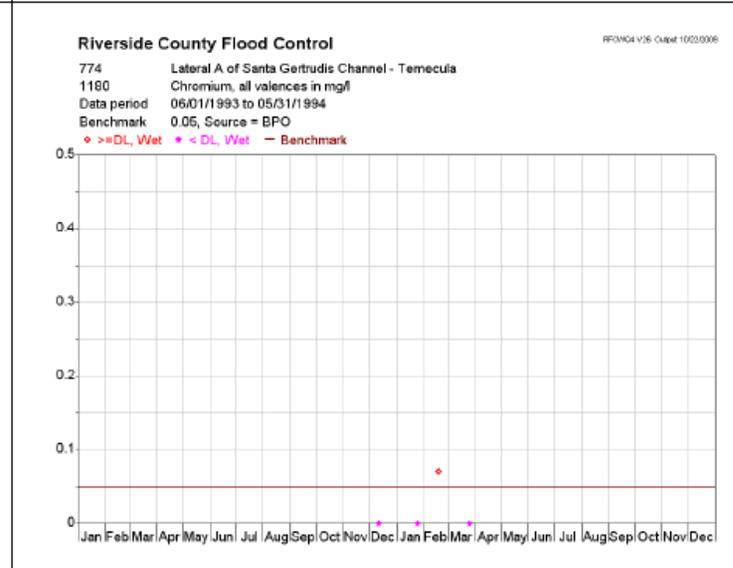
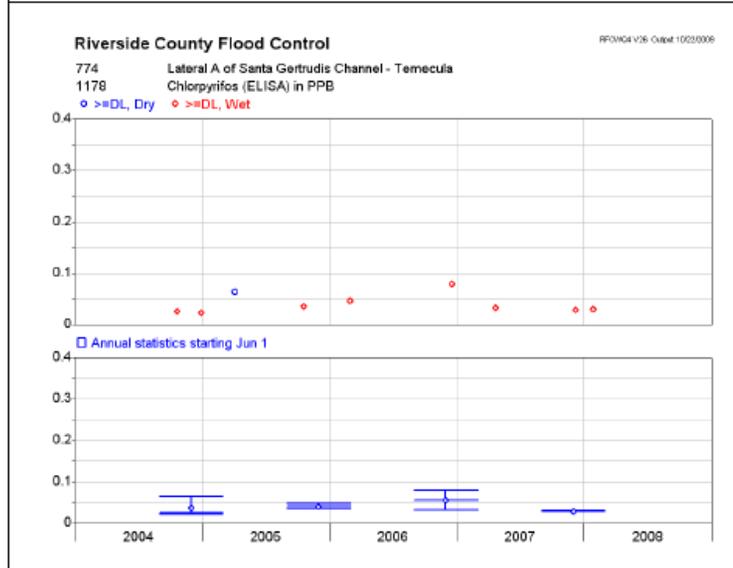
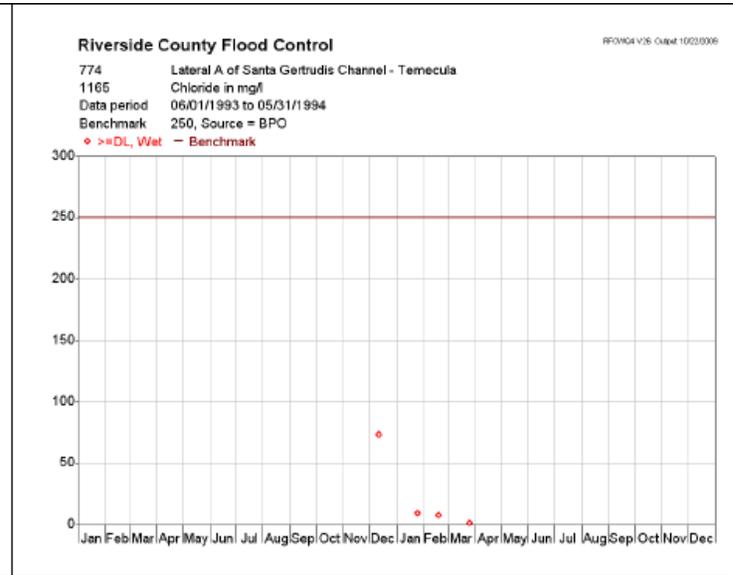
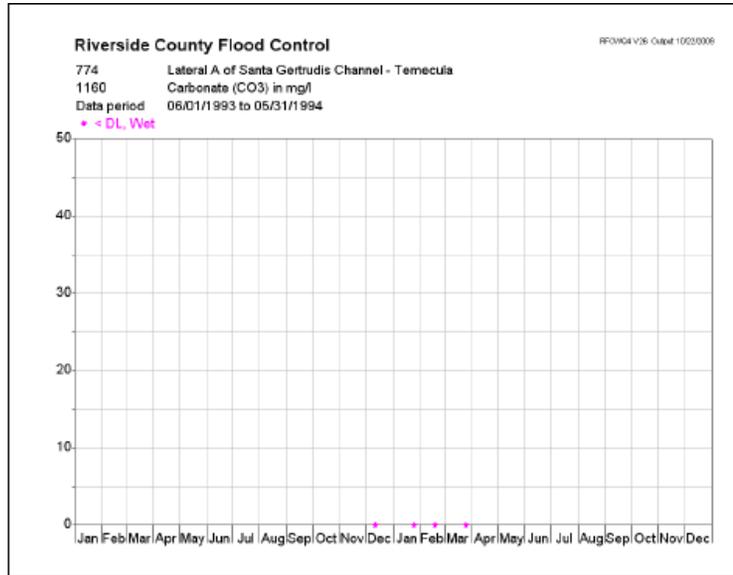


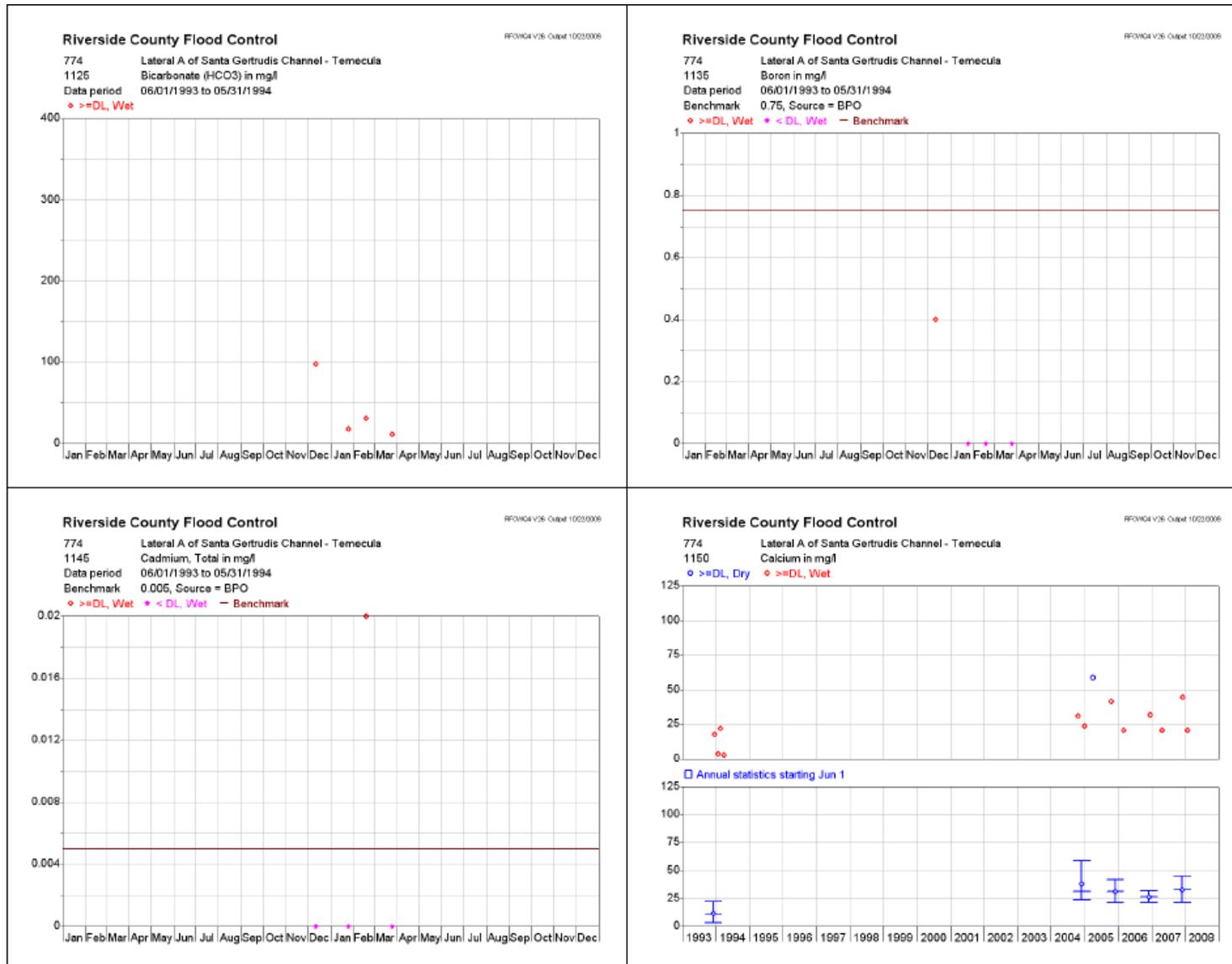


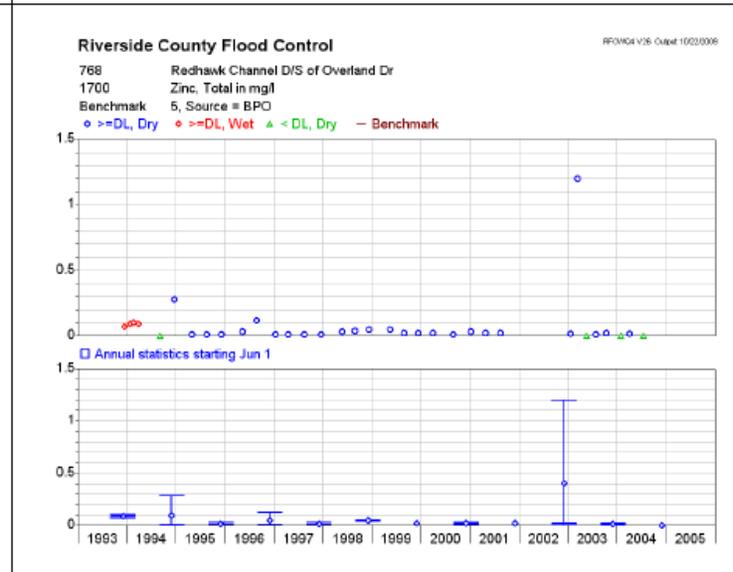
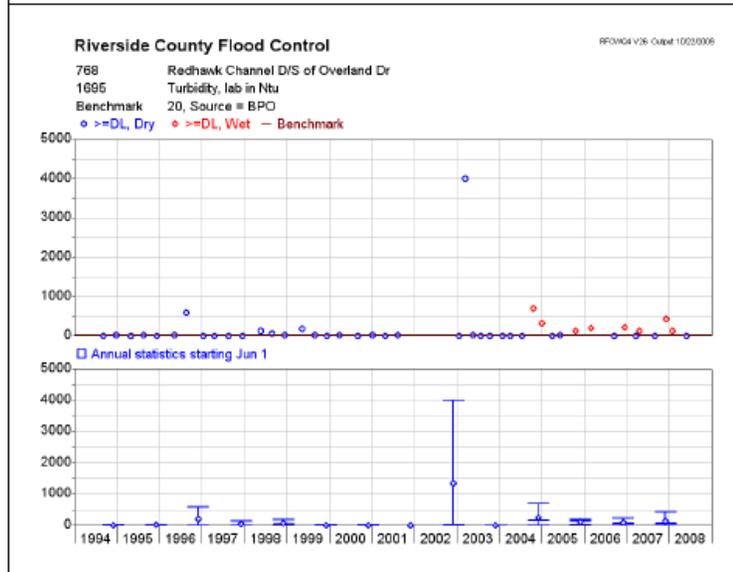
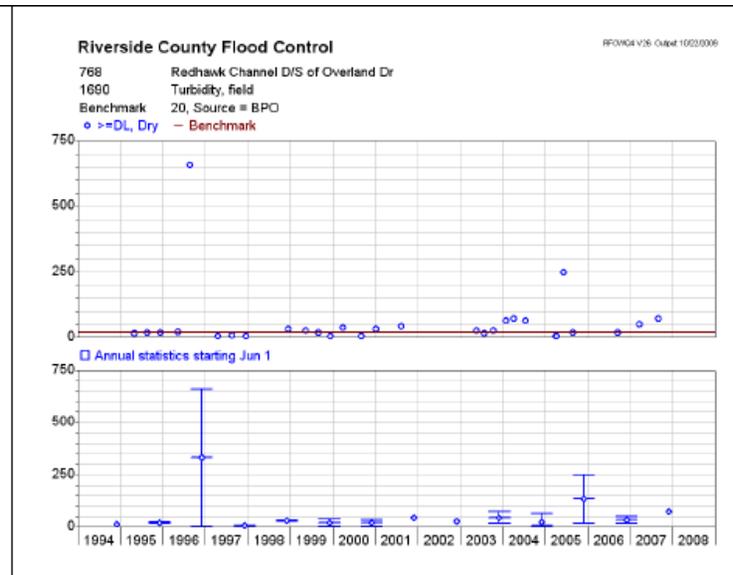
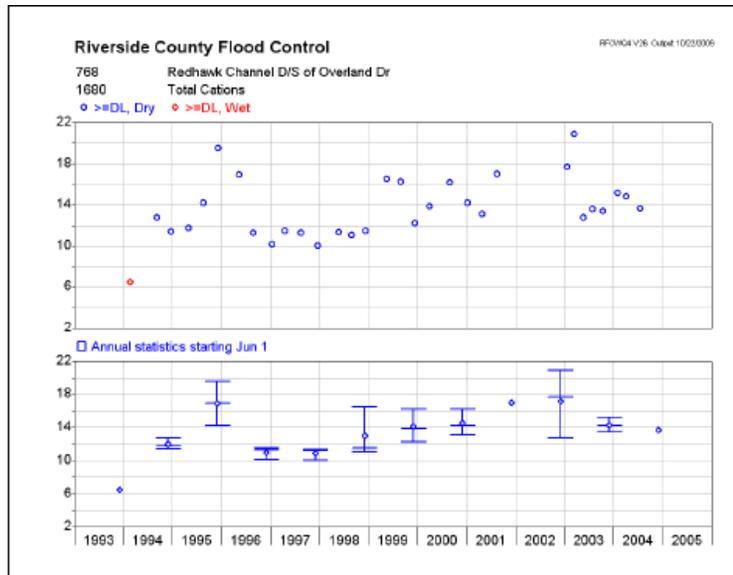


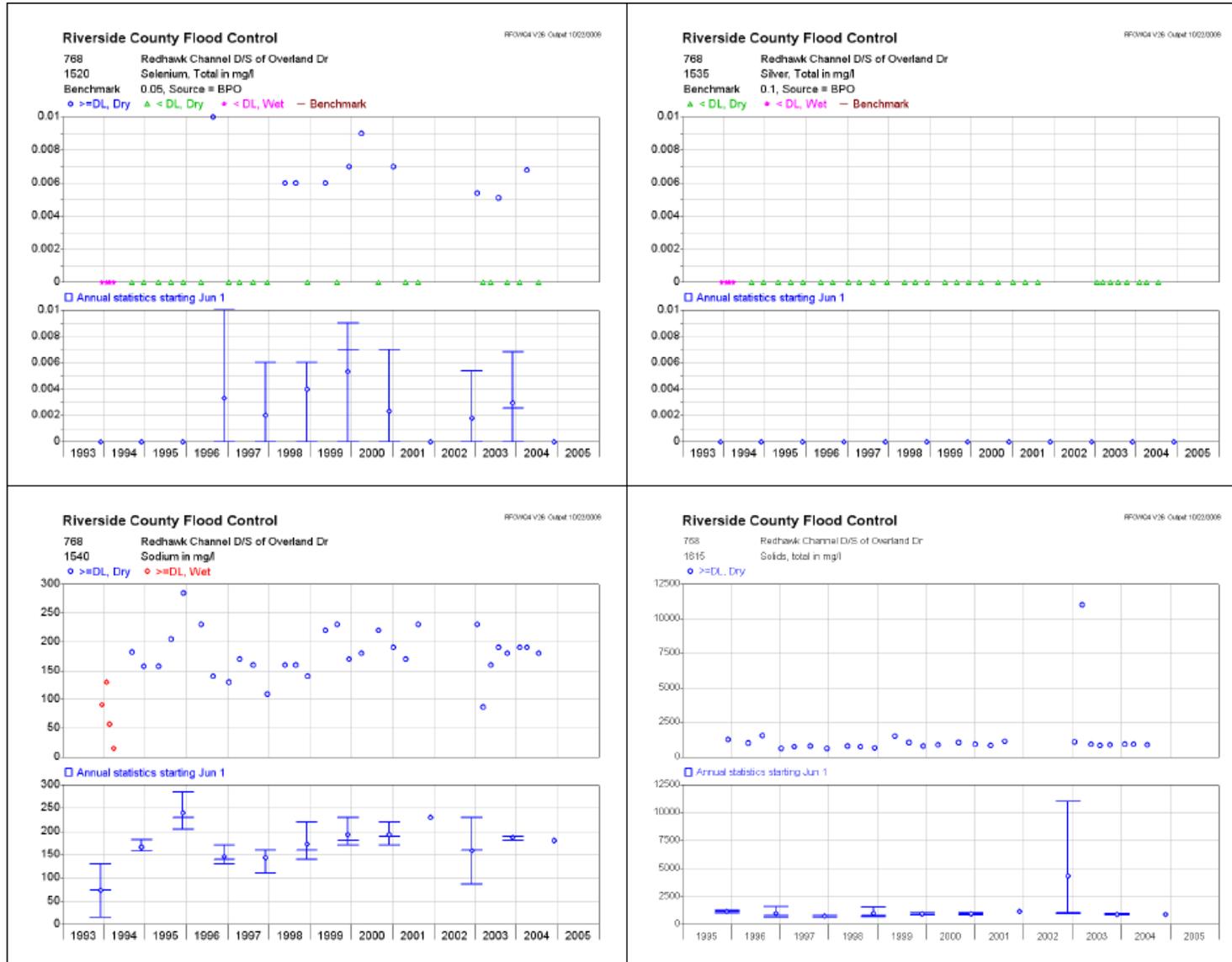


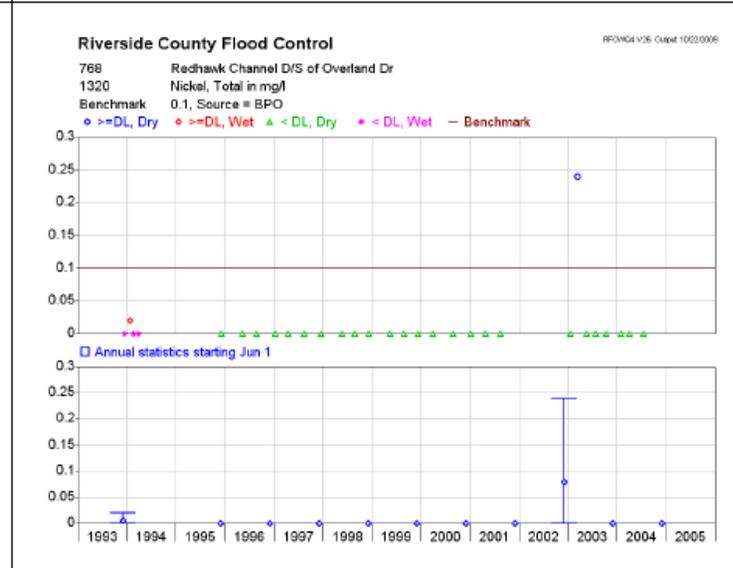
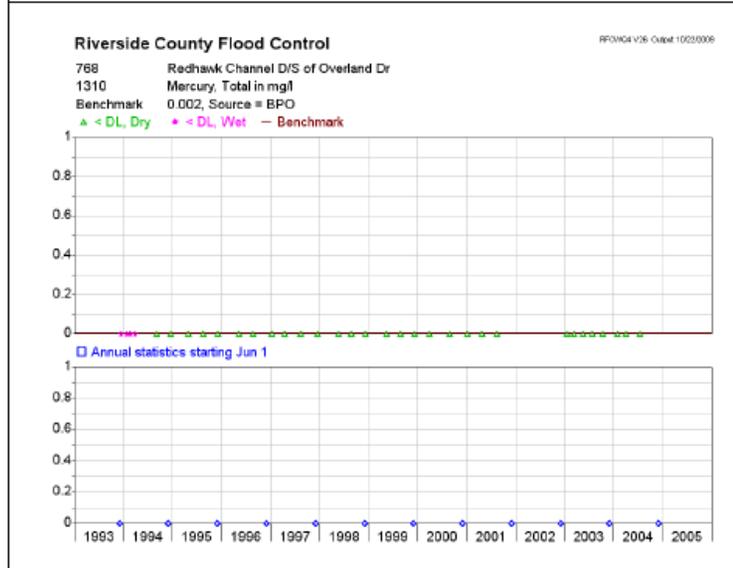
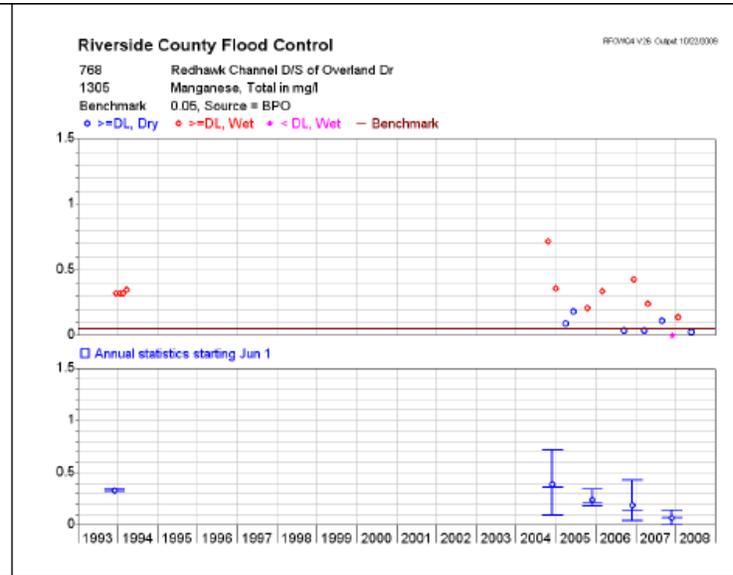
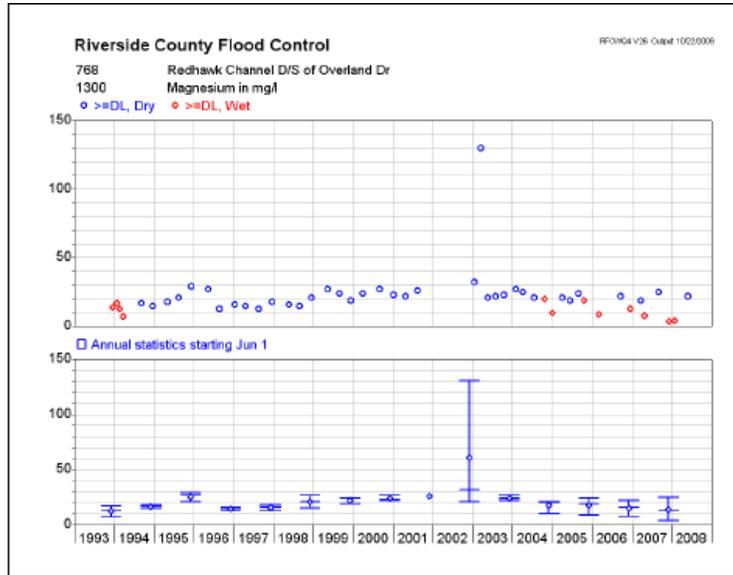


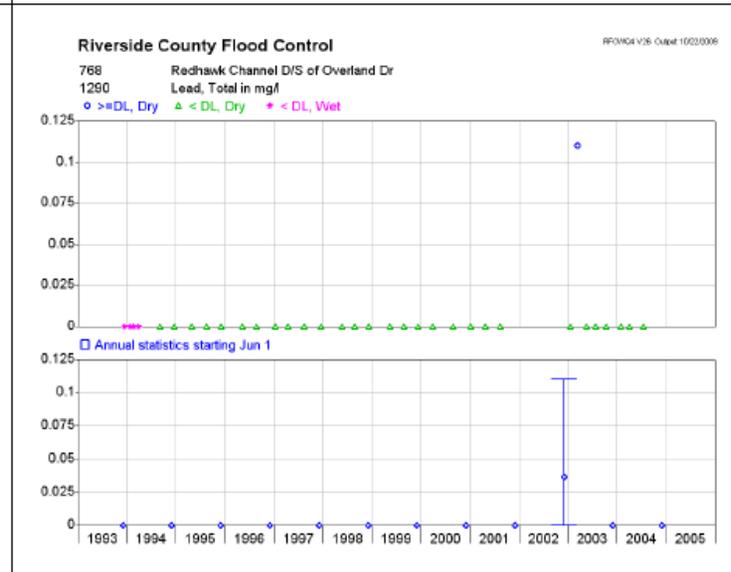
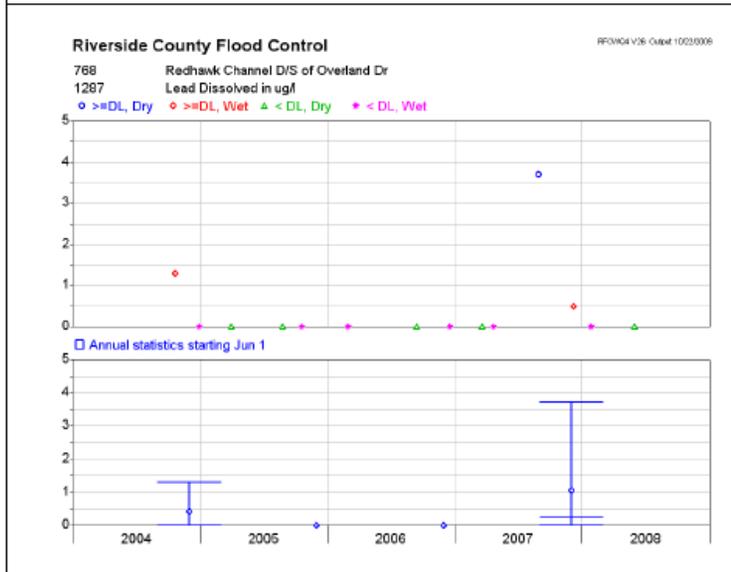
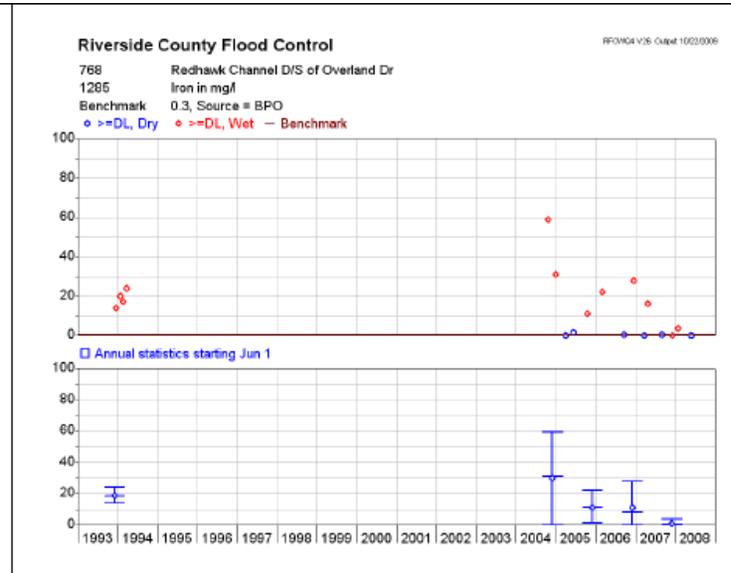
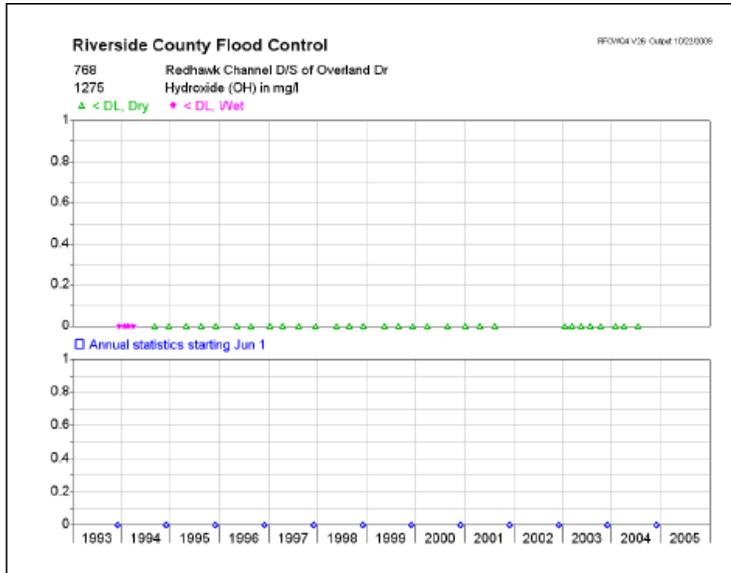


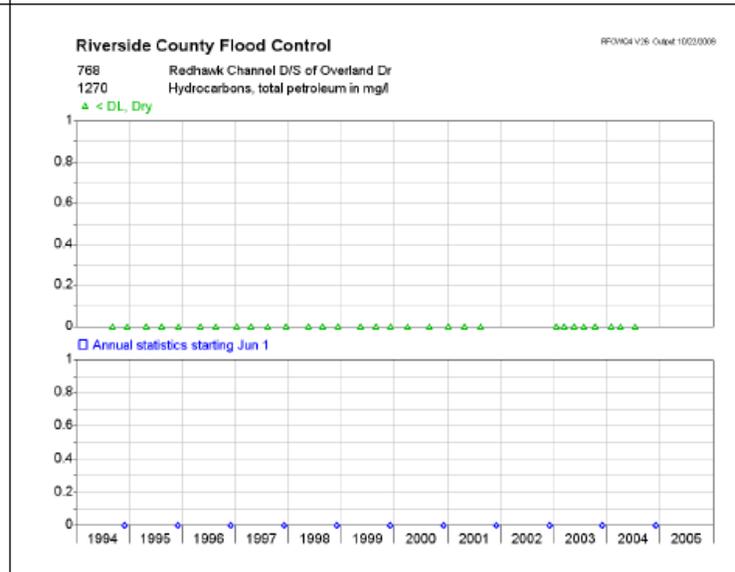
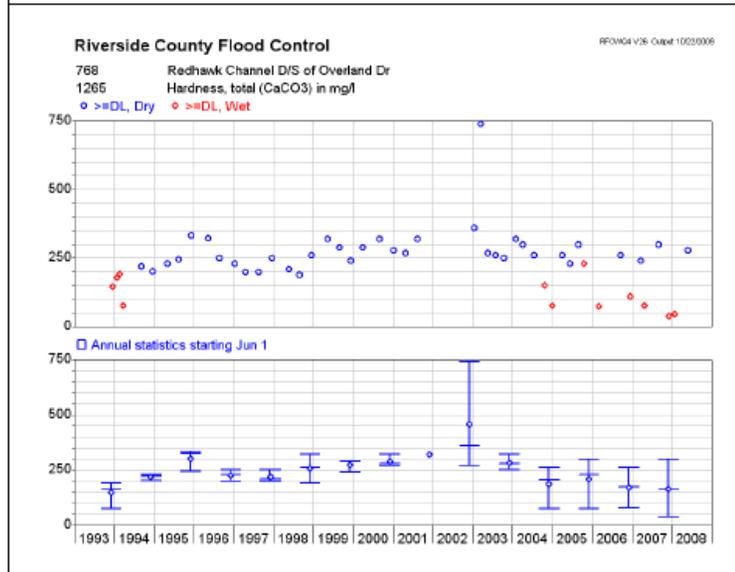
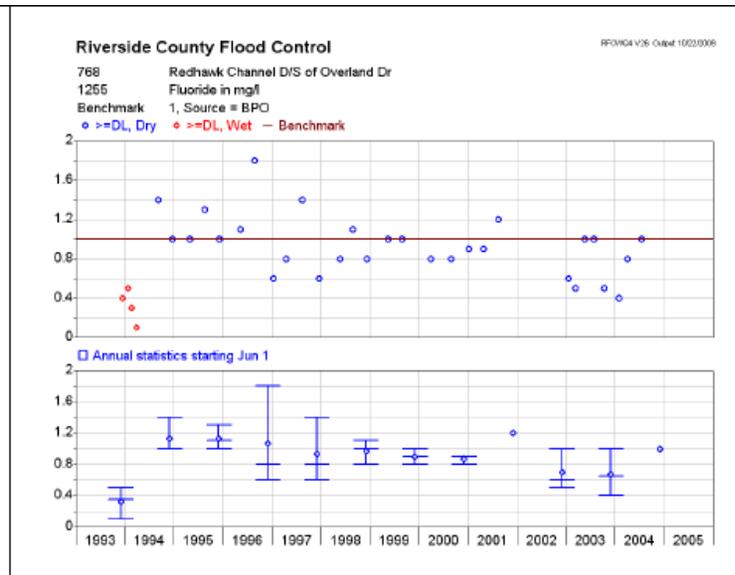
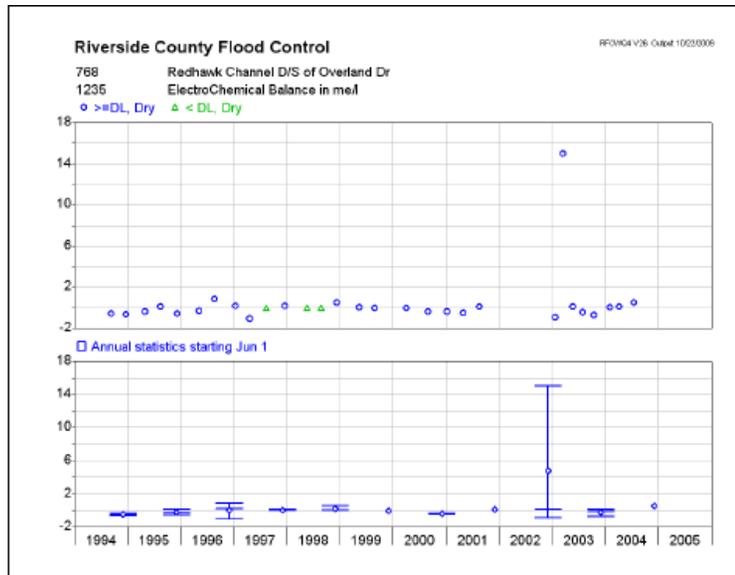


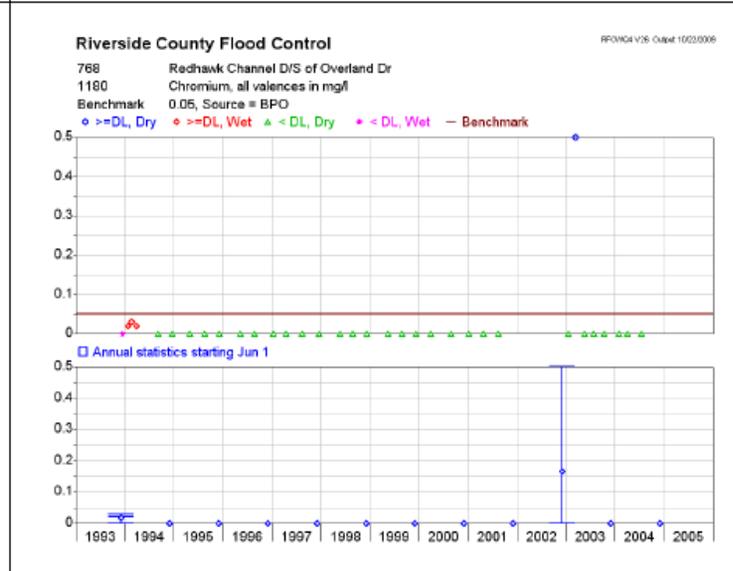
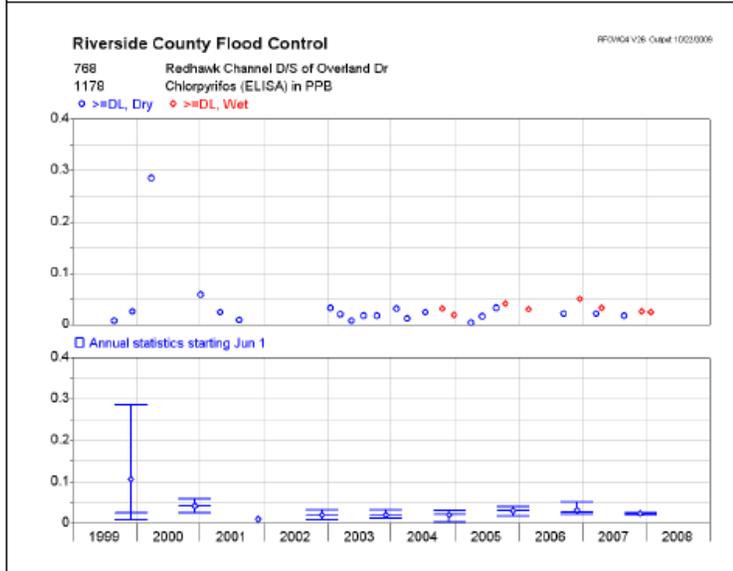
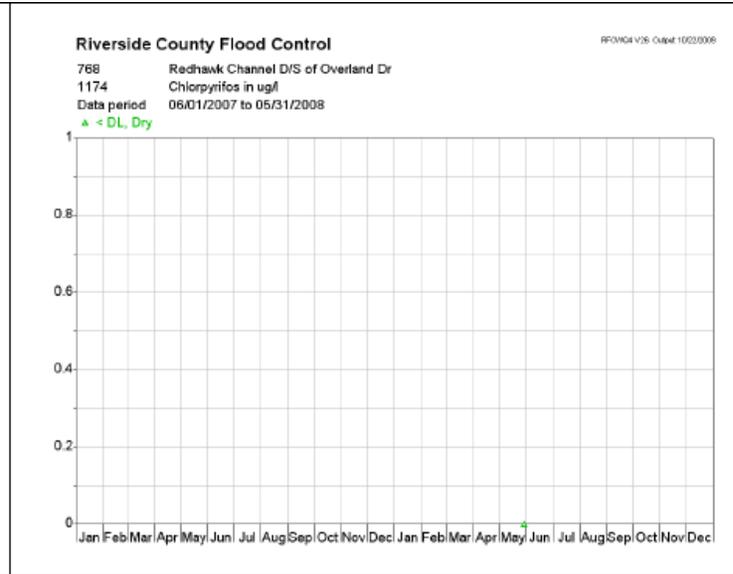
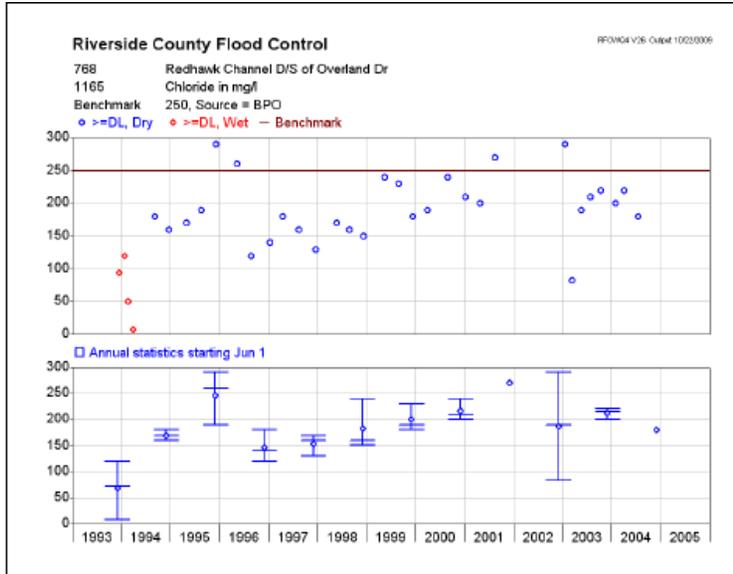


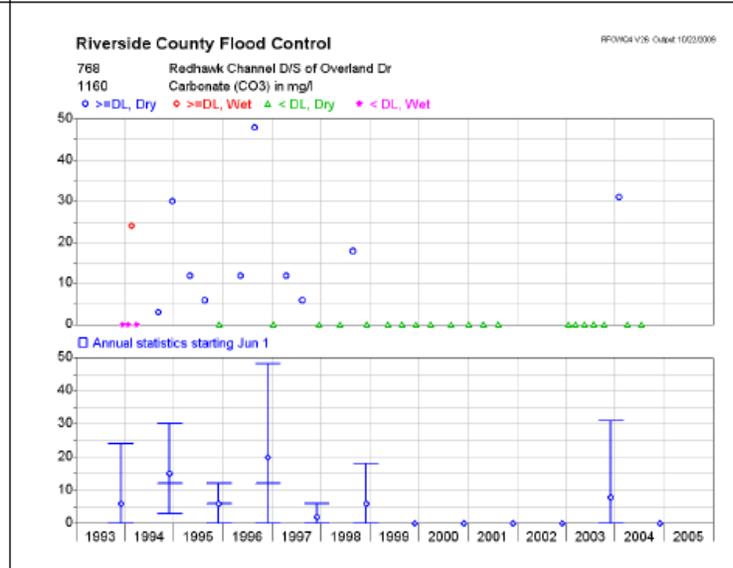
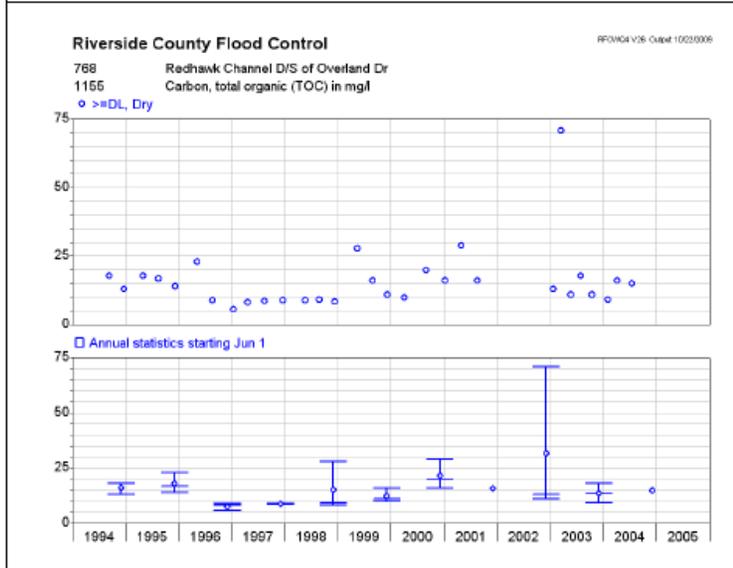
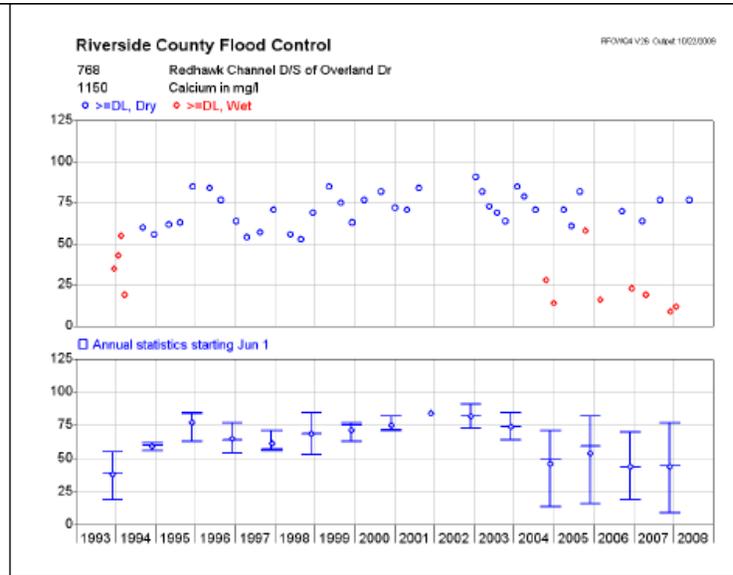
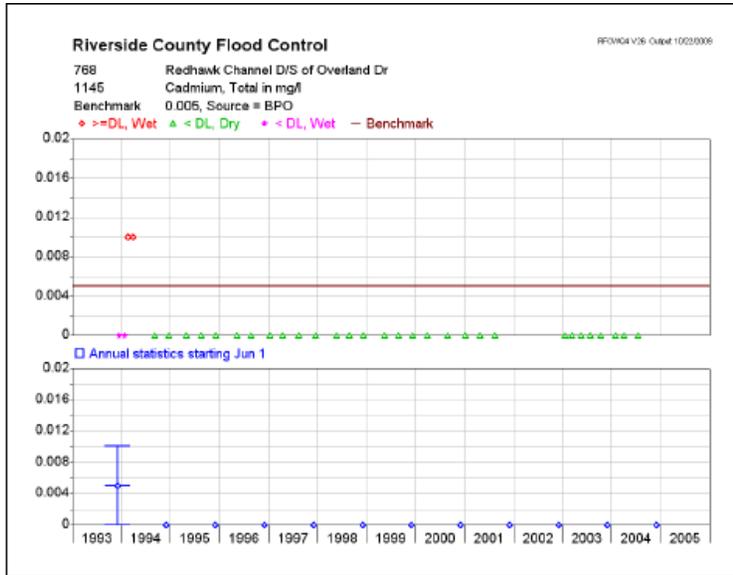


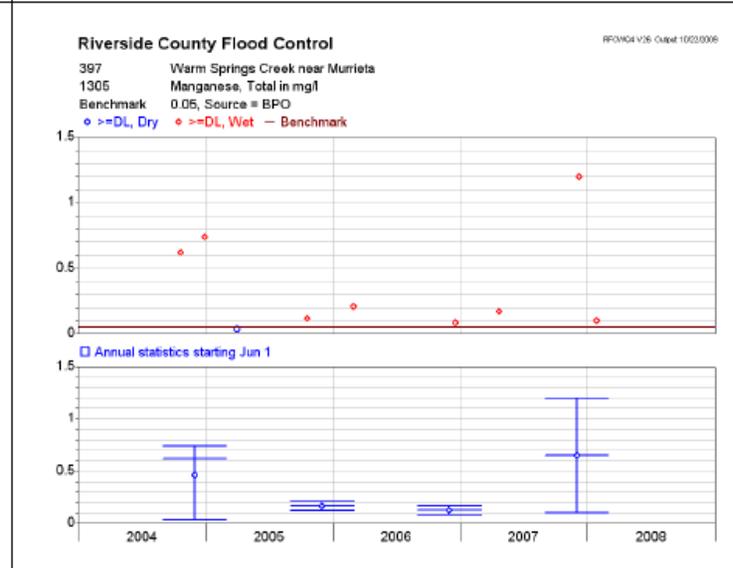
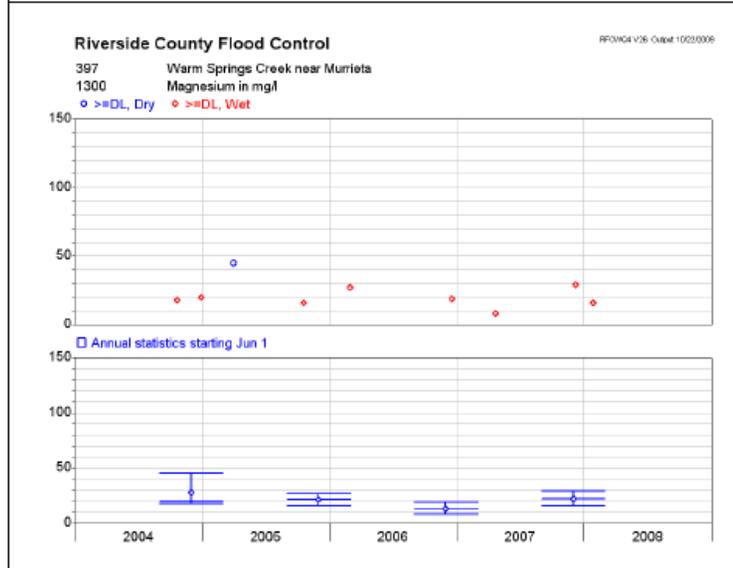
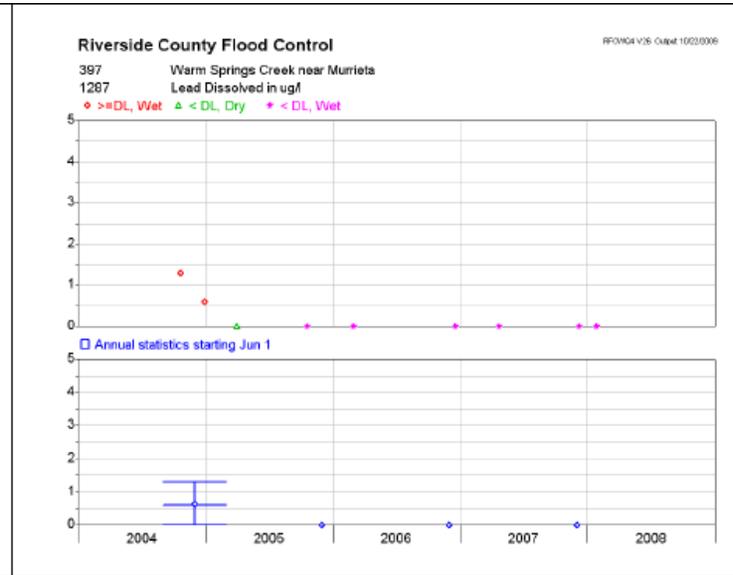
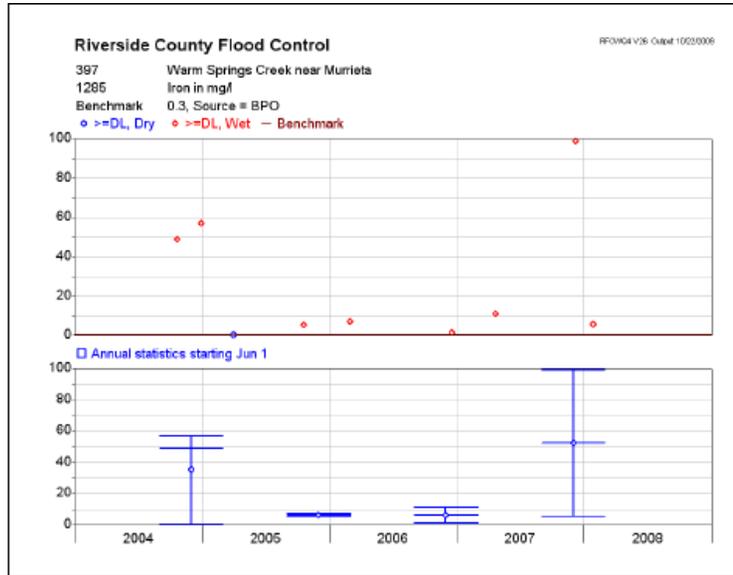


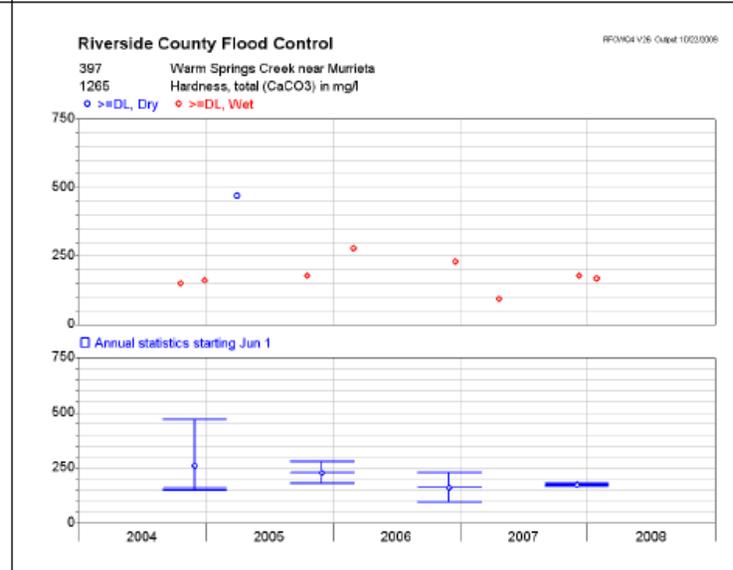
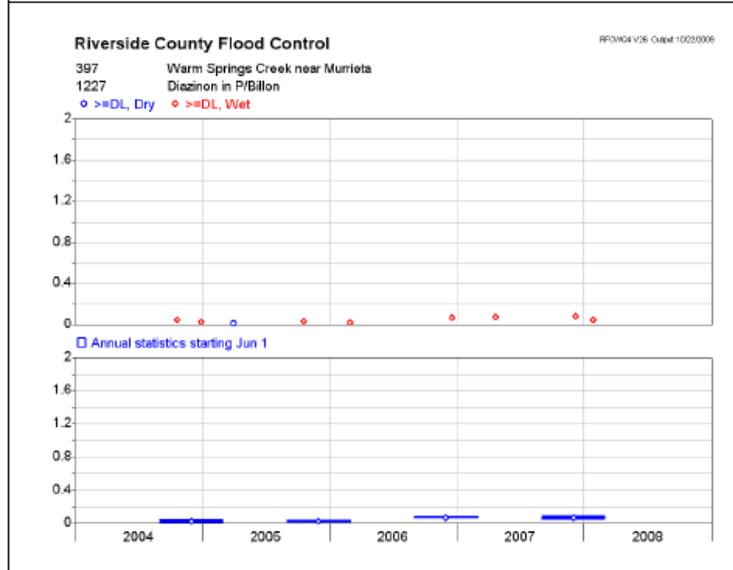
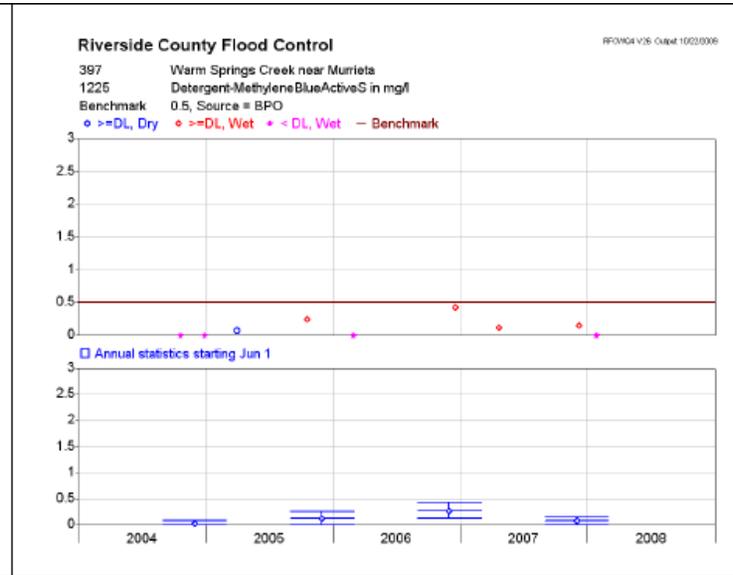
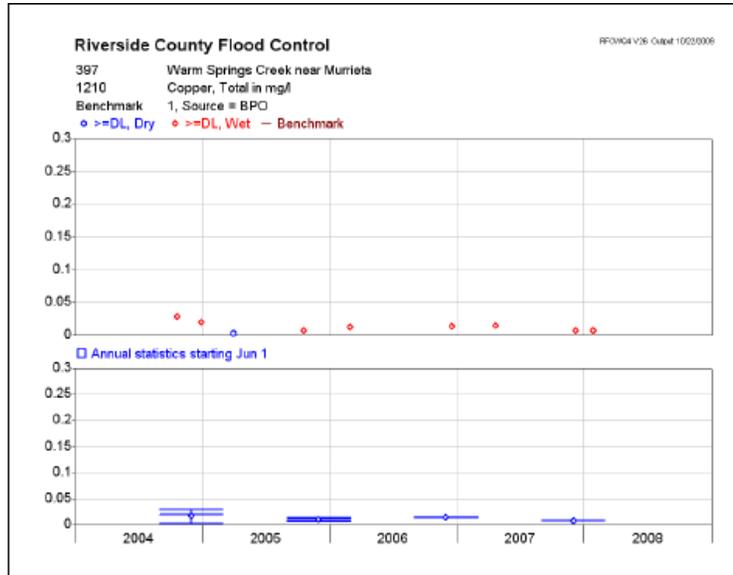


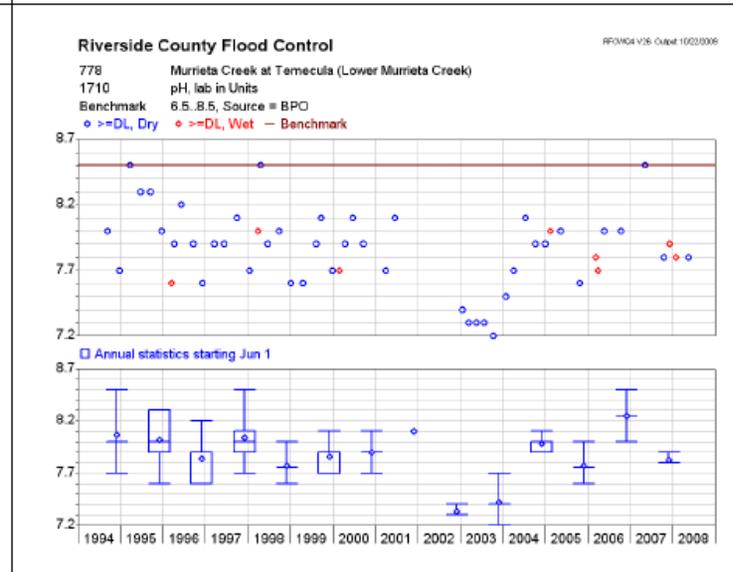
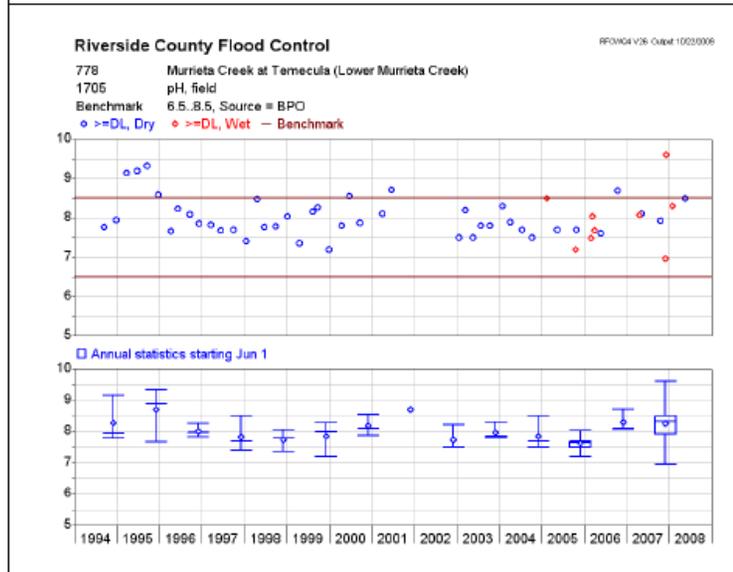
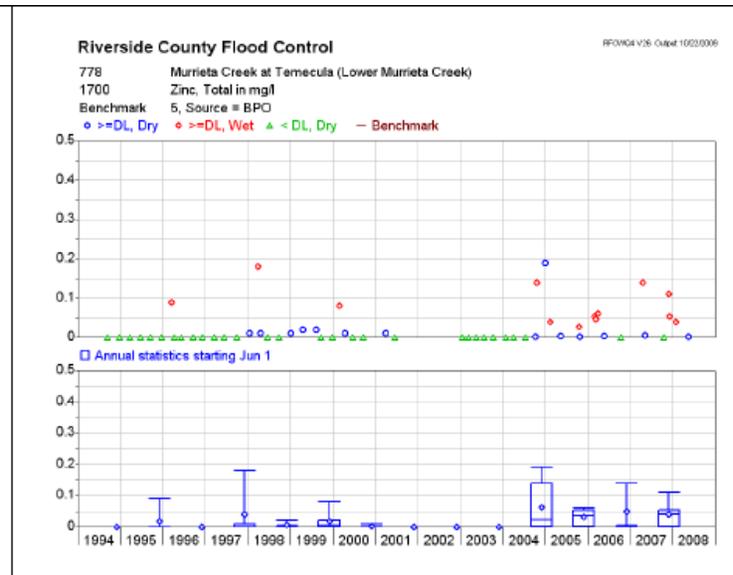
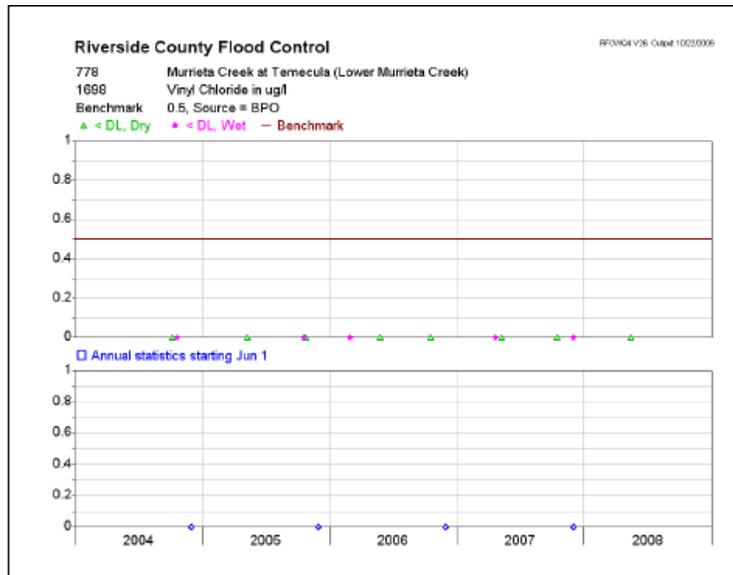


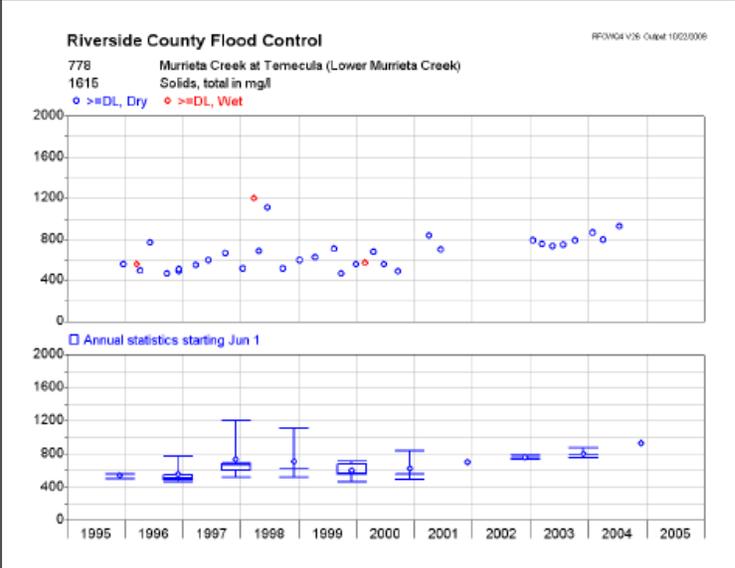
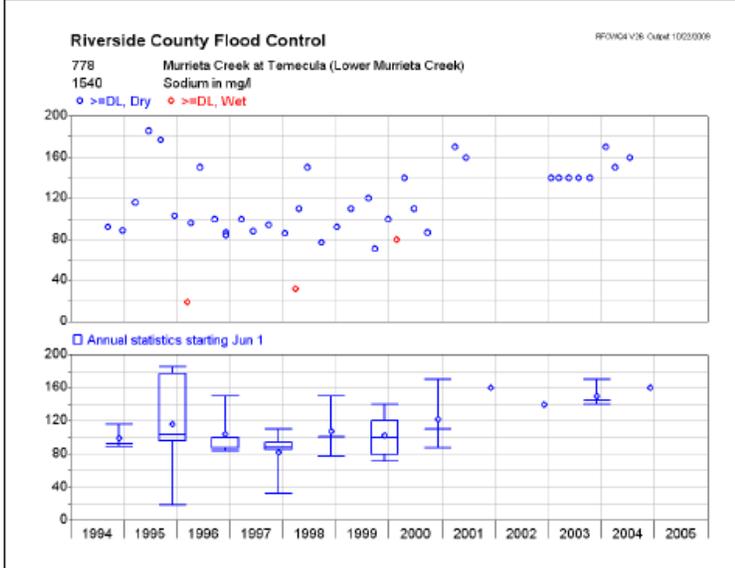
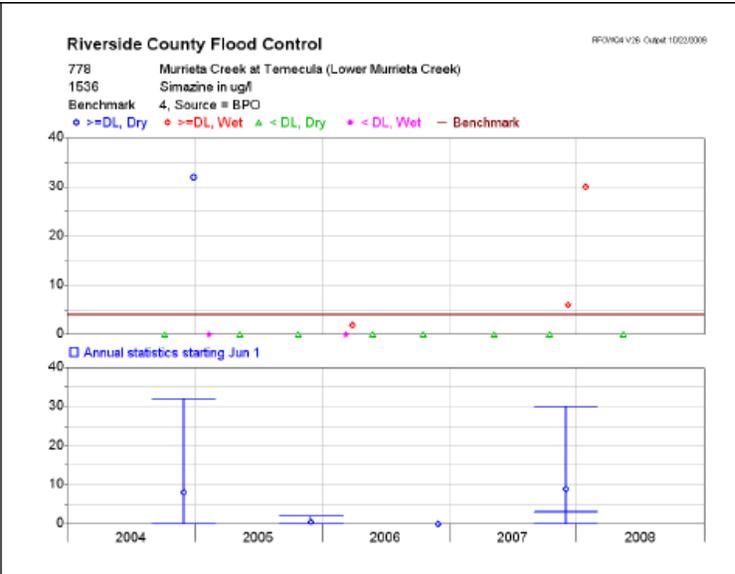
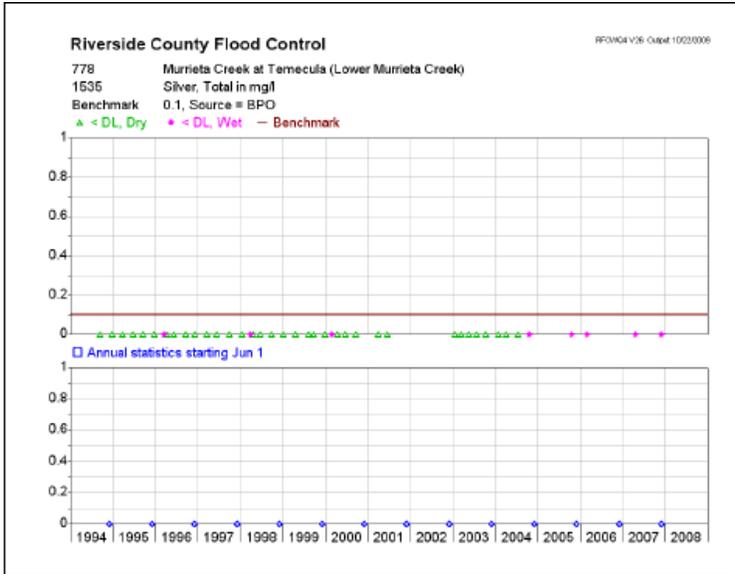


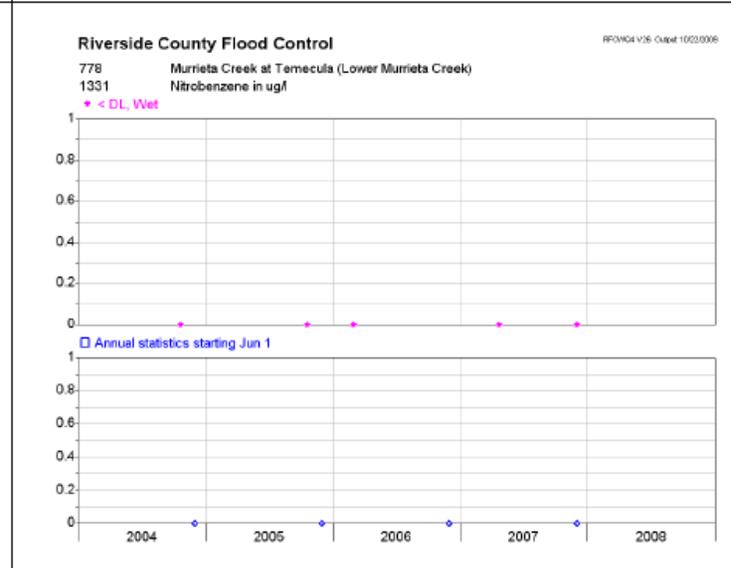
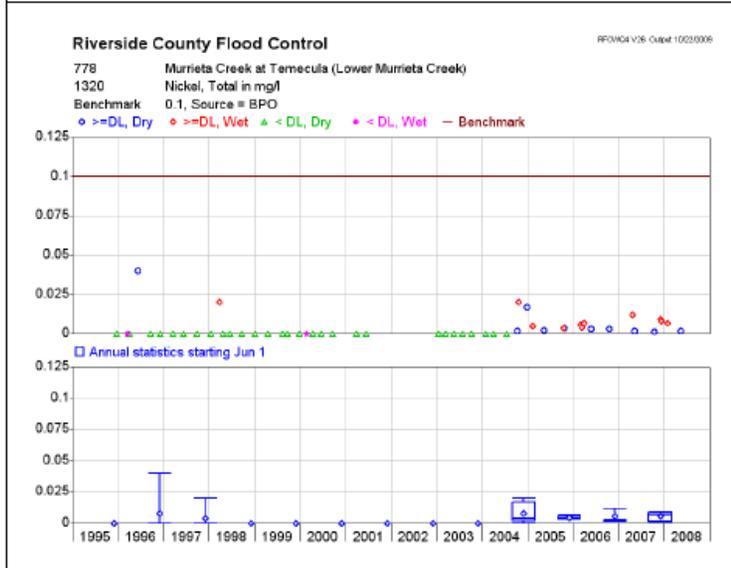
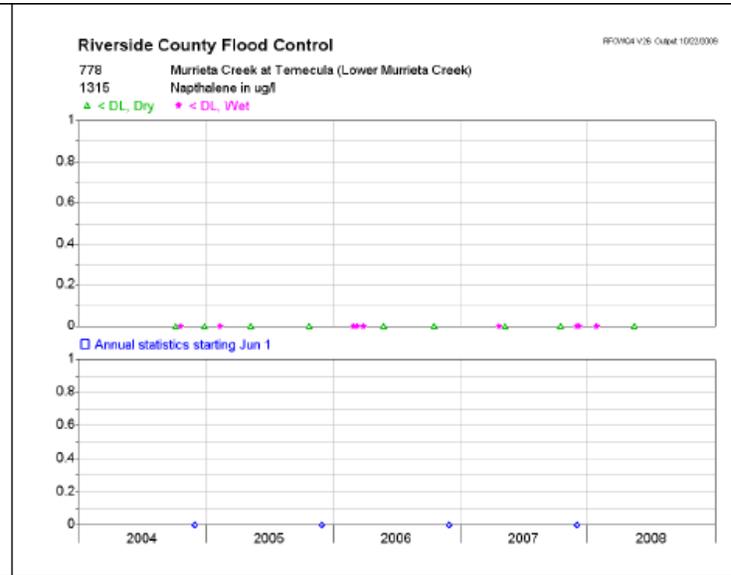
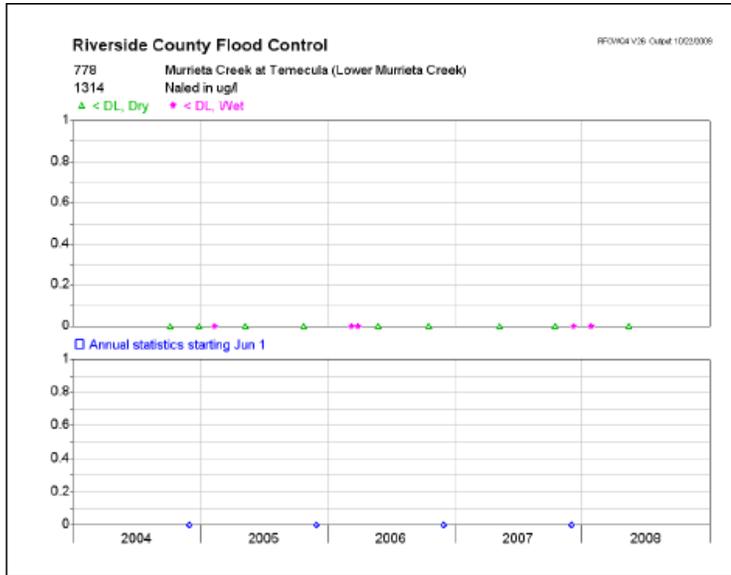


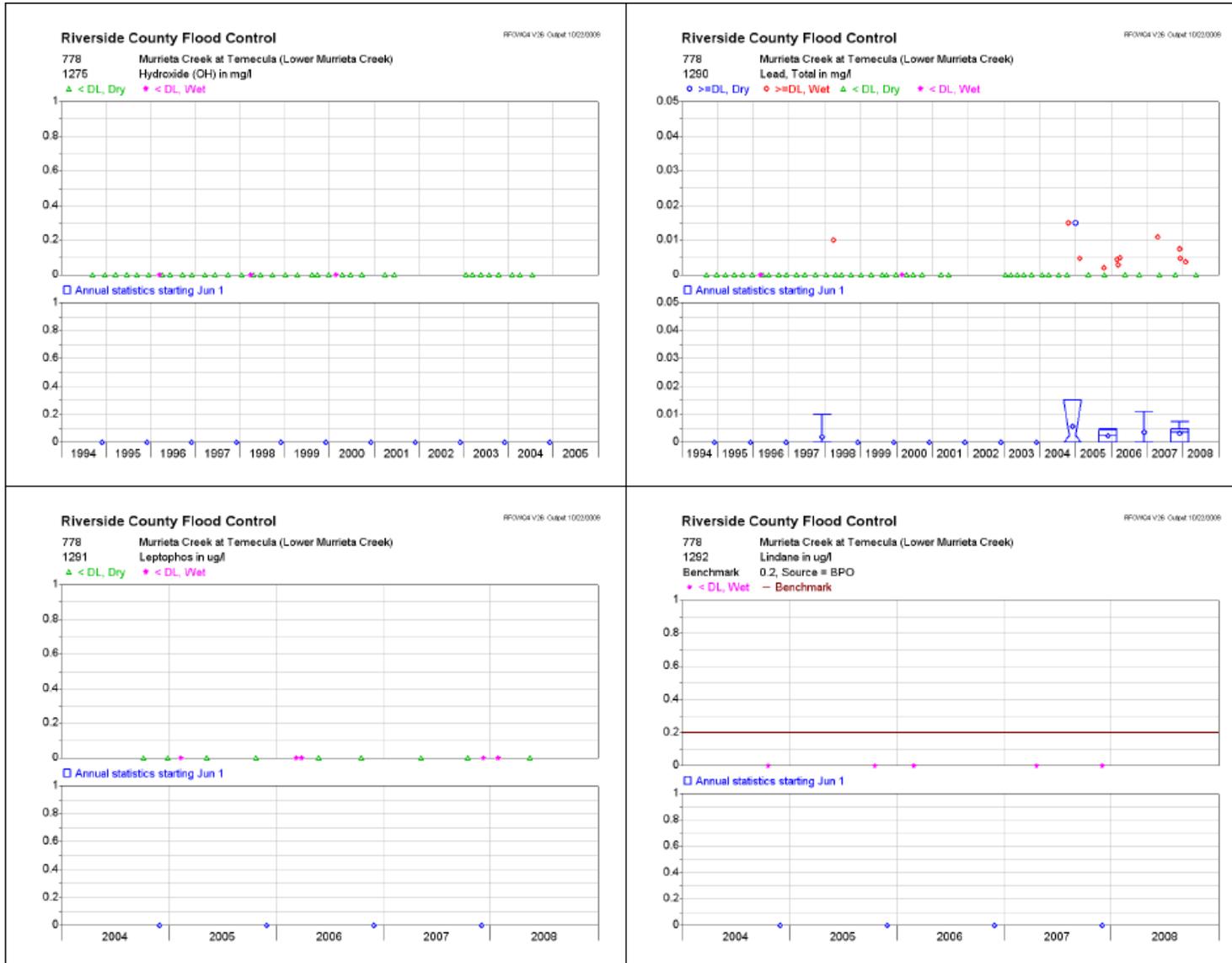






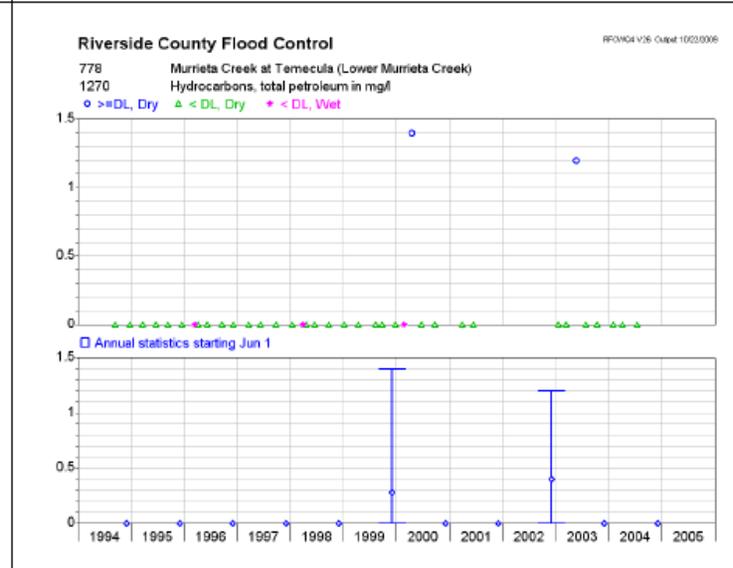
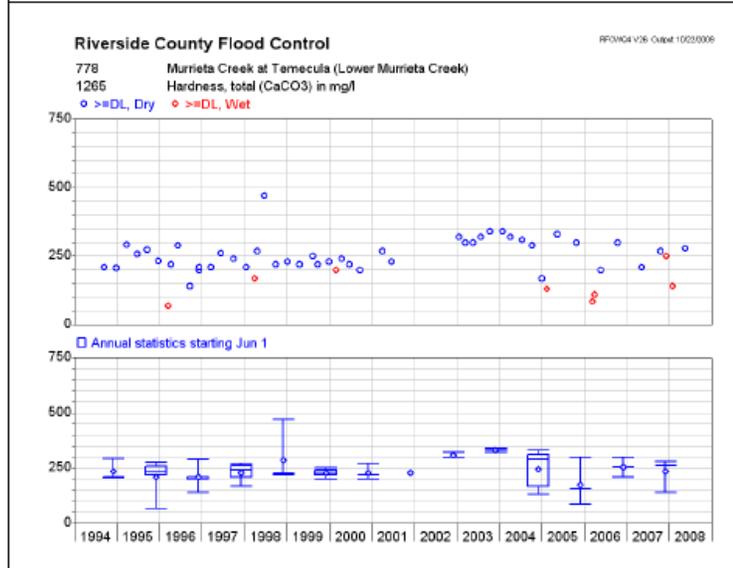
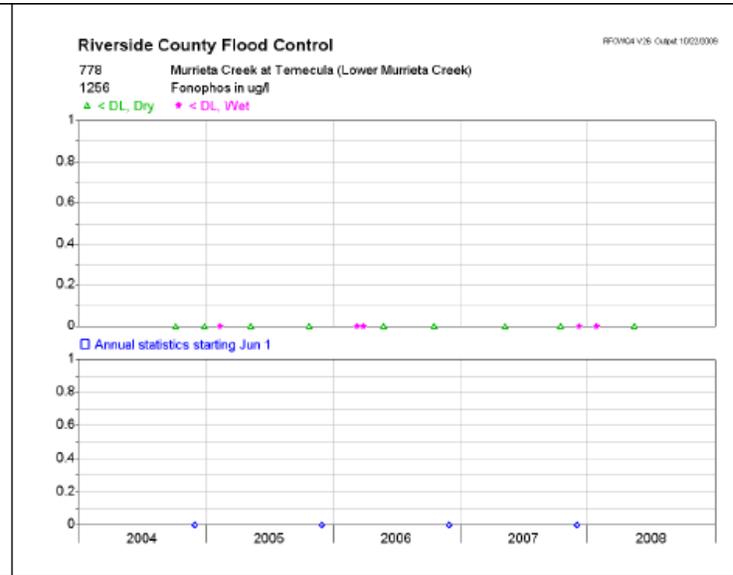
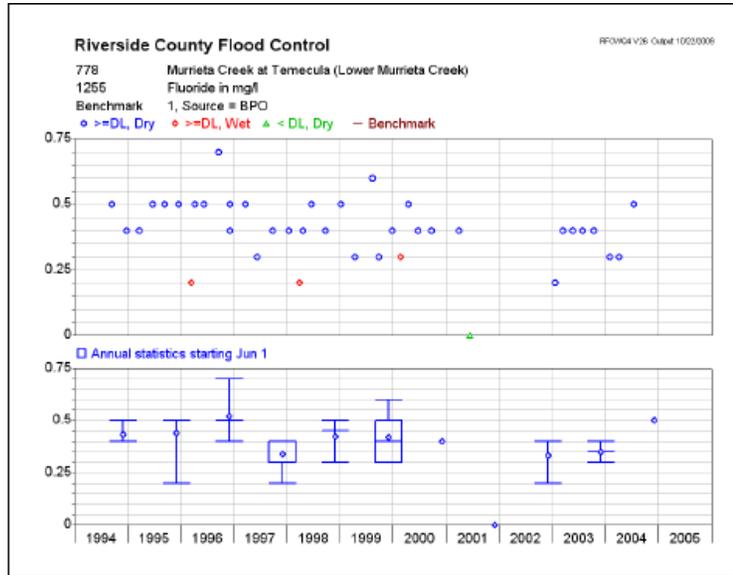


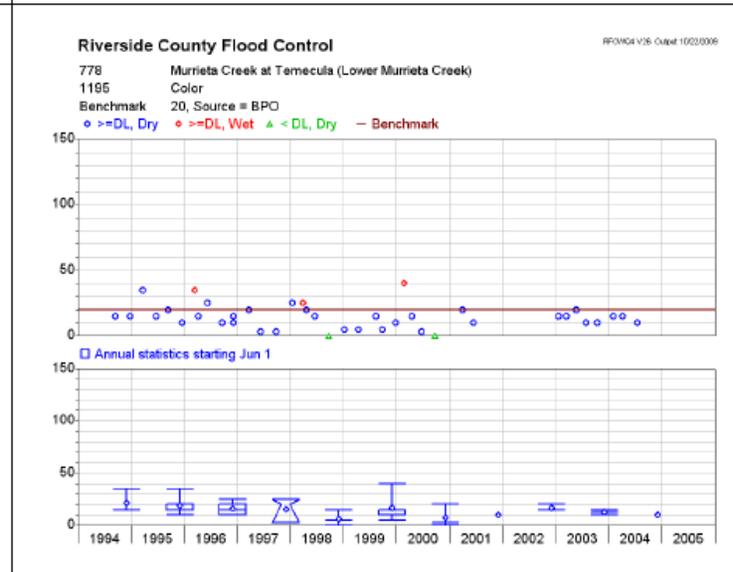
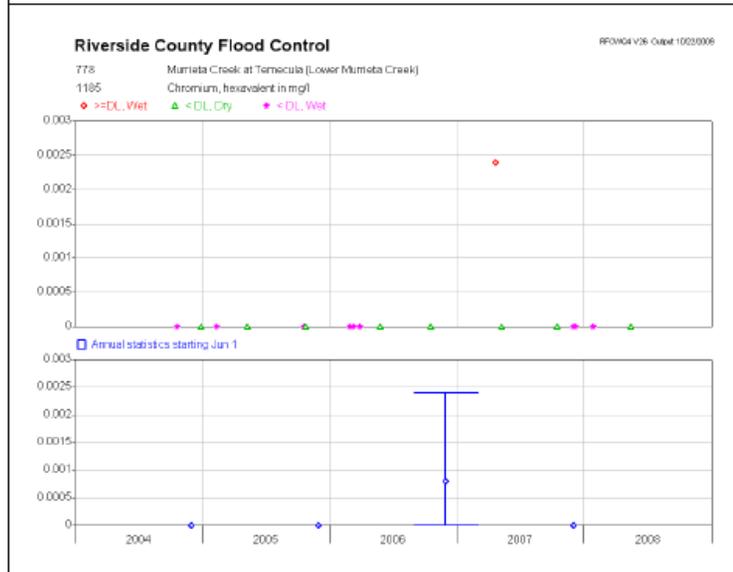
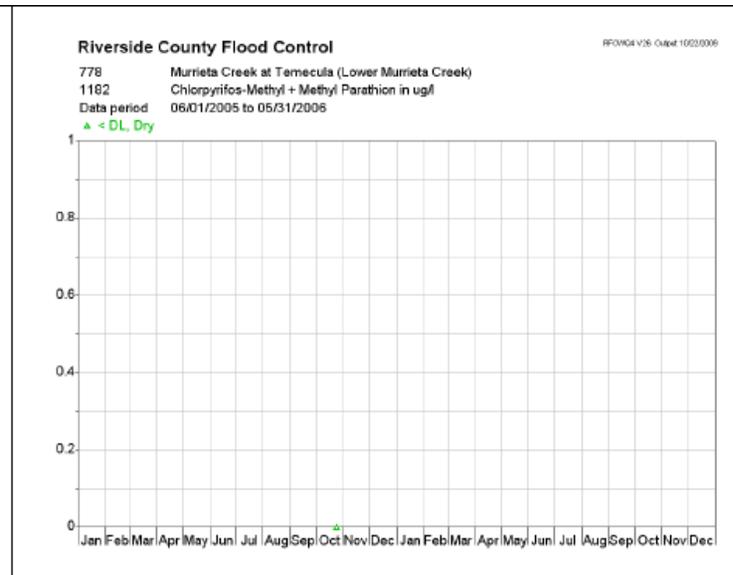
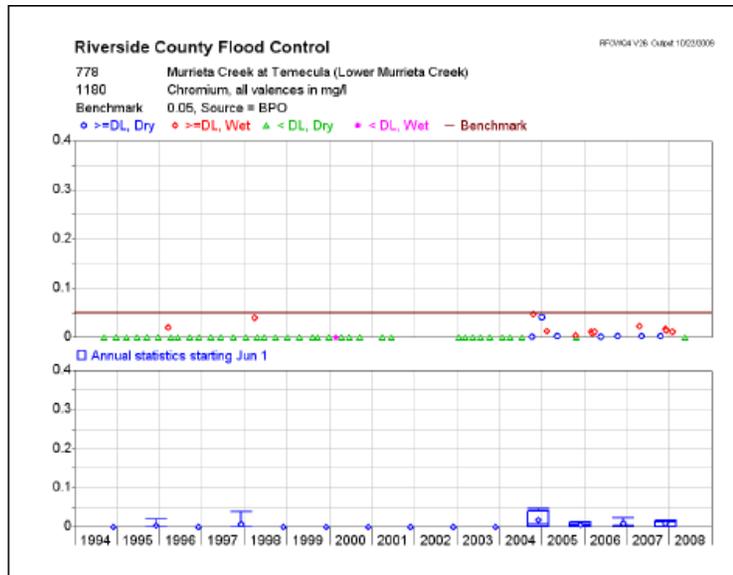


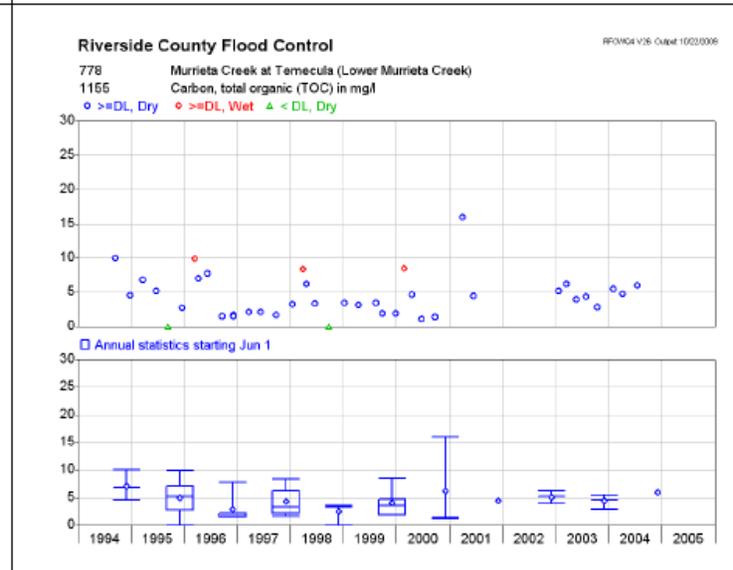
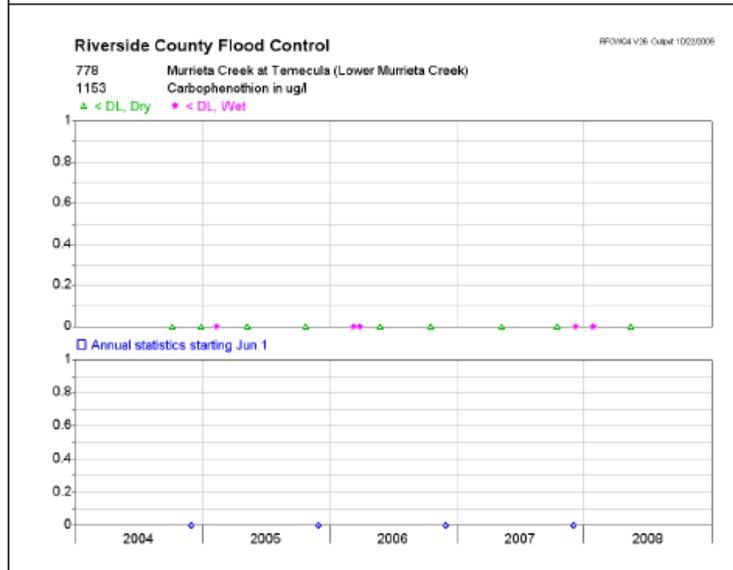
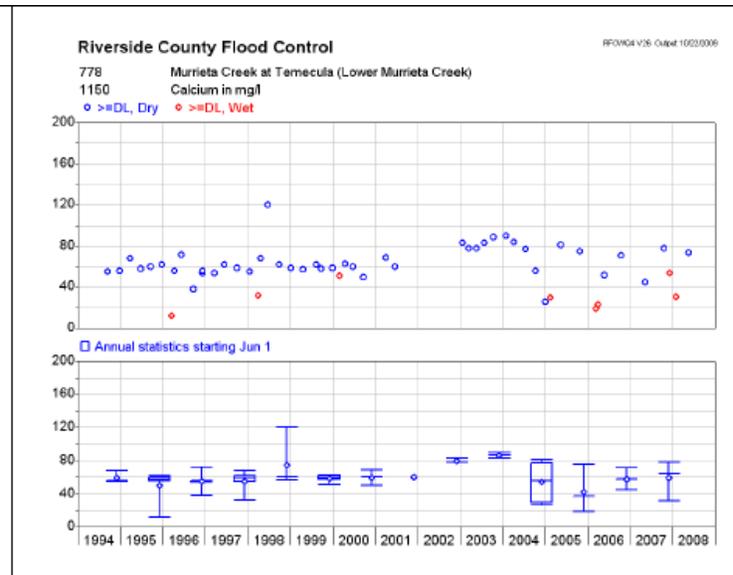
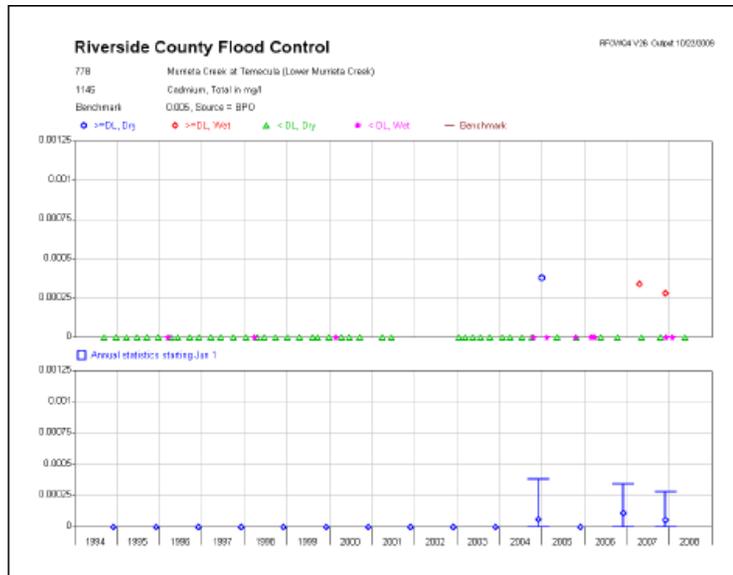


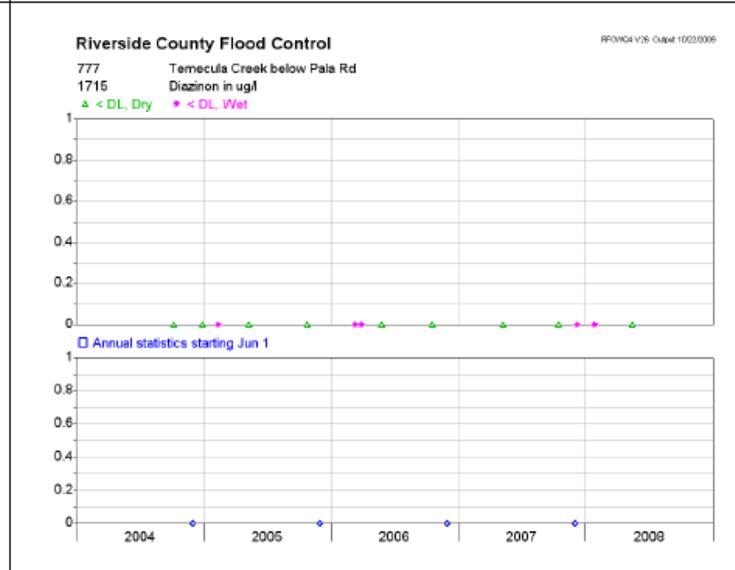
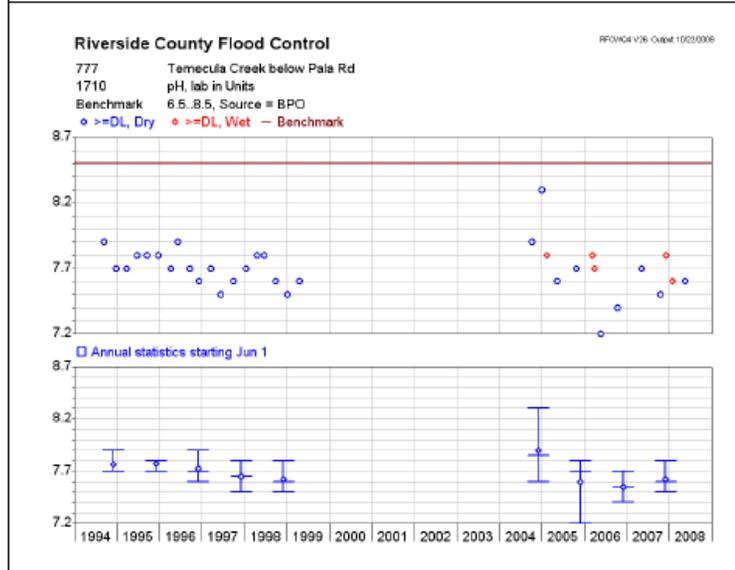
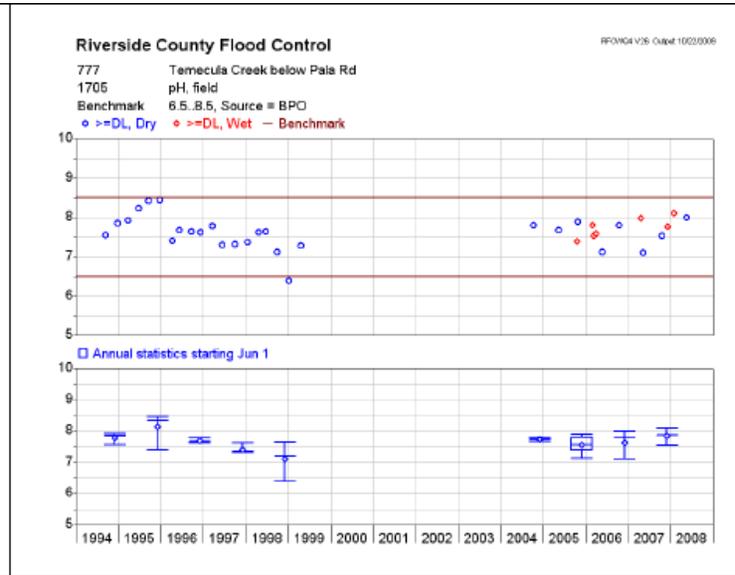
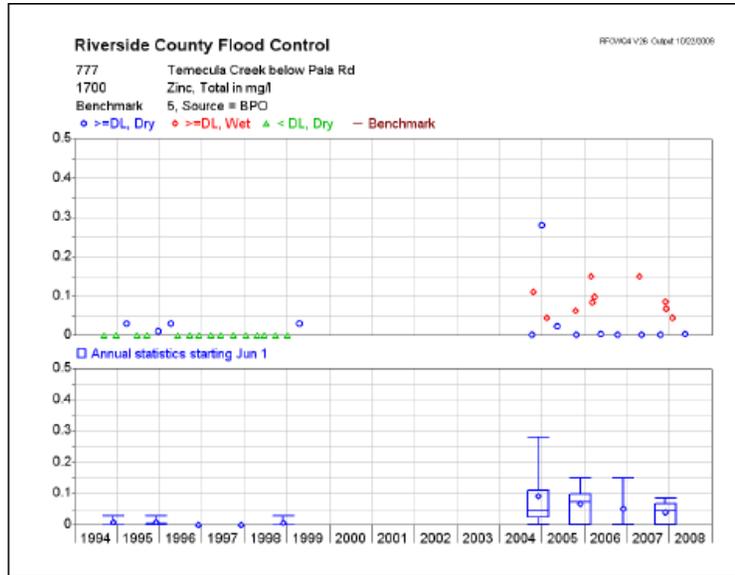
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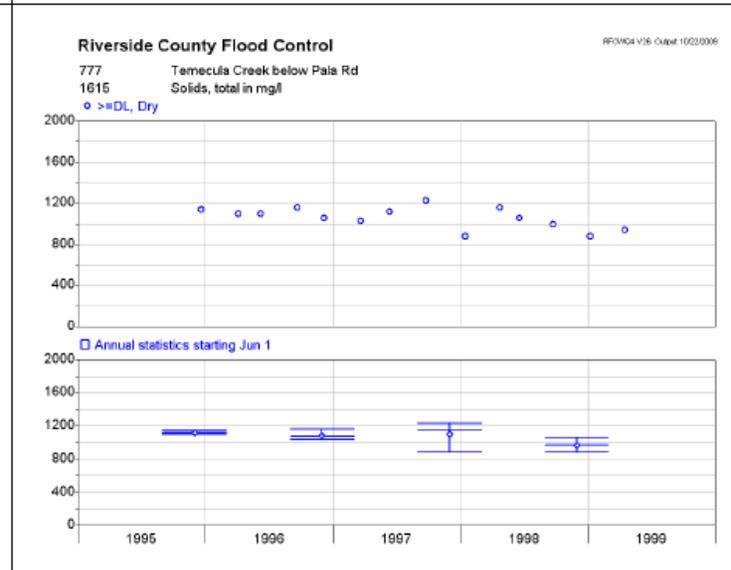
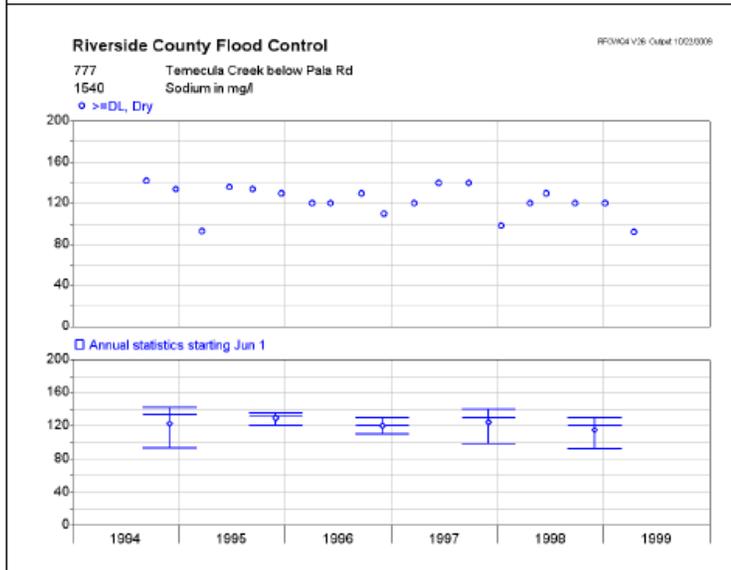
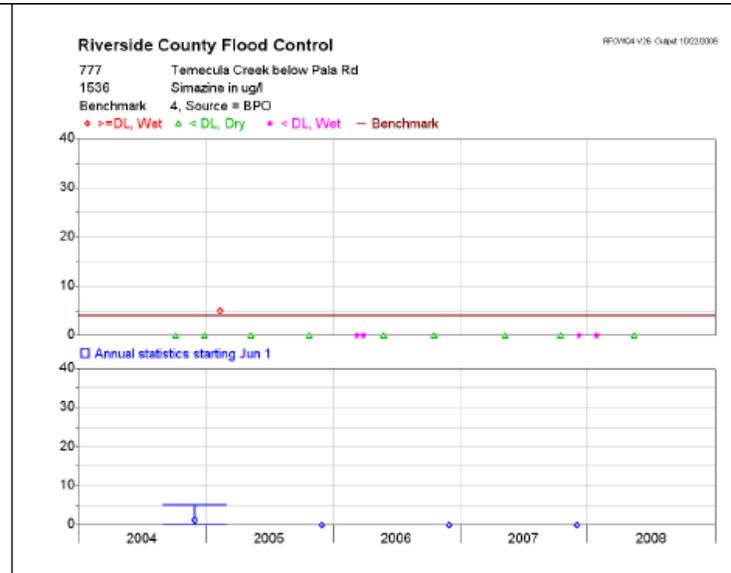
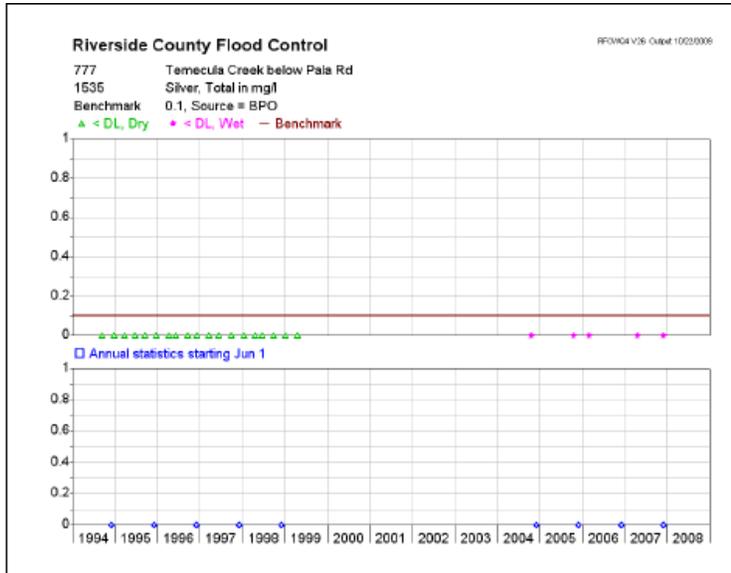
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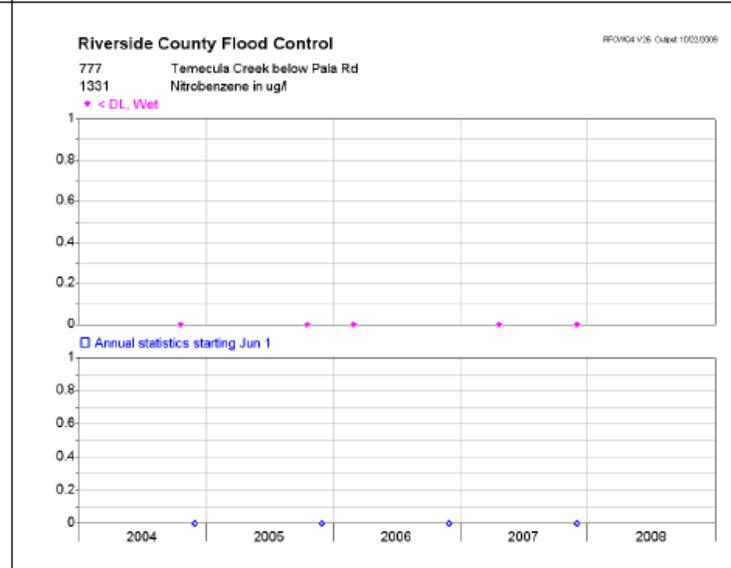
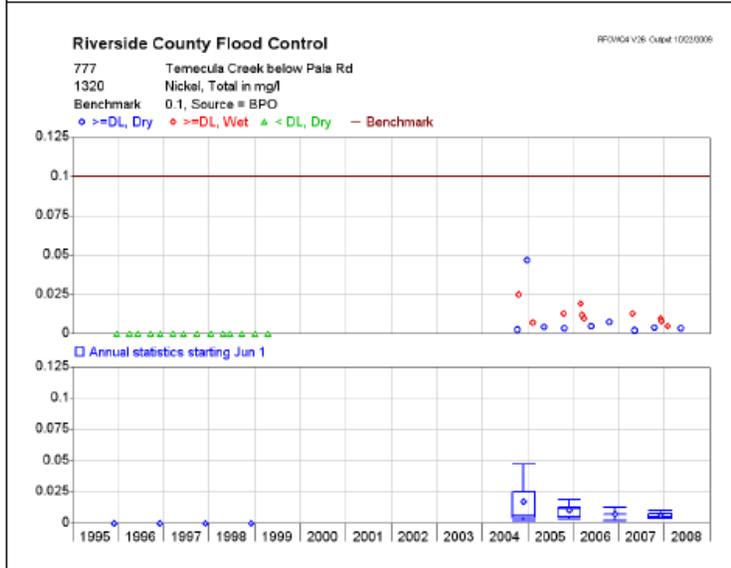
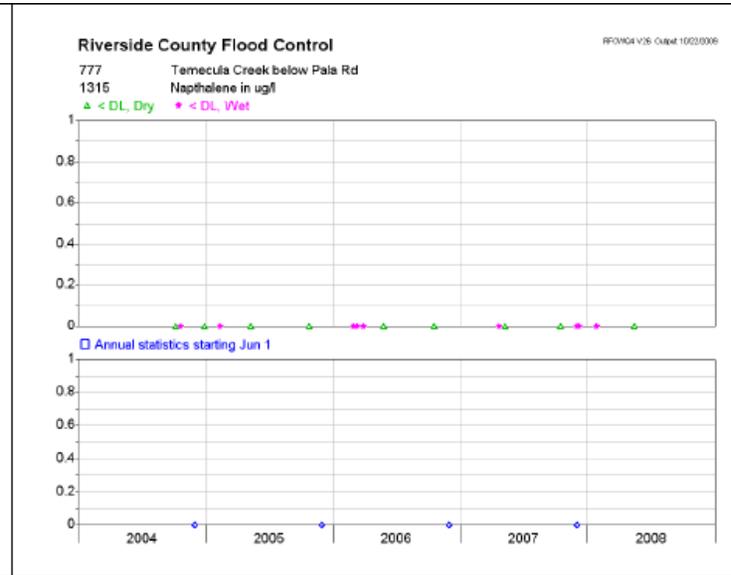
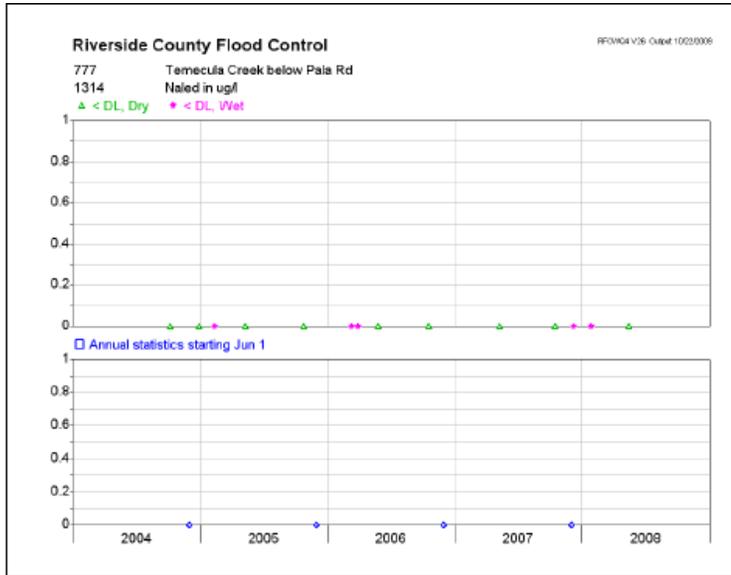




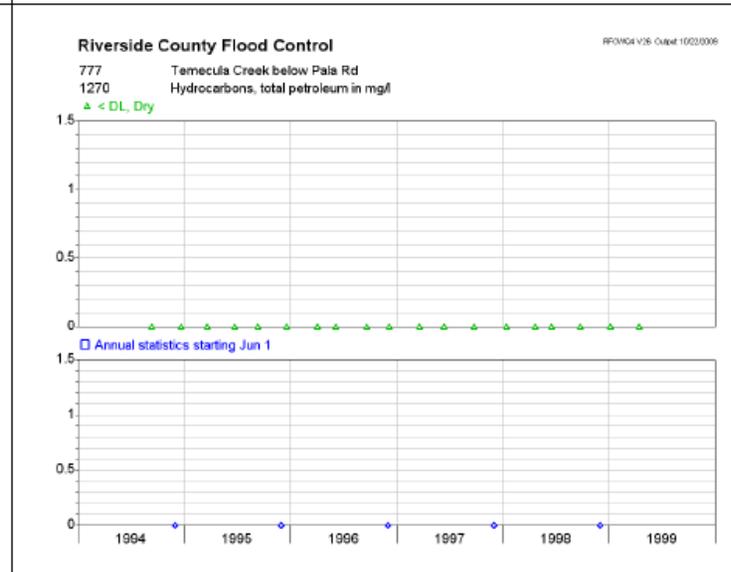
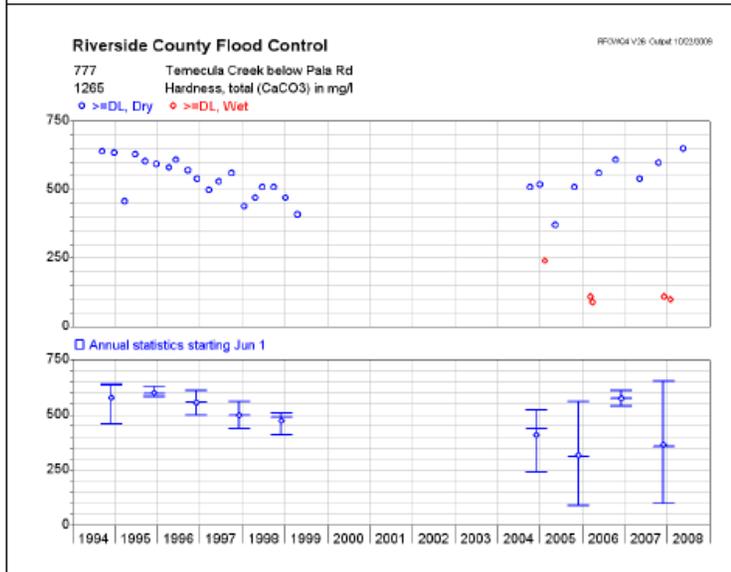
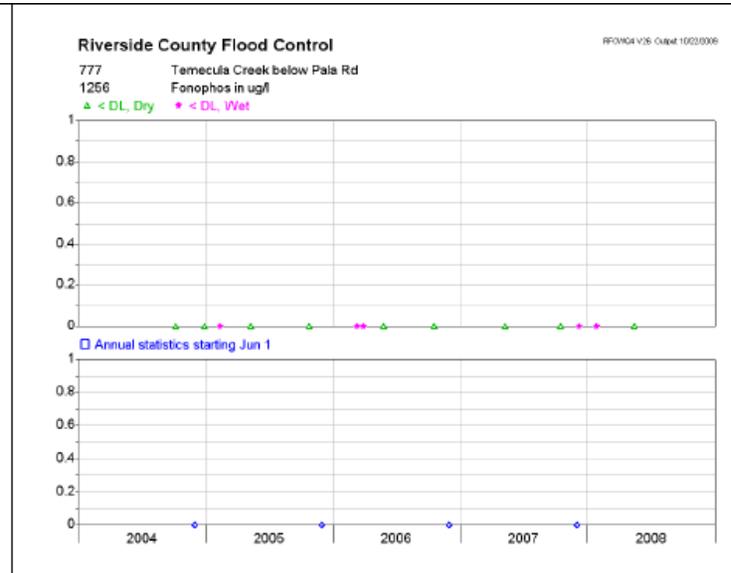
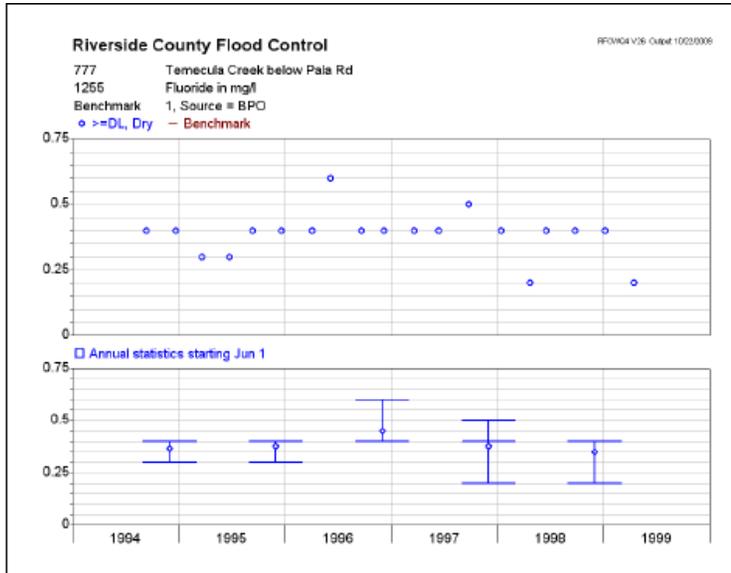


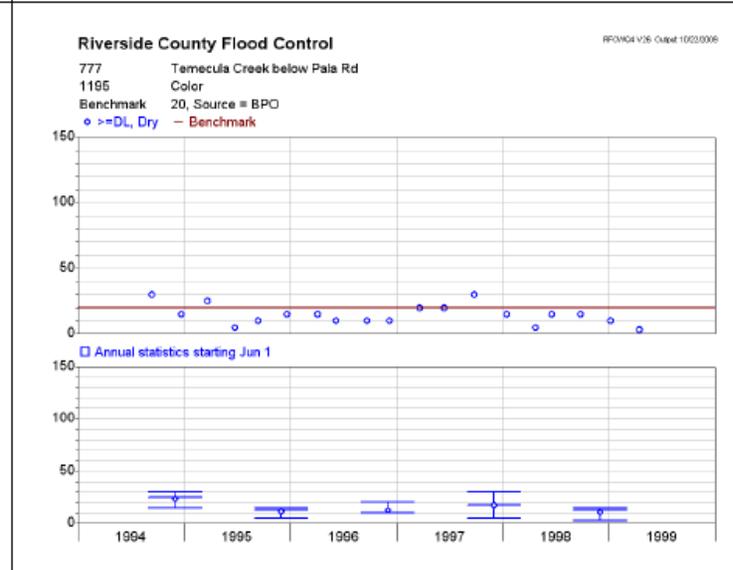
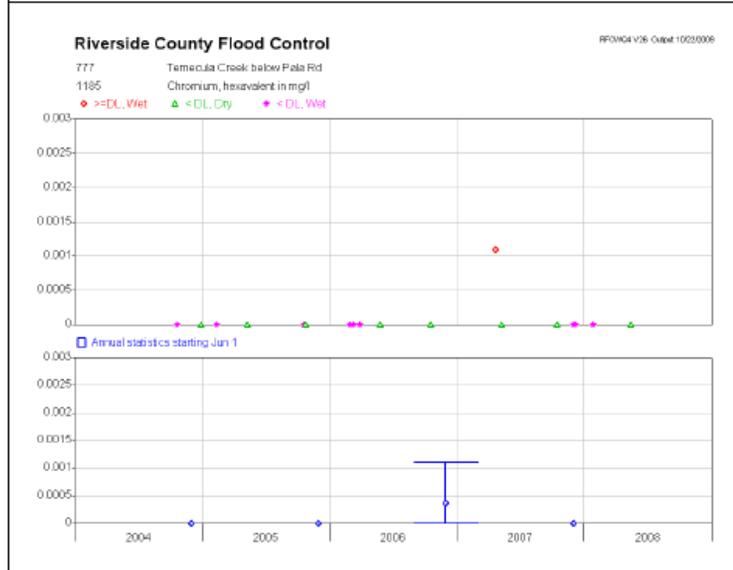
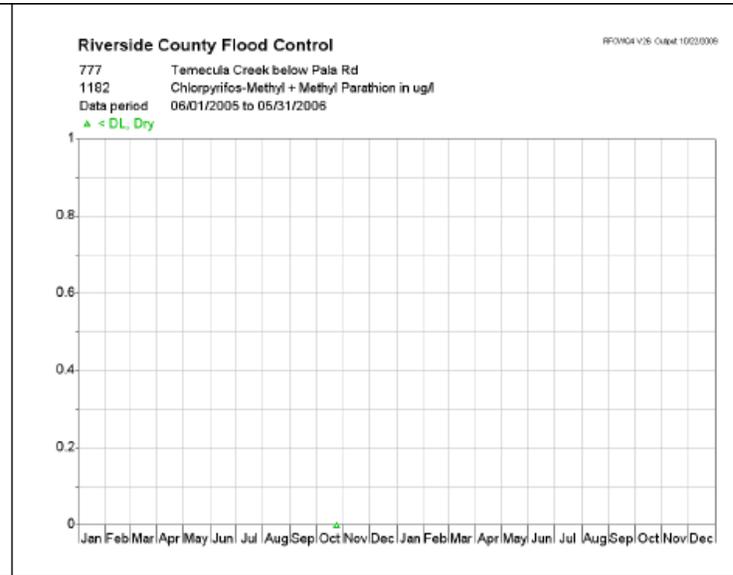
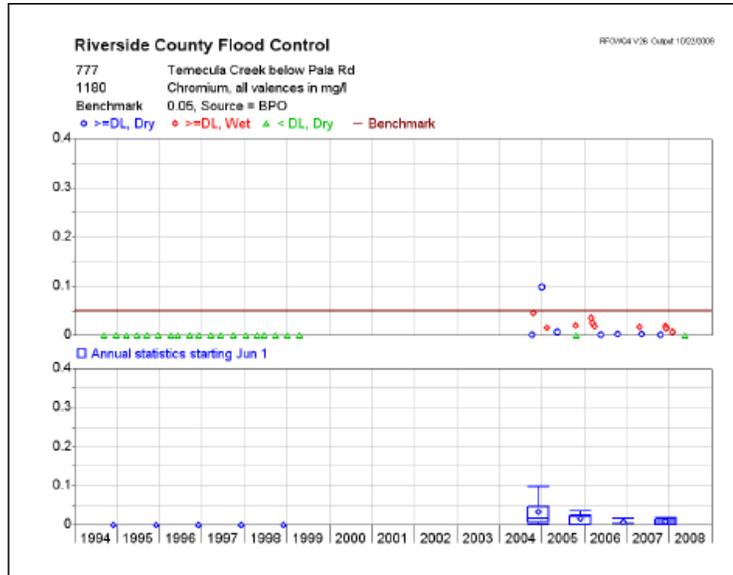


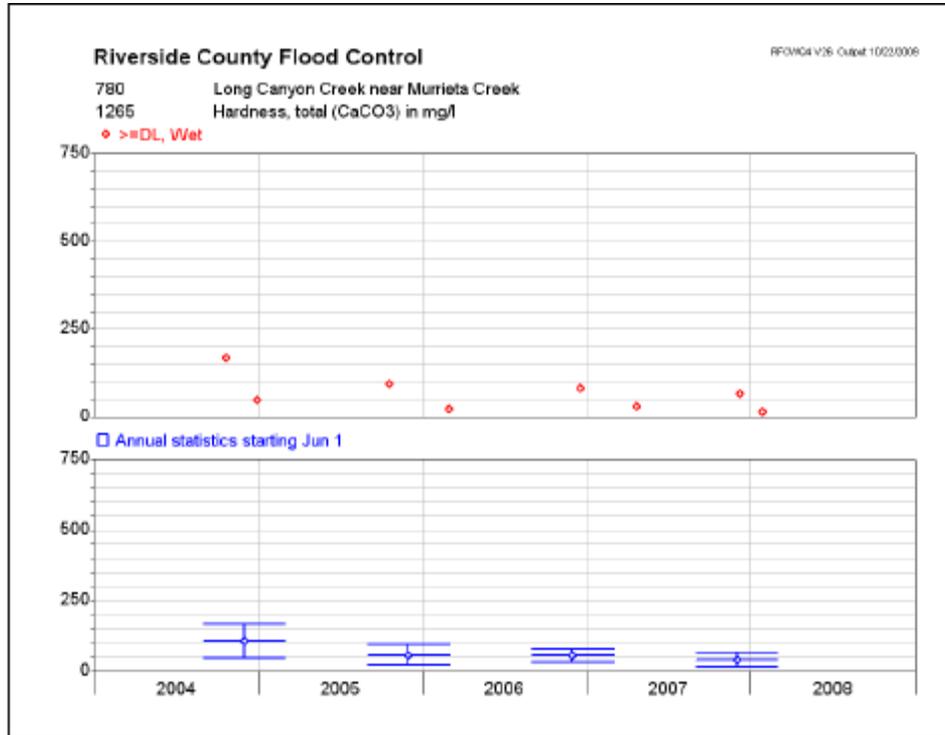












**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
SAN DIEGO REGION**

**FACT SHEET / TECHNICAL REPORT**

**FOR**

**ORDER NO. R9-2010-0016  
NPDES NO. CAS0108766**

**WASTE DISCHARGE REQUIREMENTS**

**FOR**

**DISCHARGES FROM THE  
MUNICIPAL SEPARATE STORM SEWER SYSTEMS (MS4s)  
DRAINING THE COUNTY OF RIVERSIDE,  
THE INCORPORATED CITIES OF RIVERSIDE COUNTY,  
AND THE RIVERSIDE COUNTY FLOOD CONTROL  
AND WATER CONSERVATION DISTRICT  
WITHIN THE SAN DIEGO REGION**

**NOVEMBER 10, 2010**

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**LIST OF ACRONYMS AND ABBREVIATIONS**

ADT	Average Daily Traffic
AMAL	Average Monthly Action Level
AST	Active/Passive Sediment Treatment
BAT	Best Available Technology
BIA	Building Industry Association
BMP	Best Management Practice
Basin Plan	Water Quality Control Plan for the San Diego Basin
CASQA	California Stormwater Quality Association
CCC	California Coastal Commission
CC&Rs	Covenants, Conditions and Restrictions
CDFG	California Department of Fish and Game
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
Colorado River Water Board	California Regional Water Quality Control Board, Colorado River Region
Copermittees	County of Riverside, the 4 incorporated cities within the County of Riverside in the San Diego Region, and the Riverside County Flood Control and Water Conservation District
CWA	Clean Water Act
CWC	California Water Code
CZARA	Coastal Zone Act Reauthorization Amendments of 1990
DAMP	Drainage Area Management Plan
DNQ	Did Not Quantify
ESAs	Environmentally Sensitive Areas
FR	Federal Register
GIS	Geographic Information System
HMP	Hydromodification Management Plan
HU	Hydrologic Unit
IBI	Index of Biotic Integrity
IC/ID	Illicit Connections and Illicit Discharges
JRMP	Jurisdictional Runoff Management Plan
Los Angeles Water Board	California Regional Water Quality Control Board, Los Angeles Region
LID	Low Impact Development
MDAL	Maximum Daily Action Level
MEP	Maximum Extent Practicable
MRP	Receiving Waters Monitoring and Reporting Program
MS4	Municipal Separate Storm Sewer System

**LIST OF ACRONYMS AND ABBREVIATIONS (CONT'D)**

NAL	Non-storm Water Action Levels
ND	Not Detected
NPDES	National Pollutant Discharge Elimination System
NRDC	Natural Resources Defense Council
NURP	Nationwide Urban Runoff Program
OAL	Office of Administrative Law
RCFCD	Riverside County Flood Control and Water Conservation District
Regional Water Board	California Regional Water Quality Control Board
RGOs	Retail Gasoline Outlets
ROWD	Riverside County Copermittees' Report of Waste Discharge (application for NPDES reissuance)
RWL	Receiving Water Limitations
SAL	Storm Water Action Level
Santa Ana Water Board	California Regional Water Quality Control Board, Santa Ana Region
San Diego Water Board	California Regional Water Quality Control Board, San Diego Region
San Francisco Bay Water Board	California Regional Water Quality Control Board, San Francisco Bay Region
SIC	Standard Industrial Classification Code
SIP	State Implementation Plan
SSMP	Standard Storm Water Mitigation Plan
State Water Board	State Water Resources Control Board
SWMP	Storm Water Management Plan
TAC	State Water Resources Control Board Urban Runoff Technical Advisory Committee
TIE	Toxicity Identification Evaluation
TMDL	Total Maximum Daily Load
USEPA	United States Environmental Protection Agency
WDRs	Waste Discharge Requirements
WLA	Waste Load Allocation
WQO	Water Quality Objective
WQBEL	Water Quality Based Effluent Limitations
WQMP	Water Quality Management Plan
WQS	Water Quality Standard
WRMP	Watershed Runoff Management Plan

## **I. FACT SHEET FORMAT**

This Fact Sheet briefly sets forth the principle facts and the significant factual, legal, methodological, and policy questions that the California Regional Water Quality Control Board, San Diego Region (San Diego Water Board) considered in preparing Order No. R9-2010-0016. In accordance with the Code of Federal Regulations (CFR) title 40 parts 124.8 and 124.56 (40 CFR 124.8 and 124.56), this Fact Sheet includes, but is not limited to, the following information:

- A. Contact information
- B. Public process and notification procedures
- C. Background information
- D. Permitting approach
- E. Economic issues
- F. Legal authority
- G. Findings
- H. Directives

Tentative Order No. R9-2010-0016 was distributed for public review on July 23, 2010. The San Diego Water Board accepted written comments on the Tentative Order until September 7, 2010. A public hearing was subsequently held on November 10, 2010 to receive oral comments from interested persons.

The San Diego Water Board's files applicable to the issuance of Order No. R9-2010-0016 are incorporated into the administrative record in support of the findings and requirements of Order No. R9-2010-0016.

**II. CONTACT INFORMATION****San Diego Water Board**

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The Order and other related documents can be downloaded from the San Diego Water Board website at  
[http://www.waterboards.ca.gov/sandiego/water\\_issues/programs/stormwater/rsd\\_stormwater.shtml](http://www.waterboards.ca.gov/sandiego/water_issues/programs/stormwater/rsd_stormwater.shtml)

All documents referenced in this Fact Sheet and in Order No. R9-2010-0016 are available for public review at the San Diego Water Board office, located at the address listed above. Public records are available for inspection during regular business hours, from 8:00 am to 5:00 pm Monday through Friday. To schedule an appointment to inspect public records, contact the San Diego Water Board Records Management Officer at 858-467-2952.

**Copermittees**

1. City of Murrieta	4. County of Riverside
2. City of Temecula	5. Riverside County Flood Control and Water Conservation District
3. City of Wildomar	

### III. PUBLIC PROCESS AND NOTIFICATION PROCEDURES

The San Diego Water Board followed the schedule listed below for the preparation of Order No. R9-2010-0016:

- A. In December 2008, the San Diego Water Board met with the Copermitees to discuss the Report of Waste Discharge (ROWD) required by Order No. R9-2004-001.
- B. On January 15, 2009, the San Diego Water Board received the ROWD for the permit renewal.
- C. On October 29, 2009, the San Diego Water Board received the 2008-09 annual reports from the Copermitees for the existing permit.
- D. On February 8, 2010, the San Diego Water Board notified all known interested parties that an electronic email listserv had been established to provide information and notices on the reissuance of the municipal storm water NPDES permit for southern Riverside County.
- E. On February 18, 2010 the San Diego Water Board provided written comments on the ROWD to the Copermitees.
- F. On March 22, 2010, the San Diego Water Board met with the Copermitees to discuss the potential changes to the permit based on the ROWD and annual reports.
- G. Between April 22 and July 23, 2010, the San Diego Water Board met with the Copermitees on a weekly basis to discuss the Copermitees' concerns with the provisions of the Tentative Order.
- H. On July 23, 2010, the San Diego Water Board released the Tentative Order for public review and comment.
- I. Written comments were accepted until September 7, 2010.
- J. A public hearing of the Tentative Order was conducted on November 10, 2010.

#### IV. BACKGROUND

Order No. R9-R9-2010-0016 is the fourth iteration of the storm water permit for the municipal separate storm sewer systems (MS4s) in the Riverside County portion of the San Diego Region. The first permit was adopted in 1990. The San Diego Water Board adopted the second iteration of the permit in 1998. The U.S. Environmental Protection Agency (USEPA) objected to the 1998 permit and reissued the permit in 1999. In 2000, the San Diego Water Board issued an addendum to the 1998 permit and incorporated the USEPA's permit by reference. The San Diego Water Board reissued the third iteration of the permit in 2004.

**Municipal Storm Water Permits are required by the Federal Clean Water Act 1987 Amendments.** The federal Clean Water Act (CWA) was amended in 1987 to address storm water runoff from municipal and industrial dischargers. One requirement of the amendment was that many municipalities throughout the United States were obligated for the first time to obtain National Pollutant Discharge Elimination System (NPDES) permits for discharges of storm water runoff from their MS4s. In response to the CWA amendment (and the pending federal NPDES regulations which would implement the amendment), the San Diego Water Board issued a municipal storm water permit, Order No. 90-46, in July 1990 to the Copermittees for their municipal separate storm sewer system (MS4) discharges.<sup>1</sup>

**The First and Second Term Permits, Order Nos. 90-46 and 98-02, provided maximum flexibility.** San Diego Water Board Order No. 90-46 contained the "essentials" of the 1990 regulations, but the requirements were written in very broad, generic terms. This was done in order to provide the maximum amount of flexibility to the Copermittees in implementing the new requirements (flexibility was, in fact, the stated reason for issuing the permit in advance of the final regulations). From staff's perspective however, "flexibility" in the form of lack of specificity, combined with the Copermittees' lack of funding and political will, also provided the Copermittees with ample reasons to take few substantive steps towards achieving water quality standards. The situation was exacerbated by the San Diego Water Board's own lack of storm water resources for oversight.

**The Third-Term Permit introduced specific requirements.** The regulatory approach incorporated into Order No. R9-2004-001 was a significant departure from the regulatory approach of the First and Second-Term Permits. Where San Diego Water Board Order Nos. 90-46 and 98-02 included broad, nonspecific requirements in order to provide the Copermittees with the maximum amount of flexibility in developing their programs, Order No. R9-2004-001 used detailed, specific requirements which outlined the minimum level of implementation required for the Copermittees' programs. In order to provide the Copermittees with the minimum requirements to meet the

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<sup>1</sup> The 1990 permit was issued to the County of Riverside, the Orange County Flood Control and Water Conservation District, and the City of Temecula. Additional municipalities have been added to the MS4 NPDES permit as they have incorporated.

maximum extent practicable (MEP) standard for storm water of the San Diego Water Board, Order No. R9-2004-001 included more detail to emphasize the strong jurisdictional level programs developed by the Copermittees during the First and Second-Term Permits, as well as including the watershed-level program. The shift in permitting approaches resulted from the San Diego Water Board's conclusion that the lack of specificity in earlier Orders resulted in frequently unenforceable permit requirements, which in turn allowed some Copermittees to only make limited progress in implementing their programs.

**The Third-Term Permit followed the San Diego County and Orange County permit templates.** The shift in regulatory approaches for MS4 permits was first manifested in the 2001 MS4 permit to the owners and operators of San Diego County MS4s (Order No. 2001-01) and subsequently incorporated into the 2002 MS4 permit to the owners and operators of the Orange County MS4s (Order No. R9-2002-0001). The Third-Term Riverside County Permit included similar requirements as the 2001 San Diego County Permit and the 2002 Orange County Permit. Both the San Diego and Orange County Permits were appealed to the State Water Resources Control Board (State Water Board).<sup>2</sup> Minor modifications of each were made by the State Water Board, but the vast majority of the requirements were upheld. The San Diego County permit was also challenged in the Superior Court of the State of California and the Court of Appeal, Fourth Appellate District. Further litigation on the Orange County permit was held pending the precedential decisions on the San Diego Permit. The San Diego Permit was largely upheld in the Superior and Appellate Courts. The State of California Supreme Court declined to hear a final appeal from the Building Industry Association in March 2005. Thus, the Third-Term Riverside County permit requirements remained as slightly modified by the State Water Board.

**The Third-Term Permit was adopted following substantial public participation.** Public participation was extensive during the adoption process of the Third-Term Permit. The draft permit was released for public review and comment on December 15, 2003. Because the proposed requirements for Riverside County were similar to those that had recently been adopted and contested in San Diego County, much of the public participation dialogue echoed the discussions held during the San Diego renewal. A public workshop was held at the Temecula City Hall on January 23, 2004 to answer questions about the Tentative Order for the Third-Term Riverside County permit. A public hearing was held on February 11, 2004 to receive testimony. The public comment period was closed on March 10, 2004. Approximately 165 written and verbal comments were received and responded to during the public workshop, the public hearing, and the written comment period on the Tentative Order for the Third-Term Riverside County permit. Following the extensive public participation process, the San Diego Water Board adopted Order No. R9-2004-001 on July 14, 2004.

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<sup>2</sup> Seven petitions were filed with the State Water Board over the Third-Term Orange County Permit. Six were placed in abeyance. Three of the petitioners sought stays. One stay request was dismissed and one was withdrawn. The active petition and stays were addressed by the State Water Board in Order WQO 2002-0014. That Order stayed provision F.5.f regarding sewage spills and modified Finding No. 26 regarding chronic toxicity.

**Storm water programs have improved under the Third-Term Permit.** Since adoption of Order No. R9-2004-001, the Copermittees' storm water programs have expanded. Audits of the Copermittees' programs and reviews of annual reports exhibit that the Copermittees' jurisdictional programs are largely in compliance with the Order. Some of the efforts currently being conducted on a regular basis by the Copermittees that were not conducted on a widespread basis prior to adoption of Order No. R9-2004-001, include: construction site storm water inspections, industrial and commercial facility storm water inspections, municipal facility storm water inspections, management of storm water quality from new development, development of best management practice (BMP) requirements for existing development, interdepartmental coordination, comprehensive water quality monitoring, and assessment of storm water program effectiveness.

**Significant challenges remain.** When viewed relative to the magnitude of the storm water runoff problem, enormous challenges remain, particularly regarding the management of storm water runoff on a watershed scale. Today, storm and non-storm water discharges from the MS4 continue to be the leading cause of water quality impairment in the San Diego Region.<sup>3</sup> Since 1998, the number of impaired water bodies in the Riverside County portion of the San Diego Region on the CWA section 303(d) List of Water Quality Impaired Segments (303(d) List) has increased with each new list (i.e. new impaired water bodies listed on the 2002, 2006, and 2008 303(d) Lists). The Copermittees' monitoring data exhibits persistent exceedances of water quality objectives in the Santa Margarita watershed.<sup>4</sup> The Santa Margarita watershed also has conditions that are frequently toxic to aquatic life. Bioassessment data from the watersheds further reflects these conditions, finding that macroinvertebrate communities in creeks have widespread Poor to Very Poor Index of Biotic Integrity (IBI) ratings.

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<sup>3</sup> The potential sources of impairments are identified on the CWA section 303(d) list of impaired water bodies for the San Diego Region.

<sup>4</sup> Data is provided in annual reports to the San Diego Water Board. A summary of data collected during the Third-Term Permit is provided in the Riverside County Copermittees' application for permit reissuance. That summary is available on-line at:

[http://www.waterboards.ca.gov/sandiego/water\\_issues/programs/stormwater/rsd\\_stormwater.shtml](http://www.waterboards.ca.gov/sandiego/water_issues/programs/stormwater/rsd_stormwater.shtml)

## **V. PERMITTING APPROACH (PROGRAM INTEGRATION, FLEXIBILITY, AND DETAIL)**

The Order contains an increased emphasis on storm water discharge management on a watershed basis. This shift towards increased watershed management is consistent with planning efforts conducted by the San Diego Water Board regarding reissuance of the San Diego Permit (Order No. R9-2007-0001) and Orange County Permit (Order No. R9-2009-0002). This shift reflects recognition of the maturity of the storm water programs since they began implementing the Third-Term Permit. Addressing storm water discharge management on a watershed basis is only possible if effective jurisdictional programs have been established, and maintaining effective jurisdictional programs is crucial to the success of watershed-focused management.

There are several reasons for this shift in emphasis. An emphasis on watersheds is necessary to shift the focus of the Copermittees from program development and implementation to water quality results. After over 20 years of Copermittee program implementation, it is critical that the Copermittees link their efforts with positive impacts on water quality. Addressing storm water on a watershed scale focuses on water quality results by emphasizing the receiving waters within the watershed. The conditions of the receiving waters drive management actions, which in turn focus on the water quality problems in each watershed.

Focusing on watershed implementation does not mean that the Copermittees must expend funds outside of their jurisdictions. Rather, the Copermittees within each watershed are expected to collaborate to develop a watershed strategy to address the high priority water quality problems within each watershed. They have the option of implementing the strategy in the manner they find to be most effective. Each Copermittee can implement the strategy individually within its jurisdiction, or the Copermittees can group together to implement the strategy throughout the watershed.

While the Order includes a new emphasis on addressing storm water discharges on a watershed basis, the Order includes recognition of the importance of continued program implementation on jurisdictional and countywide levels. The Order also acknowledges that jurisdictional, watershed, and countywide efforts are not always mutually exclusive. For this reason, an attempt has been made to allow for the Copermittees' jurisdictional, watershed, and countywide programs to integrate.

In the Order, the watershed requirements serve as the mechanism for this program integration. Since jurisdictional and countywide activities can also serve watershed purposes, such activities can be integrated into the Copermittees' watershed programs, provided the activities meet certain criteria. In this manner, the Copermittees' activities do not always need to distinguish between jurisdictional, watershed, and countywide levels of implementation. Instead, they can be integrated on multiple levels.

Such opportunities for program integration inherently provide flexibility to the Copermittees in implementing their programs. Program integration can be expanded or minimized as the Copermittees see fit. For example, there is flexibility provided in determining the activities to be integrated and implemented in the watershed programs – watershed-based efforts, countywide efforts, enhanced jurisdictional efforts, or a mixture of the three. Significant flexibility is also provided throughout other portions of the Order.

Copermittees can choose the best management practices (BMPs) to be implemented, or required to be implemented, for development, construction, and existing development areas. Flexibility to determine which industrial or commercial sites are to be inspected is also provided to the Copermittees. Educational approaches are also to be determined by the Copermittees under the Order. Implementation of certain efforts on a countywide basis is largely optional for the Copermittees as well. Significant leeway is also provided to the Copermittees in using methods to assess the effectiveness of their various runoff management programs. This flexibility is further extended to the monitoring program requirements, which allow the Copermittees to develop monitoring approaches to several aspects of the monitoring program.

The challenge in drafting the Order is to provide the flexibility described above while ensuring that the Order is still enforceable. To achieve this, the Order frequently prescribes minimum measurable outcomes, while providing the Copermittees with flexibility in the approaches they use to meet those outcomes. Enforceability has been found to be a critical aspect of the Order. For example, the watershed requirements of Order No. R9-2004-001 were some of the Order's most flexible requirements. This lack of specificity in the watershed requirements resulted in inefficient watershed compliance efforts. This situation reflects a common outcome of flexible permit language. Such language can be unclear and unenforceable, and it can lead to implementation of inadequate programs.

To avoid these types of situations, a balance between flexibility and enforceability has been crafted into the Order. Minimum measurable outcomes are utilized to ensure the Order is enforceable, while the Copermittees are provided flexibility in deciding how they will implement their programs to meet the minimum measurable outcomes.

## VI. ECONOMIC ISSUES

Economic discussions of storm and non-storm water management programs tend to focus on the significant costs incurred by municipalities in developing and implementing the programs. However, when considering the cost of implementing the programs, it is also important to consider the alternative costs incurred by not fully implementing the programs, as well as the benefits which result from program implementation.

The financial crisis and current economic environment has amplified the concerns about the costs incurred by the municipalities in implementing their programs. It is frequently cited by many of the Copermittees as a justification for reducing or modifying the requirements that must be met by their programs. While the current economic environment is a cause for concern in the short term, it also provides an opportunity for these programs to find and implement improvements and efficiencies before the next period of growth and development.

It is very difficult to ascertain the true cost of implementation of the Copermittees' management programs because of inconsistencies in reporting by the Copermittees. Reported costs of compliance for the same program element can vary widely from city to city, often by a very wide margin that is not easily explained.<sup>5</sup> Despite these problems, efforts have been made to identify management program costs, which can be helpful in understanding the costs of program implementation.

### Estimates of Phase I Storm Water Program Costs

The USEPA, the California Regional Water Quality Control Boards (Regional Water Boards), and the State Water Board have attempted to evaluate the costs of implementing municipal storm water programs. The assessments demonstrate that true costs are difficult to ascertain and reported costs vary widely. Nonetheless, they provide a useful context for considering the costs of requirements within Order No. R9-2010-0016. In addition, reported fiscal analyses tend to neglect the costs incurred to municipalities when storm water runoff is not effectively managed. Such costs result from pollution, contamination, nuisance, and damage to ecosystems, property, and human health.

In 1999 USEPA reported on multiple studies it conducted to determine the cost of management programs. A study of Phase II municipalities determined that the annual cost of the Phase II program was expected to be \$9.16 per household. USEPA also studied 35 Phase I municipalities, finding costs to be \$9.08 per household annually, similar to those anticipated for Phase II municipalities.<sup>6</sup>

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<sup>5</sup> LARWQCB, 2003. Review and Analysis of Budget Data Submitted by the Permittees for Fiscal Years 2000-2003. P. 2.

<sup>6</sup> Federal Register / Vol. 64, No. 235 / Wednesday, December 8, 1999 / Rules and Regulations. P. 68791-68792.

A study on Phase I MS4 program cost was also conducted by the California Regional Water Quality Control Board, Los Angeles Region (Los Angeles Water Board), where program costs reported in the municipalities' annual reports were assessed. The Los Angeles Water Board estimated that average per household cost to implement the MS4 program in Los Angeles County was \$12.50.<sup>7</sup> Since the Los Angeles County permit is very similar to Order No. R9-2004-001, this estimate is also useful in assessing general program costs in Riverside County.

The State Water Board also commissioned a study by the California State University, Sacramento to assess costs of the Phase I MS4 program. This study includes an assessment of costs incurred by Phase I MS4s throughout the State to implement their programs. Annual cost per household in the study ranged from \$18-46, with the Fresno-Clovis Metropolitan Area (FCMA) representing the lower end of the range, and the City of Encinitas (in San Diego County) representing the upper end of the range.<sup>8</sup> Included in the study is the City of Corona, which is in Riverside County under the jurisdiction of the California Regional Water Quality Control Board, Santa Ana Region (Santa Ana Water Board).

The annual cost per household for the City of Corona's program was estimated to be \$32, which should be similar to the costs to implement the MS4 programs in the Riverside County portion of the San Diego Region. In contrast, the cost of the City of Encinitas' program, with an annual cost per household estimated to be \$46, may represent the upper range of Riverside County MS4 programs. However, the City of Encinitas's program cost can be considered as the high end of the spectrum for management program costs because the City has a consent decree with environmental groups regarding its program, and City of Encinitas has received recognition for implementing a superior program.

The annual costs for the City of Corona and City of Encinitas were estimated from data collected in 2003-2004. Between 2003 and 2008, the number of households in both cities has increased by approximately 3 percent and 7 percent, respectively.<sup>9</sup> In contrast, between 2003 and 2008 the number of households in the City of Temecula has increased from 23,199 to 31,135 (34 percent)<sup>10</sup> and the City of Murrieta has increased from 22,020 to 32,664 (48 percent).<sup>11</sup> This significant increase in number of households indicates a significant increase in the tax base (sales and property tax) available to fund the implementation of the MS4 programs for the City of Temecula and City of Murrieta, as well as for the County of Riverside and recently incorporated cities.

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<sup>7</sup> Los Angeles Water Board, 2003. Review and Analysis of Budget Data Submitted by the Permittees for Fiscal Years 2000-2003. P. 2.

<sup>8</sup> State Water Board, 2005. NPDES Stormwater Cost Survey. P. ii.

<sup>9</sup> Southern California Association of Governments, Profile of the City of Corona, dated May 2009; and City of Encinitas, Comprehensive Financial Annual Report, dated June 30, 2009.

<sup>10</sup> Southern California Association of Governments, Profile of the City of Temecula, dated May 2009.

<sup>11</sup> Southern California Association of Governments, Profile of the City of Murrieta, dated May 2009.

The average amount spent per household in the Cities of Temecula and Murrieta, however, does not correspond with the increase in the number of households or the amount spent in municipalities in other regions. The table below compares the reported expenditures for the MS4 programs from 2006-07 to 2008-09 compared to number of households in the Cities of Encinitas, Corona, Temecula, and Murrieta.<sup>12</sup>

City	2006-07			2007-08			2008-09		
	\$ Spent	House-holds	\$/House-hold	\$ Spent	House-holds	\$/House-hold	\$ Spent	House-holds	\$/House-hold
Encinitas	\$1,192,174	23,798	\$50.10	\$2,052,671	23,871	\$85.99	\$1,729,962	24,100	\$71.78
Corona	\$988,547	43,000	\$22.99	\$1,151,779	43,482	\$26.49	\$1,162,928*	43,827	\$26.53
Temecula	\$566,952	28,890	\$19.62	\$748,267	30,222	\$24.76	\$534,492	31,135	\$17.17
Murrieta	\$186,377	30,237	\$6.16	\$258,247	31,758	\$8.13	\$541,180*	32,664	\$16.56

It is important to note that the program costs reported above may not include costs incurred by other departments or programs that may support the MS4 permit programs. The costs only represent the funds spent by each municipality as reported in their jurisdictional program annual reports. In any case, the figures in the table above illustrate the disparity in the amounts reportedly budgeted and spent for the programs in the Riverside County portion of the San Diego Region in comparison to the amounts budgeted and spent in the Santa Ana Region and in the San Diego County portion of the San Diego Region.

It is also important to note that reported program costs are not all attributable to compliance with MS4 permits. Many program components, and their associated costs, existed before any MS4 permits were ever issued. For example, street sweeping and trash collection costs cannot be solely or even principally attributable to MS4 permit compliance, since these practices have long been expected from and implemented by municipalities.

Therefore, true program cost resulting from MS4 permit requirements is some fraction of reported costs. The California State University, Sacramento study found that only 38 percent of program costs are new costs fully attributable to MS4 permits. The remainder of the program costs was either pre-existing or resulted from enhancement of pre-existing programs.<sup>13</sup> In 2000, the County of Orange found that even lesser amounts of program costs are solely attributable to MS4 permit compliance, reporting that the amount attributable to implement the County of Orange Drainage Area Management Plan (DAMP), was less than 20 percent of the total budget. The remaining 80 percent was attributable to pre-existing programs.<sup>14</sup>

<sup>12</sup> Amount (\$) Spent figures are the actual expenditures reported in the 2006-07, 2007-08, and/or 2008/09 Annual Reports for the jurisdictional programs for each municipality (figures with \* are estimated/budgeted expenditures). Number of households derived from SCAG 2009 profiles of Corona, Temecula, and Murrieta, and from City of Encinitas 2009 Financial Annual Report.

<sup>13</sup> State Water Board, 2005. NPDES Stormwater Cost Survey. P. 58.

<sup>14</sup> County of Orange, 2000. A NPDES Annual Progress Report. P. 60. More current data from the County of Orange is not used in this discussion because the County of Orange no longer reports such information.

## Estimating Costs of Reissued Storm Water Permits

The vast majority of costs that will be incurred as a result of implementing Order No. R9-2010-0016 is not new. Storm water management programs have been in place in Riverside County for over 15 years. As shown in the discussion above, the amount spent for MS4 Permit compliance per household in the municipalities in the Riverside County portion of the San Diego Region is already low compared to other regions. Any increase in cost to the Copermittees, however, is still expected to be incremental in nature. Since Order No. R9-2010-0016 “fine tunes” the requirements of Order No. R9-2004-001, these cost increases are expected to be modest.

Where there may be additional elements that will incur new costs, the Riverside County Copermittees are given the time to develop the budgets and funding mechanisms to phase those elements into their programs. Additionally, development of these additional elements by the Riverside County Copermittees will have the benefit of the experiences and work already done by the San Diego County and Orange County Copermittees.

The anticipated costs of program changes are difficult to estimate because of the flexibility inherent within the Permit and the recognition that program modifications will vary among the municipalities in response to the specific needs of the local and watershed programs. In other words, the Permit is intended to allow each Copermittee to de-emphasize some program components and strengthen others based on the experience of the jurisdictional programs.

The changes in Order No. R9-2010-0016 reflect the iterative process of BMP implementation and the necessarily adaptive nature of storm water management that is expected by the USEPA. In 1996, USEPA recognized that changes to MS4 programs would occur during the reapplication period based on new information on the relative magnitude of a problem, new data on water quality impacts of the storm water discharges, and experience gained under the prior permit.<sup>15</sup> Some changes have been proposed by the Copermittees in the permit reapplication package, and others have been included because the San Diego Water Board considers those measures necessary and feasible to protect water quality from the effects of MS4 discharges.

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<sup>15</sup> Federal Register / Vol. 61, No. 155 / Friday, August 9, 1996 / Rules and Regulations. Interpretive policy memorandum on reapplication requirements for MS4s.

## Other Economic Considerations

Economic considerations of management programs cannot be limited only to program costs. Evaluation of programs requires information on the implementation costs and information on the benefits derived from environmental protection and improvement.<sup>16</sup> Attention is often focused on program costs, but the programs must also be viewed in terms of their value to the public.

For example, household willingness to pay for improvements in fresh water quality for fishing and boating has been estimated by USEPA to be \$158-210.<sup>17</sup> This estimate can be considered conservative, since it does not include important considerations such as marine waters benefits, wildlife benefits, or flood control benefits. The California State University, Sacramento study reports that the annual household willingness to pay for statewide clean water is approximately \$180.<sup>18</sup> When viewed in comparison to household costs for existing management programs, household willingness to pay estimates exhibit that per household costs incurred by the Riverside County Copermittees to implement their management programs are very low.

Placing a value on good water quality in receiving waters is very difficult. The Santa Margarita River is one of the few remaining natural gorge rivers in southern California, with approximately 70 species of special concern (rare, threatened, or endangered) regularly inhabiting the watershed, including 30 that are currently protected under the Federal Endangered Species Act.<sup>19</sup> The Upper Santa Margarita Watershed provides significant habitat and recreation opportunities. In addition, residents and businesses in the Upper Santa Margarita Watershed rely heavily of local water for drinking, agriculture, and industrial supply.

Often the value of receiving waters with good water quality manifests in other forms, such as tourism, recreational opportunities, and increased property values. When surface waters are degraded, thereby degrading the habitat, the public loses the aesthetic value and benefit of being able to use the area in and around the water. Surface waters that are able to support the beneficial uses designated in the Water Quality Control Plan for the San Diego Basin (Basin Plan) can sustain plants and wildlife that can attract visitors and residents, providing aesthetic, recreational, as well as monetary value to the public. At this time, however, there have been no studies for the Riverside County portion of the San Diego Region to quantify the added value that surface waters with healthy water quality can provide.

It is also important to consider the benefits of management programs in conjunction with their costs. A study conducted by the University of Southern California and University of California, Los Angeles assessed the costs and benefits of implementing

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<sup>16</sup> Ribaldo M.O. and D. Heelerstein. 1992. *Estimating Water Quality Benefits: Theoretical and Methodological Issues*. U.S. Department of Agriculture. Technical Bulletin No. 1808.

<sup>17</sup> Federal Register / Vol. 64, No. 235 / Wednesday, December 8, 1999 / Rules and Regulations. P. 68793.

<sup>18</sup> State Water Board, 2005. NPDES Stormwater Cost Survey. P. iv.

<sup>19</sup> Stein, E. and Ambrose, R. 1998. Cumulative Impacts of Section 404 Clean Water Act Permitting on the Riparian Habitat of the Santa Margarita, California Watershed. *Wetlands*, Vol. 18, No. 3.

various approaches for achieving compliance with the MS4 permits in the Los Angeles Region. The study found that non-structural systems would cost \$2.8 billion but provide \$5.6 billion in benefit. If structural systems were determined to be needed, the study found that total costs would be \$5.7 to \$7.4 billion, while benefits could reach \$18 billion.<sup>20</sup> Costs are anticipated to be borne over many years – probably ten years at least. As can be seen, the benefits of the programs are expected to considerably exceed their costs. Such findings are corroborated by USEPA, which found that the benefits of implementation of its Phase II storm water rule would also outweigh the costs.<sup>21</sup>

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<sup>20</sup> Los Angeles Water Board, 2004. Alternative Approaches to Stormwater Control.

<sup>21</sup> Federal Register / Vol. 64, No. 235 / Wednesday, December 8, 1999 / Rules and Regulations. P. 68791.

## VII. LEGAL AUTHORITY

The following statutes, regulations, and Water Quality Control Plans provide the basis for the requirements of Order No. R9-2010-0016: Clean Water Act (CWA), California Water Code (CWC), Title 40 of the Code of Federal Regulations (40 CFR) Parts 122, 123, 124 (National Pollutant Discharge Elimination System Permit Application Regulations for Storm Water Discharges, Final Rule), Part II of 40 CFR Parts 9, 122, 123, and 124 (National Pollutant Discharge Elimination System – Regulations for Revision of the Water Pollution Control Program Addressing Storm Water Discharges; Final Rule), Water Quality Control Plan – Ocean Waters of California (California Ocean Plan), Water Quality Control Plan for the San Diego Basin (Basin Plan), 40 CFR 131 Water Quality Standards; Establishment of Numeric Criteria for Priority Toxic Pollutants for the State of California; Rule (California Toxics Rule), and the California Toxics Rule Implementation Plan.

The legal authority citations below generally apply to directives in Order No. R9-2010-0016, and provide the San Diego Water Board with ample underlying authority to require each of the directives of Order No. R9-2010-0016. Legal authority citations are also provided with each permit section discussion in section IX of this Fact Sheet/Technical Report.

CWA 402(p)(3)(B)(ii) – The CWA requires in section 402(p)(3)(B)(ii) that permits for discharges from municipal storm sewers “shall include a requirement to effectively prohibit non-storm water discharges into the storm sewers.”

CWA 402(p)(3)(B)(iii) – The CWA requires in section 402(p)(3)(B)(iii) that permits for discharges from municipal storm sewers “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.”

40 CFR 122.26(d)(2)(i)(B,C,E, and F) – Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(B,C,E, and F) provide that each Copermittee’s permit application “shall consist of: (i) Adequate legal authority. A demonstration that the applicant can operate pursuant to legal authority established by statute, ordinance or series of contracts which authorizes or enables the applicant at a minimum to: [...] (B) Prohibit through ordinance, order or similar means, illicit discharges to the municipal separate storm sewer; (C) Control through ordinance, order or similar means the discharge to a municipal separate storm sewer of spills, dumping or disposal of materials other than storm water; [...] (E) Require compliance with condition in ordinances, permits, contracts or orders; and (F) Carry out all inspection, surveillance and monitoring procedures necessary to determine compliance and noncompliance with permit conditions including the prohibition on illicit discharges to the municipal separate storm sewer.”

40 CFR 122.26(d)(2)(iv) – Federal NPDES regulation 40 CFR 122.26(d)(2)(iv) provides that the Copermittee shall develop and implement a proposed management program which “shall include a comprehensive planning process which involves public participation and where necessary intergovernmental coordination, to reduce the discharge of pollutants to the maximum extent practicable using management practices, control techniques and system, design and engineering methods, and such other provisions which are appropriate. The program shall also include a description of staff and equipment available to implement the program. [...] Proposed programs may impose controls on a system wide basis, a watershed basis, a jurisdiction basis, or on individual outfalls. [...] Proposed management programs shall describe priorities for implementing controls.”

40 CFR 122.26(d)(2)(iv)(A - D) – Federal NPDES regulations 40 CFR 122.26(d)(2)(iv)(A - D) require municipalities to implement controls to reduce pollutants in storm water runoff from new development and significant redevelopment, construction, and commercial, residential, industrial, and municipal land uses or activities. Prevention of illicit discharges is also required.

CWC 13377 – CWC section 13377 provides that “Notwithstanding any other provision of this division, the State Water Board or the Regional Water Boards shall, as required or authorized by the CWA, as amended, issue waste discharge requirements and dredged or fill material permits which apply and ensure compliance with all applicable provisions of the act and acts amendatory thereof or supplementary, thereto, together with anymore stringent effluent standards or limitation necessary to implement water quality control plans, or for the protection of beneficial uses, or to prevent nuisance.”

Order No. R9-2010-0016 is an essential mechanism for achieving the water quality objectives that have been established for protecting the beneficial uses of the water resources in the San Diego Water Board’s portion of Riverside County. Federal NPDES regulation 40 CFR 122.44(d)(1) requires MS4 permits to include any requirements necessary to “achieve water quality standards established under CWA section 303, including State narrative criteria for water quality.” The term “water quality standards” in this context refers to a water body’s beneficial uses and the water quality objectives necessary to protect those beneficial uses as established in the Basin Plan and antidegradation policies.

## VIII. FINDINGS

The findings of the Order have been modified to reduce repetition in their discussions and address new requirements. Each finding of the Order is provided and discussed below. Additional discussion relative to the findings can be found in section IX of the Fact Sheet, which provides discussions of the Order's directives.

### A. Basis For the Order

**Finding A.1.** This Order is based on the federal Clean Water Act (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 Water Board), the Water Quality Control Plan for the San Diego Basin adopted by the San Diego Water Board (Basin Plan), the California Toxics Rule, and the California Toxics Rule Implementation Plan.

**Discussion of Finding A.1.** In 1987, Congress established CWA Amendments to create requirements for storm water discharges under the NPDES program, which provides for permit systems to regulate the discharge of pollutants. Under the Porter-Cologne Water Quality Control Act, the State Water Board and the nine Regional Water Boards have primary responsibility for the coordination and control of water quality, including the authority to implement the CWA. Porter-Cologne (section 13240) directs the Regional Water Boards to set water quality objectives via adoption of Water Quality Control Plans (Basin Plans) that conform to all State policies for water quality control.

As a means for achieving those water quality objectives, Porter-Cologne (section 13243) further authorizes the Regional Water Boards to establish waste discharge requirements (WDRs) to prohibit waste discharges in certain conditions or areas. Since 1990, the San Diego Water Board has issued area-wide MS4 NPDES permits. The Order will renew Order No. R9-2004-001 to comply with the CWA and attain water quality objectives in the Basin Plan by including numeric storm water action levels to limit the contributions of pollutants conveyed by storm water, and by including numeric non-storm water action levels for dry weather non-storm water discharges designed to ensure that the Copermitees comply with the requirement to effectively prohibit all types of unauthorized non-storm water discharges into their MS4. Further discussions of the legal authority associated with the prohibitions and directives of the Order are provided in section VII this document.

**Finding A.2.** This Order reissues National Pollutant Discharge Elimination System (NPDES) Permit No. CAS0108766, which was first adopted by the San Diego Water Board on July 16, 1990 (Order No. 90-38), and then reissued on May 13, 1998 (Order No. 98-02). On May 26, 1998, the United States Environmental Protection Agency

(USEPA), Region IX, objected to Order No. 98-02 due to concerns regarding Receiving Water Limitations (RWL) language. The USEPA concluded that the RWL language in the permit did not comply with the CWA and its implementing regulations. On April 27, 1999, the USEPA reissued the MS4 permit, which the San Diego Water Board adopted as Addendum No. 1 to Order No. 98-02 on November 8, 2000. On July 14, 2004, the San Diego Water Board adopted the third term MS4 permit, Order No. R9-2004-001. On January 15, 2009, the Riverside County Flood Control and Water Conservation District (RCFCD), as the Principal Copermittee, submitted a Report of Waste Discharge (ROWD) for reissuance of the municipal separate storm sewer system (MS4) Permit.

**Discussion of Finding A.2.** This Order renews National Pollutant Discharge Elimination System (NPDES) Permit No. CAS0108766, which was first issued on July 16, 1990 (Order No. 90-38), and then renewed on May 13, 1998 (Order No. 98-02). The USEPA determined that Order No. 98-02 the Receiving Water Limitations (RWL) language in the permit did not comply with the CWA and its implementing regulations. The USEPA assumed responsibility and reissued the Riverside County MS4 permit on April 27, 1999. Subsequently, the San Diego Water Board adopted Addendum No. 1 to Order No. 98-02 on November 8, 2000, which incorporated the USEPA's permit by reference. On July 14, 2004, the San Diego Water Board adopted the third term MS4 permit, Order No. R9-2004-001. On January 15, 2009, in accordance with Order No. R9-2004-001, the Riverside County Flood Control and Water Conservation District (District), as the Principal Copermittee, submitted a Report of Waste Discharge (ROWD) for reissuance of the municipal separate storm sewer system (MS4) Permit. Supporting information discussing the topic of this finding can be found in section V of this document.

**Finding A.3.** This Order is consistent with the following precedential Orders adopted by the State Water Board addressing MS4 NPDES Permits: Order WQ 99-05, Order WQ 2000-11, Order WQ 2001-15, Order WQO 2002-0014, and Order WQ 2009-0008 (*SWRCB/OCC FILE A-1780*).

**Discussion of Finding A.3.** In recent years the State Water Board has considered several appeals of MS4 permits issued by the Regional Water Boards. In State Water Board Order WQ 99-05, the State Water Board established Receiving Water Limitation Language for MS4 permits. In State Water Board Order WQ 2000-11, the State Water Board addressed design standards for Standard Urban Storm Water Mitigation Plan (SUSMP) requirements. In State Water Board Order WQ 2001-15, the State Water Board addressed Petitions of the San Diego County MS4 Permit issued by the San Diego Water Board in 2001 (San Diego Water Board Order No. 2001-001). In State Water Board Order WQO 2002-0014, the State Water Board addresses Petitions of the Orange County MS4 Permit issued by the San Diego Water Board in 2002 (San Diego Water Board Order No. R9-2002-0001). In State Water Board Order WQ 2009-0008, the State Water Board addresses Petitions of the Los Angeles County MS4 Permit issued by the Los Angeles Water Board in 2006 (Los Angeles Water Board Order No. R4-2006-0074).

**Finding A.4.** The Fact Sheet / Technical Report for the Order No. R9-2010-0016, NPDES No. CAS0108766, Waste Discharge Requirements for Discharges from the MS4s Draining the County of Riverside, the Incorporated Cities of Riverside County, and the Riverside County Flood Control and Water Conservation District within the San Diego Region, includes cited regulatory and legal references and additional explanatory information and data in support of the requirements of this Order. This information, including any supplements thereto, is hereby incorporated by reference into these findings.

**Discussion of Finding A.4.** This Fact Sheet briefly sets forth the principle facts and the significant factual, legal, methodological, and policy questions that the San Diego Water Board considered in preparing Order No. R9-2010-0016, in accordance with the Code of Federal Regulations (CFR) title 40 parts 124.8 and 124.56 (40 CFR 124.8 and 124.56). This Fact Sheet includes general information regarding the watershed and the Copermittees' discharges from their MS4 systems. The discussions in the Fact Sheet include references to applicable statutes and regulations, as well as other supporting documents. The discussions in the Fact Sheet also can clarify the permit writer's intent for requirements that may appear vague or open to multiple interpretations.

## B. Regulated Parties

**Finding B.1.** Each of the persons in Table 1 below, hereinafter called Copermittees or dischargers, owns or operates an MS4, through which it discharges storm water and non-storm water into waters of the United States (U.S.) within the San Diego Region. These MS4s fall 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) a small MS4 that is “interrelated” to a medium or large MS4; or (3) an MS4 which contributes to a violation of a water quality standard; or (4) an MS4 which is a significant contributor of pollutants to waters of the U.S.

The Cities of Murietta, Menifee and Wildomar also discharge into waters of the U.S. in the California Regional Water Quality Control Board, Santa Ana Region (Santa Ana Water Board), so are located partially within both the San Diego and Santa Ana Water Board boundaries. As allowed by California Water Code (CWC) §13228, these Cities submitted written requests to be regulated for MS4 purposes under a permit adopted by only one Water Board. As authorized by CWC § 13228 and pursuant to a written agreement between the San Diego Water Board and the Santa Ana Water Board, the Cities of Murrieta and Wildomar are wholly regulated by the San Diego Water Board under this Order, including those portions of the Cities jurisdiction not within the San Diego Water Board’s region. Similarly, the City of Menifee is wholly regulated by the Santa Ana Water Board under Order No. R8-2010-0033, including those portions of the City of Menifee within the San Diego Water Board’s region.

**Discussion of Finding B.1.** Section 402 of the CWA prohibits the discharge of any pollutant to waters of the United States from a point source, unless that discharge is authorized by a NPDES permit. Though storm water and non-storm water may come from a diffuse source, it is discharged through MS4s, which are point sources under the CWA. Federal NPDES regulation 40 CFR 122.26(a) (iii) and (iv) provide that discharges from MS4s, which service medium or large populations greater than 100,000 or 250,000 respectively, shall be required to obtain a NPDES permit. Federal NPDES regulation 40 CFR 122.26(a)(v) also provides that a NPDES permit is required for “A [storm water] discharge which the Director, or in states with approved NPDES programs, either the Director or the USEPA Regional Administrator, determines to contribute to a violation of a water quality standard or is a significant contributor of pollutants to waters of the United States.” Such sources are then designated into the program.

Included in Table 1 of the Order are the Cities of Murrieta, Temecula, and Wildomar, the County of Riverside, and the Riverside County Flood Control and Water Conservation District. The Cities of Wildomar and Menifee are newly incorporated cities. Both Cities were previously a part of the County of Riverside’s jurisdiction and have an MS4 interrelated to other Copermittee MS4s in the San Diego Region. The boundaries of the Cities of Menifee, Murrieta, and Wildomar fall within the jurisdiction of both the San Diego Water Board and the Santa Ana Water Board.

As requested by the Cities of Menifee, Murrieta, and Wildomar, and pursuant to an agreement between the San Diego and Santa Ana Water Boards as authorized by CWC section 13228, the MS4s of the Cities of Murrieta and Wildomar are to be wholly regulated by the San Diego Water Board under this Order, and the MS4 of the City of Menifee is to be wholly regulated by the Santa Ana Water Board under Order No. R8-2010-0033. The agreement between the San Diego and Santa Ana Water Board to regulate the Cities of Menifee, Murrieta, and Wildomar will be subject to change with sufficient notice, and for good cause.

Other small MS4s also exist within the portion of Riverside County in the San Diego Region. While these small MS4s are not subject to this Order, they are subject to the Phase II NPDES storm water regulations. Over time, these small MS4s will be designated for coverage under the State Water Board's statewide general storm water permit for small MS4s.

### C. Discharge Characteristics

**Finding C.1.** Discharges from the MS4 contain waste, as defined in the CWC, and pollutants that adversely affect the quality of the waters of the State. The discharge from an MS4 is a “discharge of pollutants from a point source” into waters of the U.S. as defined in the CWA.

**Discussion of Finding C.1.** Section 13050(d) of the CWC defines “waste” as “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.” 40 CFR 122.2 defines “point source” as “any discernable, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel or other floating craft from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture or agricultural storm water runoff.” 40 CFR 122.2 defines “discharge of a pollutant” as “Any addition of any pollutant or combination of pollutants to waters of the U.S. from any point source.” Also, the justification for control of pollution into waters of the state can be found at CWC section 13260(a)(1). State Water Board Order No. WQ 2001-15 verifies that discharges from the MS4 contain waste.<sup>22</sup>

The term “urban runoff” has been removed throughout Order No. R9-2010-0016 and replaced with storm water (wet weather) or non-storm water (dry weather) runoff. This clarification is necessary to prevent the misunderstanding that regulation under this permit is subject only to urbanized areas. The term “urban runoff” is not defined in the Code of Federal Regulations or Federal Register in the regulation of Phase I MS4 discharges.

In the Copermittees’ ROWD, a distinction is made between urban land use areas and non-urban land use areas. Urban land use areas include commercial, industrial, *urban residential (less than 1 acre)*, parks and recreation facilities, and streets and roads land use categories. Non-urban land use areas include preserves and open space, agriculture, federal/state/tribal lands/non-County jurisdiction, and *rural residential (greater than 1 acre)*. The ROWD implies that only discharges from the urban land use areas are subject to the requirements of the MS4 Permit, thus rural residential (greater than 1 acre) land use areas would not be subject to the requirements of the MS4 Permit. Rural residential land use areas, however, are subject to the requirements of the MS4 Permit. The removal of the term urban runoff will further clarify the application of the requirements of the MS4 Permit.

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<sup>22</sup> State Water Board, 2001. Order WQ 2001-15. In the Matter of Petitions of Building Industry Association of San Diego County and Western States Petroleum Association: For Review of Waster Discharge Requirements Order No. 2001-01 for Urban Runoff from San Diego County [NPDES No. CAS0108758] Issued by the Regional Board.

The discharge of runoff from an MS4 is a “discharge of pollutants from a point source” into waters of the U.S. as defined in the CWA. The Permit defines runoff as all flows in a storm water conveyance system (MS4 defined below) and consists of the following components:

- (1) storm water (wet weather flows) and
- (2) non-storm water discharges (dry weather flows).

The Permit defines an MS4 as a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains):

- (i) Owned or operated by a State, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, storm water, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or 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 or 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 122.26.

Permit finding D.3.c. includes natural streams that convey runoff as part of the MS4. The presence of an MS4 system is not limited to areas considered to be “urban” in nature. Though the term urban is often referred to specifically as pertaining to cities, runoff means all flows in a storm water conveyance system, regardless of the location of the conveyance system. A conveyance system owned or operated by a State, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State law), may be located in a setting (e.g. unincorporated area, low density residential) that is not considered by the public to be “urban” in nature. These areas are contributing pollutants to the MS4 system that must be addressed. The term runoff applies to all flows in an MS4 system, no matter where the MS4 may be located in regards to incorporated or unincorporated property. Storm water and non-storm water discharges from the rural residential (greater than 1 acre) land use category, characterized as non-urban, that enter into any part of the MS4 system (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains), are also subject to the requirements of the MS4 Permit.

The Code of Federal Regulations (CFR) at 40 CFR 122.26 requires that large and medium MS4s obtain a permit for all discharges from their systems. Appendix I to 40 CFR 122 designates Riverside County as having a large and medium MS4 requiring a permit. The regulations do not differentiate discharges from urban or rural MS4 systems. Rather, the regulations require the permit for all discharges from their systems. In the Final Rule establishing the Phase 1 storm water regulations, the USEPA clarified that all discharges are subject to a permit. On page 48041 of the Final Rule, the USEPA states:

“EPA recognizes that some of the counties addressed by today’s rule have, in addition to areas with high unincorporated urbanized populations, areas that are essentially rural or uninhabited and may not be the subject of planned development. While permits issued for these municipal systems **will cover** (*emphasis added*) *municipal systems discharges in unincorporated portions of the county* (*emphasis added*), it is the intent of EPA that management plans and other components of the programs focus on the urbanized and developing areas of the county.”

So, while the Permit covers all MS4 discharges regardless if that discharge is in an urban or unincorporated area; the Copermittees management program should focus on urbanized areas. Due to the Permit’s requirements, the Copermittees management programs will naturally focus on urbanized areas. Urbanized areas have more industry, construction, pollution and MS4s that require more inspection, maintenance, monitoring, enforcement and complaint follow-up.

USEPA further clarified on page 48041 that all MS4 discharges require permit coverage when addressing highway MS4 systems:

“[The regulations] will result in discharges from separate storm sewer systems serving State highways and other highways through storm sewers ... in unincorporated portions of specified counties being included as part of the large or medium municipal separate storm sewer systems, since all municipal separate storm sewers within the boundaries of these political entities are included.”

In their summary on page 48043, the USEPA states:

“The definition [of MS4] provides that all systems within a geographical area including highways and flood controls will be covered, thereby avoiding fragmented and ill-coordinated programs;”

Neither the State Water Board’s storm water permit for Caltrans (State Water Board Order No. 99-06-DWQ) nor the Los Angeles Water Board’s MS4 permit for Ventura County include the term “urban runoff” in a significant regulatory capacity. The Caltrans permit has one reference to “urban runoff” where the term is used interchangeably with “storm water.” The draft Ventura permit uses the term “urban

runoff” when referring to titles of reference documents, previously adopted management plans and municipal ordinances that may contain the phrase.

The Copermittees have expressed concern regarding the regulation of pollutants from natural, undeveloped areas that enter the MS4 in an unincorporated area. Runoff and pollutants from any source entering the MS4, however, become the responsibility of the Copermittees upon entering the MS4. The assimilation of pollutants from natural, undeveloped areas is different under natural conditions compared to when they are transported through the MS4. The MS4 collection could change a natural sheet flow discharge to a concentrated point discharge. The MS4 does not provide natural infiltration or other pollutant remediation that these flows would receive in an otherwise natural drainage system. The MS4 may concentrate these natural pollutants and flows. In some cases, the MS4 may ultimately discharge the elevated concentrations of natural pollutants and flow rates to waters of the US far from the natural pollutant and flow source, causing a condition of pollution or a violation of water quality standards.

**Finding C.2.** MS4 storm water and non-storm water discharges are likely to contain pollutants that cause or threaten to cause a violation of surface water quality standards, as outlined in the Basin Plan. Storm water and non-storm water discharges from the MS4 are subject to the conditions and requirements established in the Basin Plan for point source discharges.

**Discussion of Finding C.2.** This finding is a clarification regarding the potential for discharges of storm water and non-storm water to impact the Beneficial Uses as described in the Basin Plan. As such these point source discharges require Waste Discharge Requirements (WDRs) to ensure that water quality standards are met. Furthermore, since point source discharges require WDRs, the discharges are subject to the prohibitions, conditions and requirements of the Basin Plan.

In addition, municipal discharges have been split into storm water and non-storm water discharges to represent the differing regulations applicable to storm water and non-storm water, though both types of discharges are likely to contain pollutants.

**Finding C.3.** The most common categories of pollutants in 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), detergents, and trash.

**Discussion of Finding C.3.** The National Urban Runoff Program (NURP) study showed that heavy metals, organics, coliform bacteria, nutrients, oxygen demanding substances (e.g., decaying vegetation), and total suspended solids are found at

relatively high levels in storm water and non-storm water discharges.<sup>23</sup> It also found that MS4 discharges draining residential, commercial, and light industrial areas contain significant loadings of total suspended solids and other pollutants. The Basin Plan goes on to identify runoff pollutants to include lawn and garden chemicals, household and automotive care products dumped or drained on streets, and sediment that erodes from construction sites.<sup>24</sup> In addition, the State Water Board Urban Runoff Technical Advisory Committee (TAC) finds that urban runoff pollutants include sediments, nutrients, oxygen-demanding substances, heavy metals, petroleum hydrocarbons, pathogenic bacteria, viruses, and pesticides.<sup>25</sup> Runoff that flows over streets, parking lots, construction sites, and industrial, commercial, residential, and municipal areas carries these untreated pollutants through storm drain networks directly to the receiving waters of the San Diego Region.

**Finding C.4.** The discharge of pollutants and/or increased flows from MS4s may cause or threaten to cause the concentration of pollutants to exceed applicable receiving water quality objectives and impair or threaten to impair designated beneficial uses resulting in a condition of pollution (i.e. unreasonable impairment of water quality for designated beneficial uses), contamination, or nuisance.

**Discussion of Finding C.4.** The 1992, 1994, and 1996 National Water Quality Inventory Reports to Congress prepared by USEPA showed a trend of impairment in the nation's waters from contaminated storm and non-storm water runoff.<sup>26</sup> The 1998 National Water Quality Inventory Report showed that runoff discharges affect 11 percent of rivers, 12 percent of lakes, and 28 percent of estuaries. Primary sources of impairment to rivers and streams included sediment, bacteria, nutrients, oxygen-depleting substances, metals, and pesticides. The report notes that runoff discharges are the leading source of pollution and the main factor in the degradation of surface water quality in California's coastal waters, rivers, and streams. Furthermore, the NURP study found that pollutant levels from illicit non-storm water discharges were high enough to significantly degrade receiving water quality, and threaten aquatic life, wildlife, and human health.<sup>27</sup>

In addition, the Region's CWA section 303(d) list, which identifies water bodies with impaired beneficial uses within the region, also indicates that the impacts of storm water and non-storm water runoff on receiving waters are significant. Many of the impaired water bodies on the 303(d) list are impaired by constituents that have been found at high levels within storm water and non-storm water runoff by the Riverside County storm water monitoring program.<sup>28</sup> Examples of constituents frequently

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<sup>23</sup> Ibid.

<sup>24</sup> San Diego Water Board, 1994. Water Quality Control Plan, San Diego Basin, Region 9. San Diego.

<sup>25</sup> State Water Board, 1994. Urban Runoff Technical Advisory Committee Report and Recommendations. Nonpoint Source Management Program.

<sup>26</sup> USEPA, 2000. Quality of Our Nation's Waters: Summary of the National Water Quality Inventory 1998 Report to Congress – USEPA 841-S-00-001; Water Quality Conditions in the United States: Profile from the 1998 National Water Quality Inventory Report to Congress – USEPA 841-F-00-006.

<sup>27</sup> USEPA, 1993. Results of the Nationwide Urban Runoff Program, Volume 1 – Final Report.

<sup>28</sup> County of Riverside, 2009. Riverside County Municipal Copermittees 2008-09 Annual Storm Water Program Report, Section 11.

responsible for beneficial use impairment include indicator fecal bacteria, heavy metals, toxicity, pesticides, dissolved solids, turbidity, and nutrients. These constituents have been found at high levels in runoff both regionally and nationwide.<sup>29,30</sup> In addition, impairments may be caused by synergistic effects of multiple contaminants or by pollutants not currently monitored by storm water programs.

**Finding C.5.** Pollutants in runoff can threaten and adversely affect human health. Human illnesses have been clearly linked to recreating near storm drains flowing to receiving waters. Also, runoff pollutants in receiving waters can bioaccumulate in the tissues of invertebrates and fish, which may be eventually consumed by humans.

**Discussion of Finding C.5.** Human illnesses have been clearly linked to recreating near storm drains flowing to coastal waters. A landmark study, conducted by the Santa Monica Bay Restoration Project, found that there was an increased occurrence of illness in people that swam in proximity to a flowing storm drain.<sup>31</sup> A study of south Huntington Beach and north Newport Beach (both located in northern Orange County) found that an illness rate of about 0.8 percent among bathers at those beaches resulted in about \$3 million annually in health-related expenses.<sup>32</sup> Although the Upper Santa Margarita Watershed is inland, the watershed drains to the Pacific Ocean, and pollutants generated in the area may impact coastal waters. For example, the Santa Margarita River system provides the main source of beach sand for the beaches in northern San Diego County.<sup>33</sup> In addition, residents from the Upper Santa Margarita Watershed, who recreate at southern California beaches, benefit from clean water.

Residents and businesses in the Upper Santa Margarita Watershed also rely heavily on local water for drinking, agriculture and industrial supply. Over 40 percent of the water used in the watershed is locally produced.<sup>34</sup> In addition, surface and ground water from the Upper Santa Margarita Watershed flow to Fallbrook in San Diego County and the U.S. Marine Corps Base Camp Pendleton where it is used as part of the municipal and domestic water supply.

According to the USEPA, spilled fuel, solvents, waste oil, paints, and other maintenance fluids pose a risk to the environment, but may be especially harmful if they enter someone's drinking water supply.<sup>35</sup> Discharges of runoff from urban areas were identified by the California Department of Health Services as one of the most

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<sup>29</sup> Ibid.

<sup>30</sup> USEPA, 1983. Results of the Nationwide Urban Runoff Program, Volume 1 – Final Report.

<sup>31</sup> Haile, R.W., et al., 1996. An Epidemiological Study of Possible Adverse Health Effects of Swimming in Santa Monica Bay. Santa Monica Bay Restoration Project.

<sup>32</sup> Dwight, R.H., et al., 2005. Estimating the Economic Burden From Illnesses Associated With Recreational Coastal Water Pollution – A Case Study in Orange County, California. *Journal of Environ. Management* Vol.76. No.2 p.95-103. Also reported in: Los Angeles Times, May 2, 2005. Here's What Ocean Germs Cost You: A UC Irvine Study Tallies the Cost of Treatment and Lost Wages for Beachgoers Who Get Sick.

<sup>33</sup> Shapiro. 1991. Refuge in an urbanized land, the Santa Margarita River: cultural and natural resource value. Santa Margarita Research Foundation, Fallbrook, CA.

<sup>34</sup> Jenks, J. 2002. Santa Margarita River Watershed Annual Watermaster Report: Water Year 2000-2001.

<sup>35</sup> USEPA. 2004. Municipal Storm Water and Ground Water Discharge Regulations in California. F-909-04-004.

prevalent possible contaminating activities for drinking water sources.<sup>36</sup> This issue of potential source water contamination is of fundamental importance, because of the dependence on local water for domestic use in the Santa Margarita Watershed.

Furthermore, runoff pollutants in receiving waters can bioaccumulate in the tissues of invertebrates and fish, which may eventually be consumed by humans. Pollutants such as heavy metals and pesticides, which are commonly found in MS4 runoff, have been found to bioaccumulate and biomagnify in long-lived organisms at the higher trophic levels.<sup>37</sup> Since many aquatic species are utilized for human consumption, toxic substances accumulated in species' tissues can pose a significant threat to public health. USEPA supports this finding when it states, "As runoff flows over areas altered by development, it picks up harmful sediment and chemicals such as oil and grease, pesticides, heavy metals, and nutrients (e.g., nitrogen and phosphorus). These pollutants often become suspended in runoff and are carried to receiving waters, such as lakes, ponds, and streams. Once deposited, these pollutants can enter the food chain through small aquatic life, eventually entering the tissues of fish and humans."<sup>38</sup>

**Finding C.6.** Runoff discharges from MS4s often contain pollutants that cause toxicity to aquatic organisms (i.e. adverse responses of organisms to chemicals or physical agents ranging from mortality to physiological responses such as impaired reproduction or growth anomalies). Toxic pollutants impact the overall quality of aquatic systems and beneficial uses of receiving waters.

**Discussion of Finding C.6.** The Copermittees' monitoring data exhibits frequent toxic conditions in runoff during storm events and dry weather. Toxicity varies significantly within and among sites and over time. The cause of toxicity may vary between locations, dates, and indicator organisms. The actual cause may be influenced by various factors such as development, land uses, runoff management, habitat modification, hydromodification, and native aquatic environment. Some toxicity identification evaluations (TIEs) have identified pyrethroids as a cause of toxicity in the receiving waters.<sup>39</sup>

**Finding C.7.** The Copermittees discharge runoff into lakes, drinking water reservoirs, rivers, streams, creeks, bays, estuaries, coastal lagoons, the Pacific Ocean, and tributaries thereto within one of the eleven hydrologic units (Santa Margarita Hydrologic Unit) comprising the San Diego Region as shown in Table 2. Some of the receiving water bodies have been designated as impaired by the San Diego Water Board in 2009 pursuant to CWA section 303(d).

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<sup>36</sup> Ibid.

<sup>37</sup> Abel, P.D, 1996. Water Pollution Biology.

<sup>38</sup> USEPA, 2000. Storm Water Phase II Compliance Assistance Guide. Washington D.C. EPA 833-R-00-002.

<sup>39</sup> County of Riverside, 2009. Riverside County Municipal Copermittees 2008-09 Annual Storm Water Program Report, Section 11.

**Discussion of Finding C.7.** This finding identifies the major receiving water bodies in the Riverside County portion of the Santa Margarita Hydrologic Unit that are listed as impaired on the CWA section 303(d) List of Impaired Waters (303(d) List). The 2006 303(d) List has been approved by the San Diego Water Board, State Water Board, and USEPA.<sup>40</sup> The 2008 303(d) List was approved by the San Diego Water Board on December 18, 2009 and by the State Water Board on August 4, 2010, and is awaiting USEPA approval.<sup>41</sup> The 303(d) list identifies waters that do not meet water quality standards after applying certain required technology-based effluent limits (“impaired” water bodies). As part of this listing process, states are required to prioritize waters/watersheds for future development of Total Maximum Daily Loads (TMDLs). The listed 303(d) pollutant(s) of concern do not necessarily reflect impairment of the entire corresponding major surface water bodies. The specific impaired portions of each water body are listed in the 2006 and 2008 303(d) Lists.

Since 2002, the number of water bodies and water body – pollutant combinations included on the 303(d) List, located in the Riverside County portion of the San Diego Region, has increased. A comparison of the 2002, 2006, and 2008 303(d) listings are summarized in the following table.

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<sup>40</sup> The approved 2006 Clean Water Act Section 303(d) List of Water Quality Limited Segments is on-line at:  
[http://www.waterboards.ca.gov/tmdl/303d\\_lists2006.html](http://www.waterboards.ca.gov/tmdl/303d_lists2006.html)

<sup>41</sup> The 2008 Clean Water Act Section 303(d) List of Water Quality Limited Segments, approved by the San Diego Water Board and State Water Board, is available on-line at  
[http://www.swrcb.ca.gov/rwqcb9/water\\_issues/programs/303d\\_list/index.shtml](http://www.swrcb.ca.gov/rwqcb9/water_issues/programs/303d_list/index.shtml)

**Comparison of Riverside County 303(d) Listings**

Watershed <sup>1</sup>	2002 303(d) List		2006 303(d) List		2008 303(d) List <sup>2</sup>	
	Listed Water Body	Impairing Pollutants	Listed Water Body	Impairing Pollutants	Listed Water Body	Impairing Pollutants
De Luz Creek HSA (902.21)	NO LISTINGS	NOT APPLICABLE	De Luz Creek	Iron Manganese	De Luz Creek	Iron Manganese Nitrogen Sulfates
Gavilan HSA (902.22)	Sandia Creek	TDS	Sandia Creek	Iron Manganese Nitrogen Sulfates TDS	Sandia Creek	Iron Sulfates TDS
	Santa Margarita River (Upper)	Phosphorus	Santa Margarita River (Upper)	Phosphorus	Santa Margarita River (Upper)	Phosphorus Toxicity
Murrieta HSA (902.32)	NO LISTINGS	NOT APPLICABLE	Long Canyon Creek	TDS	Long Canyon Creek	Chlorpyrifos E. Coli Fecal Coliform Iron Manganese
French HSA (902.33)	NO LISTINGS	NOT APPLICABLE	NO LISTINGS	NOT APPLICABLE	Warm Springs Creek	Chlorpyrifos E. Coli Fecal Coliform Iron Manganese Phosphorus Total Nitrogen as N

**Comparison of Riverside County 303(d) Listings (Cont'd)**

Watershed <sup>1</sup>	2002 303(d) List		2006 303(d) List		2008 303(d) List <sup>2</sup>	
	Listed Water Body	Impairing Pollutants	Listed Water Body	Impairing Pollutants	Listed Water Body	Impairing Pollutants
Gertrudis HSA (902.42)	NO LISTINGS	NOT APPLICABLE	NO LISTINGS	NOT APPLICABLE	Santa Gertrudis Creek	Chlorpyrifos Copper E. Coli Fecal Coliform Iron Phosphorus
Pauba HSA (902.51)	NO LISTINGS	NOT APPLICABLE	Temecula Creek	TDS Phosphorus Nitrogen	Temecula Creek	Chlorpyrifos Copper Phosphorus TDS Toxicity
	NO LISTINGS	NOT APPLICABLE	NO LISTINGS	NOT APPLICABLE	Redhawk Channel	Chlorpyrifos Copper Diazinon E. Coli Fecal Coliform Iron Manganese Nitrogen Phosphorus TDS
Wolf HSA (902.52)	Murrieta Creek	Phosphorus	Murrieta Creek	Phosphorus	Murrieta Creek	Chlorpyrifos Copper Iron Manganese Nitrogen Phosphorus Toxicity

## Notes:

- Hydrologic subarea (HSA) within the Santa Margarita Hydrologic Unit (HU), located in the Riverside County portion of the San Diego Basin.
- Water bodies and pollutants on the 2008 303(d) List were approved by the San Diego Water Board on December 18, 2009 and by the State Water Board on August 4, 2010, and are awaiting final approval by the USEPA.

**Finding C.8.** Trash is a persistent pollutant which can enter receiving waters from the MS4, accumulate and be transported downstream into receiving waters over time. Trash poses a serious threat to the beneficial uses of the receiving waters, including, but not limited to, human health, rare and endangered species, navigation and human recreation.

**Discussion of Finding C.8.** The Copermittees to date have documented high volumes of trash coming from the MS4 system and in receiving waters.<sup>42</sup>

The Basin Plan specifies the following narrative Water Quality Objective (WQO) for Floating Material:

*“Waters shall not contain floating material, including solids, liquids, foams, and scum in concentrations which cause nuisance or adversely affect beneficial uses.”*

The Basin Plan specifies the following narrative WQO for Suspended and Settleable Solids: Material:

*“Waters shall not contain suspended and settleable solids in concentrations of solids that cause nuisance or adversely affect beneficial uses.”*

Additionally, high density urban areas in Southern California have been shown to be responsible for up to 60 percent of the trash that enters receiving waters from the MS4.<sup>43</sup> The retrofitting of existing MS4 systems, such as catch basins, in targeted high trash areas can result in significant reductions in the amount of trash entering receiving waters from the MS4.

Trash, as litter in both solid and liquid form, is consistently found on and adjacent to roadways. A California Department of Transportation Litter Management Pilot Study found that of roadway trash, plastics and Styrofoam accounted for 33 percent of trash by weight, and 43 percent by volume. Further, the study found that approximately 80 percent of the litter associated with roadways was floatable, indicating that, without capture, this litter would enter Waters of the State after a storm event, resulting in the impairment of Beneficial Uses.<sup>44</sup> The study, however, relied upon a mesh capture size of 0.25 inches (6.35 millimeters). This size is too large to effectively capture plastic pre-production pellets (a.k.a. “nurdles”), which are roughly 3 mm in size, and likely underestimated the total contribution of plastics. Furthermore, pre-production plastic pellets, which are small enough to be easily digested, have been found to carry persistent organic pollutants, including PCBs and DDT.<sup>45</sup>

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<sup>42</sup> Fiscal Year 2008-2009 Santa Margarita Watershed Annual Report

<sup>43</sup> The City of Los Angeles Meets Trash TMDLs Compliance with CB Inserts and Opening Covers. August 06, 2008.

<sup>44</sup> California Department of Transportation District 7 Litter Management Pilot Study. June 26, 2000.

<sup>45</sup> Rios, L.M., Moore, C. and Patrick R. Jones. 2007. Persistent organic pollutants carried by synthetic polymers in the ocean environment. *Marine Pollution Bulletin*. Vol. 54.

**Finding C.9.** The Copermittees' water quality monitoring data submitted to date documents persistent violations of Basin Plan water quality objectives for various runoff-related pollutants (indicator bacteria, dissolved solids, turbidity, metals, pesticides, etc.) at various watershed monitoring stations. Persistent toxicity has also been observed at some watershed monitoring stations. In addition, bioassessment data indicate that the majority of the monitored receiving waters have Poor to Very Poor IBI ratings. In sum, the above findings indicate that runoff discharges are causing or contributing to water quality impairments, and are a leading cause of such impairments in Riverside County.

**Discussion of Finding C.9.** The Copermittees have produced data that demonstrates water quality objectives are frequently not met during dry and wet weather. The 2009 Report of Waste Discharge and the 2008-2009 Annual Reports document that receiving water monitoring stations often fail to meet water quality objectives established in the Basin Plan.

Water quality in receiving waters downstream of MS4 discharges fail to meet California Toxics Rule standards<sup>46</sup> and Basin Plan objectives. Data submitted in the MS4 Annual Reports indicate that at various times chemical, bacteria, pesticide, and metal concentrations may exceed water quality objectives in receiving waters in both wet and dry weather conditions.

There are no other significant NPDES permitted discharges to the creeks. For instance, there are no live-stream discharges of treated waste water in the Riverside County area of the Santa Margarita watershed. The few NPDES permits in the watershed are mainly for recycled water which only discharges occasionally during the rainy season. Because the water quality monitoring indicates exceedances of water quality standards and MS4 discharges are the main source of pollutants in the watersheds, it can be inferred that the MS4 discharges are causing or contributing to water quality impairments, and are a leading cause of such impairments in Riverside County.

**Finding C.10.** When natural vegetated pervious ground cover is converted to impervious surfaces such as paved highways, streets, rooftops, and parking lots, the natural absorption and infiltration abilities of the land are lost. Therefore, runoff leaving a developed area is significantly greater in runoff volume, velocity, and peak flow rate than pre-development runoff from the same area. Runoff durations can also increase as a result of flood control and other efforts to control peak flow rates. Increased volume, velocity, rate, and duration of runoff greatly accelerate the erosion of downstream natural channels. Significant declines in the biological integrity and physical habitat of streams and other receiving waters have been found to occur with as little as a 3-5 percent conversion from natural to impervious surfaces. The increased runoff characteristics from new development must be controlled to protect

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<sup>46</sup> The California Toxics Rule criteria promulgated by the USEPA are directly applicable water quality standards for certain priority toxic pollutants in inland surface waters and enclosed bays and estuaries in California.

against increased erosion of channel beds and banks, sediment pollutant generation, or other impacts to beneficial uses and stream habitat due to increased erosive force.

**Finding C.11.** Development creates new pollution sources as human population density increases and brings with it proportionately higher levels of car emissions, car maintenance wastes, municipal sewage, pesticides, household hazardous wastes, pet wastes, trash, etc. which can either be washed or directly dumped into the MS4. As a result, the runoff leaving the developed area is significantly greater in pollutant load than the pre-development runoff from the same area. These increased pollutant loads must be controlled to protect downstream receiving water quality.

**Discussion of Findings C.10 and C.11.** The Natural Resources Defense Council (NRDC) 1999 Report, "*Stormwater Strategies, Community Responses to Runoff Pollution*" identifies two main causes of the storm water pollution problem in developed areas. Both causes are directly related to development:

1. Increased volume and velocity of surface runoff. There are three types of human-made impervious covers that increase the volume and velocity of runoff: (i) rooftop, (ii) transportation imperviousness, and (iii) non-porous (impervious) surfaces. As these impervious surfaces increase, infiltration will decrease, forcing more water to run off the surface, picking up speed and pollutants.
2. The concentration of pollutants in the runoff. Certain industrial, commercial, residential and construction activities are large contributors of pollutant concentrations in storm water runoff. As human population density increases, it brings with it proportionately higher levels of car emissions, car maintenance wastes, municipal sewage, pesticides, household hazardous wastes, pet wastes, trash, etc.

As a result of these two causes, runoff leaving developed areas is significantly greater in volume, velocity, and pollutant load than pre-development runoff from the same area.

By accommodating the traditional approach to storm water management, development has also altered the flow regime (rate, magnitude, frequency, timing, and flashiness of runoff) that supports aquatic and riparian habitats. These hydrologic changes are driven by the loss of water storage capacity in the watersheds,<sup>47</sup> and exacerbated by physical alterations of the stream channel network.<sup>48</sup> This relationship between development and stream channel integrity has been documented nationally and in southern California. The Copermittees support these findings in their 1993 DAMP,<sup>49</sup> which states:

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<sup>47</sup> Konrad, Christopher P. and Derek K. Booth, 2005. *Hydrologic Changes in Urban Streams and Their Ecological Significance*. American Fisheries Society Symposium Vol.47 pp.157-177.

<sup>48</sup> Poff, N.L. et al. 1997. The Natural Flow Regime: A paradigm for river conservation and restoration. *Bioscience* Vol. 47, No. 11, pp.769-784.

<sup>49</sup> Riverside County Copermittees. 1993. Santa Margarita Regional Drainage Area Management Plan.

“Many storm water runoff problems are primarily a consequence of urbanization. Water that previously soaked into the ground, removing pollutants by filtering through soil, and eventually replenishing groundwater supplies, now must flow overland and therefore enters local streams more rapidly. The rapid transport of water increases the erosion of stream banks and hillsides and does not permit filtering pollutants. Sediment carried by storm water runoff can build up in streambeds, harming fish and aquatic habitat. The sediment acts as a transport mechanism for pollutants which adhere to soil particles. Typical urban runoff pollutants found in surface waters include heavy metals, nutrients, petroleum products, sediment, bacteria, chemicals, and litter.”

Hydrologic changes from development also directly and indirectly adversely affect wetlands. Natural wetlands support many beneficial uses and provide important water-quality related ecological services, including pollutant removal, flood attenuation, and groundwater recharge.<sup>50</sup> The Center for Watershed Protection recently provided USEPA with a synthesis of more than 100 scientific studies on the direct and indirect impacts of development, particularly urbanization, on wetlands and the role wetlands play in watershed quality. The report found that the three changes from land development with the most potential to impact wetlands include: Increased storm water runoff; decreased groundwater recharge; and flow constriction.<sup>51</sup> Each of these changes can often be avoided or minimized by implementing low impact development (LID) and hydromodification BMPs.

When Order No. R9-2004-001 was adopted, studies had shown that the level of imperviousness in an area strongly correlates with the quality of nearby receiving waters.<sup>52</sup> One comprehensive study, which looked at numerous areas, variables, and methods, revealed that stream degradation occurs at levels of imperviousness as low as 10 – 20 percent.<sup>53</sup> Stream degradation is a decline in the biological integrity and physical habitat conditions that are necessary to support natural biological diversity. For instance, few urban streams can support diverse benthic communities with imperviousness greater than or equal to 25 percent.<sup>54</sup> To provide some perspective, a medium density, single-family home area can be from 25 percent to 60 percent impervious (variation due to street and parking design).<sup>55</sup>

More recently, a report on the effects of impervious in southern California streams found that local ephemeral and intermittent streams are more sensitive to such effects than streams in other parts of the country. This study, by the Southern California

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<sup>50</sup> Wright, Tiffany, et al. 2006. “Direct and Indirect Impacts of Urbanization on Wetland Quality.” Prepared by the Center for Watershed Protection. Available at: <http://www.cwp.org>. 81p.

<sup>51</sup> Ibid p.26

<sup>52</sup> USEPA, 1999. Part II. 40 CFR Parts 9, 122, 123, and 124. National Pollutant Discharge Elimination System – Regulations for Revision of the Water Pollution Control Program Addressing Storm Water Discharges; Final Rule. Federal Register.

<sup>53</sup> Ibid.

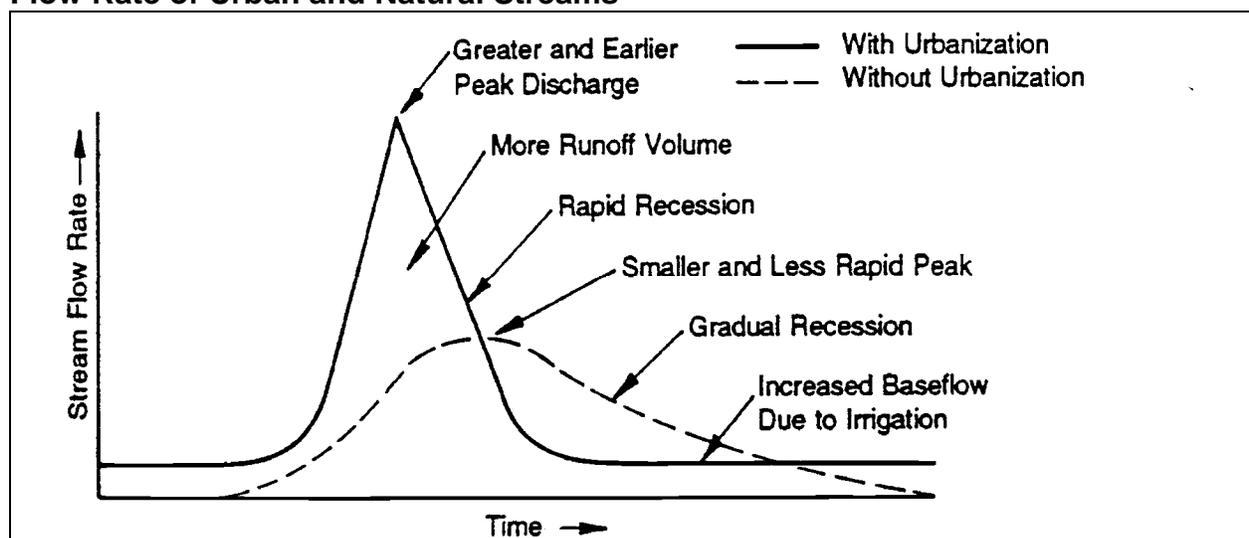
<sup>54</sup> Ibid.

<sup>55</sup> Schueler, T.R., 1994. The Importance of Imperviousness. Watershed Protection Techniques. As cited in 64 FR 68725.

Coastal Water Research Program, estimated a threshold of response at a two to three percent change in percent of impervious cover in a watershed.<sup>56</sup> This threshold is lower than the previously reported estimates by the USEPA that were cited in the Fact Sheet for Order No. R9-2004-001.

To demonstrate the principle of increased volume and velocity of runoff from urbanization, the figure below shows the flow rate of an urban vs. a natural stream. What the figure demonstrates is that urban stream flows have greater peaks and volumes, as well as shorter retention times than natural stream flows. The greater peak flows and volumes result in stream degradation through increased erosion of stream banks and damage to aquatic habitat. The shorter retention times result in less time for sediments and other pollutants to settle before being carried out to the ocean. This sediment, and the associated pollutants it carries, can be a significant cause of water quality degradation.

### Flow Rate of Urban and Natural Streams<sup>57</sup>



Increased volume and velocity of runoff adversely impacts receiving waters and their beneficial uses in many ways. According to the Urban Runoff TAC report,<sup>58</sup> increases in population density and imperviousness result in changes to stream hydrology including:

1. Increased peak discharges compared to pre-development levels;
2. Increased volume of storm water runoff with each storm compared to pre-development levels;

<sup>56</sup> Coleman, Derrick, et al. 2005. *Effect of Increases in Peak Flows and Imperviousness on the Morphology of Southern California Streams*. Technical Report No. 450 of the Southern California Coastal Water Research Project.

<sup>57</sup> Adapted from Schueler, T.R., 1987. *Controlling Urban Runoff: A Practical Manual for Planning and Designing Urban BMPs*. Metropolitan Washington Council of Governments.

<sup>58</sup> State Water Board, 1994. *Urban Runoff Technical Advisory Committee Report and Recommendations*. Nonpoint Source Management Program.

3. Decreased travel time to reach receiving water; increased frequency and severity of floods;
4. Reduced stream flow during prolonged periods of dry weather due to reduced levels of infiltration;
5. Increased runoff velocity during storms due to a combination of effects of higher discharge peaks, rapid time of concentration, and smoother hydraulic surfaces from channelization; and
6. Decreased infiltration and diminished ground water recharge.

Even though the rainfall depths in arid watersheds are lower, watershed development can greatly increase peak discharge rates during rare flood events.<sup>59</sup> A study conducted in arid watersheds around Riverside, CA showed that, over two decades, impervious cover increased from 9 percent to 22 percent, which resulted in an increase of more than 100 percent in the peak flow rate for the two-year storm event. The study also showed that the average annual storm water runoff volume had increased by 115 percent to 130 percent over the same time span.<sup>60</sup>

Flooding caused by the increased volume and velocity of runoff from urbanization in the upper Santa Margarita watershed are clear examples of the effects described above. Disastrous flooding has occurred more frequently in recent years. In the last century, flood events occurred in 1938, 1969, 1980, 1993, 1995, and 1998.<sup>61</sup> In the 1993 flood event, the Cities of Murrieta and Temecula sustained \$12 million dollars in damage, and Camp Pendleton sustained \$88 million in damage. Future flooding is expected to occur more frequently because of continued urban development within the watershed, and flood damages are expected to continue accruing at an estimated annual rate of \$1,780,300.

Prior hydromodification studies in California have shown that the increase in impervious cover, and thus change in runoff volume, velocity, rate, and duration, results in a shift in the range of storms that produce geomorphically significant flows within receiving waters (see above discussion). Additionally, studies in California have determined that ninety percent of the geomorphic “work” done within channels receiving flows from developed areas now occurs from flows below the 10 year peak flow event.<sup>62</sup>

This increased volume, velocity, rate, and duration of runoff greatly accelerates the erosion of the beds and banks within downstream receiving waters. Additionally, storm water flows which runoff directly from impervious surfaces into the MS4 and thus receiving waters prevent the associated runoff of natural sediments which would occur in pre-project conditions. This combined alteration of the physical condition of storm water runoff results in accelerated downstream erosion of receiving water bed and

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<sup>59</sup> Schueler and Holland, 2000. Storm Water Strategies for Arid and Semi-Arid Watersheds (Article 66). The Practice of Watershed Protection. P. 695-706.

<sup>60</sup> Ibid.

<sup>61</sup> U.S. Army Corps of Engineers, 2000. Final EIS/EIR, Murrieta Creek Flood Control Project.

<sup>62</sup> Santa Clara Valley Hydromodification Management Plan. April 21, 2005.

banks. The excessive erosion of stream beds and banks releases pollutants found in soils into receiving waters, degrades macroinvertebrate habitat (see D.2.c), eliminates spawning habitat, reduces associated wetland and riparian habitat, and threatens existing infrastructure adjacent to receiving waters. Bank sloughing within creeks and streams increases the pollutant loading to those receiving waters, particularly for turbidity and phosphorous.<sup>63</sup> In arid environments, accelerated channel erosion has been shown to have synergistic impacts within watersheds. Increased channel erosion within Las Vegas wash has resulted in the loss of over 1,000 acres of wetland and riparian habitat, released additional pollutants into downstream receiving waters, and eliminated in-stream habitat and water quality conditions required for existing threatened and endangered species.<sup>64</sup>

Regarding the impact of development on storm water runoff pollutant loads, the San Diego Water Board's Basin Plan states:

*Nonpoint source pollution is primarily the result of man's uses of land such as urbanization, roads and highways, vehicles, agriculture, construction, industry, mineral extraction, physical habitat alteration (dredging/filling), hydromodification (diversion, impoundment, channelization), silviculture (logging), and other activities which disturb land.<sup>65</sup> As a result, when rain falls on and drains through urban freeways, industries, construction sites, and neighborhoods it picks up a multitude of pollutants. The pollutants can be dissolved in the runoff and quickly transported by gravity flow through a vast network of concrete channels and underground pipes referred to as storm water conveyance systems. Such systems ultimately discharge the polluted runoff, without treatment, into the nation's creeks, rivers, estuaries, bays, and oceans.<sup>66</sup>*

According to the Center for Watershed Protection, urbanization strongly shapes the quality of both surface and ground water in arid and semi-arid regions of the southwest. Since rain events are so rare, pollutants have more time to build up on impervious surfaces compared to humid regions. Therefore, the pollutant concentrations of storm water runoff from arid watersheds tend to be higher than that of humid watersheds.<sup>67</sup> The effect of antecedent rainfall events is demonstrated in a report from the California Department of Transportation (Caltrans) that found the concept of a seasonal first flush is applicable to the southern California climate.<sup>68</sup>

<sup>63</sup> Sekely, A.C., Mulla, D.J. and D.W. Bauer. 2002. Streambank slumping and its contribution to the phosphorus and suspended sediment loads of the Blue Earth River, Minnesota. *Journal of Soil and Water Conservation*. September 2002 vol. 57 no. 5 243-250.

<sup>64</sup> Tuttle, P.L. and E.L. Orsak. 2002. Las Vegas Wash Water Quality and Implications to Fish and Wildlife. U.S. Fish and Wildlife Service.

<sup>65</sup> San Diego Water Board, 1994. Water Quality Control Plan for the San Diego Basin. P. 4-66.

<sup>66</sup> Ibid. P. 4-69 - 4-70.

<sup>67</sup> Schueler and Holland, 2000. Storm Water Strategies for Arid and Semi-Arid Watersheds (Article 66). The Practice of Watershed Protection. P. 695-706.

<sup>68</sup> Stenstrom, Michael and Masoud Kayhanian, 2005. *First Flush Phenomenon Characterization*. Prepared for Caltrans. Report No. CTSW-RT-05-73-02.6 Study jointly performed by UCLA and UCD. Most of the data presented was collected from three highly urbanized highway sites in west Los Angeles. Much effort went into developing a quantitative way of defining the mass first flush. Other aspects include: variability of water quality during storm events, litter characteristics, correlation among constituents, first flush of organics and particle size

**Finding C.12.** Development and urbanization especially threaten environmentally sensitive areas (ESAs), such as water bodies designated as supporting a RARE beneficial use (supporting rare, threatened or endangered species) and CWA 303(d)-impaired water bodies. Such areas have a much lower capacity to withstand pollutant loads than other, more sensitive areas. In essence, development that is ordinarily insignificant in its impact on the environment may become significant in a particularly sensitive environment. Therefore, additional controls to reduce storm water pollutants from new and existing development may be necessary for areas adjacent to or discharging directly to an ESA.

**Discussion of Finding C.12.** ESAs are defined in the Order as “Areas that include but are not limited to all CWA section 303(d) impaired water bodies; areas designated as Areas of Special Biological Significance by the Basin Plan; water bodies designated with the RARE beneficial use by the Basin Plan; areas designated as preserves or their equivalent under the Natural Communities Conservation Program within the Cities and County of Riverside; and any other equivalent environmentally sensitive areas which have been identified by the Copermitees.”

Areas that meet this definition are inherently sensitive habitats containing unique, rare, threatened, or endangered species, or are not achieving their designated beneficial uses. As discussed above, runoff is known to contain a wide range of pollutants and has demonstrated toxicity to plants and animals. Therefore, it is necessary to apply additional storm water controls for developments within, adjacent to, or directly discharging to ESAs. This need for additional storm water controls is addressed within each component of the Order. USEPA supports the requirement for additional storm water controls, stating “For construction sites that discharge to receiving waters that do not support their designated use or other waters of special concern, additional construction site controls are probably warranted and should be strongly considered.”<sup>69</sup> Further support for requiring additional controls to reduce pollutants in storm water discharges to ESAs can be found in *Mitigation of Storm Water Impacts From New Developments in Environmentally Sensitive Areas*, a technical report written by the Los Angeles Water Board.<sup>70</sup>

**Finding C.13.** Although dependent on several factors, the risks typically associated with properly managed infiltration of runoff (especially from residential land use areas) are not significant. The risks associated with infiltration can be managed by many techniques, including (1) designing landscape drainage features that promote infiltration of runoff, but do not “inject” runoff (injection bypasses the natural processes of filtering and transformation that occur in the soil); (2) taking reasonable steps to prevent the illegal disposal of wastes; (3) protecting footings and foundations; (4)

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distribution, new methods for measuring oil and grease, and grab and composite sampling strategies. The report is available on-line at: <http://www.dot.ca.gov/hq/env/stormwater/special/newsetup/>

<sup>69</sup> USEPA, 1992. Guidance Manual for the Preparation of Part II of the NPDES Permit Applications for Discharges from Municipal Separate Storm Sewer Systems. Washington D.C. EPA/833-B-92-002.

<sup>70</sup> Los Angeles Water Board, 2001. *Mitigation of Storm Water Impacts From New Developments In Environmentally Sensitive Areas*.

ensuring that each drainage feature is adequately maintained in perpetuity; and (5) pretreatment.

**Discussion of Finding C.13.** Infiltration is an effective means for managing runoff. However, measures must be taken to protect groundwater quality when infiltration of runoff is implemented. USEPA supports runoff infiltration and provides guidance for protection of groundwater: “With a reasonable degree of site-specific design considerations to compensate for soil characteristics, infiltration may be very effective in controlling both urban runoff quality and quantity problems. This strategy encourages infiltration of urban runoff to replace the natural infiltration capacity lost through urbanization and to use the natural filtering and sorption capacity of soils to remove pollutants; however, the potential for some types of urban runoff to contaminate groundwater through infiltration requires some restrictions.”<sup>71</sup> The restrictions placed on runoff infiltration in this Order are based on recommendations provided by the USEPA Risk Reduction Engineering Laboratory. The State Water Board found in Order WQ 2000-11 on the appeal of the Los Angeles Water Board’s Standard Urban Storm Water Mitigation Plan (SUSMP) requirements that the guidance provided in the above referenced document by the USEPA Risk Reduction Engineering Laboratory is sufficient for the protection of groundwater quality from runoff infiltration. To further protect groundwater quality, the Order also includes guidance from the Los Angeles Water Board,<sup>72</sup> the State of Washington,<sup>73</sup> and the State of Maryland.<sup>74</sup> Subsequently, the California Storm Water Quality Association (CASQA) has produced technical guidance for post-construction treatment BMPs to protect ground water quality<sup>75</sup>.

**Finding C.14.** Non-storm water (dry weather) discharge from the MS4 is not considered a storm water (wet weather) discharge and therefore is not subject to regulation under the Maximum Extent Practicable (MEP) standard from CWA 402(p)(3)(B)(iii), which is explicitly for “Municipal ... *Stormwater Discharges* (emphasis added)” from the MS4. Rather, non-storm water discharges into the storm sewers, per CWA 402(p)(3)(B)(ii), are to be effectively prohibited. Such dry weather non-storm water discharges have been shown to contribute significant levels of pollutants and flow in arid, developed Southern California watersheds and are to be effectively prohibited under the CWA.

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<sup>71</sup> USEPA, 1994. Potential Groundwater Contamination from Intentional and Nonintentional Stormwater Infiltration. EPA 600 SR-94 051.

<sup>72</sup> Los Angeles Water Board, 2000. Standard Urban Storm Water Mitigation Plan for Los Angeles County and Cities in Los Angeles County.

<sup>73</sup> Washington State Department of Ecology, 1999. Draft Stormwater Management in Washington State. Volume V – Runoff Treatment BMPs. Pub. No. 99-15.

<sup>74</sup> Maryland Department of the Environment, 1999. 2000 Maryland Stormwater Design Manual. Volume I.

<sup>75</sup> CASQA. The New Development and Redevelopment Handbook, 2003. Available on-line at <http://www.cabmphandbooks.org/Development.asp>

**Discussion of Finding C.14.**Permitting Framework

The CWA prohibits the discharge of any pollutant from a point source into waters of the United States unless the discharger of the pollutant(s) obtains a NPDES permit pursuant to CWA section 402. The discharge of storm water and/or non-storm water from an MS4 system is considered a discharge from a point source. As discussed below, however, the CWA regulates storm water and non-storm water discharges under different standards.

In 1987 the CWA was amended to include provisions that specifically concerned NPDES permitting requirements for storm water discharges from MS4 systems. Section 402(p) of the CWA regulates the discharge of storm water from a point source, the municipal separate storm sewers. Such discharges of storm water are subject to the maximum extent practicable (MEP) storm water standard and the related iterative process. The MEP standard for storm water discharges reflects Congress' recognition that the variability of flow and intensity of storm events render difficult strict compliance with water quality standards by MS4s. However, this standard was not considered applicable to non-storm water discharges, which under 402(p) are required to be effectively prohibited from entering the MS4. Clearly, if non-storm water discharges must be effectively prohibited from entering the MS4, the very next requirement (402(p)(3)(B)(iii)) requiring discharges from the MS4 be reduced to the MEP intends that the discharge of pollutants be limited to storm water. Unless exempt or authorized under a separate NPDES permit, non-storm water discharges are not authorized to enter the MS4 in the first instance and are considered to be illicit discharges.

The Federal Register further clarifies that such discharges through an MS4 are not authorized under the CWA (55 Federal Register (FR) 47995):

“Today’s rule defines the term “illicit discharge” to describe any discharge through a municipal separate storm sewer system that is not composed entirely of storm water and that is not covered by an NPDES permit. Such illicit discharges are not authorized under the Clean Water Act. Section 402(p)(3)(B) requires that permits for discharges from municipal separate storm sewers require the municipality to “effectively prohibit” non-storm water discharges from the municipal separate storm sewer...Ultimately, such non-storm water discharges through a municipal separate storm sewer must either be removed from the system or become subject to an NPDES permit.”

The federal regulations (40 CFR 122.26(d)(vi)(2)(B)) require that the municipal separate storm sewer discharger prohibit “through ordinance, order or similar means, illicit discharges to the municipal separate storm sewer.” As owners and operators of the MS4, Copermitees cannot passively receive discharges from third parties (Federal Register 68766) and thus are responsible for the discharge of any non-storm water from their MS4.

The State Water Board recently recognized in order (Order WQ 2009-0008) that “[n]either the Clean Water Act nor the federal storm water regulations define ‘non-storm water.’ ‘Illicit discharge’ is defined as any discharge to an MS4 ‘not composed entirely of storm water.’ Thus, ‘illicit discharge’ is the most nearly applicable definition of ‘non-storm water’ found in federal law and is often used interchangeably with that term.”<sup>76</sup> In July 2010, the court in *Los Angeles County v. State Water Resources Control Board* remanded the Los Angeles Water Board’s MS4 permit underlying Order WQ 2009-0008 for procedural reasons occurring during the permit adoption process. The court did not evaluate or rule upon the substantive findings and reasoning set forth in Order WQ 2009-0008. The State Water Board rescinded and voided Order WQ 2009-0008 to comply with the court’s order. While the San Diego Water Board may no longer cite Order WQ 2009-0008, the San Diego Water Board has independently considered whether the requirement to eliminate non-stormwater discharges is subject to the MEP standard. The San Diego Water Board concludes that the MEP standard does not apply to non-stormwater discharges for the same reasons expressed by the State Water Board.

#### Storm Water and Non-storm Water Definitions

By definition non-storm water is not precipitation related. 40 CFR 122.26(b)(13) states that: “Storm water means storm water runoff, snowmelt runoff, and surface runoff and drainage.” While “surface runoff and drainage” is not defined in federal law, it is related to precipitation events such as rain and/or snowmelt (see 55 FR 47995-96). The term “surface runoff and drainage” does not include all incidental flows in the MS4 system, but consists of flows relating to precipitation events as clarified by the Federal Register, USEPA’s documents and permitting, and other Regional Water Board Orders.

The Federal Register (55 FR 47995-47996) provides clarification on the distinction between storm water and non-storm water discharges, including their regulation:

“In response to the comments which requested EPA to define the term storm water broadly to include a number of classes of discharges **which are not in any way related to precipitation events, EPA believes that this rulemaking is not an appropriate forum for addressing the appropriate regulation of such non-storm water discharges**, even though some classes of non-storm water discharges may typically contain only minimal amounts of pollutants. Congress did not intend that the term storm water be used to describe any discharge that has a de minimis amount of pollutants, not did it intend for section 402(p) to be used to provide a moratorium from permitting other non-storm water discharges.”

As recently recognized by the State Water Board in a precedential decision upholding an MS4 permit modification adopted by the Los Angeles Water Board, “U.S. EPA has previously rejected the notion that ‘storm water,’ as defined at 40 Code of Federal

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<sup>76</sup> State Water Board Order WQ-2009-0008 (*In the Matter of the Petition of County of Los Angeles and Los Angeles County Flood Control District*, adopted August 4, 2009), p. 4.

Regulations section 122.26(b)(13), includes dry weather flows. In U.S. EPA's preamble to the storm water regulations, U.S. EPA rejected an attempt to define storm water to include categories of discharges 'not in any way related to precipitation events.'<sup>77</sup> Thus, USEPA has made it clear that it deems discharges unrelated to precipitation events to be non-storm water discharges. 40 CFR 122.26(d)(iv)(B) itself provides specific examples of non-storm water discharges:

“...the following category of non-storm water discharges or flows shall only be addressed where such discharges are identified by the municipality as sources of pollutants to the United States: water line flushing, landscape irrigation, diverted stream flows, rising ground waters, uncontaminated groundwater infiltration (as defined at 40 CFR 35.2005(20) to separate storm sewers, uncontaminated pumped groundwater,...”

USEPA also removed street wash waters from the definition of storm water, as USEPA specifically identified this discharge as being non-storm water (55 FR page 47996). Additionally, section 1.2.2.2 of USEPA's Multi-Sector General Permit for Industrial Activities (MSGP-2000) considers fire hydrant flushings, irrigation drainage, landscape watering, and foundation or footing drains to be non-storm water discharges. USEPA's September 1999 Storm Water Management Fact Sheet for Non-Storm Water Discharges to Storm Sewers states that non-storm water discharges can include discharges of process water, air conditioning condensate, non-contact cooling water, vehicle wash water, or sanitary wastes.

While these types of non-storm water discharges (or illicit discharges) may be regulated under storm water permits because as a practical matter they can enter and be discharged from the MS4 systems, they are not regulated as storm water discharges under the CWA because they are unrelated to precipitation events. As indicated above, the State Water Board's recent discussion of this issue supports the conclusion that non-storm water discharges are unrelated to precipitation events. In its Order affirming amendments to the Los Angeles County MS4 permit to implement a TMDL to control bacteria in dry weather flows, the State Water Board rejected petitioners County of Los Angeles and the Los Angeles County Flood Control District implied assertion that the definition of “storm water” contained in the federal regulations (defined as “surface run-off and drainage”) includes the run-off and drainage from non-storm events. The State Water Board notes that the challenged permit provisions do not apply to storm water flows in that they apply only during dry weather conditions as defined in the permit. In upholding the challenged order, the State Water Board notes that the Los Angeles Water Board's permit language followed USEPA's approach, referring to USEPA's rejection of attempts to define storm water to include categories of discharges “not in any way related to precipitation events.”<sup>78</sup>

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<sup>77</sup> State Water Board Order WQ-2009-0008 (*In the Matter of the Petition of County of Los Angeles and Los Angeles County Flood Control District*, adopted August 4, 2009), p. 7.

<sup>78</sup> State Water Board Order WQ-2009-0008 (*In the Matter of the Petition of County of Los Angeles and Los Angeles County Flood Control District*, adopted August 4, 2009), p. 7 (quoting 55 FR 47990, 47995).

Lastly, the San Diego Water Board and State Water Board have issued multiple, separate NPDES permits for non-storm water discharges, including, but not limited to, San Diego Water Board Order No. R9-2008-0002 (extracted groundwater), San Diego Water Board Order No. R9-2002-0020 (hydrostatic discharge), and State Water Board Order No. 2006-0008-DWQ (utility vaults), pursuant to section 402 of the CWA.

#### Permitting Non-storm Water Discharges

Non-storm water discharges may contain pollutants which result from various activities that occur within areas draining into the MS4. This includes, but is not limited to, illicit discharges and connections, exempted categories of discharge not a source of pollutants (40 CFR 122.26(d)), and discharges into the MS4 covered under a separate NPDES permit. As such, existing and proposed discharges of non-storm water from MS4s:

- a) Result from similar activities through the MS4 system;
- b) Are the same type of water;
- c) Require similar action levels for the protection of the Beneficial Uses of the receiving waters;
- d) Require similar monitoring;
- e) Are under the passive control of the owner and operator of the MS4 system; and
- f) Are more appropriately regulated under a general permit than individual permits.

The U.S. EPA's approach (and the San Diego Water Board's under its approved program) for non-storm water discharges from MS4s is to regulate these discharges under the existing 402 NPDES framework (FR 47995 and 48037 see below) for discharges to surface waters. The NPDES program (40 CFR 122.44(d)) utilizes discharge prohibitions and effluent limitations as regulatory mechanisms to regulate non-storm water discharges, including the use of technology and water quality-based effluent limitations. Non-numerical effluent limitations, such as BMPs for non-storm water discharges may only be authorized where numerical effluent limits are infeasible or where the practices are reasonably necessary to achieve effluent limitations and standards or to carry out the purposes and intent of the CWA (40 CFR 122.44(k) see below).

The Federal Register (55, page 48037) provides clarification that non-storm water discharges from the MS4 are to be regulated under section 402, not 402(p):

“Conveyances which continue to accept other “non-storm water” discharges (e.g. discharges without an NPDES permit) with the exceptions noted above (*exempted discharges that are not a source of pollutants*) do not meet the definition of municipal separate storm sewer and are not subject to 402(p)(3)(B) of the CWA unless such discharges are issued separate NPDES permits. Instead, conveyances which continue to accept non-storm water discharges

which have not been issued separate NPDES permits are subject to sections 301 and 402 of the CWA.”

This regulatory approach is consistent with the approach recently upheld by the State Water Board in a precedential order adopted on August 4, 2009. In this Order, the State Water Board rejected a challenge to amendments to the Los Angeles County MS4 permit that require compliance with receiving water limitations and discharge prohibitions for dry weather, non-storm water discharges. Petitioners there argued that the receiving water limits and discharge prohibitions for dry weather dischargers were inappropriate and that the Los Angeles Water Board should instead have regulated the discharges with the maximum extent practicable standard, through an iterative process. The State Water Board concludes that dry weather discharges, as defined in the permit and in the underlying TMDL, “are more appropriately regarded as non-storm water discharges, which the Clean Water Act requires to be effectively prohibited.”<sup>79</sup>

As stated above, for NPDES permits under 402 of the CWA, the Code of Federal Regulations (122.44(k)) clarify that a discharger may utilize BMPs to control or abate the discharge of pollutants when:

- “(1) Authorized under section 304(e) of the CWA for the control of toxic pollutants and hazardous substances from ancillary industrial activities;
- (2) Authorized under section 402(p) of the CWA for the control of storm water discharges;
- (3) Numeric limits are infeasible; or
- (4) The practices are reasonably necessary to achieve effluent limitations and standards or to carry out the purposes and intent of the CWA.”

For the last 20 years, Riverside County NPDES permits for discharges of storm water have regulated non-storm water discharges from the MS4. These permits required Copermittees (dischargers) to prohibit non-storm water discharges into (thus through and from) their MS4 systems, implement a program to prevent illicit discharges, and monitor to identify illicit discharges and exempted discharges that are a source of pollution. These measures are considered Best Management Practices (BMPs), are required to be included in NPDES permits issued under section 402(p) of the CWA, and are considered by USEPA to be an interim approach to permitting non-storm water discharges from the MS4 in accordance with section 402 of the CWA and CFR 122.44(k).

As explained in the discussion of Finding C.15., below, the Copermittees’ reliance on BMPs for the past 20 years has not resulted in compliance with applicable water quality standards. The San Diego Water Board has evaluated (in accordance with 40 CFR 122.44(d)(1)) past and existing controls (BMPs), non-storm water monitoring results, the sensitivity of the species in receiving waters (e.g. endangered species),

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<sup>79</sup> State Water Board Order WQ-2009-0008 (*In the Matter of the Petition of County of Los Angeles and Los Angeles County Flood Control District*, adopted August 4, 2009), p. 8

and the potential for effluent dilution, and has determined that existing BMPs to control pollutants in storm water discharges are not sufficient to protect water quality standards in receiving waters and the existing requirement that Copermittees effectively prohibit all types of unauthorized non-storm water discharges into the MS4 historically results in the discharge of pollutants to the receiving waters. Thus, numeric action levels for non-storm water, dry weather, discharges from the MS4 and required actions following observed exceedances of numeric action levels have been established. For further discussion regarding the development of action levels please see Finding E.10 and discussion.

Dry weather action levels are applicable to non-storm water discharges of effluent from the MS4 system. Non-storm water effluent discharges from the MS4 are those which occur during dry weather conditions. These action levels are not applied to storm water discharges, as defined within the Order. Storm water discharges regulated by the Order are required to meet the MEP standard and related iterative process and have separate action levels.

Dry weather action levels are applicable to non-storm water discharges from the MS4 system into receiving waters. Non-storm water discharges are already required to be prohibited unless specifically exempted or covered under a separate NPDES permit. Dry weather action levels apply to non-storm water discharges of effluent from a point source into receiving waters. The MS4 is not a receiving water. Should a discharger wish to discharge a non-exempt category to the MS4 system, such discharges require a separate NPDES permit pursuant to sections 402 and 301 of the CWA. It is also infeasible to monitor and sample every discharge into the MS4, as such discharges are diffuse by nature and may vary spatially and temporally.

**Finding C.15.** Non-storm water discharges to the MS4 granted an influent exception [i.e. which are exempt from the effective prohibition requirement set forth in CWA section 402(p)(3)(B)(ii)] under 40 CFR 122.26 are included within this Order. Any exempted discharges identified by Copermittees as a source of pollutants are subsequently required to be *addressed* (emphasis added) as illicit discharges through prohibition and incorporation into existing IC/ID programs. Furthermore, the USEPA contemplates that permitting agencies such as the San Diego Water Board may also identify exempted discharges as a source of pollutants required to be addressed as illicit discharges (See Vol. 55 FR 48037). The San Diego Water Board and the Copermittees have identified landscape irrigation, irrigation water and lawn water, previously exempted discharges, as a source of pollutants and conveyance of pollutants to waters of the U.S.

**Discussion of Finding C.15.** The FR (Vol. 55, page 48037) and 40 CFR 122.26(d)(iv)(B) clarify that certain components and categories of non-storm water discharges into the MS4 are not required to be prohibited. The Code of Federal Regulations requires the discharger have:

“...a program, including inspections, to implement through ordinance, orders or similar means to prevent illicit discharges to the municipal separate storm sewer system; this program shall address all types of illicit discharges, however, the following category of non-storm water discharges or flows shall only be addressed where such discharges are identified by the municipality as sources of pollutants to waters of the United States: water line flushing, landscape irrigation, diverted stream flows, rising ground waters, uncontaminated groundwater infiltration (as defined at 40 CFR 35.2005(20) to separate storm sewers, uncontaminated pumped groundwater,...”

The categories of non-storm water discharges into the MS4, as listed under 40 CFR 122.26(d)(iv)(B), are not required to be prohibited unless identified by the Copermittees as sources of pollutants to waters of the United States. The FR (Vol. 55, page 48037), however, goes on to clarify that:

“However, the Director may include permit conditions that either require municipalities to prohibit or otherwise control any of these types of discharge where appropriate.”

Thus, the Copermittees or the San Diego Water Board may identify any of these categories of non-storm water discharges as a source of pollutants. As such, the identification of any of these categories as a source of pollutants requires them to be addressed as illicit discharges, which are not authorized under the CWA, and are required to be “effectively prohibited” as illicit discharges via ordinance, order or similar means. The prohibition of previously exempted discharges of non-storm water to waters of the United States from entering, and necessarily being discharged from an MS4, conforms with CWA requirements for standards and enforcement for effluent limitations necessary to meet water quality standards (33 U.S.C. 1311(b)(1)(C)).

To date the San Diego Water Board and the Copermittees have identified overspray and drainage from potable and reclaimed water landscape irrigation as a substantial source and conveyance mechanism for pollutants into waters of the United States. Several municipalities throughout the San Diego Region (e.g., cities and counties of Orange County and San Diego County) have reported and/or identified runoff originating from landscape irrigation as potential sources of dry weather flows conveying pollutants into their MS4s. This is also supported by legislation (Assembly Bill 1881) recently enacted by the State of California, which has identified runoff resulting from over irrigation not only as a waste of water resources, but also as a source of pollutants to the state’s waterways.

Irrigation runoff into the MS4, as identified by the San Diego Water Board and the Copermittees, is a source of pollutants to waters of the United States, and is required to be *addressed* (emphasis added) as an illicit discharge per 40 CFR 122.26(d)(2)(iv)(B)(1) by prohibition through implementing and enforcing an ordinance, order or similar means. The San Diego Water Board and the Copermittees have identified irrigation water as a source of pollutants and conveyance of pollutants to waters of the United States, when

applied improperly in excess and thereafter entering the MS4, in the following documents:

- The Cities and County of Riverside “Only Rain in the Storm Drain” Pollution Prevention Program identifies runoff from irrigation as a source of pollutants to waters of the United States in the following documents:

1) The Landscape and Garden public education brochure states:

*“Soil, yard wastes, over-watering [emphasis added] and garden chemicals become part of the urban runoff mix that winds its way through streets, gutters and storm drains before entering lakes, rivers, streams, etc.”*

2) In a survey distributed at public outreach events,<sup>80</sup> the answer to the question about where lawn irrigation water goes states:

*“Water that leaves your lawn from irrigation...can pick up motor oil and grease from vehicles, excess fertilizer from your lawn, bacteria from pet waste, and excess pesticides from your yard. These pollutants can be carried down streets and storm drains directly to our streams, lakes and rivers without treatment!”*

- In 2006, the State Water Board allocated Grant funding to the **SmartTimer/Edgescapes Evaluation Program (SEEP)**. The project targets irrigation runoff by retrofitting existing development and documenting the conservation and runoff improvements. The Grant Application states that:

*“Irrigation runoff contributes flow & pollutant loads to creeks and beaches that are 303(d) listed for bacteria indicators.”*

Furthermore, the grant application states:

*“Regional program managers agree that the reduction and/or elimination of irrigation-related urban flows and associated pollutant loads may be key to successful attainment of water quality and beneficial use goals as outlined in the San Diego Basin Plan and Bacteria TMDL over the long term.”*

This is reinforced in the project descriptions and objectives:

*“Elevated dry-weather storm drain flows, composed primarily ... of landscape irrigation water wasted as runoff, carry pollutants that impair recreational use and aquatic habitats all along Southern California’s*

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<sup>80</sup> A copy of the survey was provided in the Riverside County Copermittees' Report of Waste Discharge, dated January 15, 2009, page 39.

*urbanized coastline. Storm drain systems carry the wasted water, along with landscape derived pollutants such as bacteria, nutrients and pesticides, to local creeks and the ocean. Given the local Mediterranean climate, excessive perennial dry season stream flows are an unnatural hydrologic pattern, causing species shifts in local riparian communities and warm, unseasonal contaminated freshwater plumes in the near-shore marine environment”.*

The basis of this grant project is that over-irrigation (landscape irrigation, irrigation water and lawn watering) into the MS4 is a source and conveyance of pollutants. In addition, they indicate that this alteration of natural flows is impacting the Beneficial Uses of Waters of the State and U.S. The results of this study can be applied broadly to any area where over-irrigation takes place, including Riverside County. Preliminary results from the study indicate that that over-irrigation (landscape irrigation, irrigation water and lawn watering) into the MS4 is a source and conveyance of pollutants.

- Several municipalities in the San Diego Region have identified runoff from irrigation as a source of pollutants to waters of the United States in the following documents:

- 1) The **Watershed Action Plan Annual Report(s)** for the 2006-2007 reporting period was submitted by the County of Orange, Orange County Flood Control District and Copermittees within the San Juan Creek, Laguna Coastal Streams, Aliso Creek, and Dana Point Coastal Streams Watersheds. San Juan Creek, Laguna Coastal Streams, Aliso Creek and Dana Point Coastal Streams are all currently 303(d) listed as impaired for Indicator Bacteria within their watersheds and/or in the Pacific Ocean at the discharge points of their watersheds. The Orange County Copermittees, within their Watershed Action Strategy Table for Fecal Indicator Bacteria:

*“Support programs to reduce or eliminate the discharge of anthropogenic dry weather nuisance flow throughout the [...] watershed. Dry weather flow is the transport medium for bacteria and other 303(d) constituents of concern”. Additionally, they state that “conditions in the MS4 contribute to high seasonal bacteria propagation in-pipe during warm weather. Landscape irrigation is a major contributor to dry weather flow, both as surface runoff due to over-irrigation and overspray onto pavements; and as subsurface seepage that finds its way into the MS4.”*

- 2) The **Carlsbad Watershed Urban Runoff Management Program (WURMP) Fiscal Year 2008 Annual Report** was submitted by the Carlsbad Watershed Copermittees (Cities of Carlsbad, Encinitas, Escondido, Oceanside, San Marcos, Solana Beach, and Vista, and the County of San Diego). In the WURMP Annual Report, the Carlsbad

Watershed Copermittees stated the following:

*“The Carlsbad Watershed Management Area (WMA) collective watershed strategy identifies bacteria, sediment, and nutrients as high priority water quality pollutants in the Agua Hedionda (904.3 – bacteria and sediment), Buena Vista (904.2 – bacteria), and San Marcos Creek (904.5 – nutrients) Hydrologic Areas. Bacteria, sediment, and nutrients have been identified as potential discharges from over-irrigation.”*

- 3) The **San Diego Bay Watershed Urban Runoff Management Program (WURMP) 2007-2008 Annual Report** was submitted by the San Diego Bay Watershed Copermittees (Cities of Chula Vista, Coronado, Imperial Beach, La Mesa, Lemon Grove, National City, and San Diego, the County of San Diego, the Port of San Diego, and the San Diego County Airport Authority). In Appendix D of the WURMP Annual Report, titled Likely Sources of Pollutants, the San Diego Bay Watershed Copermittees identified over-irrigation of lawns as a pollutant generating activity from business and/or residential land uses for bacteria, pesticides, and sediment.

Within the reports above, municipalities throughout San Diego and Orange counties have acknowledged that runoff from over-irrigation is a potential or likely source of several types of pollutants to waters of the United States. Because there are landscaped areas in Riverside County that receive irrigation similar to San Diego and Orange counties, runoff from over-irrigation is also a likely source of pollutants to waters of the United States in Riverside County.

- There is statewide recognition of the pollution caused by over-irrigation, and current legislation already requires cities and counties to prohibit over-irrigation. On September 28, 2006 Governor Arnold Schwarzenegger approved Assembly Bill 1881, The Water Conservation in Landscaping Act (AB 1881, Laird). The act requires cities, counties, and charter cities and charter counties, to adopt landscape water conservation ordinances by January 1, 2010. Additionally, the law required the Department of Water Resources (DWR) to prepare a Model Water Efficient Landscape Ordinance for use by local agencies. The Water Efficient Landscape Ordinance was approved by the Office of Administrative Law on September 10, 2009. All local agencies were required to adopt a water efficient landscape ordinance by January 1, 2010. Local agencies could adopt the Water Efficient Landscape Ordinance developed by DWR, or an ordinance considered at least as effective as the Model Ordinance. The Water Efficient Landscape Ordinance includes a requirement that local agencies prohibit runoff from irrigation (§ 493.2):

*“(a) Local agencies shall prevent water waste resulting from inefficient landscape irrigation by prohibiting runoff [emphasis added] from leaving the target landscape due to low head drainage, overspray, or other*

*similar conditions where water flows onto adjacent property, non-irrigated areas, walks, roadways, parking lots, or structures. Penalties for violation of these prohibitions shall be established locally.”*

- On October 08, 2009, the State of California Department of Water Resources issued a letter to all cities and counties within the State of California giving reminder of required adoption of the Water Efficient Landscape Ordinance. The letter states that:

*“Other benefits include reduced irrigation runoff, reduced pollution of waterways, drought resistance, and less green waste.”*

- On December 18, 2009, the San Diego Water Board adopted Order No. R9-2009-0002, the fourth-term Orange County permit, which found that over-irrigation (landscape irrigation, irrigation water and lawn watering) into the MS4 is a source and conveyance of pollutants. Landscape irrigation, irrigation water, and lawn watering were categories removed from the list of non-storm water discharges not prohibited to be discharged into the MS4.

## D. Runoff Management Programs

**Finding D.1.a.** This Order specifies requirements necessary for the Copermittees to reduce the discharge of pollutants in storm water to the MEP. However, since MEP is a dynamic performance standard, which evolves over time as runoff management knowledge increases, the Copermittees' runoff management programs must continually be assessed and modified to incorporate improved programs, control measures, best management practices (BMPs), etc. in order to achieve the evolving MEP standard. Absent evidence to the contrary, this continual assessment, revision, and improvement of runoff management program implementation is expected to ultimately achieve compliance with water quality standards in the Region.

**Discussion of Finding D.1.a.** Under CWA section 402(p), municipalities are required to reduce the discharge of storm water pollutants from their MS4s to the maximum extent practicable (MEP). MEP is the critical technology-based performance standard that municipalities must attain. The MEP standard is an ever-evolving, flexible, and advancing concept, which considers technical and economic feasibility. As knowledge about controlling storm water runoff continues to evolve, so does that which constitutes MEP. Reducing the discharge of storm water pollutants to the MEP requires Copermittees to assess each program component and revise activities, control measures, best management practices (BMPs), and measurable goals, as necessary to meet MEP.

To achieve the MEP standard, municipalities must employ whatever BMPs are technically feasible (i.e. are likely to be effective) and are not cost prohibitive. The major emphasis is on technical feasibility. Reducing storm water 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:

1. Effectiveness: Will the BMPs address a pollutant (or pollutant source) of concern?
2. Regulatory Compliance: Is the BMP in compliance with storm water regulations as well as other environmental regulations?
3. Public Acceptance: Does the BMP have public support?
4. Cost: Will the cost of implementing the BMP have a reasonable relationship to the pollution control benefits to be achieved?
5. Technical Feasibility: Is the BMP technically feasible considering soils, geography, water resources, etc?

If a municipality reviews a lengthy menu of BMPs and chooses to select only a few of the least expensive BMPs, 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 is prohibitive, 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 based 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 easily dismissed. In any case, the burden is on the municipal discharger to comply with its permit. After selecting BMPs, it is the responsibility of the discharger to ensure that all BMPs are implemented.<sup>81</sup>

A definition of MEP is not provided in either the federal statute or in the federal regulations. The final determination regarding whether a municipality has reduced storm water pollutants to the MEP can only be made by the San Diego Water Board or the State Water Board, and not by the municipal discharger. While the San Diego Water Board or the State Water Board ultimately define MEP, it is the responsibility of the Copermittees to initially propose actions that implement BMPs to reduce storm water pollution to the MEP. In other words, the Copermittees' runoff management programs to be developed under the Order are the Copermittees' proposals of MEP. Their total collective and individual activities conducted pursuant to their runoff management programs become their proposal for MEP as it applies both to their overall effort, as well as to specific activities. The Order provides a minimum framework to guide the Copermittees in meeting the MEP standard for storm water.

It is the San Diego Water Board's responsibility to evaluate the proposed programs and specific BMPs to determine what constitutes MEP, using the above guidance and the court's 1994 decision in NRDC v. California Department of Transportation, Federal District Court, Central District of California. The federal court stated that a Copermittee must evaluate and implement BMPs except where (1) other effective BMPs will achieve greater or substantially similar pollution control benefits; (2) the BMP is not technically feasible; or (3) the cost of BMP implementation greatly outweighs the pollution control benefits. In the absence of a proposal acceptable to the San Diego Water Board, the San Diego Water Board will define MEP by requiring implementation of additional measures by the Copermittees.

The Copermittees' continual evolution in meeting the MEP standard is expected to achieve compliance with water quality standards. USEPA has consistently supported this expectation. In its Interim Permitting Approach for Water Quality-Based Effluent Limitations (WQBELs) in Storm Water Permits, USEPA states "the interim permitting approach uses best management practices (BMPs) in first-round storm water permits, and expanded or better-tailored BMPs in subsequent permits, where necessary, to provide for attainment of water quality standards."<sup>82</sup> USEPA reiterated its position in 1999, when it stated regarding the Phase II municipal storm water regulations that "successive iterations of the mix of BMPs and measurable goals will be driven by the objective of assuring maintenance of water quality standards" and "EPA anticipates

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<sup>81</sup> State Water Board, 1993. Memo Entitled Definition of Maximum Extent Practicable.

<sup>82</sup> Federal Register / Vol. 61, No. 166 / August 26, 1996 / P. 43761.

that a permit for a regulated small MS4 operator implementing BMPs to satisfy the six minimum control measures will be sufficiently stringent to protect water quality, including water quality standards [...].”<sup>83</sup>

The requirements of the Order are expected to achieve compliance with receiving water quality standards. The approach to be used is the continual assessment, revision, and improvement of Copermittee best management practice implementation. This approach is consistent with the CWA and State Water Board guidance. In *Defenders of Wildlife v. Browner* (1999, 197 F. 3d 1035), the United States Court of Appeals for the Ninth Circuit states: “Under 33 U.S.C. section 1342 (p)(3)(B)(iii), the EPA’s choice to include either management practices or numeric limitations in the permits was within its discretion.” In addition, the approach is consistent with State Water Board Order WQ 99-05, which outlines an iterative approach for achieving compliance with water quality standards.

**Finding D.1.b.** The Copermittees have generally been implementing the Jurisdictional Runoff Management Programs (JRMPs) required pursuant to Order No. R9-2004-001 since July 14, 2005. Prior to that, the Copermittees were regulated by Order No. 98-02 since May 13, 1998. MS4 discharges, however, continue to cause or contribute to violations of water quality standards as evidenced by the Copermittees’ monitoring results.<sup>84</sup>

**Discussion of Finding D.1.b.** In response to Order No. R9-2004-001, the Copermittees have developed their runoff management programs. In order to implement the plans, the Copermittees have, among other things, developed BMP requirements, improved inter- and intra-governmental coordination, improved training programs, improved illicit discharge detection procedures, and improved their monitoring efforts. Although the programmatic improvements have led to better implementation of BMPs, the Copermittees’ monitoring data demonstrate that additional or revised BMPs are necessary to prevent discharges from MS4s from causing and contributing to violations of water quality standards. A discussion of data collected by the Copermittees is included in the discussion for Finding C.9.

**Finding D.1.c.** This Order contains new or modified requirements that are necessary to improve Copermittees’ efforts to reduce the discharge of pollutants in storm water runoff to the MEP and achieve water quality standards. Some of the new or modified requirements, such as the revised Watershed Water Quality Workplan (Watershed Workplan) section, are designed to specifically address these high priority water quality problems. Other requirements, such as for unpaved roads, are a result of San Diego Water Board’s identification of water quality problems through investigations and complaints during the previous permit period. Other new or modified requirements address program deficiencies that have been noted during audits, report reviews, and other San Diego Water Board compliance assessment activities.

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<sup>83</sup> Federal Register / Vol. 64, No. 235 / Wednesday, December 8, 1999 / Rules and Regulations. P. 68753-68754.

<sup>84</sup> County of Riverside, 2009. Riverside County Municipal Copermittees 2008-09 Annual Storm Water Program Report, Section 11..

Additional changes in the monitoring program provide consistency with the Code of Federal Regulations, USEPA guidance, State Water Board guidance, and the Southern California Monitoring Coalition recommendations.

**Discussion of Finding D.1.c.** The Copermitees are required to update and expand their runoff management programs on jurisdictional and watershed levels in order to improve their efforts to reduce the contribution of storm water pollutants in runoff to the MEP and meet water quality standards. Changes to Order No. R9-2004-001's requirements have been made to help ensure these two standards are achieved by the Copermitees.

The Orders' jurisdictional requirements have changed based on findings by the San Diego Water Board during typical compliance assurance activities, audits, or receipt of complaints.<sup>85</sup> Where the audits found common implementation problems, requirements have been altered to better ensure compliance. In addition, the San Diego Water Board conducted reviews of the jurisdictional annual reports submitted by the Copermitees. Updates to the requirements for the Copermitees' programs are also based in part on information found in the Copermitees' ROWD,<sup>86</sup> requirements that were included in the San Diego and Orange County MS4 permits, and discussions with the Riverside County Copermitees.

To better focus on attainment of water quality standards, the Order's jurisdictional and watershed requirements have been improved. The conditions of the receiving waters now drive management actions, which in turn focus diminishing resources on the highest priority water quality problems within the receiving waters in the watershed. Improvements to jurisdictional and watershed requirements were also made to facilitate a mutually clear understanding of the requirements between the San Diego Water Board and Copermitees.

During the previous permit period, the San Diego Water Board identified, through investigations and complaints, sediment discharges from unpaved roads as a significant source of water quality problems in the Riverside County portion of the San Diego Region. Enforcement and inspection activities conducted by the San Diego Water Board during the previous permit term have found a lack of source control for many unpaved roads within the jurisdiction of the Copermitees. Unpaved roads are a source of sediment that can be discharged in runoff to receiving waters, especially during storm events. Erosion of unpaved roadways occurs when soil particles are loosened and carried away from the roadway base, ditch, or road bank by water, wind, traffic, or other transport means. Exposed soils, high runoff velocities and volumes, sandy or silty soil types, and poor compaction increase the potential for erosion.

Road construction, culvert installation, and other maintenance activities can disturb the soil and drainage patterns to streams in undeveloped areas, causing excess runoff

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<sup>85</sup> Audit reports, report reviews, and inspection reports are available for review at the San Diego Water Board office.

<sup>86</sup> All significant changes made to the Order's requirements are described and explained in detail in Fact Sheet section IX.

and thereby erosion and the release of sediment. Poorly designed roads can act as preferential drainage pathways that carry runoff and sediment into natural streams, impacting water quality. In addition, other public works activities along unpaved roads have the potential to significantly affect sediment discharge and transport within streams and other waterways, which can degrade the beneficial uses of those waterways.

USEPA also recognizes that discharges from unpaved roads are a threat to water quality. USEPA guidance<sup>87</sup> emphasizes the threat of unpaved roads to water quality:

*“Dirt and gravel roads are a major potential source of these pollutants [sediment] and pollutants that bind to sediment such as oils, nutrients, pesticides, herbicides, and other toxic substances]. Many roads have unstable surfaces and bases. Roads act like dams, concentrating flows that accelerate erosion of road materials and roadsides. Both unstable surfaces and accelerated erosion then lead to sediment and dust.”*

There are several guidance documents, developed by the USEPA,<sup>88</sup> the US Forest Service,<sup>89</sup> the University of California,<sup>90</sup> and others, that include design and construction specifications and BMPs that are readily available for implementation by private and public entities. Implementing design and other source control BMPs for unpaved roads in the region is necessary to reduce and minimize the impacts of sediment discharged during storm events from unpaved roads to the MS4s and receiving waters.

**Finding D.1.d.** Updated individual Storm Water Management Plans (individual SWMPs or JRMPs) and Watershed Stormwater Management Plans (watershed SWMPs or Watershed Workplans), which, together with references in the DAMP, describe the Copermittes’ runoff management programs in their entirety, are needed to guide the Copermittes’ runoff management efforts and aid the Copermittes in tracking runoff management program implementation. Hereinafter, the individual SWMP is referred to as the JRMPs and the Watershed SWMP is referred to as the Watershed Workplan. It is practicable for the Copermittes to update the JRMPs and Watershed Workplans within the timeframe specified in this Order, since significant efforts to develop these programs have already occurred.

**Discussion of Finding D.1.d.** Development of runoff management plans is a crucial runoff management measure and should be considered a BMP. The plans help organize and focus the Copermittes’ programs and guide their implementation. In its statewide assessment report to USEPA Region IX and the State Water Board, Tetra

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<sup>87</sup> USEPA 2006 “Environmentally Sensitive Maintenance for Dirt and Gravel Roads.” Gesford and Anderson, USEPA-PA-2005.

<sup>88</sup> Ibid.

<sup>89</sup> US Forest Service, 1996. Forest Service Specifications for Construction of Roads & Bridges. EM-7720-100. Revised August 1996.

<sup>90</sup> University of California Division of Agriculture and Natural Resources, 2007. Rural Roads: A Construction and Maintenance Guide of California Landowners. Publication 8262.

Tetra Tech, Inc. concluded that the lack of a master storm water planning document must be considered a serious program deficiency<sup>91</sup>. When submitted to the San Diego Water Board, the plans provide useful correspondence between the Copermittees and the San Diego Water Board. The Plans also become available for review by the public, and thus facilitate public participation in runoff management decisions. Finally, while development and submittal of runoff management plans are not necessary to ensure compliance of the Copermittees' runoff management programs with the Order, the San Diego Water Board is provided with a means to track Copermittee implementation.

The focus of the Order is on development and implementation of storm water programs which meet MEP, rather than creation of Copermittee plans which exhibit MEP. While the Order does not rely upon the plans to ensure MEP and other standards are achieved, the plans still serve a useful purpose. As stated above, the plans serve to organize the Copermittees' efforts to address runoff. As a practical matter, any program of the size required by the Order should be documented in writing. This serves to guide implementation of the program by the numerous individuals responsible for program implementation.

Runoff management plans are not necessary for ensuring compliance with the Order because the Order itself contains sufficient detailed requirements to ensure that compliance with discharge prohibitions, receiving water limitations, and the narrative standard of MEP for storm water are achieved. Implementation by the Copermittees of programs in compliance with the Order's requirements, prohibitions, and receiving water limitations is the pertinent compliance standard to be used under the Order, as opposed to assessing compliance by reviewing the Copermittees' implementation of their plans alone. The San Diego Water Board ensures compliance with the Order by reviewing annual reports, conducting inspections, performing audits, and through other general program oversight.

Runoff management plans are particularly important and useful for municipalities when program implementation is spread across several departments and/or when municipalities experience staff turnover.<sup>92</sup> Each Copermittee relies on multiple employees or contractors for program implementation, but the spread of responsibility varies among Copermittees.<sup>93</sup> Written jurisdictional plans ensure appropriate coordination within each municipality.

Copermittees' runoff management plans are simply descriptions of their runoff management programs required under the Order. These plans serve as procedural correspondence which guides program implementation and aids the Copermittees and San Diego Water Board in tracking implementation of the programs. In this manner,

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<sup>91</sup> Tetra Tech, Inc. 2006. *Assessment Report on Tetra Tech's Support of California's MS4 Stormwater Program*. Produced for USEPA Region IX and the California State and Regional Water Quality Control Boards.

<sup>92</sup> Tetra Tech, Inc. 2005. *Program Evaluation Report*. Orange County Storm Water Program: Cities of Laguna Beach, Laguna Hills, Lake Forest, and Rancho Santa Margarita.

<sup>93</sup> Responsible departments and employees are described in the 2005-06 Annual Reports for the MS4 programs.

the plans are not functional equivalents of the Order. For these reasons, the Copermitees' runoff management plans need not be an enforceable part of the Order.

The Copermitees' plans and programs can be updated on or before June 30, 2012 because much of their plans and programs are already in existence. In fact, many parts of their plans and programs have been in place for 15 years. Moreover, the adoption of Order No. R9-2004-001 required a larger scale reorganization of the Copermitees' programs than Order No. R9-2010-0016, but also only allowed one year for program updates. The Copermitees were generally able to meet the time schedule required under Order No. R9-2004-001. After discussions with the Copermitees, based on the timing of the adoption of the Order and the Copermitee's fiscal planning cycles, in conjunction with consideration for the current economic conditions, the San Diego Water Board agreed that additional time to update the Copermitees' plans and programs may be warranted. Thus, the Copermitees must update their plans and programs on or before June 30, 2012, which provides the Copermitees over 18 months, instead of 1 year, to update their plans and programs.

**Finding D.1.e.** Pollutants can be effectively reduced in storm water runoff by the application of a combination of pollution prevention, source control, and treatment control BMPs. Pollution prevention is the reduction or elimination of pollutant generation at its source and is the best "first line of defense". Source control BMPs (both structural and non-structural) minimize the contact between pollutants and flows (e.g., rerouting run-on around pollutant sources or keeping pollutants on-site and out of receiving waters). Treatment control BMPs remove pollutants that have been mobilized by wet-weather or dry-weather flows.

**Discussion of Finding D.1.e.** The State Water Board finds in its Order WQ 98-01 that BMPs are effective in reducing pollutants in storm water runoff, stating that "implementation of BMPs [is] generally the most appropriate form of effluent limitations when designed to satisfy technology requirements, including reduction of pollutants to the maximum extent practicable." A State Water Board TAC further supports this finding by recommending "that nonpoint source pollution control can be accomplished most effectively by giving priority to [BMPs] in the following order:

1. Pollution Prevention – implementation of practices that use or promote pollution free alternatives;
2. Source Control – implementation of control measures that focus on preventing or minimizing urban runoff from contacting pollution sources;
3. Treatment Control – implementation of practices that require treatment of polluted runoff either onsite or offsite.<sup>94</sup>

Pollution prevention, the reduction or elimination of pollutant generation at its source, is an essential aspect of BMP implementation. Fewer pollutants are available to be washed from developed areas when the generation of pollutants by activities is limited.

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<sup>94</sup> State Water Board, 1994. Urban Runoff Technical Advisory Committee Report and Recommendations. Nonpoint Source Management Program.

Thus, pollutant loads in storm water discharges are reduced from these areas. In addition, there is no need to control or treat pollutants that are never generated. Furthermore, pollution prevention BMPs are generally more cost effective than removal of pollutants by treatment facilities or cleanup of contaminated media.<sup>95,96</sup>

In the Pollution Prevention Act of 1990, Congress established a national policy that emphasizes pollution prevention over control and treatment. CWC section 13263.3(a) also supports pollution prevention, stating “The Legislature finds and declares that pollution prevention should be the first step in a hierarchy for reducing pollution and managing wastes, and to achieve environmental stewardship for society. The Legislature also finds and declares that pollution prevention is necessary to support the federal goal of zero discharge of pollutants into navigable waters.” Finally, the Basin Plan also supports this finding by stating “To eliminate pollutants in storm water, one can either clean it up by removing pollutants or prevent it from becoming polluted in the first place. Because of the overwhelming volume of storm water and the enormous costs associated with pollutant removal, pollution prevention is the only approach that makes sense.”<sup>97</sup>

USEPA also supports the utilization of a combination of BMPs to address pollutants in runoff. For example, USEPA has found there has been success in addressing illicit discharge related problems through BMP initiatives like storm drain stenciling and recycling programs, including household hazardous waste special collection days.<sup>98</sup> Structural BMP performance data has also been compiled and summarized by USEPA.<sup>99</sup>

The summary provides the performance ranges of various types of structural BMPs for removing suspended solids, nutrients, pathogens, and metals from storm water flows. These pollutants are generally a concern in storm water in the San Diego Region and Riverside County. For suspended solids, the least effective structural BMP type was found to remove 30-65 percent of the pollutant load, while the most effective was found to remove 65-100 percent of the pollutant load. For nutrients, the least effective structural BMP type was found to remove 15-45 percent of the pollutant load, while the most effective was found to remove 65-100 percent of the pollutant load. For pathogens, the least effective structural BMP type was found to remove <30 percent of the pollutant load, while the most effective was found to remove 65-100 percent of the pollutant load. For metals, the least effective structural BMP type was found to

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<sup>95</sup> Deviny, J.S. et al. 2004. *Alternative Approaches to Stormwater Quality Control*. Prepared for the Los Angeles Regional Water Quality Control Board. Found as Appendix H to *NPDES Stormwater Cost Survey*. Prepared for the California State Water Resources Control Board by the Office of Water Programs California State University, Sacramento. Available on-line at: <http://www.owp.csus.edu/research/npdes/>

<sup>96</sup> Schueler, T.R., 2000. Center for Watershed Protection. Assessing the Potential for Urban Watershed Restoration, Article 142.

<sup>97</sup> San Diego Water Board, 1994. Water Quality Control Plan, San Diego Basin, Region 9.

<sup>98</sup> USEPA, 1999. 40 CFR Parts 9, 122, 123, and 124 National Pollutant Discharge Elimination System-Regulations for Revision of the Water Pollution Control Program Addressing Storm Water Discharges. 64 FR 68728.

<sup>99</sup> USEPA, 1999. Preliminary Data Summary of Urban Storm Water Best Management Practices. EPA 821-R-99-012.

remove 15-45 percent of the pollutant load, while the most effective was found to remove 65-100 percent of the pollutant load.

It is important to note that the CWA and NPDES federal regulations clearly require control of discharges into the MS4. CWA section 402(p)(3)(B)(ii) states that MS4 permits must "prohibit non-storm water discharges into the storm sewers." 40 CFR 122.26(d)(2)(iv)(B) requires Copermitttees to "detect and remove [...] illicit discharges and improper disposal into the storm sewer." See Finding C.14 and Discussion.

The Order's approach to regulating discharges into and from the MS4 is in accordance with State Water Board Order WQ 2001-15. In that order, the State Water Board reviewed the San Diego County permit (Order No. 2001-01) requirements and made one change to one prohibition.<sup>100</sup> The Order upheld all other requirements of the current permit. Order No. R9-2010-0016 incorporates the one change made by the State Water Board, and continues the approach of Order No. 2001-01 (the basis for the current permit), as it was upheld by the State Water Board in Order WQ 2001-15. State Water Board Order WQ 2001-15 supports such requirements, stating: "It is important to emphasize that dischargers into MS4s continue to be required to implement a full range of BMPs, including source control."

The Court of Appeals, Fourth Appellate District, found that the current permit's approach to regulation of discharges into the MS4 was appropriate. Since the Order utilizes the same approach, the court decision supports the Order's requirements.

**Finding D.1.f.** Runoff needs to be addressed during the three major phases of urban development (planning, construction, and use) in order to reduce the discharge of storm water pollutants to the MEP, effectively prohibit non-storm water discharges and protect receiving waters. Development which is not guided by water quality planning policies and principles can unnecessarily result in increased pollutant load discharges, flow rates, and flow durations which can negatively impact receiving water beneficial uses. Construction sites without adequate BMP implementation result in sediment runoff rates which greatly exceed natural erosion rates of undisturbed lands, causing siltation and impairment of receiving waters. Existing development generates substantial pollutant loads which are discharged in runoff to receiving waters.

**Discussion of Finding D.1.f.** MS4 permits are issued to municipalities because of their land use authority. The ultimate responsibility for the pollutant discharges, increased runoff, and inevitable long-term water quality degradation that results from development lies with local governments. This responsibility is based on the fact that it is the local governments that have authorized the development (i.e. conversion of natural pervious ground cover to impervious surfaces) and the land uses that generate the pollutants and runoff. Furthermore, the MS4 through which the pollutants and

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<sup>100</sup> The State Water Board removed the prohibition of discharges *into* the MS4 that cause or contribute to exceedances of water quality objectives. The revision allows for treatment of storm water flows once the pollutants have entered the MS4. It does not affect the effective prohibition on certain dry-weather flows into the MS4 that is required by the Clean Water Act.

increased flows are conveyed, and ultimately discharged into natural receiving waters, are owned and operated by the same local governments. In summary, the Copermittees under the Order are responsible for discharges into and out of their MS4s because (1) they own and operate the MS4; and (2) they have the legal authority that authorizes the very development and land uses with generate the pollutants and increased flows in the first place.

For example, since grading cannot commence prior to the issuance of a local grading permit, the Copermittees have a built-in mechanism to ensure that all grading activities are protective of receiving water quality. The Copermittee has the authority to withhold issuance of the grading permit until the project proponent has demonstrated to the satisfaction of the Copermittee that the project will not violate their ordinances or cause the Copermittee to be in violation of its MS4 permit. Since the Copermittee will ultimately be held responsible for any discharges from the grading project by the San Diego Water Board, the Copermittee will want to use its own permitting authority to ensure that whatever measures the Copermittee deems necessary to protect discharges into its MS4 are in fact taken by the project proponent.

The Order holds the local government accountable for this direct link between its land use decisions and water quality degradation. The Order recognizes that each of the three major stages in the development process (development planning, construction, and the use or operational stage) are controlled by and must be authorized by the local government. Accordingly, this permit requires the local government to implement, or require others to implement, appropriate best management practices to reduce storm water pollutant discharges and increased flow during each of the three stages of development.

Including plans for BMP implementation during the design phase of new development and redevelopment offers the most cost effective strategy to reduce storm water runoff pollutant loads to surface waters.<sup>101</sup> The Phase II regulations for small municipalities reflect the necessity of addressing runoff during the early planning phase. Due to the greater water quality concerns generally experienced by larger municipalities, Phase II requirements for small municipalities are also applicable to larger municipalities such as the Copermittees. The Phase II regulations direct municipalities to develop, implement, and enforce a program to address storm water runoff from new development and redevelopment projects that disturb greater than or equal to one acre, including projects less than one acre that are part of a larger common plan of development or sale. The program must ensure that controls are in place that would prevent or minimize water quality impacts. This includes developing and implementing strategies which include a combination of structural and/or non-structural BMPs appropriate to the locality. The program must also ensure the adequate long-term operation and maintenance of BMPs.<sup>102</sup> USEPA expands on the Phase II regulations for urban development when it recommends that Copermittees:

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<sup>101</sup> USEPA, 2000. Storm Water Phase II Compliance Assistance Guide. EPA 833-R-00-002.

<sup>102</sup> USEPA, 1999. 40 CFR Parts 9, 122, 123, and 124 National Pollutant Discharge Elimination System-Regulations for Revision of the Water Pollution Control Program Addressing Storm Water Discharges; Final Rule. 64 FR 68845.

“Adopt a planning process that identifies the municipality’s program goals (e.g., minimize water quality impacts resulting from post-construction runoff from new development and redevelopment), implementation strategies (e.g., adopt a combination of structural and/or non-structural BMPs), operation and maintenance policies and procedures, and enforcement procedures. In developing your program, you should consider assessing existing ordinances, policies, programs and studies that address storm water runoff quality.”

Management of storm water runoff during the construction phase is also essential. USEPA explains in the preamble to the Phase II regulations that storm water discharges generated during construction activities can cause an array of physical, chemical, and biological water quality impacts. Specifically, the biological, chemical and physical integrity of the waters may become severely compromised due to runoff from construction sites. Fine sediment from construction sites can adversely affect aquatic ecosystems by reducing light penetration, impeding sight-feeding, smothering benthic organisms, abrading gills and other sensitive structures, reducing habitat by clogging interstitial spaces within the streambed, and reducing intergravel dissolved oxygen by reducing the permeability of the bed material. Water quality impairment also results, in part, because a number of pollutants are preferentially absorbed onto mineral or organic particles found in fine sediment. The interconnected process of erosion (detachment of the soil particles), sediment transport, and delivery is the primary pathway for introducing key pollutants, such as nutrients, metals, and organic compounds into aquatic systems.<sup>103</sup>

Finally, storm water and non-storm water runoff from existing development must be addressed. The Copermittees’ monitoring data exhibits that significant water quality problems exist in receiving waters which receive runoff from areas with extensive existing development, such as Aliso Creek. Source identification, BMP requirements, inspections, and enforcement are all important measures which can be implemented to address runoff from existing development. USEPA supports inspections and enforcement by municipalities when it states “Effective inspection and enforcement requires [...] penalties to deter infractions and intervention by the municipal authority to correct violations. Enforcement mechanisms [...] also must be described.”<sup>104</sup>

**Finding D.1.g.** Annual reporting requirements included in this Order are necessary to meet federal requirements and to evaluate the effectiveness and compliance of the Copermittees’ programs.

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<sup>103</sup> Ibid., 64 FR 68728.

<sup>104</sup> USEPA, 1992. Guidance Manual for the Preparation of Part II of the NPDES Permit Applications for Discharges from Municipal Separate Storm Sewer Systems. EPA 833-B-92-002.

**Discussion of Finding D.1.g.** The annual reporting requirements are consistent with federal NPDES regulation 40 CFR 122.41, which states:

“The operator of a large or medium municipal separate storm sewer system of a municipal separate storm sewer system that has been designated by the Director under section 122.26(a)(1)(v) of this part must submit an annual report by the anniversary of the date of the issuance of the permit for such a system. The report shall include: (1) The status of implementing the components of the storm water management program that are established as permit conditions; (2) Proposed changes to the storm water management program that are established as permit condition, Such proposed changes shall be consistent with § 122.26(d)(2)iii) of this part; (3) Revisions, if necessary, to the assessment of controls and the fiscal analysis reported in the permit application under § 122.26(d)(2)iv) and (d)(2)(v) of this part; (4) A summary of data, including monitoring data, that is accumulated throughout the reporting year; (5) Annual expenditures and budget for year following each annual report; (6) A summary describing the number and nature of enforcement actions, inspections, and public education programs; and (7) Identification of water quality improvements or degradation.”

CWC section 13267 provides that “the regional board may require that any person who has discharged [...] shall furnish, under penalty of perjury, technical or monitoring reports which the regional board requires.”

The San Diego Water Board must assess the reports to ensure that the Copermittees’ programs are adequate to assess and address water quality. The reporting requirements can also be useful tools for the Copermittees to review, update, or revise their programs. Areas or issues which have received insufficient efforts can also be identified and improved.

**Finding D.1.h.** This Order establishes Storm Water Action Levels (SALs) for selected pollutants based on USEPA Rain Zone 6 (arid southwest) Phase I MS4 monitoring data for pollutants in storm water. The SALs were computed as the 90<sup>th</sup> percentile of the data set, utilizing the statistical based population approach, one of three approaches recommended by the State Water Board’s Storm Water Panel in its report, ‘The Feasibility of Numerical Effluent Limits Applicable to Discharges of Storm Water Associated with Municipal, Industrial and Construction Activities (June 2006). SALs are identified in section D of this Order. Copermittees must implement a timely, comprehensive, cost-effective storm water pollution control program to reduce the discharge of pollutants in storm water from the permitted areas so as not to exceed the SALs. Exceedance of SALs may indicate inadequacy of programmatic measures and BMPs required in this Order.

**Discussion of Finding D.1.h.** Section 402(p) of the CWA states MS4 permits for storm water 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. This includes requiring numeric effluent limitations for storm water.

SALs are not numeric effluent limitations, which is reflected in language which clarifies an excursion above a SAL does not create a presumption that MEP is not being met. Instead, a SAL exceedance is to be used by the Copermitttee as an indication that the MS4 storm water discharge point is a definitive "bad actor," and the result from the monitoring needs to be considered as part of the iterative process for reducing pollutants in storm water to the MEP.

The CWA defines effluent limitations as:

"Any restriction imposed by the Director on quantities, discharge rates, and concentrations of pollutants which are "discharged" from "point sources" into "waters of the United States"..." A SAL is not a restriction on a quantity, rate or concentration, but is a level at which actions that further reduce pollutants from that discharge point need to be evaluated in order to reduce storm water pollutants to the MEP. Thus, SALs are not effluent limitations as defined by the CWC or CWA.

The approach of using "action levels" is consistent with recommendations made by USEPA in their Interim Permitting Approach for Water Quality-Based Effluent Limitations in Storm Water Permits, dated August 26, 1996:

"Under the Clean Water Act (CWA) and NPDES regulations, permitting authorities may employ a variety of conditions and limitations in storm water permits, including best management practices, performance objectives, narrative conditions, monitoring triggers, action levels (e.g., monitoring benchmarks, toxicity reduction evaluation action levels), etc., as the necessary water-quality based limitations, where numeric water quality based effluent limitations are determined to be unnecessary or infeasible". As such, these action levels are not considered numeric water quality-based effluent limitations.

It should be noted that a purpose of monitoring, required under this and previous Orders, is to aid in the evaluation of implemented programs and BMPs in reducing pollutants in storm water discharges to the MEP. The Monitoring and Reporting Program states:

This Receiving Waters Monitoring and Reporting Program is intended to meet the following goals:

2. Measure and improve the effectiveness of the Copermittees' runoff management programs;
3. Assess the chemical, physical, and biological impacts to receiving waters resulting from MS4 discharges;
4. Characterize storm water discharges;
5. Identify sources of specific pollutants;
6. Prioritize drainage and sub-drainage areas that need management actions; and
9. Provide information to implement required BMP improvements.

Since the first permit (adopted 20 years ago), Copermittees have utilized non-numerical limitations (BMPs) to control and abate the discharge of any pollutants in storm water discharges to the MEP. Copermittees have been accorded 20 years to research, develop, and deploy BMPs that are capable of reducing storm water discharges from the MS4 to levels represented in SALs. Storm Water Action Levels are set at such a level that any exceedance of a SAL will clearly indicate BMPs being implemented are insufficient to protect the Beneficial Uses of waters of the State. Copermittee shall utilize the exceedance information as a high priority consideration when adjusting and executing annual work plans, as required by this Permit. Failure to appropriately consider and react to SAL exceedances in an iterative manner creates a presumption that the Copermittee(s) have not complied to the MEP.

SALs have been developed utilizing Phase I storm water effluent data (updated February 2008, <http://rpitt.eng.ua.edu/Research/ms4/mainms4.shtml>) from the arid west region (USEPA Rain Zone 6). USEPA Rainfall Zone 6, which includes MS4 effluent data from Orange, San Diego, Los Angeles, Ventura and San Bernadino County. The approach taken to derive SALs is a straightforward percentile approach, with the SAL being set as the 90<sup>th</sup> percentile of the dataset for each constituent. This approach is consistent with the 2006 State Water Board Panel Report:

"The statistically based population approach would once again rely on the average distribution of measured water quality values developed from many water quality samples taken for many events at many locations. In this case, however, the Action Level would be defined by the central tendency and variance estimates from the population data. For example, the Action Level could be set as two standard deviations above the mean, i.e. if measured concentrations are consistently higher than two standard deviations above the mean, an Action Level would be triggered. Other population based measures of central tendency could be used (i.e. geometric mean, median, etc.) or estimates of variance (i.e. prediction intervals, etc.). Regardless of which population based estimators are used (or percentile from above), the idea would be to identify the [statistically derived] point at which managers feel concentrations are significantly beyond the norm."

SALs are measurable criteria which quantify the performance of BMPs for a particular watershed or subwatershed that discharges storm water MS4 effluent from that particular discharge point. Thus, Copermittees can utilize SAL results to determine the effectiveness BMPs on the effluent from a particular area of the MS4.

SALs represent the lowest 10 percent of pollutant reduction for USEPA Rain Zone 6 MS4 Phase I programs discharging to waters of the United States. For the past 20 years, Copermittees have utilized non-numerical limitations (BMPs) to control and abate the discharge of any pollutants in storm water discharges to the MEP. Copermittees have been accorded 20 years to research, develop, and deploy BMPs that are capable of reducing storm water discharges from the MS4 to levels represented in SALs. Storm Water Action Levels are set at such a level that any exceedance of a SAL will indicate to the Copermittee(s) that the discharge is within the lowest 10% of monitored outfalls. Therefore, an exceedance of a SAL warrants priority consideration within the Copermittee iterative process.

**Finding D.2.a.** The Standard Storm Water Mitigation Plan (SSMP) requirements contained in this Order are consistent with Order WQ 2000-11 adopted by the State Water Board on October 5, 2000. In the precedential order, the State Water Board found that the design standards, which essentially require that runoff generated by 85 percent of storm events from specific development categories be infiltrated or treated, reflect the MEP standard. The order also found that the SSMP requirements are appropriately applied to the majority of the Priority Development Project categories that are also contained in section F.1 of this Order. The State Water Board also gave California Regional Water Quality Control Boards (Regional Water Boards) the needed discretion to include additional categories and locations, such as retail gasoline outlets (RGOs), in SSMPs.

**Discussion of Finding D.2.a.** The post-construction requirements and design standards contained in the SSMP section of Order No. R9-2010-0016 constitute MEP consistent with State Water Board guidance, court decisions, and San Diego Water Board requirements. The State Water Board and San Diego Water Board have made several recent decisions in regards to inclusion of SSMP requirements in MS4 permits. In a precedential decision, State Water Board Order WQ 2000-11, the State Water Board found that the SSMP provisions constitute MEP for addressing storm water pollutant discharges resulting from Priority Development Projects. The provisions of the SSMP section of the Order are also consistent with those previously issued by the San Diego Water Board for Riverside County (Order No. R9-2004-001), Southern Orange County (Order Nos. R9-2002-0001 and R9-2009-0002) and San Diego County (Order Nos. R9-2001-01 and R9-2007-0001), as well as requirements in the Los Angeles County MS4 permit (Order No. R4-2001-182). In State Water Board Order WQ 2001-15, the State Water Board reaffirmed that SSMP requirements constitute MEP. Moreover, the SSMP requirements of the San Diego County MS4 permit (Order No. R9-2001-01) were upheld when the California State Supreme Court declined to hear the matter on appeal.

**Finding D.2.b.** Controlling runoff pollution by using a combination of onsite source control and site design BMPs augmented with treatment control BMPs before the runoff enters the MS4 is important for the following reasons: (1) Many end-of-pipe BMPs (such as diversion to the sanitary sewer) are typically ineffective during significant storm events; (2) Whereas, onsite source control BMPs can be applied during all runoff conditions end-of-pipe BMPs are often incapable of capturing and treating the wide range of pollutants which can be generated on a sub-watershed scale; (3) End-of-pipe BMPs are more effective when used as polishing BMPs, rather than the sole BMP to be implemented; (4) End-of-pipe BMPs do not protect the quality or beneficial uses of receiving waters between the pollutant source and the BMP; and (5) Offsite end-of-pipe BMPs do not aid in the effort to educate the public regarding sources of pollution and their prevention.

**Discussion of Finding D.2.b.** Many end-of-pipe BMPs are designed for low flow conditions because their end-of-pipe location prevents them from being designed for large storm events. This results in the end-of-pipe BMPs being overwhelmed, bypassed, or ineffective during larger storm events more frequently than onsite BMPs designed for larger storms. BMPs are also frequently most effective for a particular type of pollutant (such as sediment). Such BMPs may be appropriate for small sites with a limited suite of pollutants generated; however, end-of-pipe BMPs must typically be able to address a wide range of pollutants generated by a sub-watershed, limiting their effectiveness and/or increasing costs. Moreover, the location of some end-of-pipe BMPs allow for untreated pollutants to be discharged to and degrade receiving waters prior to their reaching the BMPs. This fails to protect receiving waters, which is the purpose of BMP implementation. In addition, opportunities to educate the public regarding runoff pollution can be lost when end-of-pipe BMPs are located away from pollutant sources and out of sight. Onsite BMPs can lead to a better public understanding of runoff issues since their presence can provide a visible and/or tangible lesson in pollution prevention.

**Finding D.2.c.** Use of Low-Impact Development (LID) site design BMPs at new development, redevelopment and retrofit projects can be an effective means for minimizing the impact of storm water runoff discharges from the development projects on receiving waters. LID is a site design strategy with a goal of maintaining or replicating the pre-development hydrologic regime through the use of design techniques. LID site design BMPs help preserve and restore the natural hydrologic cycle of the site, allowing for filtration and infiltration which can greatly reduce the volume, peak flow rate, velocity, and pollutant loads of storm water runoff. Current runoff management, knowledge, practices and technology have resulted in the use of LID BMPs as an acceptable means of meeting the storm water MEP standard.

**Discussion of Finding D.2.c.** The CWA is the cornerstone of surface water quality protection in the United States. (The Act does not deal directly with ground water or with water quantity issues.) The statute employs a variety of regulatory and nonregulatory tools to sharply reduce direct pollutant discharges into waterways, and manage polluted runoff. These tools are employed to achieve the broader goal of

restoring and maintaining the chemical, physical, and biological integrity of the nation's waters so that they can support the protection and propagation of fish, shellfish, wildlife and recreation in and on the water.

Increasing the volume, velocity, frequency and discharge duration of storm water runoff from developed areas will eventually greatly accelerate downstream erosion, impair stream habitat in natural drainages, and negatively impact beneficial uses. Development and urbanization increase pollutant loads and volume while simultaneously increasing impervious area. Impervious surfaces can neither absorb water nor remove pollutants and thus lose the purification and infiltration provided by naturally vegetated soil. Furthermore, impervious surfaces tend to concentrate pollutants on the top of the surface that are then washed off into the MS4 and waters of the State in a concentrated manner. The use of LID site design BMPs can be an effective means of minimizing the impact of runoff discharges on receiving waters. By reducing water pollution, reducing runoff and increasing groundwater recharge, LID helps to improve the quality of receiving surface waters, stabilize the flow rates of receiving waters (preventing downstream hydromodification), reduce downstream flooding and protect and enhance water supply sources. Current runoff management, knowledge, practice and technology has resulted in the use of LID BMPs as an acceptable means of meeting the MEP standard for storm water treatment.

Current municipal codes may oppose or hinder the design, use and implementation of specific elements of LID. These codes include, but are not limited to, emergency services access requirements, building landscape ordinances, building height limits and parking space requirements. It is essential for Copermitttees to work with other responsible agencies and/or update codes that have the potential to impact the use of LID.

The Local Government Commission, a non-profit organization working to build livable communities, developed a set of principles known as the *Ahwahnee Water Principles for Resource-Efficient Land Use*<sup>105</sup> that provide the opportunity to reduce costs and improve the reliability and quality of our water resources. Implementation of LID incorporates several of the Ahwahnee principles such as:

1. "Community Design should be compact, mixed use, walkable and transit-oriented so that urban runoff pollutants are minimized and the open lands that absorb water are preserved to the maximum extent possible."
3. "Water holding areas such as creek beds, recessed athletic fields, ponds, cisterns, and other features that serve to recharge groundwater, reduce runoff, improve water quality and decrease flooding should be incorporated into the urban landscape."
4. "All aspects of landscaping from the selection of plants to soil preparation and the installation of irrigation systems should be designed to reduce water demand, retain runoff, decrease flooding, and recharge groundwater."

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<sup>105</sup> Local Government Commission, "The Ahwahnee Water Principles – A Blueprint for Regional Sustainability", [http://water.lgc.org/Members/tony/docs/lgc\\_water\\_guide.pdf](http://water.lgc.org/Members/tony/docs/lgc_water_guide.pdf)

5. "Permeable surfaces should be used for hardscape. Impervious surfaces such as driveways, streets, and parking lots should be minimized so that land is available to absorb storm water, reduce polluted urban runoff, recharge groundwater and reduce flooding."

The use of LID site design BMPs helps reduce the amount of impervious area associated with development and allows storm water to infiltrate into the soil. Natural vegetation and soil filters storm water runoff and reduces the volume and pollutant loads of storm water. Studies have revealed that the level of imperviousness resulting from development and urbanization is strongly correlated with the water quality impairment of nearby receiving waters.<sup>106</sup> In many cases, the impacts on receiving waters due to changes in hydrology can be more significant than those attributable to the contaminants found in storm water discharges.<sup>107</sup> These impacts include stream bank erosion (increased sediment load and subsequent deposition), benthic habitat degradation, and decreased diversity of macroinvertebrates. Although conventional BMPs do reduce storm water pollutant loads, they may not effectively control adverse effects from changes in the discharge hydrologic conditions.<sup>108</sup>

The Order includes requirements for developments to include site design BMPs that mimic or replicate the natural hydrologic cycle. Open space designs which maximize pervious surfaces and retention of "natural" drainages have been found to reduce both the costs of development and pollutant export.<sup>109</sup> Moreover, USEPA finds including plans for a "natural" site design and BMP implementation during the design phase of new development and redevelopment offers the most cost effective strategy to reduce storm water pollutant loads to surface waters.<sup>110</sup> In addition, a recent U.S. Department of Housing and Urban Development guidance document on low-impact development notes that the use of LID-based storm water management design allows land to be developed, but in a cost-effective manner that helps mitigate potential environmental impacts.<sup>111</sup>

**Finding D.2.d.** RGOs are significant sources of pollutants in storm water runoff. RGOs are points of convergence for motor vehicles for automotive related services such as repair, refueling, tire inflation, and radiator fill-up and consequently produce significantly higher loadings of hydrocarbons and trace metals (including copper and zinc) than other developed areas.

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<sup>106</sup> USEPA, 1999. 40 CFR Parts 9, 122, 123, and 124 National Pollutant Discharge Elimination System – Regulations for Revision of the Water Pollution Control Program Addressing Storm Water Discharges; Final Rule.

<sup>107</sup> Ibid.

<sup>108</sup> USEPA, 2000. Low-Impact Development: A literature review. EPA-841-B-00-005. 35p.

<sup>109</sup> Center for Watershed Protection, 2000. "The Benefits of Better Site Design in Residential Subdivisions." Watershed Protection Techniques. Vol. 3. No. 2.

<sup>110</sup> USEPA, 1999. 40 CFR Parts 9, 122, 123, and 124 National Pollutant Discharge Elimination System – Regulations for Revision of the Water Pollution Control Program Addressing Storm Water Discharges; Final Rule.

<sup>111</sup> U.S. Department of Housing and Urban Development, Office of Policy Development and Research, 2003. "The Practice of Low Impact Development." Prepared by: NAHB Research Center, Inc. Upper Marlboro, Maryland. Contract No. H-21314CA. 131p.

**Discussion of Finding D.2.d.** RGOs are included in the Order as a Priority Development Project category because RGOs produce significantly greater loadings of hydrocarbons and trace metals (including copper and zinc) than other developed areas. To meet the storm water MEP standard, source control and structural treatment BMPs are needed at RGOs that meet the following criteria: (a) 5,000 square feet or more or (b) an average daily traffic (ADT) of 100 or more vehicles per day. These are appropriate thresholds since vehicular development size and volume of traffic are good indicators of potential impacts of storm water runoff from RGOs on receiving waters.

This finding has been added to satisfy State Water Board Order WQ 2000-11's requirements for including RGOs as a Priority Development Category. State Water Board Order WQ 2000-11 acknowledged that a threshold (size, average daily traffic, etc.) appropriate to trigger SSMP requirements should be developed for RGOs and that specific findings regarding RGOs should be included in MS4 permits to justify the requirement.<sup>112</sup>

**Finding D.2.e.** Industrial sites are significant sources of pollutants in runoff. Pollutant concentrations and loads in runoff from industrial sites are similar or exceed pollutant concentrations and loads in runoff from other land uses, such as commercial or residential land uses. As with other land uses, LID site design, source control, and treatment control BMPs are needed at industrial sites in order to meet the MEP standard. These BMPs are necessary where the industrial site is larger than 10,000 square feet. The 10,000 square feet threshold is appropriate, since it is consistent with requirements in other Phase I NPDES storm water regulations throughout California.

**Discussion of Finding D.2.e.** Industrial sites can be a significant source of pollutants in storm water runoff. In an extensive review of storm water literature, the Los Angeles Water Board found widespread support for the finding that "industrial and commercial activities can also be considered hot spots as sources of pollutants." It also found that "industrial and commercial areas were likely to be the most significant pollutant source areas" of heavy metals.<sup>113</sup> Likewise, storm water runoff from heavy industry in the Santa Clara Valley has been found to be extremely toxic.<sup>114</sup> These findings are corroborated by USEPA, which states in the preamble to the 1990 Phase I NPDES storm water regulations that "Because storm water from industrial facilities may be a major contributor of pollutants to municipal separate storm sewer systems, municipalities are obligated to develop controls for storm water discharges associated

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<sup>112</sup> State Water Board, 2000. Order WQ 2000-11. In the Matter of the Petitions of The Cities Of Bellflower, Et Al., The City Of Arcadia, And Western States Petroleum Association Review of January 26, 2000 Action of the Regional Board And Actions and Failures to Act by both the California Regional Water Quality Control Board, Los Angeles Region and Its Executive Officer Pursuant to Order No. 96-054, Permit for Municipal Storm Water and Urban Run-Off Discharges Within Los Angeles County [NPDES NO. CAS614001] SWRCB/OCC FILES A-1280, A-1280(a) and A-1280(b)

<sup>113</sup> Los Angeles Water Board. 2001.

<sup>114</sup> Schueler and Holland, 2000. Storm Water Strategies for Arid and Semi-Arid Watersheds (Article 66). The Practice of Watershed Protection.

with industrial activity through their system in their storm water management program." Since heavy industrial sites can be a significant source of pollutants in runoff in a manner similar to other SSMP project categories such as commercial development or automotive repair shops, it is appropriate to include heavy industrial sites as a SSMP category in the Order.

The Phase I NPDES storm water regulations require the Copermittees to "control through ordinance, permit, contract, order, or similar means, the contribution of pollutants to the municipal storm sewer by storm water discharges associated with industrial activity and the quality of storm water discharged from sites of industrial activity" (40 CFR 122.26(d)(2)(i)). In addition, it has been established that the MEP standard for the control of storm water runoff from new development projects includes incorporation of the SSMP requirements. Since the Copermittees must both control storm water pollutants from industrial sites and meet the storm water MEP standard for new development, it is appropriate to apply the SSMP requirements to heavy industrial sites.

The State Water Board's Order WQ 2000-11 indicates that it is appropriate to apply SSMP requirements to categories of development where evidence shows the category of development can be a significant source of pollutants. As evidenced above, heavy industrial sites can be a significant source of pollutants. Therefore, the Order includes heavy industrial sites as a SSMP Priority Development Project category.

**Finding D.2.f.** If not properly designed or maintained, certain BMPs implemented or required by municipalities for runoff management may create a habitat for vectors (e.g. mosquitoes and rodents). Proper BMP design and maintenance to avoid standing water, however, can prevent the creation of vector habitat. Nuisances and public health impacts resulting from vector breeding can be prevented with close collaboration and cooperative effort between municipalities, local vector control agencies, and the California Department of Public Health during the development and implementation of runoff management programs.

**Discussion of Finding D.2.f.** The implementation of certain structural BMPs or other runoff treatment systems can result in significant vector problems in the form of increased breeding or harborage habitat for mosquitoes, rodents or other potentially disease transmitting organisms. The implementation of BMPs that retain water may provide breeding habitat for a variety of mosquito species, some of which have the potential to transmit diseases such as Western Equine Encephalitis, St. Louis Encephalomyelitis, and malaria. Recent BMP implementation studies by Caltrans<sup>115</sup> in District 7 and District 11 have demonstrated mosquito breeding associated with some types of BMPs. The Caltrans BMP Retrofit Pilot study cited lack of maintenance and improper design as factors contributing to mosquito production. However, a Watershed Protection Techniques article describes management techniques for selecting, designing, and maintaining structural treatment BMPs to minimize mosquito

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<sup>115</sup> Caltrans, 2000. BMP Retrofit Pilot Studies: A Preliminary Assessment of Vector Production.

production.<sup>116</sup> State and local runoff management programs that include structural BMPs with the potential to retain water have been implemented in Florida and the Chesapeake Bay region without resulting in significant public health threats from mosquitoes or other vectors.<sup>117</sup>

**Finding D.2.g.** The increased volume, velocity, frequency and discharge duration of storm water runoff from developed areas has the potential to greatly accelerate downstream erosion, impair stream habitat in natural drainages, and negatively impact beneficial uses. Development and urbanization increase pollutant loads in storm water runoff and the volume of storm water runoff. Impervious surfaces can neither absorb water nor remove pollutants and thus lose the purification and infiltration provided by natural vegetated soil. Hydromodification measures for discharges to hardened channels allow for the future restoration of the hardened channels to their natural state, thereby restoring the chemical, physical, and biological integrity and beneficial uses of local receiving waters.

**Discussion of Finding D.2.g.** Increasing the volume, velocity, frequency and discharge duration of storm water runoff from developed areas will eventually greatly accelerate downstream erosion, impair stream habitat in natural drainages, and negatively impact beneficial uses. Development and urbanization increase pollutant loads and volume while simultaneously increasing impervious area. Impervious surfaces can neither absorb water nor remove pollutants and thus lose the purification and infiltration provided by naturally vegetated soil.

Historic hydromodification impacts, such as concrete lining and channelization, have impacted the natural physical habitat of urban streams resulting in low IBI scores. The Copermittee's monitoring to date indicates decreased IBI scores in the developed watersheds when compared to reference sites, with developed sites consistently having poor or very poor IBI scores. While habitat scores remained stable over the last reporting period, with scores of marginal to sub-optimal, the Copermittees have consistently monitored high levels of fine sediment in habitat assessments and often changing vegetative cover. However, the impact of persistent toxicity at the bioassessment stations in conjunction with physical habitat scores is unknown.<sup>118</sup>

Hydromodification impacts result in poor physical habitat conditions through streambed scour, erosion, vegetation displacement, sediment deposition, channelization, and channel modifications. Increased sediment loads from hydromodification causes other impacts to physical habitats including increased turbidity which then may cause increased temperatures. In addition, an increased sediment load may have an increased biological content thereby increasing the

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<sup>116</sup> Watershed Protection Techniques, 1995. Mosquitoes in Constructed Wetlands: A Management Bugaboo? 1(4):203-207.

<sup>117</sup> Shaver, E. and R. Baldwin, 1995. Sand Filter Design for Water Quality Treatment in Herricks, E., Ed. Stormwater Runoff and Receiving Systems: Impact, Monitoring, and Assessment, CRC Lewis Publishers, New York, NY.

<sup>118</sup> Riverside County Copermittees, 2008-2009 Santa Margarita Watershed Annual Report.

sediment oxygen demand and lowering the dissolved oxygen available for aquatic life.<sup>119</sup>

The objective of the CWA is “to restore and maintain the chemical, *physical*, and biological integrity of the Nation’s waters (emphasis added).” Stream restoration by removing concrete and other unnatural materials is a major step toward achieving that objective. The success of future stream restoration and stabilization is, however, dependent on preventing and reducing physical impacts from activities upstream. Therefore, hydromodification management measures are necessary upstream of modified (e.g. concrete, rip rap, etc.) channels in addition to non-modified channels.

Please see discussion of Findings C.10 and C.11 for additional information about impacts due to increasing volume, velocity, frequency and discharge duration of storm water runoff from developed areas.

**Finding D.3.a.** In accordance with federal NPDES regulations and to ensure the most effective oversight of industrial and construction site discharges, discharges of runoff from industrial and construction sites are subject to dual (State and local) storm water regulation. Under this dual system, each Copermitttee is responsible for enforcing its local permits, plans, and ordinances, and the San Diego Water Board is responsible for enforcing the General Construction Activities Storm Water Permit, State Water Board Order 2009-0009-DWQ, NPDES No. CAS000002 (General Construction Permit) and the General Industrial Activities Storm Water Permit, State Water Board Order97-03-DWQ, NPDES No. CAS000001 (General Industrial Permit). NPDES municipal regulations require that municipalities develop and implement measures to address runoff from industrial and construction activities. Those measures may include the implementation of other BMPs in addition to those BMPs that are required under the statewide general permits for activities subject to both State and local regulation.

**Discussion of Finding D.3.a.** USEPA finds the control of pollutant discharges from industry and construction so important to receiving water quality that it has established a double system of regulation over industrial and construction sites. This double system of regulation consists of two parallel regulatory systems with the same common objective: to keep pollutants from industrial and construction sites out of the MS4. In this double system of regulation for runoff from industrial and construction sites, local governments must enforce their legal authorities (i.e. local ordinances and permits) while the San Diego Water Board must enforce its legal authority (i.e. statewide general industrial and construction storm water permits). These two regulatory systems are designed to complement and support each other. Municipalities are not required to enforce San Diego Water Board and State Water Board permits. They are required, however, to enforce their ordinances and permits. The Federal regulations are clear that municipalities have responsibility to prevent

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<sup>119</sup> USEPA, National Management Measures to Control Nonpoint Source Pollution from Hydromodification, EPA 841-B-07-002, July 2007.

non-storm water and address storm water runoff from industrial and construction sites which enters their MS4s.

Municipalities have this responsibility because they have the authority to issue land use and development permits. Since municipalities are the lead permitting authority for industrial land use and construction activities, they are also the lead for enforcement regarding runoff discharges from these sites. For sites where the municipality is the lead permitting authority, the San Diego Water Board will work with the municipality and provide support where needed. The San Diego Water Board will assist municipalities in enforcement against non-compliant sites after the municipality has exhibited a good faith effort to bring the site into compliance.

According to USEPA, the storm water regulations envision that NPDES permitting authorities and municipal operators will cooperate to develop programs to monitor and control pollutants in storm water discharges from industrial facilities.<sup>120</sup> USEPA discusses the “dual regulation” of construction sites in its Storm Water Phase II Compliance Assistance Guide, which states “Even though all construction sites that disturb more than one acre are covered nationally by an NPDES storm water permit, the construction site runoff control minimum measure [...] is needed to induce more localized site regulation and enforcement efforts, and to enable operators [...] to more effectively control construction site discharges into their MS4s.”<sup>121</sup> While the Storm Water Phase II Compliance Assistance Guide applies to small municipalities, it is applicable to the Copermittees, because they are similar in size and have the potential to discharge similar pollutant types as Phase II municipalities.

**Finding D.3.b.** Identification of sources of pollutants in runoff (such as municipal areas and activities, industrial and commercial sites/sources, construction sites, and residential areas), development and implementation of BMPs to address those sources, and updating ordinances and approval processes are necessary for the Copermittees to ensure that discharges of pollutants from its MS4 in storm water are reduced to the MEP and that non-storm water discharges are not occurring. Inspections and other compliance verification methods are needed to ensure minimum BMPs are implemented. Inspections are especially important at areas that are at high risk for pollutant discharges.

**Discussion of Finding D.3.b.** Source identification is necessary to characterize the nature and extent of pollutants in discharges and to develop appropriate BMPs. It is the first step in a targeted approach to runoff management. Source identification helps identify the location of potential sources of pollutants in runoff. Pollutants found to be present in receiving waters can then be traced to the sites which frequently generate such pollutants. In this manner source inventories can help to target inspections, monitoring, and potential enforcement. This allows for limited inspection, monitoring, and enforcement time to be most effective. USEPA supports source identification as a

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<sup>120</sup> USEPA, 1992. Guidance Manual for the Preparation of Part II of the NPDES Permit Applications for Discharges from Municipal Separate Storm Sewer Systems. EPA 833-B-92-002.

<sup>121</sup> USEPA, 2000. Storm Water Phase II Compliance Assistance Guide. EPA 833-R-00-002.

concept when it recommends construction, municipal, and industrial source identification in guidance and the federal regulations.<sup>122,123</sup>

The development of BMPs for identified sources will help ensure that appropriate, consistent controls are implemented at all types of development and areas. Copermittees must reduce the discharge of pollutants in storm water runoff to the maximum extent practicable. To achieve this level of pollutant reduction, BMPs must be implemented. Designation of minimum BMPs helps ensure that appropriate BMPs are implemented for various sources. These minimum BMPs also serve as guidance as to the level of water quality protection required. USEPA requires development and implementation of BMPs for construction, municipal, commercial, industrial, and residential sources at 40 CFR 122.26(d)(2)(iv)(A-D).

Updating ordinances and approval processes is necessary in order for the Copermittees to control discharges to their MS4s. USEPA supports updating ordinances and approval processes when it states “A crucial requirement of the NPDES storm water regulation is that a municipality must demonstrate that it has adequate legal authority to control the contribution of pollutants in storm water discharged to its MS4. [...] In order to have an effective municipal storm water management program, a municipality must have adequate legal authority to control the contribution of pollutants to the MS4. [...] ‘Control,’ in this context, means not only to require disclosure of information, but also to limit, discourage, or terminate a storm water discharge to the MS4.”<sup>124</sup>

Inspections provide a necessary means for the Copermittees to evaluate compliance of pollutant sources with their municipal ordinances and minimum BMP requirements. USEPA supports inspections when it recommends inspections of construction, municipal, and industrial sources.<sup>125</sup> Inspection of high risk sources are especially important because of the ability of frequent inspections to help ensure compliance, thereby reducing the risk associated with such sources. USEPA suggests that inspections can improve compliance when it states “Effective inspection and enforcement requires [...] penalties to deter infractions and intervention by the municipal authority to correct violations.”<sup>126</sup>

**Finding D.3.c.** Historic and current development makes use of natural drainage patterns and features as conveyances for runoff. Urban streams used in this manner are part of the municipalities MS4s regardless of whether they are natural, anthropogenic, or partially modified features. In these cases, the urban stream is both an MS4 and receiving water.

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<sup>122</sup> USEPA, 1992. Guidance Manual for the Preparation of Part II of the NPDES Permit Applications for Discharges from Municipal Separate Storm Sewer Systems. EPA 833-B-92-002.

<sup>123</sup> 40 CFR 122.26(d)(2)(ii)

<sup>124</sup> USEPA, 1992. Guidance Manual for the Preparation of Part II of the NPDES Permit Applications for Discharges from Municipal Separate Storm Sewer Systems. EPA 833-B-92-002.

<sup>125</sup> Ibid.

<sup>126</sup> USEPA, 1992. Guidance Manual for the Preparation of Part II of the NPDES Permit Applications for Discharges from Municipal Separate Storm Sewer Systems. EPA 833-B-92-002.

**Discussion of Finding D.3.c.** An MS4 is defined in the federal regulations as a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains), owned or operated by a Copermittee, and designed or used for collecting or conveying runoff.<sup>127</sup> Natural drainage patterns and urban streams are frequently used by municipalities to collect and convey runoff away from development within their jurisdiction. Therefore, the San Diego Water Board considers natural drainages that are used for conveyances of runoff, regardless of whether or not they've been altered by the municipality, as both part of the MS4s and as receiving waters. To clarify, an unaltered natural drainage, which receives runoff from a point source (channeled by a Copermittee to drain an area within their jurisdiction), which then conveys the runoff to an altered natural drainage or a man-made MS4, is both an MS4 and a receiving water.<sup>128</sup>

**Finding D.3.d.** As operators of the MS4s, the Copermittees cannot passively receive and discharge pollutants from third parties. By providing free and open access to an MS4 that conveys discharges to waters of the U.S., the operator essentially accepts responsibility for discharges into the MS4 that it does not prohibit or otherwise control. These discharges may cause or contribute to a condition of contamination or a violation of water quality standards.

**Discussion of Finding D.3.d.** CWA section 402(p) requires operators of MS4s to prohibit non-storm water discharges into their MS4s. This is necessary because pollutants which enter the MS4 generally are conveyed through the MS4 to be eventually discharged into receiving waters. If a municipality does not prohibit non-storm water discharges, it is providing the pathway (its MS4) which enables pollutants to reach receiving waters. Since the municipality's storm water management service can result in pollutant discharges to receiving waters, the municipality must accept responsibility for the water quality consequences resulting from this service. Furthermore, third party discharges can cause a municipality to be out of compliance with its permit. Since pollutants from third parties which enter the MS4 will eventually be discharged from the MS4 to receiving waters, the third party discharges can result in a situation of municipality non-compliance if the discharges lead to an exceedance of water quality standards. For these reasons, each Copermittee must prohibit and/or control discharges from third parties to its MS4. USEPA supports this concept when it states "the operators of regulated small MS4s cannot passively receive and discharge pollutants from third parties" and "the operator of a small MS4 that does not prohibit and/or control discharges into its system essentially accepts 'title' for those discharges. At a minimum, by providing free and open access to the MS4s that convey discharges

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<sup>127</sup> USEPA, 2000. EPA Administered Permit Programs: The National Pollutant Discharge Elimination System. Code of Federal Regulations, Vol. 40, Part 122.

<sup>128</sup> San Diego Water Board, 2001. Response in Opposition to Petitions for Review of California Regional Water Quality Control Board San Diego Region Order No. 2001-01 – NPDES Permit No. CAS0108758 (San Diego Municipal Storm Water Permit).

to the waters of the United States, the municipal storm sewer system enables water quality impairment by third parties.”<sup>129</sup>

In a recent decision issued for *United States v. Washington State Department of Transportation (WSDOT)*,<sup>130</sup> the court found that WSDOT, by allowing runoff from its MS4 to a receiving water that is part of a Superfund site, is an “arranger” of “disposal or treatment of hazardous substances” as defined under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) by “designing, constructing, and operating drainage systems whose sole function was to collect highway runoff and dispose of it into nearby water-bodies.” The court went on to state that “WSDOT did design the drainage system and...has the ability to redirect, contain or treat its contaminated runoff.”

**Finding D.3.e.** Waste and pollutants which are deposited and accumulate in MS4 drainage structures will be discharged from these structures to waters of the U.S. unless they are removed. These discharges may cause or contribute to, or threaten to cause or contribute to, a condition of pollution in receiving waters. For this reason, pollutant discharges from storm water into MS4s must be reduced using a combination of management measures, including source control and an effective MS4 maintenance program implemented by each Copermittee.

**Discussion of Finding D.3.e.** When rain falls and drains freeways, industries, construction sites, and neighborhoods, it picks up a multitude of pollutants. Gravity flow transports the pollutants to the MS4. Illicit discharges and connections also can contribute a significant amount of pollutants to MS4s. MS4s are commonly designed to convey their contents as quickly as possible. Due to the resulting typically high flow rates within the concrete conveyance systems of MS4s, pollutants which enter or are deposited in the MS4 and not removed are generally flushed unimpeded through the MS4 to waters of the United States. Since treatment generally does not occur within the MS4, in such cases reduction of storm water pollutants to the MEP must occur prior to discharges entering the MS4.

The importance of this concept is supported by the tons of wastes/pollutants that have been removed from the Copermittees’ MS4s as reported in their ROWD.<sup>131</sup> Moreover, these pollutants will be discharged into receiving waters unless an effective MS4 and structural treatment BMP maintenance program is implemented by the Copermittees. The requirement for Copermittees to conduct a MS4 maintenance program is specifically directed in both the Phase I and Phase II storm water regulations. Regarding MS4 cleaning, USEPA states “The removal of sediment, decaying debris, and highly polluted water from catch basins has aesthetic and water quality benefits, including reducing foul odors, reducing suspended solids, and reducing the load of

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<sup>129</sup> Federal Register / Vol. 64, No. 235 / Wednesday, December 8, 1999 / Rules and Regulations. P. 68765-68766.

<sup>130</sup> United State District Court, Western District of Washington at Tacoma, Case No. C08-5722RJB, Order on Motions for Partial Summary Judgment, dated June 7, 2010.

<sup>131</sup> Riverside County Copermittees. 2009. Report of Waste Discharge (San Diego Region).

oxygen-demanding substances that reach receiving waters.”<sup>132</sup> It goes on to say, “Catch basin cleaning is an efficient and cost-effective method for preventing the transport of sediment and pollutants to receiving water bodies.” USEPA also finds that “Lack of maintenance often limits the effectiveness of storm water structural controls such as detention/retention basins and infiltration devices. [...] The proposed program should provide for maintenance logs and identify specific maintenance activities for each class of control, such as removing sediment from retention ponds every five years, cleaning catch basins annually, and removing litter from channels twice a year.”<sup>133</sup>

**Finding D.3.f.** Enforcement of local runoff related ordinances, permits, and plans is an essential component of every runoff management program and is specifically required in the federal storm water regulations and this Order. Each Copermitttee is individually responsible for adoption and enforcement of ordinances and/or policies, implementation of identified control measures/BMPs needed to prevent or reduce pollutants in storm water runoff, and for the allocation of funds for the capital, operation and maintenance, administrative, and enforcement expenditures necessary to implement and enforce such control measures/BMPs under its jurisdiction. Education is an important aspect of every effective runoff management program and the basis for changes in behavior at a societal level. Education of municipal planning, inspection, and maintenance department staffs is especially critical to ensure that in-house staffs understand how their activities impact water quality, how to accomplish their jobs while protecting water quality, and understand 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.

**Discussion of Finding D.3.f.** The Federal NPDES regulations 40 CFR 122.26(d)(2)(iv)(A – D) are clear in placing responsibility on municipalities for control of runoff from third party activities and land uses to their MS4.<sup>134</sup> In order for municipalities to assume this responsibility, they must implement ordinances, permits, and plans addressing runoff from third parties. Assessments for compliance with their ordinances, permits, and plans are essential for a municipality to ensure that third parties are not causing the municipality to be in violation of its municipal storm water permit. When conditions of non-compliance are determined, enforcement is necessary to ensure that violations of municipality ordinances and permits are corrected. When the Copermitttees determine a violation of its storm water ordinance, it must pursue correction of the violation. Without enforcement, third parties do not have incentive to correct violations. USEPA supports enforcement by municipalities when it states “Effective inspection and enforcement requires [...] penalties to deter

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<sup>132</sup> USEPA, 1999. Storm Water O&M Fact Sheet, Catch Basin Cleaning. EPA 832-F-99-011.

<sup>133</sup> USEPA, 1992. Guidance Manual for the Preparation of Part II of the NPDES Permit Applications for Discharges from Municipal Separate Storm Sewer Systems. EPA 833-B-92-002.

<sup>134</sup> USEPA, 2000. EPA Administered Permit Programs: The National Pollutant Discharge Elimination System. Code of Federal Regulations, Vol. 40, Part 122.

infractions and intervention by the municipal authority to correct violations. Enforcement mechanisms [...] also must be described.”<sup>135</sup>

Education is a critical BMP and an important aspect of runoff management programs. USEPA finds that “An informed and knowledgeable community is critical to the success of a storm water management program since it helps ensure the following: Greater support for the program as the public gains a greater understanding of the reasons why it is necessary and important, [and] greater compliance with the program as the public becomes aware of the personal responsibilities expected of them and others in the community, including the individual actions they can take to protect or improve the quality of area waters.”<sup>136</sup>

Regarding target audiences, USEPA also states “The public education program should use a mix of appropriate local strategies to address the viewpoints and concerns of a variety of audiences and communities, including minority and disadvantaged communities, as well as children.”

**Finding D.3.g.** Public participation during the development of runoff management programs is necessary to ensure that all stakeholder interests and a variety of creative solutions are considered.

**Discussion of Finding D.3.g.** This finding is supported by the Phase II Storm Water Regulations, which state “early and frequent public involvement can shorten implementation schedules and broaden public support for a program.” USEPA goes on to explain, “Public participation is likely to ensure a more successful storm water program by providing valuable expertise and a conduit to other programs and governments.”<sup>137</sup>

**Finding D.3.h.** Retrofitting existing development with storm water treatment controls, including LID, is necessary to address storm water discharges from existing development that may cause or contribute to a condition of pollution or a violation of water quality standards. Although SSMP BMPs are required for redevelopment, the current rate of redevelopment will not address water quality problems in a timely manner. Cooperation with private landowners is necessary to effectively identify, implement, and maintain retrofit projects for the preservation, restoration, and enhancement of water quality.

**Discussion of Finding D.3.h.** Existing BMPs are not sufficient to protect the Beneficial Uses of receiving waters from storm water MS4 discharges, as evidenced by 303(d) listings and exceedances of Water Quality Objectives from the Copermitees’ monitoring reports. As recognized in USEPA guidance, waters in the region cannot be protected without also addressing degradation caused by storm

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<sup>135</sup> USEPA, 1992. Guidance Manual for the Preparation of Part II of the NPDES Permit Applications for Discharges from Municipal Separate Storm Sewer Systems. EPA/833-B-92-002.

<sup>136</sup> USEPA, 2000. Storm Water Phase II Compliance Assistance Guide. EPA 833-R-00-002.

<sup>137</sup> Federal Register / Vol. 64, No. 235 / Wednesday, December 8, 1999 / Rules and Regulations. P. 68755.

water discharges from existing development. This requires more than just a new development and redeveloped sites program, which at best can only hold the line. For this reason USEPA recommends that storm water programs include a retrofit plan or program for retrofitting existing development.<sup>138</sup>

Implementing more advanced BMPs, including the retrofitting of existing development with LID BMPs, is part of the iterative process. Based on the current rate of redevelopment compared to existing BMPs, the use of LID only on new and redevelopment will not adequately address current water quality problems, including downstream hydromodification. Retrofitting existing development is practicable for a municipality through a systematic evaluation, prioritization and implementation plan focused on impaired water bodies, pollutants of concern, areas of downstream hydromodification, feasibility and effective communication and cooperation with private property owners.

To actually improve the quality of receiving waters, discharges from existing developed sites need to be mitigated, which generally means implementation of measures to retrofit existing development sites with storm water control measures that can retain and/or treat storm water on site. Retrofitting existing development is possible and reasonable to significantly improve water quality in receiving waters.

Successful retrofitting programs have been implemented in such diverse locations as Seattle, Washington<sup>139</sup>; Portland, Oregon<sup>140</sup>; Santa Monica, California<sup>141</sup>; Kansas City, Kansas<sup>142</sup>; and Montgomery County, MD<sup>143</sup>. When appropriately applied as in this Order, retrofitting existing development meets MEP.

**Finding D.4.a.** Since runoff within a watershed can flow from and through multiple land uses and political jurisdictions, watershed-based runoff management can greatly enhance the protection of receiving waters. Such management provides a means to focus on the most important water quality problems in each watershed. By focusing on the most important water quality problems, watershed efforts can maximize protection of beneficial use in an efficient manner. Effective watershed-based runoff management actively reduces pollutant discharges and abates pollutant sources causing or contributing to watershed water quality problems. Watershed-based runoff management that does not actively reduce pollutant discharges and abate pollutant sources causing or contributing to watershed water quality problems can necessitate implementation of the iterative process outlined in section A.3 of the this Order. Watershed management of runoff does not require Copermittees to expend resources outside of their jurisdictions. In some cases, however, this added flexibility provides more, and possibly more effective, alternatives for minimizing waste discharges.

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<sup>138</sup> USEPA, 2010. MS4 Permit Improvement Guide. EPA 833-R-10-001.

<sup>139</sup> SEA Street, [http://www.seattle.gov/dpd/Planning/CityDesign/What\\_We\\_Do/Outreach/Folio/DPDS\\_008014.asp](http://www.seattle.gov/dpd/Planning/CityDesign/What_We_Do/Outreach/Folio/DPDS_008014.asp)

<sup>140</sup> Clean River Rewards, <http://www.portlandonline.com/BES/index.cfm?c=edeef>

<sup>141</sup> City of Santa Monica, Urban Runoff program,

<http://www.smgov.net/Departments/OSE/categories/content.aspx?id=4007>

<sup>142</sup> 10,000 Rain Gardens, <http://www.rainkc.com/>

<sup>143</sup> Rainscapes, <http://www.montgomerycountymd.gov/Content/DEP/Rainscapes/home.html>

Watershed management requires the Copermittees within a watershed to develop a watershed-based management strategy, which can then be implemented on a jurisdictional basis.

**Discussion of Finding D.4.a.** In recent years, addressing water quality issues from a watershed perspective has increasingly gained attention. Regarding watershed-based permitting, the USEPA *Watershed-Based NPDES Permitting Policy Statement* issued on Jan. 7, 2004 states the following:

USEPA continues to support a holistic watershed approach to water quality management. The process for developing and issuing NPDES permits on a watershed basis is an important tool in water quality management. USEPA believes that developing and issuing NPDES permits on a watershed basis can benefit all watershed stakeholders, from the NPDES permitting authority to local community members. A watershed-based approach to point source permitting under the NPDES program may serve as one innovative tool for achieving new efficiencies and environmental results. USEPA believes that watershed-based permitting can:

- Lead to more environmentally effective results;
- Emphasize measuring the effectiveness of targeted actions on improvements in water quality;
- Provide greater opportunities for trading and other market based approaches;
- Reduce the cost of improving the quality of the nation's waters;
- Foster more effective implementation of watershed plans, including total maximum daily loads (TMDLs); and
- Realize other ancillary benefits beyond those that have been achieved under the CWA (e.g., facilitate program integration including integration of Clean Water Act and Safe Drinking Water Act programs).

Watershed-based permitting is a process that ultimately produces NPDES permits that are issued to point sources on a geographic or watershed basis. In establishing point source controls in a watershed-based permit, the permitting authority may focus on watershed goals, and consider multiple pollutant sources and stressors, including the level of nonpoint source control that is practicable. In general, there are numerous permitting mechanisms that may be used to develop and issue permits within a watershed approach.

This USEPA guidance is in line with State Water Board and San Diego Water Board watershed management goals. For example, the State Water Board's TAC recommends watershed-based water quality protection, stating "Municipal permits should have watershed specific components." The TAC further recommends that "All NPDES permits and Waste Discharge Requirements should be considered for reissuance on a watershed basis."

In addition, the Basin Plan states that “public agencies and private organizations concerned with water resources have come to recognize that a comprehensive evaluation of pollutant contributions on a watershed scale is the only way to realistically assess cumulative impacts and formulate workable strategies to truly protect our water resources. Both water pollution and habitat degradation problems can best be solved by following a basin-wide approach.”

In light of USEPA’s policy statement and the State Water Board’s and San Diego Water Board’s watershed management goals, the San Diego Water Board seeks to expand watershed management in the regulation of runoff from the MS4. Watershed-based MS4 permits can provide for more effective receiving water quality protection by focusing on specific water quality problems. The entire watershed for the receiving water can be assessed, allowing for critical areas and practices to be targeted for corrective actions. Known sources of pollutants of concern can be investigated for potential water quality impacts. Problem areas can then be addressed, leading to eventual improvements in receiving water quality. Management of runoff on a watershed basis allows for specific water quality problems to be targeted so that efforts result in maximized water quality improvements.<sup>144</sup>

**Finding D.4.b.** Some runoff issues, such as general education and training, can be effectively addressed on a regional basis. Regional approaches to runoff management can improve program consistency and promote sharing of resources, which can result in implementation of more efficient programs.

**Discussion of Finding D.4.b.** Copermittees in Riverside County participate in several runoff-related activities whose scope extends beyond the area subject to this Order. These include countywide activities (e.g., portions of Riverside County fall under the jurisdictions of the Santa Ana Water Board and California Regional Water Quality Control Board, Colorado River Region (Colorado River Water Board)), southern California, and statewide activities. Copermittees’ participation in these regional activities is generally directed at improving management capability, preventing redundancy and taking advantage of economies of scale. For instance, Copermittees seek to develop consistency between watershed and/or jurisdictional programs (e.g., through standards development), and to collaborate on certain program activities such as education, training, and monitoring.

**Finding D.4.c.** It is important for the Copermittees to coordinate their water quality protection and land use planning activities to achieve the greatest protection of receiving water bodies. Copermittee coordination with other watershed stakeholders, especially the State of California Department of Transportation, the U.S. federal government, sovereign American Indian tribes, and water and sewer districts, is also important.

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<sup>144</sup> San Diego Water Board, 2004. San Diego County Municipal Storm Water Permit Reissuance Analysis Summary. P. 1.

**Discussion of Finding D.4.c.** Conventional planning and zoning can be limited in their ability to protect the environmental quality of creeks, rivers, and other water bodies. Watershed-based planning is often ignored, despite the fact that receiving waters unite land by collecting runoff from throughout the watershed. Since watersheds unite land, they can be used as an effective basis for planning. Watershed-based planning enables local and regional areas to realize economic, social, and other benefits associated with growth, while conserving the resources needed to sustain such growth, including water quality.

This type of planning can involve four steps: (1) Identify the watersheds shared by the participating jurisdictions; (2) Identify, assess, and prioritize the natural, social, and other resources in the watersheds; (3) Prioritize areas for growth, protection, and conservation, based on prioritized resources; and (4) Develop plans and regulations to guide growth and protect resources. Local governments have started with simple, yet effective, steps toward watershed planning, such as adopting a watershed-based planning approach, articulating the basic strategy in their General Plans, and beginning to pursue the basic strategy in collaboration with neighboring local governments who share the watersheds. Examples of new mechanisms created to facilitate watershed-based planning and zoning include the San Francisquito Creek Watershed Coordinated Resource Management Process and the Santa Clara Basin Watershed Management Initiative.<sup>145</sup>

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<sup>145</sup> Bay Area Stormwater Management Agencies Association., 1999. Start at the Source. Forbes Custom Publishing. Available on-line at: [http://www.scvurppp-w2k.com/basmaa\\_satsm.htm](http://www.scvurppp-w2k.com/basmaa_satsm.htm)

## E. Statute and Regulatory Considerations

**Finding E.1.** The RWL language specified in this Order is consistent with language recommended by the USEPA and established in State Water Board Order WQ-99-05, *Own Motion Review of the Petition of Environmental Health Coalition to Review Waste Discharge Requirements Order No. 96-03, NPDES Permit No. CAS0108740*, adopted by the State Water Board on June 17, 1999. The RWL language in this Order requires compliance with water quality standards, which for storm water discharges is to be achieved through an iterative approach requiring the implementation of improved and better-tailored BMPs over time. Compliance with receiving water limitations based on applicable water quality standards is necessary to ensure that MS4 discharges will not cause or contribute to violations of water quality standards and the creation of conditions of pollution, contamination, or nuisance.

**Discussion of Finding E.1.** The RWL language in the Order requires storm water compliance with water quality standards through an iterative approach for implementing improved and better-tailored BMPs over time. The iterative BMP process requires the implementation of increasingly stringent BMPs until receiving water quality standards are achieved. This is necessary because implementation of BMPs alone cannot ensure attainment of receiving water quality standards. For example, a BMP that is effective in one situation may not be applicable in another. An iterative process of BMP development, implementation, and assessment is needed to promote consistent compliance with receiving water quality objectives. If assessment of a given BMP confirms that the BMP is ineffective, the iterative process should be restarted, with redevelopment of a new BMP that is anticipated to result in compliance with receiving water quality objectives.

The issue of whether storm water discharges from MS4s must meet water quality standards has been intensely debated in past years. The argument arises because CWA section 402(p) fails to clearly state that municipal dischargers of storm water must meet water quality standards. On the issue of industrial discharges of storm water, the statute clearly indicates that industrial dischargers must meet both (1) the technology-based standard of “best available technology economically achievable (BAT)” and (2) applicable water quality standards. On the issue of municipal discharges however, the statute states that municipal dischargers must meet (1) the technology-based standard of “MEP” and (2) “such other provisions that the Administrator or the State determines appropriate for the control of such pollutants.” The statute fails, however, to specifically state that municipal dischargers must meet water quality standards.

As a result, the municipal storm water dischargers have argued that they do not have to meet water quality standards; and that they only are required to meet MEP for storm water. Environmental interest groups maintain that not only do MS4 discharges have to meet water quality standards, but that MS4 permits must also comply with numeric effluent limitations for the purpose of meeting water quality standards. On the issue of water quality standards, USEPA, the State Water Board, and the San Diego Water

Board have consistently maintained that MS4s must indeed comply with water quality standards. On the issue of whether water quality standards must be met by numeric effluent limitations, USEPA, the State Water Board (in Orders WQ 91-03 and WQ 91-04), and the San Diego Water Board have maintained that MS4 permits can contain narrative requirements for the implementation of BMPs in place of numeric effluent limitations for storm water discharges.<sup>146</sup>

In addition to relying on USEPA's legal opinion concluding that MS4s must meet MEP for storm water and water quality standards, the State Water Board also relied on the CWA's explicit authority for States to require "such other provisions that the Administrator or the State determines appropriate for the control of such pollutants" in addition to the technology-based standard of MEP for storm water discharges. To further support its conclusions that MS4 permit dischargers must meet water quality standards, the State Water Board relied on provisions of the CWC that specify that all waste discharge requirements must implement applicable Basin Plans and take into consideration the appropriate water quality objectives for the protection of beneficial uses.

The State Water Board first formally concluded that permits for MS4s must contain effluent limitations based on water quality standards in its Order WQ 91-03. In that Order, the State Water Board also concluded that it was appropriate for Regional Water Boards to achieve this result by requiring best management practices, rather than by inserting numeric effluent limitations into MS4 permits. Later, in Order WQ 98-01, the State Water Board prescribed specific precedent setting Receiving Water Limitations language to be included in all future MS4 permits. This language specifically requires that MS4 dischargers meet water quality standards and allows for the use of narrative BMPs (increasing in stringency and implemented in an iterative process) as the mechanism by which water quality standards can be met for storm water discharges.

In Order WQ 99-05, the State Water Board modified its receiving water limitations language in Order WQ 98-01 to meet specific objections by USEPA (the modifications resulted in stricter compliance with water quality standards). State Water Board Order WQ 99-05 states:

"In Order WQ 98-01, the State Board ordered that certain receiving water limitation language be included in future municipal storm water permits. Following inclusion of that language in permits issued by the San Francisco Bay and San Diego Water Boards for Vallejo and Riverside respectively, the USEPA objected to the permits. The USEPA objection was based on the receiving water limitation language. The USEPA has now issued those permits itself and has included receiving water limitation language it deems appropriate.

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<sup>146</sup> For the most recent assessment, see Storm Water Panel Recommendations to the California State Water Resources Control Board, 2006. *The Feasibility of Numeric Effluent Limits Applicable to Discharges of Storm Water Associated with Municipal, Industrial, and Construction Activities.*

In light of USEPA's objection to the receiving water limitation language in Order WQ 98-01 and its adoption of alternative language, the State Board is revising its instructions regarding receiving water limitation language for municipal storm water permits. It is hereby ordered that Order WQ 98-01 will be amended to remove the receiving water limitation language contained therein and to substitute the USEPA language. Based on the reasons stated here, and as a precedent decision, the following receiving water limitation language shall be included in future municipal storm water permits."

In the 1999 case involving MS4 permits issued by USEPA to several Arizona cities (*Defenders of Wildlife v. Browner*, 1999, 197 F. 3d 1035), the United States Court of Appeals for the Ninth Circuit upheld USEPA's requirement for MS4 dischargers to meet water quality standards, but it did so on the basis of USEPA's discretion rather than on the basis of strict compliance with the CWA. In other words, while holding that the CWA does not require all MS4 discharges to comply strictly with state water quality standards, the Court also held that USEPA has the authority to determine that ensuring strict compliance with state water quality standards is necessary to control pollutants. On the question of whether MS4 permits must contain numeric effluent limitations, the court upheld USEPA's use of iterative BMPs in place of numeric effluent limitations for storm water discharges.

On October 14, 1999, the State Water Board issued a legal opinion on the federal appellate decision and provided advice to the Regional Water Boards on how to proceed in the future. In the memorandum, the State Water Board concludes that the recent Ninth Circuit opinion upholds the discretion of USEPA and the State to (continue to) issue storm water permits to MS4s that require compliance with water quality standards through iterative BMPs. Moreover, the memorandum states that "[...] because most MS4 discharges enter impaired water bodies, there is a real need for permits to include stringent requirements to protect those water bodies. As TMDLs are developed, it is likely that MS4s will have to participate in pollutant load reductions, and the MS4 permits are the most effective vehicles for those reductions." In summary, the State Water Board found that the Regional Water Boards should continue to include the RWL established in State Water Board Order WQ 99-05 in all future permits.

The issue of the RWLs language was also central to the Building Industry Association's (BIA's) (and others') appeal of San Diego Water Board Order No. 2001-01 (San Diego MS4 permit), which was used as a template for San Diego Water Board Order No. R9-2002-0001 (Orange County MS4 permit). BIA contended that the storm water MEP standard was a ceiling on what could be required of the Copermittees in implementing their runoff management programs, and that Order No. 2001-01's receiving water limitations requirements exceeded that ceiling. In other words, BIA argued that the Copermittees could not be required to comply with receiving water limitations if they necessitated efforts which went beyond the MEP standard. Again, the courts upheld the San Diego Water Board's discretion to require compliance with water quality standards in municipal storm water permits, without limitation. The Court

of Appeal, Fourth Appellate District found that the San Diego Water Board has “the authority to include a permit provision requiring compliance with water quality standards.”<sup>147</sup> On further appeal by BIA, the California State Supreme Court declined to hear the matter.

While implementation of the iterative BMP process is a means to achieve compliance with water quality objectives for storm water MS4 discharges, it does not shield the discharger from enforcement actions for continued non-compliance with water quality standards. Consistent with USEPA guidance,<sup>148</sup> regardless of whether or not an iterative process is being implemented, discharges that cause or contribute to a violation of water quality standards are in violation of Order No. R9-2010-0016.

**Finding E.2.** The Basin Plan, identifies the following existing and potential beneficial uses for surface waters in Riverside County: Municipal and Domestic Supply (MUN), Agricultural Supply (AGR), Industrial Process Supply (PROC), Hydropower Generation (POW), Industrial Service Supply (IND), Ground Water Recharge (GWR), Contact Water Recreation (REC1), Non-contact Water Recreation (REC2), Warm Freshwater Habitat (WARM), Cold Freshwater Habitat (COLD), Wildlife Habitat (WILD), Rare, Threatened, or Endangered Species (RARE), Spawning, Reproduction and/or Early Development (SPWN) and Preservation of Biological Habitats of Special Significance (BIOL).

**Discussion of Finding E.2.** The southwestern portion of Riverside County is within the San Diego Region. The Riverside County portion of the San Diego Region falls within Santa Margarita Hydrologic Unit. The major streams within the Riverside County portion of the Santa Margarita Hydrologic Unit are the Santa Margarita River, Temecula Creek, and Murrieta Creek. Other surface water bodies include De Luz Creek, Sandia Canyon Creek, Warm Springs Creek, San Gertrudis Creek, and Wilson Creek. Major inland water bodies include Lake Skinner and Vail Lake.

The Riverside County portion of the Santa Margarita Hydrologic Unit includes unincorporated portions of Riverside County, the Cities of Menifee, Murrieta, Temecula, and Wildomar..

Based on the 2000 census, approximately 150,000 people resided within the permitted area. Since the 2000 census, however, several new developments, especially in the Cities of Temecula and Murrieta have increased the housing stock of the area, and the population is now significantly higher. As of January 1, 2009, approximately 250,000 people reside in the permitted area, with approximately 30,000 people living in the unincorporated area of Riverside County (31,163) and approximately 220,000 living in the Cities of Menifee (613), Murrieta (99,574), Temecula (102,604), and Wildomar (22,240).<sup>149</sup>

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<sup>147</sup> Building Industry Association et al., v. State Water Resources Control Board, et al. 2004.

<sup>148</sup> USEPA, 1998. Jan. 21, 1998 correspondence, “State Board/OCC File A-1041 for Orange County,” from Alexis Strauss to Walt Petit, and March 17, 1998 correspondence from Alexis Strauss to Walt Petit.

<sup>149</sup> Fiscal Year 2008-2009 Santa Margarita Watershed Annual Progress Report

**Finding E.3.** This Order is in conformance with State Water Board Resolution No. 68-16, *Statement of Policy with Respect to Maintaining High Quality Waters in California*, and the federal Antidegradation Policy described in 40 CFR 131.12.

**Discussion of Finding E.3.** Runoff management programs are required to be designed to reduce pollutants in storm water MS4 discharges to the maximum extent practicable and achieve compliance with water quality standards. Therefore, implementation of runoff management programs, which satisfy the requirements of Order No. R9-2010-0016, will prevent violations of receiving water quality standards. The Basin Plan states that “Water quality objectives must [...] conform to US EPA regulations covering antidegradation (40 CFR 131.12) and State Water Board Resolution No. 68-16, *Statement of Policy with Respect to Maintaining High Quality of Waters in California*.” As a result, when water quality standards are met, USEPA and State Water Board antidegradation policy requirements are also met.

**Finding E.4.** Section 6217(g) of the Coastal Zone Act Reauthorization Amendments of 1990 (CZARA) requires coastal states with approved coastal zone management programs to address non-point pollution impacting or threatening coastal water quality. CZARA addresses five sources of non-point pollution: agriculture, silviculture, urban, marinas, and hydromodification. This NPDES permit addresses the management measures required for the urban category, with the exception of septic systems. The adoption and implementation of this NPDES permit relieves the Copermittee from developing a non-point source plan, for the urban category, under CZARA. The San Diego Water Board addresses septic systems through the administration of other programs.

**Discussion of Finding E.4.** Coastal states are required to develop programs to protect coastal waters from nonpoint source pollution, as mandated by the federal CZARA. CZARA section 6217 identifies polluted runoff as a significant factor in coastal water degradation, and requires implementation of management measures and enforceable policies to restore and protect coastal waters. In lieu of developing a separate NPS program for the coastal zone, California’s NPS Pollution Control Program was updated in 2000 to address the requirements of both the CWA section 319 and the CZARA section 6217 on a statewide basis. The California Coastal Commission (CCC), the State Water Board, and the nine Regional Water Boards are the lead State agencies for upgrading the program, although 20 other State agencies also participate. Pursuant to the CZARA (section 6217(g)) Guidance Document the development of runoff management programs pursuant to this NPDES permit fulfills the need for cities within watersheds that discharge to the coastal zone to develop an runoff non-point source plan identified in the State’s Non-point Source Program Strategy and Implementation Plan.<sup>150</sup>

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<sup>150</sup> State Water Board/CCC, 2000. Nonpoint Source Program Strategy and Implementation Plan, 1998-2013 (PROSIP).

**Finding E.5.** Section 303(d)(1)(A) of the CWA requires that “Each state shall identify those waters within its boundaries for which the effluent limitations...are not stringent enough to implement any water quality standard (WQS) applicable to such waters.” The CWA also requires states to establish a priority ranking of impaired waterbodies known as Water Quality Limited Segments and to establish Total Maximum Daily Loads (TMDLs) for such waters. This priority list of impaired waterbodies is called the Section 303(d) List. The 2006 303(d) List was approved by the State Water Board on October 25, 2006. On June 28, 2007 the 2006 303(d) List for California was given final approval by the USEPA. The 303(d) List was recently updated, and on December 16, 2009 the 2008 303(d) List was approved by the San Diego Water Board. The 2008 303(d) List for the San Diego Region was approved by the State Water Board on August 4, 2010. The 2008 303(d) List is awaiting USEPA approval.

**Discussion of Finding E.5.** Section 303(d) of the federal CWA (CWA, 33 USC 1250, et seq., at 1313(d)), requires States to identify waters that do not meet water quality standards after applying certain required technology-based effluent limits (“impaired” water bodies). States are required to compile this information in a list and submit the list to USEPA for review and approval. This list is known as the Section 303(d) list of impaired waters, or 303(d) List. As part of this listing process, States are required to prioritize waters/watersheds for future development of TMDLs. The State Water Board and Regional Water Boards have ongoing efforts to monitor and assess water quality, to prepare the 303(d) List, to prioritize waters/watersheds for TMDL development, and to subsequently develop TMDLs. TMDLs developed and adopted by the San Diego Water Board are incorporated into the Basin Plan via a Basin Plan Amendment as authorized under CWC section 13240.

The 2006 California 303(d) List identifies impaired receiving water bodies and their watersheds within the State of California.<sup>151</sup> The San Diego Water Board recently updated the 303(d) List for the San Diego Region and adopted the 2008 303(d) List on December 16, 2009.<sup>152</sup> The number of water bodies listed as impaired in the Riverside County portion of the Santa Margarita Hydrologic Unit increased from 6 water bodies (13 water body / impairing pollutant combinations) on the 2006 303(d) List to 9 water bodies (49 water body / impairing pollutant combinations) on the 2008 303(d) List, indicating the receiving water quality has been degraded further (see Table 2). Storm water and non-storm water runoff that is discharged from the Copermittees’ MS4s is a leading cause of receiving water quality impairment in the San Diego Region.

**Finding E.6.** This Order does not constitute an unfunded local government mandate subject to subvention under Article XIII B, Section (6) of the California Constitution for several reasons, including, but not limited to, the following. First, this Order implements federally mandated requirements under CWA § 402. (33 U.S.C. §

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<sup>151</sup> The approved 2006 Clean Water Act Section 303(d) List of Water Quality Limited Segments is on-line at: [http://www.waterboards.ca.gov/tmdl/303d\\_lists2006.html](http://www.waterboards.ca.gov/tmdl/303d_lists2006.html).

<sup>152</sup> The 2008 Clean Water Act Section 303(d) List of Water Quality Limited Segments, approved by the San Diego Water Board and State Water Board, is available on-line at [http://www.swrcb.ca.gov/rwqcb9/water\\_issues/programs/303d\\_list/index.shtml](http://www.swrcb.ca.gov/rwqcb9/water_issues/programs/303d_list/index.shtml)

1342(p)(3)(B).) Second, the local agency Copermittees' obligations under this Order are similar to, and in many respects less stringent than, the obligations of non-governmental and new dischargers who are issued NPDES permits for storm water and non-storm water discharges. Third, the local agency Copermittees have the authority to levy service charges, fees, or assessments sufficient to pay for compliance with this Order. Fourth, the Copermittees have requested permit coverage in lieu of compliance with the complete prohibition against the discharge of pollutants contained in CWA § 301, subdivision (a) (33 U.S.C. § 1311(a)) and in lieu of numeric restrictions on their MS4 discharges (i.e. effluent limitations). 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 XIII B, Section (6) of the California Constitution. Likewise, the provisions of this Order to implement TMDLs are federal mandates. The CWA requires TMDLs to be developed for water bodies that do not meet federal water quality standards. (33 U.S.C. sec. 1313(d).) Once the UUSEPA 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. sec. 122.44(d)(1)(vii)(B).)

**Discussion of Finding E.6.** This Order does not constitute an unfunded local government mandate subject to subvention under Article XIII B, Section (6) of the California Constitution for several reasons, including, but not limited to, the following. First, this Order implements federally mandated requirements under CWA 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 in storm water 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 CWA'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.)

Second, the local agency Copermittees' 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 CWA regulates the discharge of pollutants from point sources (33 U.S.C. § 1342) and the Porter-Cologne regulates the discharge of waste (CWC § 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 CWA 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 CWA 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 Board decisions, this Order does not require strict compliance with water quality standards. (State Water Board Order 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 Copermittees 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 Copermittees have requested permit coverage in lieu of compliance with the complete prohibition against the discharge of pollutants contained in CWA section 301, subdivision (a) (33 U.S.C. § 1311(a)) and in lieu of numeric effluent limitations on their storm water 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 Copermittees have voluntarily sought a program-based municipal storm water permit in lieu of a numeric limitations approach on their storm water discharge. (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 limitations].) 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 XIII B, Section (6) of the California Constitution.

The San Diego Water Board recognizes that the Commission on State Mandates recently found that certain provisions within two municipal storm water permits constituted reimbursable state mandates within the meaning of the California Constitution. The Commission did not determine the validity of those provisions; it only determined that the State must reimburse the claimants for the costs of implementing those provisions. The decisions directly affect only the municipal storm water permits identified in the two test claims. That is, the effect of the decisions is limited to the provisions of Los Angeles Water Board Order 01-182 and San Diego Order R9-2007-0001 identified by the Commission as reimbursable state mandates. No other municipal storm water permits or provisions therein are directly affected by the decisions and the San Diego Water Board is not precluded from adopting similar or identical provisions in the Tentative Order. Subsequent proceedings before the Commission to determine the local governments entitled to reimbursement and the amount of reimbursement are underway before the Commission. Separately, the State Water Board and San Diego and Los Angeles Water Boards have challenged these decisions in court.

**Finding E.7.** Runoff treatment and/or mitigation must occur prior to the discharge of runoff into receiving waters. Treatment BMPs must not be constructed in waters of the U.S. or State unless the runoff flows are sufficiently pretreated to protect the values and functions of the water body. Federal regulations at 40 CFR 131.10(a) state that in no case shall a state adopt waste transport or waste assimilation as a designated use for any waters of the U.S. Authorizing the construction of a runoff treatment facility within a water of the U.S., or using the water body itself as a treatment system or for conveyance to a treatment system, would be tantamount to accepting waste assimilation as an appropriate use for that water body. Furthermore, the construction, operation, and maintenance of a pollution control facility in a water body can negatively impact the physical, chemical, and biological integrity, as well as the beneficial uses, of the water body. Without federal authorization (e.g., pursuant to CWA § 404), waters of the U.S. may not be converted into, or used as, waste treatment or conveyance facilities. Similarly, waste discharge requirements pursuant to CWC §13260 are required for the conversion or use of waters of the State as waste treatment or conveyance facilities. Diversion from waters of the U.S./State to treatment facilities and subsequent return to waters of the U.S. is allowable, provided that the effluent complies with applicable NPDES requirements.

**Discussion of Finding E.7.** Runoff treatment and/or mitigation in accordance with any of the requirements in the Order must occur prior to the discharge of storm water into receiving waters. Allowing storm water polluted runoff to enter receiving waters prior to treatment to the MEP will result in degradation of the water body and potential

exceedances of water quality standards, from the discharge point to the point of dissipation, infiltration, or treatment. Furthermore, the construction, operation, and maintenance of a pollution control facility in a water body can negatively impact the physical, chemical, and biological integrity, as well as the beneficial uses, of the water body. This requirement is supported by federal regulation 40 CFR 131.10(a) and USEPA guidance. According to USEPA,<sup>153</sup> "To the extent possible, municipalities should avoid locating structural controls in natural wetlands. Before considering siting of controls in a natural wetland, the municipality should demonstrate that it is not possible or practicable to construct them in sites that do not contain natural wetlands. Practices should be used that settle solids, regulate flow, and remove contaminants prior to discharging storm water into a wetland."

Additional Federal guidance discusses the implementation of wetlands to treat municipal storm water discharges (USEPA, 2000. *Guiding Principles for Constructed Treatment Wetlands: Providing for Water Quality and Wildlife Habitat*). It states:

*"..treatment wetlands should not be constructed in a waters of the U.S. unless you can sufficiently pretreat the stormwater flows to protect the values and functions of the waters of the U.S. Because storm water is an unpredictable effluent source and can contain high levels of toxic substances, nutrients, and pathogens, we strongly encourage that you construct the treatment wetland in uplands and use best management practices in these projects."<sup>154</sup>*

Consistent with USEPA guidance, the conversion or use of waters of the U.S./State into runoff treatment facilities or conveyance facilities for untreated storm water discharges must be appropriately reviewed by both Federal and State resource agencies. Such projects may be subject to federal permitting pursuant to CWA section 404 if discharges of dredged or fill material is involved.

The placement of hydromodification controls within waters of the U.S./State may also be subject to federal and/or state permitting, but would not necessarily be considered a pollutant treatment BMP. Provided that grade control structures are designed to re-establish a natural channel gradient and correct excessive changes to the sediment transport regime caused by urbanization, rather than to create a series of artificial hydrological impoundments for the purpose of treating pollution, this type of project is not considered an in-stream treatment BMP.

**Finding E.8.** The issuance of waste discharge requirements and an NPDES permit for the discharge of runoff from MS4s to waters of the U.S. is exempt from the requirement for preparation of environmental documents under the California Environmental Quality Act (CEQA) (Public Resources Code, Division 13, Chapter 3, section 21000 et seq.) in accordance with the CWC section 13389.

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<sup>153</sup> USEPA, 1992. Guidance Manual for the Preparation of Part II of the NPDES Permit Applications for Discharges from Municipal Separate Storm Sewer Systems. EPA 833-B-92-002.

<sup>154</sup> USEPA, 2000. *Guiding Principles for Constructed Treatment Wetlands: Providing for Water Quality and Wildlife Habitat*, (EPA 843-B-00-003).

**Discussion of Finding E.8.** CWC section 13389 exempts the adoption of waste discharge requirements (such as NPDES permits) from CEQA requirements: “Neither the State Water Board nor the Regional Water Boards shall be required to comply with the provisions of Chapter 3 (commencing with section 21100) of Division 13 of the Public Resources Code prior to the adoption of any waste discharge requirement, except requirements for new sources as defined in the Federal Water Pollution Control Act or acts amendatory thereof or supplementary thereto.”

This CEQA exemption was challenged during BIA’s (and others’) appeal of Order No. 2001-01. BIA contended that the CEQA exemption did not apply to permit requirements where the San Diego Water Board utilized its discretion to craft permit requirements which were more prescriptive than required by federal law. The Court of Appeal, Fourth Appellate District disagreed with this argument, stating “we also reject Building Industry’s argument to the extent it contends the statutory CEQA exemption in CWC section 13389 is inapplicable to a particular NPDES permit provision that is discretionary, rather than mandatory, under the CWA.”<sup>155</sup> On further appeal by BIA, the California State Supreme Court declined to hear the matter.

In a recent decision, the Court of Appeal of the State of California, Second Appellate District, upheld the CEQA exemption for municipal storm water NPDES permits (County of Los Angeles, et al. v. California State Water Resources Control Board, et al.).<sup>156</sup>

**Finding E.9.** Storm water discharges from developed and developing areas in Riverside County are significant sources of certain pollutants that cause, may be causing, threatening to cause or contributing to water quality impairment in the waters of Riverside County. Furthermore, as delineated in the CWA section 303(d) list in Table 2, the San Diego Water Board has found that there is a reasonable potential that municipal storm water and non-storm water discharges from MS4s cause or may cause or contribute to an excursion above water quality standards for the following pollutants: Indicator Bacteria (including Fecal Coliform and E. Coli), Copper, Manganese, Iron, Chlorpyrifos, Diazinon, Sulfates, Phosphorous, Nitrogen, Total Dissolved Solids (TDS), and Toxicity. In accordance with CWA section 303(d), the San Diego Water Board is required to establish TMDLs for these pollutants to these waters to eliminate impairment and attain water quality standards. Therefore, certain early pollutant control actions and further pollutant impact assessments by the Copermitees are warranted and required pursuant to this Order.

**Discussion of Finding E.9.** CWA section 303(d)(1)(A) requires that:

*“Each state must identify those waters within its boundaries for which the effluent limitations...are not stringent enough to implement any water quality standard (WQS) applicable to such waters.”*

<sup>155</sup> Building Industry Association et al., v. State Water Resources Control Board, et al. 2004.

<sup>156</sup> Los Angeles County Super. Ct. No. BS080792. Partial publication dated November 6, 2006.

The CWA also requires states to establish a priority ranking of impaired water bodies known as Water Quality Limited Segments and to establish Total Maximum Daily Loads (TMDLs) for such waters. This priority list of impaired water bodies is called the 303(d) List. The current 303(d) List was approved by the State Water Board on October 25, 2006. On June 28, 2007 the 2006 303(d) List for California was given final approval by USEPA. Every two years the State of California is required by CWA section 303(d) and 40 CFR(130.7) to develop and submit to the USEPA for approval an updated 303(d) list of impaired water bodies. The San Diego Water Board recently updated the 303(d) List and adopted the 2008 303(d) List on December 16, 2009.<sup>157</sup> The 2008 303(d) List for the San Diego Region was approved by the State Water Board on August 4, 2010. The 2008 303(d) List is awaiting approval by the USEPA. The number of water bodies listed as impaired in the Riverside County portion of the Santa Margarita Hydrologic Unit increased from 6 water bodies (13 water body / pollutant combinations) on the 2006 303(d) List to 9 water bodies (49 water body / pollutant combinations) on the 2008 303(d) List, indicating the receiving water quality has been degraded further (see Table 2).

Multiple water bodies in Riverside County have been identified as impaired and placed on the 303(d) List. The 303(d) listing of a water body and subsequent TMDL development is required when regulations under current permits, such as Technology Based Effluent Limitations (TBELs), are not stringent enough to meet Water Quality Standards and protect the Beneficial Uses of Waters of the State.

Storm water discharges from developed and developing areas in Riverside County are a significant source of certain pollutants that cause, may be causing, threatening to cause, or contributing to water quality impairment in the waters of Riverside County. Furthermore, the CWA section 303(d) list indicates that there is a reasonable potential that municipal storm water and dry weather discharges from MS4s cause, or may cause, or contribute to an excursion above water quality standards for the following pollutants: Indicator Bacteria, Copper, Manganese, Iron, Chlorpyrifos, Sulfates, Phosphorous, Nitrogen, Total Dissolved Solids, Toxicity and Turbidity (see Table 2). In accordance with CWA section 303(d), the San Diego Water Board is required to establish TMDLs for these pollutants in these waters to eliminate impairment and attain water quality standards. Per 40 CFR(130.7), WLAs are required for all point sources, including storm water and non-storm water discharges from MS4s. Therefore, focused pollutant control actions and further pollutant impact assessments by the Copermitees are warranted and required pursuant to this Order.

MS4 Permits address only those TMDL WLAs that have been adopted by the San Diego Water Board and have been approved by the State Water Board, Office of Administrative Law (OAL) and USEPA. WLAs are portions of a receiving water's loading capacity that is allocated to one of its existing or future point sources of

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<sup>157</sup> The 2008 Clean Water Act Section 303(d) List of Water Quality Limited Segments, approved by the San Diego Water Board and State Water Board, is available on-line at [http://www.swrcb.ca.gov/rwqcb9/water\\_issues/programs/303d\\_list/index.shtml](http://www.swrcb.ca.gov/rwqcb9/water_issues/programs/303d_list/index.shtml)

pollution. To date, no TMDLs and WLAs have been adopted to address impaired water bodies in the Riverside County portion of the Santa Margarita Hydrologic Unit. When TMDLs and WLAs are adopted and approved, they will be incorporated into the MS4 permit. The TMDL WLAs in MS4 Permits can be addressed using water quality-based numeric effluent limitations (WQBELs) calculated at end-of-pipe. WQBELs must be consistent with the assumptions and requirements of the WLAs.<sup>158</sup>

**Finding E.10.** This Order requires each Copermitee to effectively prohibit all types of unauthorized discharges of non-storm water into its MS4. However, historically pollutants have been identified as present in dry weather non-storm water discharges from the MS4s through 303(d) listings, monitoring conducted by the Copermitees under Order No. R9-2004-001, and there are others expected to be present in dry weather non-storm water discharges because of the nature of these discharges. This Order includes action levels for pollutants in non-storm water, dry weather discharges from the MS4. The non-storm water action levels are designed to ensure that the Order's requirement to effectively prohibit all types of unauthorized discharges of non-storm water into the MS4 is being complied with. Non-storm water action levels in the Order are based upon numeric or narrative water quality objectives and criteria as outlined in the Basin Plan, the State Water Board's Water Quality Control Plan for Ocean Waters of California (Ocean Plan), and State Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (State Implementation Policy or SIP). An exceedance of an action level requires specified responsive action by the Copermitees. This Order describes what actions the Copermitees must take when an exceedance of an action level is observed. Exceedances of non-storm water action levels do not alone constitute a violation of this Order but could indicate non-compliance with the requirement to effectively prohibit all types of unauthorized non-storm water discharges into the MS4 or other prohibitions established in this Order. Failure to undertake required source investigation and elimination action following an exceedance of a non-storm water action level (NAL or action level) is a violation of this Order. The San Diego Water Board recognizes that use of action levels will not necessarily result in detection of all unauthorized sources of non-storm water discharges because there may be some discharges in which pollutants do not exceed established action levels. However, establishing NALs at levels appropriate to protect water quality standards is expected to lead to the identification of significant sources of pollutants in dry weather non-storm water discharges.

**Discussion of Finding E.10.** This Order includes the existing requirement that Copermitees effectively prohibit all types of unauthorized non-storm water discharges in the MS4s. It also includes the following prohibition set forth in the Basin Plan: "The discharge of waste to waters of the state in a manner causing, or threatening to cause a condition of pollution, contamination or nuisance as defined in CWC section 13050 is prohibited." (Prohibition A.1.) As discussed in the Order's Findings on discharge characteristics, e.g., C.2., C.4., C.6., C.7., C.9., C.14., and C.15., the Copermitees'

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<sup>158</sup> Per 40 CFR 122.44(d)(1)(vii)(B)

reliance on BMPs for the past 20 years has not resulted in compliance with applicable water quality standards or compliance with the requirement to effectively prohibit all types of unauthorized discharges of non-storm water in the MS4. The San Diego Water Board has evaluated (in accordance with 40 CFR 122.44(d)(1)) past and existing control BMPs, non-storm water effluent monitoring results, the sensitivity of the species in receiving waters (e.g. endangered species), and the potential for effluent dilution, and has determined that existing BMPs to control pollutants in storm water discharges are not sufficient to protect water quality standards in receiving waters, and the existing requirement that Copermittees effectively prohibit all types of unauthorized non-storm water discharges into the MS4, historically results in the discharge of pollutants to the receiving waters.

Therefore it is appropriate to establish dry weather non-storm water action levels based upon established water quality standards to measure pollutants levels in the discharge of dry weather non-storm water that could indicate non-compliance with the requirement to effectively prohibit all types of unauthorized non-storm water discharges into the MS4 and/or that these discharges are causing, or threatening to cause, a condition of pollution, contamination or nuisance in the receiving waters. NALs are not numeric effluent limitations. While not alone a violation of this Order, an exceedance of an NAL requires the Copermittees to initiate a series of source investigation and elimination actions to address the exceedance. Results from the NAL monitoring are to be used in developing the Copermittees annual work plans. Failure to undertake required source investigation and elimination action following an exceedance of an NAL is a violation of this Order. Also refer to further discussion in the Directives section C of the Fact Sheet.

A purpose of monitoring, required under this and previous Orders, as stated in the Monitoring and Reporting Program is to “detect and eliminate illicit discharges and illicit connections to the MS4” and to answer the following core management questions:

1. Are conditions in receiving waters protective, or likely to be protective, of beneficial uses?
2. What is the extent and magnitude of the current or potential receiving water problems?
3. What is the relative MS4 discharge contribution to the receiving water problem(s)?
4. What are the sources of MS4 discharge that contribute to receiving water problem(s)?
5. Are conditions in receiving waters getting better or worse?

For the past 20 years, Copermittees have utilized their illicit connection / illicit discharge (IC/ID) program to identify and eliminate non-storm water discharges that are sources of pollutants to the MS4. The Copermittees are also subject to the requirement to effectively prohibit all types of unauthorized discharges of non-storm water into the MS4s. Historically, discharges of unauthorized non-storm water do

occur, resulting in the discharge of pollutants to the receiving water. NALs have been included in this Order to ensure that the Copermitees comply with the requirement to effectively prohibit all types of unauthorized non-storm water discharges that are a source of pollutants in the receiving waters.

**Finding E.12.** With this Order, the San Diego Water Board has completed the re-issuance of the fourth iteration of the Phase I MS4 NPDES Permits for the Copermitees in the portions of San Diego County, Orange County, and Riverside County within the San Diego Region. The NPDES Permit requirements issued to the Copermitees in each county have substantially the same core requirements such as discharge prohibitions, receiving water limitations, jurisdictional components, and monitoring. In addition, the Copermitees cooperate regionally to develop monitoring with the Southern California Stormwater Monitoring Coalition and to develop program effectiveness with the California Stormwater Quality Association. Regional programs could improve the Copermitees' compliance with other permit components such as development of the Hydromodification Management Plans and Retrofitting Existing Development with more consistent implementation and cost sharing. Re-issuing the NPDES Permit requirements within five years for three counties under three different permits requires the San Diego Water Board to expend significant time and resources for issuance of the permits through three separate public proceedings, thereby greatly reducing the time and resources available to oversee compliance. Multiple permits also create confusion for determining compliance among regulated entities, especially the land development community. The San Diego Water Board recognizes that issuing a single MS4 permit for all Phase I entities in the San Diego Region will provide consistent implementation, improve communication among agencies within watersheds crossing multiple jurisdictions, and minimize staff resources spent with each permit renewal. The San Diego Water Board plans to develop a single regional MS4 permit prior to the expiration of this Order that will transfer the Copermitees' enrollment to the regional permit upon expiration of this Order.

**Discussion of Finding E.12.** With the advances in storm water science and regulation in the last decade, the additional complexity has resulted in a more significant amount of San Diego Water Board staff time and resources required to complete each Phase I MS4 Permit renewal. On average, the renewal of the fourth iteration of the Phase I MS4 Permits for each county has taken approximately 2 years and multiple staff to complete. The time and resources required to complete each renewal has diverted staff time and resources away from the San Diego Water Board's ability to oversee and ensure compliance with the permit provisions and requirements.

With the adoption of this Order, all the Phase I MS4s in the San Diego Region (i.e. Copermitees of Orange County, Riverside County and San Diego County) will essentially be subject to the same set of core requirements. Because there are now more similarities than differences among the permit provisions and requirements, developing and issuing a single regionwide permit to the Phase I MS4 entities may be appropriate with the next (i.e. fifth) iteration of the Phase I MS4 Permits.

This approach would provide a consistent set of regulatory requirements throughout the San Diego Region, thereby reducing the confusion that is created with different sets of requirements between areas in close proximity to each other. A regional set of requirements for the discharge prohibitions, receiving water limitations, jurisdictional program components (i.e., new development, construction, existing development, retrofitting), hydromodification management plans, low impact development design requirements, and monitoring would also make it easier for the programs in the three counties to share and transfer information and program efficiencies, and cooperate on a regionwide basis. Regionwide consistency would be especially beneficial where there are multiple counties involved in implementing permit requirements, such as the Santa Margarita watershed with parts of San Diego County and Riverside County, regional TMDLs (e.g., beaches and creeks bacteria TMDLs), or regional monitoring efforts or studies (e.g., Southern California Stormwater Monitoring Coalition, Bight '08).

An additional benefit would be the reduction of staff time and resources that will be required to renew future Phase I MS4 Permits, which would only be required once every 5 years for a single regionwide permit instead of once every 1 to 3 years for three separate permits. Because of these benefits, the San Diego Water Board plans to develop a single regional Phase I MS4 Permit with the next iteration of the San Diego County MS4 Permit, which will incorporate the Orange County and Riverside County Phase I MS4 entities upon the expiration of their respective permits, or sooner.

**F. Public Process**

**Finding F.1.** The San Diego Water Board has notified the Copermitees, all known interested parties, and the public of its intent to consider adoption of an Order prescribing waste discharge requirements that would serve to renew an NPDES permit for the existing MS4 discharges of pollutants to waters of the U.S.

**Discussion of Finding F.1.** Public notification of development of a draft permit is required under Federal regulation 40 CFR 124.10(a)(1)(ii). This regulation states “(a) Scope. (1) The Director shall give public notice that the following actions have occurred: (ii) A draft permit has been prepared under Sec. 124.6(d).” Public notifications “shall allow at least 30 days for public comment,” as required under Federal regulation 40 CFR 124.10(b)(1).

**Finding F.2.** The San Diego Water Board has held a public hearing on November 10, 2010 and heard and considered all comments pertaining to the terms and conditions of this Order.

**Discussion of Finding F.2.** Public hearings are required under CWC section 13378, which states “Waste discharge requirements and dredged or fill material permits shall be adopted only after notice and any necessary hearing.” Federal regulation 40 CFR 124.12(a)(1) also requires public hearings for draft permits, stating “The Director shall hold a public hearing whenever he or she finds, on the basis or requests, a significant degree of public interest in a draft permit(s).” Regarding public notice of a public hearing, Federal regulation 40 CFR 124.10(b)(2) states that “Public notice of a public hearing shall be given at least 30 days before the hearing.”

## IX. DIRECTIVES

This section discusses significant changes which have been made to the requirements of the Order from the requirements which were previously included in Order No. R9-2004-001. For each section of the Order that has been changed there is a discussion which describes the change that was made and provides the rationale for the change. In addition, comments on the Copermittees' ROWD recommendations, as they pertain to each changed requirement of the Order, are provided.

Requirements of the Order that are not discussed in this section have not been significantly changed from those requirements previously included in Order No. R9-2004-001. For such requirements, discussions and rationale for the requirements can be found in section VIII of the Fact Sheet/Technical Report for San Diego Water Board Order No. R9-2004-001, dated July 14, 2004. Section VIII also provides additional background information for those requirements that have undergone significant change which are described in detail in this report. The Fact Sheet/Technical Report is available for download at:

[http://www.waterboards.ca.gov/sandiego/water\\_issues/programs/stormwater/rsd\\_stormwater.shtml](http://www.waterboards.ca.gov/sandiego/water_issues/programs/stormwater/rsd_stormwater.shtml)

Legal authority citations are provided for each major section of the Order. These citations apply to all applicable requirements within the section for which they are provided.

### A. Prohibitions and Receiving Water Limitations

The following legal authority applies to section A:

**Broad Legal Authority:** CWA sections 402(p)(3)(B)(ii-iii), CWC section 13377, and Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(B, C, E, and F) and 40 CFR 122.26(d)(2)(iv).

**Specific Legal Authority:** The Water Quality Control Plan for the San Diego Basin (Basin Plan) contains the following waste discharge prohibition: "The discharge of waste to waters of the state in a manner causing, or threatening to cause a condition of pollution, contamination, or nuisance as defined in CWC section 13050, is prohibited."

CWC section 13050(l) states "(1) 'Pollution' means an alteration of the quality of waters of the state by waste to a degree which unreasonably affects either of the following: (A) The water for beneficial uses. (B) Facilities which serve beneficial uses. (2) 'Pollution' may include "contamination."

CWC section 13050(k) states “Contamination’ means an impairment of the quality of waters of the state by waste to a degree which creates a hazard to public health through poisoning or through the spread of disease. ‘Contamination’ includes any equivalent effect resulting from the disposal of waste, whether or not waters of the state are affected.”

CWC section 13050(m) states “Nuisance’ means anything which meets all of the following requirements: (1) Is injurious to health, or is indecent or offensive to the senses, or an obstruction to the free use of property, so as to interfere with the comfortable enjoyment of life or property. (2) Affects at the same time an entire community or neighborhood, or any considerable number of persons, although the extent of the annoyance or damage inflicted upon individuals may be unequal. (3) Occurs during, or as a result of, the treatment or disposal of wastes.”

CWC section 13241 requires each Regional Water Board to “establish such water quality objectives in water quality control plans as in its judgment will ensure the reasonable protection of beneficial uses and the prevention of nuisance [...]”

CWC section 13243 provides that “A regional board, in a water quality control plan or in waste discharge requirements, may specify certain conditions or areas where the discharge of waste, or certain types of waste, will not be permitted.”

CWC section 13263(a) provides that waste discharge requirements prescribed by the San Diego Water Board implement the Basin Plan.

Federal NPDES regulations 40 CFR 122.26(d)(2)(iv)(A - D) require municipalities to implement controls to reduce pollutants in storm water runoff from commercial, residential, industrial, and construction land uses or activities.

Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(A - D) require municipalities to have legal authority to control various discharges to their MS4.

Federal NPDES regulation 40 CFR 122.44(d)(1) requires municipal storm water permits to include any requirements necessary to “[a]chieve water quality standards established under section 303 of the CWA, including State narrative criteria for water quality.”

Federal NPDES regulation 40 CFR 122.44(d)(1)(i) requires NPDES permits to include limitations to “control all pollutants or pollutant parameters (either conventional, nonconventional, or toxic pollutants) which the Director determines are or may be discharged at a level which will cause, have reasonable potential to cause, or contribute to an excursion above any State water quality standard, including State narrative criteria for water quality.”

**Section A** of the Order combines two previously distinct requirement sections – Prohibitions and Receiving Water Limitations. These sections have been combined into one section for organization purposes and to reduce redundancy, since both sections address the same issue. These changes have no net effect on the implementation and enforcement of the Order.

**Section A.3** describes the “iterative process.” The Copermitees must reduce the discharge of storm water pollutants to the MEP and ensure that their MS4 discharges do not cause or contribute to violations of water quality standards. If the Copermitees have reduced storm water pollutant discharges to the MEP, but their discharges are still causing or contributing to violations of water quality standards, the Order provides a clear and detailed process for the Copermitees to follow. This process is often referred to as the "iterative process" and can be found at section A.3. The language of section A.3 is prescribed by the State Water Board and is included in MS4 permits statewide. Section A.3 essentially requires additional BMPs to be implemented until MS4 storm water discharges no longer cause or contribute to a violation of water quality standards.

The State Policy with respect to maintaining high quality waters has been added to clarify that discharges from the MS4 that cause or contribute to a violation of the Policy for high quality waters is prohibited.

The Copermitee must notify the San Diego Water Board of storm water discharges that are causing or contributing to an exceedance of applicable water quality standards. This notification can be in the form of an email or letter, with a summary of the pollutants in the storm water discharge that are exceeding the applicable water quality standards, and where and when the exceedances occurred. After notification is provided to the San Diego Water Board, the Copermitee must submit a report that describes the BMPs that are currently being implemented and the additional BMPs that will be implemented by the Copermitee to prevent or reduce the pollutants in the storm water discharge from causing or contributing to the exceedances of the applicable water quality standards. The report is separate from the notification and may be submitted with the Annual Report, unless the San Diego Water Board requests an earlier submittal of the report.

## B. Non-Storm Water Discharges

The following legal authority applies to section B:

**Broad Legal Authority:** CWA sections 402, 402(p)(3)(B)(ii-iii), CWC section 13377, and Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(B, C, E, and F), 40 CFR 122.26(d)(2)(iv) and 40 CFR 122.44.

**Specific Legal Authority:** Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(B) requires MS4 operators “to detect and remove (or require the discharger to the municipal separate storm sewer to obtain a separate NPDES permit for) illicit discharges and improper disposal into the storm sewer.”

Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(B)(1) provides that the Copermittees shall prevent all types of illicit discharges into the MS4 except for certain non-storm water discharges.

**Section B** of the Order has been reworded to simplify and clarify the requirements for addressing non-storm water discharges that are not prohibited. This rewording has no net effect on the implementation and enforcement of the Order.

**Section B.2** identifies categories of non-storm water discharges that do not have to be addressed as illicit discharges unless identified by a Copermittee or the San Diego Water Board as a category that is a source of pollutants to waters of the U.S. If a Copermittee or the San Diego Water Board identifies a category of non-storm water discharges as a source of pollutants to waters of the U.S., the category must be addressed through a program, including inspections, to implement and enforce an ordinance, orders, or other similar means to prevent illicit discharges to the MS4.<sup>159</sup>

The program includes enforcement of an ordinance, orders, or other legal authority that prohibits the category of non-storm water discharges from entering the MS4. Implementation of the program is through the IC/ID program, described in Directive F.4, which includes requirements for investigating/inspecting illicit discharges and enforcing the ordinance, orders, or other legal authority that prohibits the category of non-storm water discharges from entering the MS4.

The federal regulations list several categories of non-storm water discharges or flows that do not have to be addressed by the program unless a Copermittee or the San Diego Water Board identifies a category as a source of pollutants to waters of the U.S. These categories are often referred to as “exempt” discharges that are “allowed” to be discharged into the MS4. There are two types of categories of non-storm water discharges or flows that are considered “exempt”: 1) anthropogenic (e.g., water line

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<sup>159</sup> Code of Federal Regulations Title 40 section 122.26(d)(2)(iv)(B)(1)

flushing, air conditioner condensate), and 2) non-anthropogenic (e.g., springs, rising ground water).

For “exempt” anthropogenic categories of non-storm water discharges or flows that are identified as sources of pollutants to waters of the U.S., those categories become illicit discharges and are no longer “allowed” to be discharged to the MS4. The IC/ID program addresses those discharges (i.e. investigation of illicit discharges and enforcement of ordinances prohibiting illicit discharges to the MS4).

For “exempt” non-anthropogenic discharges or flows that are identified as sources of pollutants to waters of the U.S., the IC/ID program cannot be fully implemented with enforcement. Categories of non-storm water discharges or flows that originate due to a natural source (e.g., springs or rising ground water) can be investigated and identified, but it would be difficult to enforce ordinances prohibiting these discharges to the MS4. In these cases, the Copermittee may need to implement other control measures to prevent the illicit discharges from non-anthropogenic sources from entering the MS4 (e.g., sealing the storm drains to prevent infiltration).

The IC/ID program also identifies categories of “exempt” non-storm water discharges that are sources of pollutants to waters of the U.S. If an individual discharge within a category of “exempt” non-storm water discharges is found to be an isolated incidence or source of pollutants and not representative of the category as a whole, the entire category does not need to be removed from the list of “exempt” categories of non-storm water discharges. If, however, the Copermittees or the San Diego Water Board find that a pattern of isolated incidents or sources are consistently discharging pollutants to waters of the U.S. over a period of time, or throughout the region, the category must be identified as a source of pollutants to waters of the U.S. warranting removal from the list of “exempt” categories of non-storm water discharges.

The San Diego Water Board and several municipalities throughout the San Diego Region (e.g., cities and counties of Orange County and San Diego County) have reported and/or identified runoff originating from landscape irrigation as likely sources of dry weather flows conveying pollutants into their MS4s. This is also supported by legislation (Assembly Bill 1881) recently enacted by the State of California, which has identified runoff resulting from over irrigation not only as a waste of water resources, but also as a source of pollutants to the state’s waterways. Discharges from landscape irrigation have been identified by the San Diego Water Board and the Copermittees as a source of pollutants and conveyance of pollutants to waters of the United States in the following:

- In educational materials developed by The Cities and County of Riverside “Only Rain in the Storm Drain” Pollution Prevention Program, the Landscape and Garden brochure states: “Soil, yard wastes, *over-watering* [emphasis added] and garden chemicals become part of the urban runoff mix that winds it way through streets, gutters and storm drains before entering lakes, rivers, streams, etc.”

- In an educational survey developed by The Cities and County of Riverside “Only Rain in the Storm Drain” Pollution Prevention Program distributed at Public Outreach events, the answer to the question about where lawn irrigation water goes states: *“Water that leaves your lawn from irrigation...can pick up motor oil and grease from vehicles, excess fertilizer from your lawn, bacteria from pet waste, and excess pesticides from your yard. These pollutants can be carried down streets and storm drains directly to our streams, lakes and rivers without treatment!”*
- In 2006, the State Water Board allocated Grant funding to the Smarttimer/Edgescape Evaluation Program (SEEP). The project targets irrigation runoff by retrofitting existing development and documenting the conservation and runoff improvements. The Grant Application states that “Irrigation runoff contributes flow & pollutant loads to creeks and beaches that are 303(d) listed for bacteria indicators”. Furthermore, the grant application states that “Regional program managers agree that the reduction and/or elimination of irrigation-related urban flows and associated pollutant loads may be key to successful attainment of water quality and beneficial use goals as outlined in the Basin Plan and Bacteria TMDL over the long term”. This is reinforced in the project descriptions and objectives: “Elevated dry-weather storm drain flows, composed primarily ... of landscape irrigation water wasted as runoff, carry pollutants that impair recreational use and aquatic habitats all along Southern California’s urbanized coastline. Storm drain systems carry the wasted water, along with landscape derived pollutants such as bacteria, nutrients and pesticides, to local creeks and the ocean. Given the local Mediterranean climate, excessive perennial dry season stream flows are an unnatural hydrologic pattern, causing species shifts in local riparian communities and warm, unseasonal contaminated freshwater plumes in the near-shore marine environment”. The basis of this grant project is that over-irrigation (landscape irrigation, irrigation water and lawn watering) into the MS4 is a source and conveyance of pollutants. In addition, they indicate that the alteration of natural flows is impacting the Beneficial Uses of waters of the State. The results of this study can be applied broadly to any area where over-irrigation takes place, including Riverside County. Preliminary results from the study indicate that that over-irrigation (landscape irrigation, irrigation water and lawn watering) into the MS4 is a source and conveyance of pollutants.
- In the Watershed Action Plan Annual Report(s) for the 2006-2007 reporting period, submitted by the County of Orange, Orange County Flood Control District and Copermittees within the San Juan Creek, Laguna Coastal Streams, Aliso Creek, and Dana Point Coastal Streams Watersheds, the Orange County Copermittees, within their Watershed Action Strategy Table for Fecal Indicator Bacteria state that *“Support programs to reduce or eliminate the discharge of anthropogenic dry weather nuisance flow throughout the [...] watershed. Dry weather flow is the transport medium for bacteria and other 303(d) constituents of concern”*. Additionally, they state that *“conditions in the MS4 contribute to high seasonal bacteria propagation in-pipe during warm weather. Landscape irrigation is a major*

*contributor to dry weather flow, both as surface runoff due to over-irrigation and overspray onto pavements; and as subsurface seepage that finds its way into the MS4.”*

- In the Carlsbad Watershed Urban Runoff Management Program (WURMP) Fiscal Year 2008 Annual Report, submitted by the Carlsbad Watershed Copermittees (Cities of Carlsbad, Encinitas, Escondido, Oceanside, San Marcos, Solana Beach, and Vista, and the County of San Diego), the Carlsbad Watershed Copermittees state *“The Carlsbad Watershed Management Area (WMA) collective watershed strategy identifies bacteria, sediment, and nutrients as high priority water quality pollutants in the Agua Hedionda (904.3 – bacteria and sediment), Buena Vista (904.2 – bacteria), and San Marcos Creek (904.5 – nutrients) Hydrologic Areas. Bacteria, sediment, and nutrients have been identified as potential discharges from over-irrigation.”*
- In Appendix D of the San Diego Bay WURMP 2007-2008 Annual Report, submitted by the San Diego Bay Watershed Copermittees (Cities of Chula Vista, Coronado, Imperial Beach, La Mesa, Lemon Grove, National City, and San Diego, the County of San Diego, the Port of San Diego, and the San Diego County Airport Authority), the San Diego Bay Watershed Copermittees identified *over-irrigation of lawns* from business and/or residential land uses as a likely pollutant source for bacteria, pesticides, and sediment.
- On September 28, 2006 Governor Arnold Schwarzenegger approved Assembly Bill 1881, The Water Conservation in Landscaping Act (AB 1881, Laird). The act requires cities, counties, and charter cities and charter counties, to adopt landscape water conservation ordinances by January 1, 2010. Additionally, the law required the Department of Water Resources (DWR) to prepare a Model Water Efficient Landscape Ordinance for use by local agencies. The Water Efficient Landscape Ordinance was approved by the Office of Administrative Law on September 10, 2009. All local agencies were required to adopt a water efficient landscape ordinance by January 1, 2010. Local agencies could adopt the Water Efficient Landscape Ordinance developed by DWR, or an ordinance considered at least as effective as the Model Ordinance. The Water Efficient Landscape Ordinance includes a requirement that local agencies prohibit runoff from irrigation (§ 493.2): *“Local agencies shall prevent water waste resulting from inefficient landscape irrigation by prohibiting runoff from leaving the target landscape [emphasis added] due to low head drainage, overspray, or other similar conditions where water flows onto adjacent property, non-irrigated areas, walks, roadways, parking lots, or structures. Penalties for violation of these prohibitions shall be established locally.”*
- On October 08, 2009, the State of California Department of Water Resources issued a letter to all cities and counties within the State of California giving reminder of required adoption of the Water Efficient Landscape Ordinance. The letter states that: *“Other benefits include reduced irrigation runoff, reduced*

pollution of waterways [*emphasis added*], drought resistance, and less green waste.”

- On December 18, 2009, the San Diego Water Board adopted Order. No. R9-2009-0002, the fourth-term Orange County permit, which found that over-irrigation (landscape irrigation, irrigation water and lawn watering) into the MS4 is a source and conveyance of pollutants. Landscape irrigation, irrigation water, and lawn watering were categories removed from the list of non-storm water discharges not prohibited to be discharged into the MS4.
- The San Diego Water Board has responded to complaints about and observed runoff from over-irrigation entering the MS4s in the Riverside County portion of the San Diego Region.

Several significant changes have been made to the list of categories of non-storm water discharges that do not have to be addressed as illicit discharges. A footnote has been added to dechlorinated swimming pool discharges on the list to specify that this category does not include saline swimming pool discharges. The list has been modified to remove the landscape irrigation, irrigation water and lawn watering “exempt” discharge categories (i.e. no longer “allowed” to enter the MS4). Language has been also added to the section to clarify differences in the federal regulations under 40 CFR 122.26(d)(iv)(B) and for the authority of the Director (i.e. San Diego Water Board) in regards to identifying exempted discharges.

Because the landscape irrigation, irrigation water and lawn watering “exempt” discharge categories have been removed from section B, per identification as a source and conveyance of pollutants to waters of the United States when discharged from the MS4, these illicit discharges must be addressed per 40 CFR 122.26(d)(iv)(B). The San Diego Water Board is requiring these discharges be addressed as illicit discharges by the Copermittees. This is consistent with the Federal Regulations (55 FR 48037). Thus, the discharges are to be prohibited via ordinance, order, or similar means and incorporated as part of the Copermittees IC/ID program.

**Section B.3** has been clarified by the recognition of building fire suppression system maintenance (e.g. fire sprinklers) as an illicit discharge. The San Diego Water Board has found that such discharges contain waste, and as such the San Diego Water Board is requiring these discharges be addressed as illicit discharges by the Copermittees. This is consistent with the Federal Regulations (55 FR 48037). Thus, the discharges are to be prohibited via ordinance, order or similar means and incorporated as part of the Copermittees IC/ID program.

### **C. Non Storm Water Dry Weather Action Levels**

The following legal authority applies to section C:

**Broad Legal Authority:** CWA section 402, 402(p)(3)(B)(ii), CWC §13377. 40 CFR 122.26(d)(2)(i)(B, C, E, and F), and 40 CFR 122.26(d)(2)(iv).

**Specific Legal Authority:**

CWA section 402(p)(3)(B)(ii) provides that MS4 permits “shall include a requirement to effectively prohibit non-storm water discharges into the storm sewers.”

Federal NPDES regulations 40 CFR 122.26(d)(2)(iv)(B) provides that the proposed management program “shall be based on a description of a program including a schedule, to detect and remove (or require the discharger to the municipal storm sewer to obtain a separate NPDES permit for) illicit discharges and improper disposal into the storm sewer.”

Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(B)(1) provides that the Copermittee include in its proposed management program “a program, including inspections, to implement and enforce an ordinance, orders or similar means to prevent illicit discharges to the municipal storm sewer system; this program description shall address all types of illicit discharges, however the [listed exempt] category of non-storm water discharges or flows shall be addressed where such discharges are identified by the municipality as sources of pollutants to waters of the United States.”

Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(B)(2) provides that the Copermittee include in its proposed management program “a description of procedures to conduct on-going field screening activities during the life of the permit, including areas or locations that will be evaluated by such field screens.”

Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(B)(3) provides that the Copermittee include in its proposed management program “procedures to be followed to investigate portions of the separate storm sewer system that, based on the results of the field screen, or other appropriate information, indicate a reasonable potential of containing illicit discharges or other sources of non-storm water.”

**Section C** establishes non-storm water dry weather action levels (see also Finding C.14, Finding E.10, and the Discussion for those sections).

Non-exempted, non-storm water discharges are to be effectively prohibited from entering the MS4 or become subject to another NPDES permit (see Federal Register, Vol. 55, No. 222, pg. 47995). Conveyances which continue to accept non-exempt, non-storm water discharges do not meet the definition of MS4 and are not subject to section 402(p)(3)(B) of the CWA unless the discharges are issued separate NPDES permits. Instead, conveyances that continue to accept non-exempt, non-storm water

discharges that do not have a separate NPDES permit are subject to sections 301 and 402 of the CWA (see Federal Register, Vol. 55, No. 222, pg. 48037).

The Order requires the sampling of a representative percentage of major outfalls and other identified stations within each hydrologic subarea. While it is important to assess all major outfall discharges from the MS4 into receiving waters, to date the Copermittees have implemented a dry-weather monitoring program that has consisted of 4 water quality parameters collected in receiving waters, not major outfalls. In the ROWD the Copermittees have proposed relocating IC/ID (non-storm water) monitoring sites to major outfalls and increasing the level of monitoring. It is expected that the Copermittees will need to utilize current 303(d) listings, land use, the history of IC/ID complaints and the sensitivity of receiving waters in the selection and annual sampling of a representative percentage of major outfalls in accordance with the requirements under section C.4. It is expected the selection of major outfalls will be done in conjunction with the Copermittees' required updates to the MS4 map in section F.4.b of the Order.

The Order requires an increase in the number and type of pollutants sampled in non-storm water from major outfalls. To date, Copermittees have not sampled major outfalls, only receiving waters, and sampling was limited to total dissolved solids, dissolved oxygen, pH, turbidity and specific conductance. Additional sampling was generally, though not always, conducted by Copermittees if initial sampling exceeded a Copermittee threshold. With the exception of dissolved oxygen, the current thresholds do not represent water quality objectives, as sampling may not trigger a threshold, but may still be exceeding a water quality objective. This Order requires non-storm water discharges to be sampled for additional pollutants including indicator bacteria, nutrients (nitrate and phosphorous), Methylene Blue Active Substances (MBAS), pesticides and metals. These pollutants are expected to be present in non-storm water discharges, are pollutants for which receiving waters are 303(d) listed as impaired or have been identified as present through receiving water monitoring.

#### Background and Rationale for Requirements

The San Diego Water Board developed the requirements for dry weather, non-storm water action levels based upon an evaluation of existing controls, monitoring and reporting programs (effluent and receiving water), special studies, and based upon Findings C.1 C.3, C.4, C.6, C.7 and C.14. In addition, the Copermittees' ROWD supports the establishment of action levels which can be used in the effectiveness assessment program to ensure a minimum level of program implementation and identify shortcomings in their MS4 programs.<sup>160</sup>

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<sup>160</sup> Riverside County Copermittees. 2009. Report of Waste Discharge (San Diego Region).

### Water Quality Control Plan

CWA section 303(c) requires the state to establish Water Quality Standards (WQS). WQS define the water quality goals of a water body, or part thereof, by designating their use or uses to be made of the water and by setting criteria necessary to protect those uses.

The San Diego Water Board's Water Quality Control Plan for the San Diego Basin (Basin Plan) designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the Basin Plan. The Basin Plan was adopted by the San Diego Water Board on September 8, 1994, and was subsequently approved by the State Water Board on December 13, 1994. Subsequent revisions to the Basin Plan have also been adopted by the San Diego Water Board and State Water Board.

### National Toxics Rule (NTR) and California Toxics Rule (CTR)

The USEPA adopted the NTR on December 22, 1992, which was amended on May 4, 1995, and November 9, 1999. The CTR was adopted by USEPA on May 18, 2000,<sup>161</sup> and amended on February 13, 2001.<sup>162</sup> These rules include water quality criteria for priority pollutants and are applicable to non-storm water discharges from the MS4. Criteria for 126 priority pollutants are established by the CTR. USEPA promulgated this rule to fill a gap in California water quality standards that was created in 1994 when a California court overturned the State's water quality control plans containing criteria for priority toxic pollutants. The federal criteria are legally applicable in the State of California for inland surface waters, enclosed bays and estuaries for all purposes and programs under the CWA.

### Antidegradation Policy

Section 131.12 of 40 CFR requires that the State water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy in State Water Board 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 Water Boards' Basin Plans implement, and incorporate by reference, both the State and federal antidegradation policies. Permitted non-storm water discharges from the MS4 are consistent with the antidegradation provision of 40 CFR section 131.12 and State Water Board Resolution No. 68-16.

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<sup>161</sup> Federal Register / Vol. 65, No. 97 / May 18, 2000 / Rules and Regulation P. 31861-31719; Code of Federal Regulations Title 40 Part 131

<sup>162</sup> Federal Register / Vol. 66, No. 30 / February 13, 2001 / Rules and Regulation P. 9960-9962; Code of Federal Regulations Title 40 Part 131

### Sources of Drinking Water Policy

State Water Board Resolution No. 88-63 establishes state policy that all waters, with certain exceptions, should be considered suitable or potentially suitable for municipal and domestic supplies. Requirements of this Order include action levels, where appropriate, reflecting municipal and domestic supply use as all waters within the County of Riverside under this Order are specifically assigned municipal and domestic supply as a Beneficial Use.

### Monitoring and Reporting

40 CFR section 122.48 requires that all NPDES permits specify requirements for recording and reporting monitoring results. Sections 13267 and 13383 of CWC authorize the Regional Water Boards to require technical and monitoring reports. The Monitoring and Reporting Program establishes monitoring and reporting requirements to implement state and federal regulations. The Monitoring and Reporting Program can be found as Attachment E of the Order.

### Dilution or Mixing Zones

In order to protect the Beneficial Uses of receiving waters from pollutants as a result of non-storm water MS4 discharges, this Order does not provide for a mixing zone or a zone of initial dilution except when the discharge is to the surf zone.

The San Diego Region has predominantly intermittent and ephemeral rivers and streams (Inland Surface Waters) which vary in flow volume and duration at spatial and temporal scales. Therefore, it is assumed that any non-storm water discharge from the MS4 into the receiving water is likely to be of a quantity and duration that does not allow for dilution or mixing. For ephemeral systems, non-storm water discharges from the MS4 are likely to be the only surface flows present within the receiving water during the dry season. Additionally, all surface waters within the jurisdiction of this Order have been designated in the Basin Plan with municipal supply (MUN) as a beneficial use.

It is appropriate to base numeric action levels for dry weather non-storm water discharges on these considerations.

### Establishment of Action Levels

Action levels in the Order are based upon numeric or narrative water quality objectives and criteria as defined in the Basin Plan and the State Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (State Implementation Policy or SIP). The San Diego Water Board recognizes that use of action levels will not necessarily result in detection of all unauthorized sources of non-storm water discharges because there may be some discharges in which pollutants do not exceed established action levels.

In June of 2006, the State Water Board's Blue Ribbon Storm Water Panel released its report titled 'The Feasibility of Numerical Effluent Limits Applicable to Discharges of Storm Water Associated with Municipal, Industrial and Construction Activities.' The

report only examined numerical limits as applied to storm water and not non-storm water. In the recommendations, the Blue Ribbon panel proposed storm water action levels which are computed using statistical based population approaches. For example, section D of the Permit uses a recommended statistical approach to develop storm water action levels. The Blue Ribbon panel did not examine the efficacy of action levels or recommendations for development of action levels for non-storm water discharges.

For discharges to inland surface waters, action levels are based on the USEPA water quality criteria for the protection of aquatic species, the USEPA water quality criteria for the protection of human health, water quality criteria and objectives in the applicable State plans, effluent concentration available using best available technology, and 40 CFR 131.38. Since the assumed initial dilution factor for the discharge is zero and a mixing zone is not allowed, a non-storm water discharge from the MS4 could not cause an excursion from numeric receiving water quality objectives if the discharge is in compliance with the action levels contained in the Order.

Dry weather monitoring of non-storm water conducted in receiving waters under the previous Order (Order No. R9-2004-001), which relies on BMPs as controls to protect water quality standards, has identified the presence of pollutants commonly found in non-storm water discharges. Monitoring of Indicator Bacteria, pH, Dissolved Oxygen, Phosphorus, Nitrate, Turbidity, Methylene Blue Active Substances (MBAS), and metals in receiving waters has shown concentrations that exceed state water quality criteria. It is appropriate to establish numeric action levels for these pollutants to ensure that the Copermitees are complying with the requirement to effectively prohibit all types of unauthorized non-storm water discharges into the MS4s.

Water Quality Limited Segments on the current 303(d) list (2008) within the jurisdiction of this Order have been identified due to exceedances of Sulfate and Total Dissolved Solids criteria from a source which is currently unknown (see Table 2). These pollutants are not monitored for in non-storm water effluent under the current non-storm water MS4 monitoring program. While this Order does not establish a numeric action level for these constituents at this time, this Order now requires non-storm water MS4 discharge monitoring to include monitoring for Sulfates, Total Dissolved Solids, and Chlorides.

Priority pollutants analyzed included Cadmium, Copper, Chromium, Lead, Nickel, Silver and Zinc. These priority pollutants are likely to be present in non-storm water MS4 discharges (see Finding C.3) though dissolved metal effluent monitoring was not conducted under the previous Order. The most stringent applicable water quality criteria have been identified for these seven metals and, excluding Chromium (VI), and all are dependent on receiving water hardness. The conversion factors for Cadmium and Lead are also water hardness dependent (40 CFR 131.38(b)(2)). These levels are established as the action levels for these constituents.

While effluent monitoring is not available from the previous Order, the monitoring that was done for metal concentrations in receiving waters often lacked a measurement of receiving water hardness. Due to the multiple point source discharges of non-storm water from the MS4, a discharge may enter a receiving water whose hardness will vary temporally. In addition, hardness may vary spatially within and among receiving waters.

However, other information is available to determine the appropriateness of an action level. Existing monitoring concentrations absent of receiving water data, no dilution credit or mixing zone allowance, current 303(d) listings of receiving waters for other pollutants, receiving water monitoring data, and the classification of waters as critical habitat for endangered and species of concern, provide evidence that NALs are appropriate for these priority pollutants at this time in order to ensure that the Copermittees comply with the requirement to effectively prohibit all types of unauthorized non-storm water discharges into the MS4s.

Existing receiving water pollutant concentration data (see attachment F) provides evidence that it is appropriate to include NAL based comparisons to water quality criteria given observed hardness levels, assumption of a conservative hardness level when data is absent, or designation of receiving waters as having MUN as a beneficial use. Although dry weather receiving water data is limited (see attachment F), data has been collected that documents exceedances of CTR criteria for Lead, Nickel, and Copper given the measured hardness for the receiving water. Absent receiving water hardness, Zinc has been detected in receiving waters at concentrations which may be in exceedance of CTR criteria depending on receiving water hardness. Additionally, Cadmium and Chromium were detected at elevated levels, though the concentrations were within CTR criteria given the observed receiving water hardness. However, these detections typically coincided with detections of other exceedances of water quality standards for other pollutants, including metals. Chromium and Nickel were also detected at levels that did not exceed CTR, but did exceed Maximum Contaminant Levels (MCLs) for receiving waters.

As discussed, inland surface waters have conservatively been allotted a mixing zone and dilution credit of zero. As such, any discharge of these priority pollutants is likely to impact the receiving water, regardless of the quantity or rate of discharge.

As discussed in Finding C.7 and discussion, multiple receiving waters within the County of Riverside are 303(d) listed for a number of pollutants, including toxicity. The 303(d) listing of a water body as impaired provides evidence that the receiving water(s) are already experiencing negative impacts. These water quality limited segments are more susceptible to degradation from the synergistic addition of more pollutants, even from upstream discharges. It is therefore appropriate to include NALs designed to ensure that the Copermittees are complying with the requirement to effectively prohibit all types of unauthorized discharges of non-storm water into the MS4s.

Copermittees have monitored the receiving waters for MS4 discharges pursuant to requirements under Order No. R9-2004-001. Dry weather receiving water data indicates poor conditions within waters receiving non-storm water MS4 discharges. Bioassessment conducted under the Order (2004-present) has documented all non-reference sites as consistently having poor or very poor IBI scores, likely due in part to receiving water chemistry and toxicity<sup>163</sup>.

Receiving waters and downstream receiving waters within the jurisdiction of this Order contain species and/or are classified as critical habitat (or are exempted pursuant to Integrated National Resource Management Plans) for endangered, threatened, and state species of special concern including, but not limited to, *E. newberryi*, *A. marmorata pallida*, and *G. orcutti*.

Furthermore, the Santa Margarita River has been designated with the RARE beneficial use.

#### Dry Weather Non-Storm Water Action Levels Calculations for Discharges to Inland Surface Waters

On the basis of the foregoing discussion, the NALs were calculated with the following considerations and assumptions:

No dilution credit is considered for the discharge. Therefore, the discharge must comply with the Water Quality Objective at the point of discharge.

For NALs based on CTR, implementation was done using the procedure list as outlined in the State Implementation Plan (SIP) (see below example).

#### NAL CTR/SIP Calculation – Chromium VI Example:

Criteria for Priority Toxic Pollutants in the State of California is described in the CTR table listed in 40 CFR 131.38.

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<sup>163</sup> Riverside County Copermittees 2007-08 and 2008-09 Annual Progress Reports.

A		B Freshwater		C Saltwater		D Human Health (10 <sup>-6</sup> risk for carcinogens) For consumption of:	
# Compound	CAS Number	Criterion Maximum Conc. <sup>d</sup> B1	Criterion Continuous Conc. <sup>d</sup> B2	Criterion Maximum Conc. <sup>d</sup> C1	Criterion Continuous Conc. <sup>d</sup> C2	Water & Organisms ( $\mu$ g/L) D1	Organisms Only ( $\mu$ g/L) D2
1. Antimony	7440360					14 a,s	4300 a,t
2. Arsenic <sup>b</sup>	7440382	340 i,m,w	150 i,m,w	69 i,m	36 i,m		
3. Beryllium	7440417					n	n
4. Cadmium <sup>b</sup>	7440439	4.3 e,i,m,w,x	2.2 e,i,m,w	42 i,m	9.3 i,m	n	n
5a. Chromium (III)	16065831	550 e,i,m,o	180 e,i,m,o			n	n
5b. Chromium (VI) <sup>b</sup>	18540299	16 i,m,w	11 i,m,w	1100 i,m	50 i,m	n	n
6. Copper <sup>b</sup>	7440508	13 e,i,m,w,x	9.0 e,i,m,w	4.8 i,m	3.1 i,m	1300	
7. Lead <sup>b</sup>	7439921	65 e,i,m	2.5 e,i,m	210 i,m	8.1 i,m	n	n
8. Mercury <sup>b</sup>	7439976	[Reserved]	[Reserved]	[Reserved]	[Reserved]	0.050 a	0.051 a
9. Nickel <sup>b</sup>	7440020	470 e,i,m,w	52 e,i,m,w	74 i,m	8.2 i,m	610 a	4600 a
10. Selenium <sup>b</sup>	7782492	[Reserved] p	5.0 q	290 i,m	71 i,m	n	n
11. Silver <sup>b</sup>	7440224	3.4 e,i,m		1.9 i,m			
12. Thallium	7440280					1.7 a,s	6.3 a,t
13. Zinc <sup>b</sup>	7440666	120 e,i,m,w,x	120 e,i,m,w	90 i,m	81 i,m		

Freshwater criterion maximum concentration (CMC) = 16 ug/L

Freshwater criterion continuous concentration (CCC) = 11 ug/L

These criteria are expressed in terms of the dissolved fraction of the metal in the water column. [See footnote "m" to Table in paragraph (b)(1) of 40 CFR 131.38].

40 CFR 122.45(c) requires that this Order include effluent limitations as total recoverable concentration; therefore it is appropriate to include action levels also as total recoverable concentration.

The SIP requires that if it is necessary to express a dissolved metal value as a total recoverable and a site-specific translator has not yet been developed, the San Diego Water Board shall use the applicable conversion factor from 40 CFR 131.38.

The term "Conversion Factor" (CF) represents the recommended conversion factor for converting a metal criterion expressed as the total recoverable fraction in the water column to a criterion expressed as the dissolved fraction in the water column.

Total recoverable concentration \* CF = Dissolved concentration criterion

or

Total recoverable concentration = Dissolved concentration criterion/ CF

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Metal	Conversion factor (CF) for freshwater acute criteria	CF for freshwater chronic criteria	CF for saltwater acute criteria	CF <sup>a</sup> for saltwater chronic criteria
Antimony .....	( <sup>d</sup> )	( <sup>d</sup> )	( <sup>d</sup> )	( <sup>d</sup> )
Arsenic .....	1.000	1.000	1.000	1.000
Beryllium .....	( <sup>d</sup> )	( <sup>d</sup> )	( <sup>d</sup> )	( <sup>d</sup> )
Cadmium .....	<sup>b</sup> 0.944	<sup>b</sup> 0.909	0.994	0.994
Chromium (III) .....	0.316	0.860	( <sup>d</sup> )	( <sup>d</sup> )
Chromium (VI) .....	0.982	0.962	0.993	0.993
Copper .....	0.960	0.960	0.83	0.83
Lead .....	<sup>b</sup> 0.791	<sup>b</sup> 0.791	0.951	0.951
Mercury .....				
Nickel .....	0.998	0.997	0.990	0.990
Selenium .....		( <sup>c</sup> )	0.998	0.998

CF for Chromium VI = .982 and .962, so the total recoverable concentrations for chromium VI:

16 ug/L dissolved (CMC)/ 0.982 (CF) = 16.3 ug/L total recoverable CMC

11 ug/L dissolved (CCC) / 0.962 (CF) = 11.4 ug/L total recoverable CCC

Effluent Variability multiplier and Coefficient of Variation (CV)

For each concentration based on an aquatic life criterion, the long-term average (LTA) is calculated by multiplying the concentration with a factor that adjusts for effluent variability. The multiplier can be found in Table 1 of the SIP. Since this Order does not have existing data to properly conduct a variability analysis in accordance with the SIP, the CV has been set equal to 0.6 per SIP requirements. The current effluent data is limited due to the small number of representative outfalls sampled, the lack of outfalls discharging to representative water bodies within the Region, and the targeted nature of the sampling design.

Based upon a CV of 0.6, Table 1 of the SIP requires an effluent variability as follows:

Acute Multiplier = 0.321

Chronic Multiplier = 0.527

The long-term average (LTA) is calculated by multiplying the total recoverable concentrations for zinc with the acute and chronic multipliers:

LTA Acute = 16.3 ug/L \* 0.321 = 5.23

LTA Chronic = 86 11.4 ug/L \* 0.527 = 6.01

The maximum daily action level (MDAL) and average monthly action level (AMAL) will be based on the most limiting of the acute and chronic LTA, in the case for chromium VI the most limiting LTA is the acute of 5.23 ug/L

NALs are calculated by multiplying the most limiting LTA with a multiplier that adjusts for the averaging periods and exceedance frequencies of the criteria and the effluent limitations. The multiplier can be found in Table 2 of the SIP. Since this Order has insufficient data, the CV has been set to 0.6 and since sampling frequency is four times a month or less, n has been set equal to 4 per the SIP.

Table 2. Long-Term Average (LTA) Multipliers for Calculating  
Effluent Limitations

Coefficient of Variation	MDEL Multiplier	AMEL Multiplier			MDEL/AMEL Multiplier		
	99 <sup>th</sup> Percentile Occurrence Probability	95 <sup>th</sup> Percentile Occurrence Probability			MDEL = 99 <sup>th</sup> Percentile AMEL = 95 <sup>th</sup> Percentile Occurrence Probability		
(CV)		n = 4	n = 8	n = 30	n = 4	n = 8	n = 30
0.1	1.25	1.08	1.06	1.03	1.16	1.18	1.22
0.2	1.55	1.17	1.12	1.06	1.33	1.39	1.46
0.3	1.90	1.26	1.18	1.09	1.50	1.60	1.74
0.4	2.27	1.36	1.25	1.12	1.67	1.82	2.02
0.5	2.68	1.45	1.31	1.16	1.84	2.04	2.32
0.6	3.11	1.55	1.38	1.19	2.01	2.25	2.62

Therefore, from Table 2 of the SIP, the LTA multipliers will be as follows:

MDAL Multiplier = 3.11

AMAL Multiplier = 1.55

The MDAL and AMAL limits are calculated by multiplying the LTA with an LTA multiplier for each limit:

MDAL = 5.23 ug/L \* 3.11 = 16 ug/L

AMAL = 5.23 ug/L \* 1.55 = 8.1 ug/L

#### Whole Effluent Toxicity (WET) Testing Requirements

A WET limit is required if a discharge causes, has a reasonable potential to cause, or contributes to an exceedance of applicable water quality standards, including numeric and narrative. Since these types of discharges are prohibited under this Order, WET limits are not applicable.

#### Discussion of AMALs, MDALs and Instantaneous Maximums

Where practical, action levels in this Order have been expressed as both AMALs and MDALs. Certain action levels may not practicably be expressed as AMALs and MDALs due to specific Basin Plan water quality objective language, sampling requirements and/or a lack of Criteria. Based upon the likely sampling frequency of the Copermittees, the frequency of sampling will occur such that grab samples are taken once per sampling day. This single sample would then be subject to MDALs and Instantaneous Maximum levels. In this case, the more conservative action level would apply. In addition, it is expected that some effluent monitoring will occur less than or equal to once per month. In this scenario, the MDAL, AMAL and Instantaneous Maximum levels would need to be met based upon one sample (unless sampling did

not occur). For some Basin Plan water quality objectives, AMALs have been excluded and only MDALs/Instantaneous Maximums set to prevent redundancy in action levels.

#### Compliance with Action Levels (Priority Pollutants)

Compliance with action levels shall be determined as follows:

Dischargers shall be deemed out of compliance with this Order if the Copermittee failed to take the prescribed action in response to a concentration of the priority pollutant in the monitoring sample that is greater than the action level and greater than or equal to the reported Minimum Level (exceedance of an action level). Regardless of the Copermittee's actions in response to an exceedance, they are still subject to the prohibitions found in sections A and B of the Order.

When determining to take an action in response to the AMALs and more than one sample result is available in a month, the discharger shall compute the arithmetic mean unless the data set contains one or more reported determinations of "did not quantify" (DNQ) or "not detected" (ND). In those cases, the discharger shall compute the median in place of the arithmetic mean in accordance with the following procedure:

- (1) The data set shall be ranked from low to high, reported ND determinations lowest, DNQ determinations next, followed by quantified values (if any). The order of the individual ND or DNQ determinations is unimportant.
- (2) The median value of the data set shall be determined. If the data set has an odd number of data points then the median is the middle value. If the data set has an even number of data points, then the median is the average of the two values around the middle unless one or both of those points are ND or DNQ, in which case the median value shall be the lower of the two data points where DNQ is lower than a value and ND is lower than DNQ.

## D. Storm Water Action Levels

The following legal authority applies to section D:

**Broad Legal Authority:** CWA §402, §402(p)(3)(B)(iii), CWC §13377, 40 CFR §122.44, 40 CFR §122.26(d)(1)(iv), 40 CFR §122.26(d)(2)(i)(E and F), and 40 CFR §122.26(d)(2)(iii and iv).

### **Specific Legal Authority:**

CWA section 402(p)(3)(B)(iii) provides that MS4 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.”

Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(E and F) provides that the Copermittee “Require compliance with conditions in ordinances, permits, contracts or orders;” and “Carry out all inspection, surveillance and monitoring procedures necessary to determine compliance and noncompliance with permit conditions ...”

Copermittees must conduct a comprehensive monitoring program as required under Federal NPDES regulations 40 CFR 122.26(d)(2)(iii), including the collection of quantitative MS4 storm water effluent data from outfalls.

Federal NPDES regulations 40 CFR 122.44 (d) provide that NPDES permits include any requirements necessary to “Achieve water quality standards,... including State narrative criteria for water quality.”

**Section D** has been added to establish storm water action levels (see also Finding D.1.h and Discussion).

### Introduction

The Copermittees’ ROWD supports the establishment of action levels which can be used in the effectiveness assessment program to ensure a minimum level of program implementation and identify shortcomings in their MS4 programs.<sup>164</sup> Storm Water Action Level (SAL) concentrations, standards and constituents have been developed and incorporated into the monitoring requirements for wet weather.

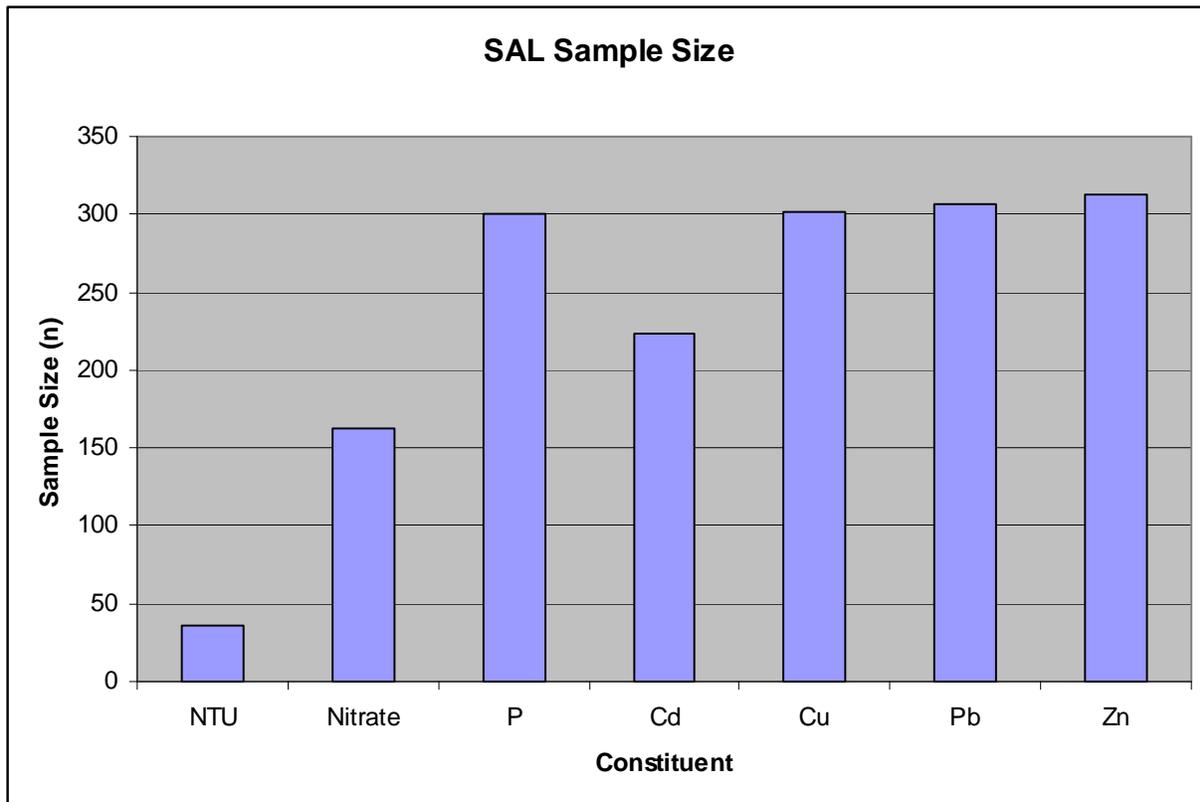
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<sup>164</sup> Riverside County Copermittees. 2009. Report of Waste Discharge (San Diego Region).

SAL Concentration/Standards

SAL pollutant levels were developed from a regional subset of nationwide Phase I MS4 data by using USEPA Climate Zone 6 (arid west) data.<sup>165</sup> Utilizing data from USEPA Climate Zone 6 resulted in SALs which closely reflect the environmental conditions experienced in Riverside County. The localized subset of data includes sampling events from multiple Southern California locations including Orange, San Diego, Riverside, Los Angeles, and San Bernardino Counties. The dataset includes samples taken from highly built-out impervious areas and from storm events representative of Southern California conditions.

Additionally, utilization of regional data is appropriate due to the addition of data into the nationwide Phase I MS4 monitoring dataset in February 2008. This additional data increased the number of USEPA Climate Zone 6 samples to more than 400, and included additional monitoring events within Southern California (see figure below).

**Sample Sizes Used to Calculate Storm Water Action Levels**

In addition, the SALs reflect the water quality standards in the Basin Plan for the San Diego Region, the California Toxic Rule and USEPA Water Quality Criteria. Since it is the goal of the SALs, through the iterative and MEP process, to have outfall storm water discharges meet all applicable water quality objectives, the list of constituents to

<sup>165</sup> Data used to develop SAL are provided in Attachment F to Order No. R9-2010-0016, and obtained from <http://rpitt.eng.ua.edu/Research/ms4/mainms4.shtml>

be tested and protocol for testing has been developed to provide a reference point to evaluate the iterative MEP process.

SALs were developed based upon receiving water monitoring results and CWA section 303(d) impaired waters listings. Nitrogen, Copper and Phosphorous are all pollutants for which receiving waters are 303(d) listed as impaired and for which sufficient data was available to develop SALs. Additionally, receiving water monitoring, including from storm events monitored by the Copermittees, has demonstrated excursions and/or potential excursions, often absent receiving water hardness, above water quality criteria for turbidity (NTU), Cadmium, Lead, and Zinc. SALs were not developed for some pollutants for which receiving waters are 303(d) listed as impaired due to a lack of representative data available. These pollutants are required to be monitored but are not subject to a SAL under the Order.

### Monitoring

The SALs require the measurement of hardness and to provide more specificity in the assessment of samples with SALs for total metal concentrations. While USEPA Climate Region 6 data includes a large sample size for concentrations of total metals, the impact the concentration will have on receiving waters will vary with receiving water hardness. Since it is the goal of the SALs, through the iterative and MEP process, to have MS4 storm water discharges meet all applicable water quality objectives, the hardness of the receiving water should be used when assessing the total metal concentration of a sample. Thus, when an exceedance of a SAL concentration is detected for a metal, the Copermittee must determine if that exceedance is above the existing applicable water quality limitation based upon the hardness of the receiving water. The water quality limitations Copermittees must use to assess total metal SAL exceedances are the California Toxic Rule (CTR) and USEPA National Recommended Water Quality Criteria for Freshwater Aquatic Life 1 hour maximum concentrations. The 1 hour maximum concentration is to be used for comparison since it is expected to most replicate the impacts to waters of the State from the first flush following a precipitation event.

## E. Legal Authority

The following legal authority applies to section E:

**Broad Legal Authority:** CWA sections 402(p)(3)(B)(ii-iii), CWC section 13377, and Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(B, C, E, and F) and 40 CFR 122.26(d)(2)(iv).

**Specific Legal Authority:** Federal NPDES regulation 40 CFR 122.26(d)(2)(i)(A) provides that the Copermittees shall develop and implement legal authority to “Control through ordinance, order or similar means, the contribution of pollutants to the municipal storm sewer by storm water discharges associated with industrial activity and the quality of storm water discharged from sites of industrial activity.”

Federal NPDES regulation 40 CFR 122.26(d)(2)(i)(D) provides that the Copermittees shall develop and implement legal authority to “Control through interagency agreements among coapplicants the contribution of pollutants from one portion of the municipal system to another portion of the municipal system.”

Illicit discharge is defined under Federal NPDES regulation 40 CFR 122.26(b)(2) as “any discharge to a municipal separate storm sewer system that is not composed entirely of storm water except discharges pursuant to a NPDES permit (other than the NPDES permit for discharges from the municipal separate storm sewer) and discharges resulting from fire fighting activities.”

Federal NPDES regulations 40 CFR 122.26(d)(2)(iv)(A - D) require municipalities to implement controls to reduce pollutants in storm water runoff from commercial, residential, industrial, and construction land uses or activities.

Federal NPDES regulation 40 CFR 122.26(d)(1)(ii) requires from the Copermittee “A description of existing legal authority to control discharges to the municipal separate storm sewer system.”

**Section E.1.b** requires the Copermittees to prohibit all identified illicit discharges not otherwise allowed pursuant to section B.2 including but not limited to:

- (1) Sewage;
- (2) Discharges of wash water resulting from the hosing or cleaning of gas stations, auto repair garages, or other types of automotive services facilities;
- (3) Discharges resulting from the cleaning, repair, or maintenance of any type of equipment, machinery, or facility including motor vehicles, cement-related equipment, and port-a-potty servicing, etc.;
- (4) Discharges of wash water from mobile operations such as mobile automobile washing, steam cleaning, power washing, and carpet cleaning, etc.;

- (5) Discharges of wash water from the cleaning or hosing of impervious surfaces in municipal, industrial, commercial, and residential areas including parking lots, streets, sidewalks, driveways, patios, plazas, work yards and outdoor eating or drinking areas, etc.;
- (6) Discharges of runoff from material storage areas containing chemicals, fuels, grease, oil, or other hazardous materials;
- (7) Discharges of pool or fountain water containing chlorine, biocides, toxic amounts of salt, or other chemicals; discharges of pool or fountain filter backwash water;
- (8) Discharges of sediment, pet waste, vegetation clippings, or other landscape or construction-related wastes; and
- (9) Discharges of food-related wastes (e.g., grease, fish processing, and restaurant kitchen mat and trash bin wash water, etc.).

**Section E.1.j** has been added to the Order to ensure that BMPs implemented by third parties are effective. Since the Copermittees cannot passively receive and discharge pollutants from third parties, the Copermittees must ensure discharges of storm water pollutants to the MS4 are reduced to the MEP. In order to achieve this, the Copermittees must be able to ensure that effective BMPs are being implemented by requiring the third parties to document BMP effectiveness. Regarding the Copermittees' ability to require documentation and reporting from third parties, USEPA states "municipalities should provide documentation of their authority to enter, sample, inspect, review, and copy records, etc., as well as demonstrate their authority to require regular reports."<sup>166</sup>

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<sup>166</sup> USEPA, 1992. Guidance Manual for the Preparation of Part 2 of the NPDES Permit Applications for Discharges from Municipal Separate Storm Sewer Systems. EPA 833-B-92-002.

## F. Jurisdictional Runoff Management Program

### F.1. Development Planning Component

The following legal authority applies to section F.1:

**Broad Legal Authority:** CWA sections 402(p)(3)(B)(ii-iii), CWA section 402(a), CWC section 13377, and Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(B, C, E, and F), 40 CFR 131.12, and 40 CFR 122.26(d)(2)(iv).

**Specific Legal Authority:** Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(A)(2) provides that Copermittees develop and implement a management program which is to include “A description of planning procedures including a comprehensive master plan to develop, implement and enforce controls to reduce the discharge of pollutants from municipal separate storm sewers which receive discharges from areas of new development and significant redevelopment. Such plans shall address controls to reduce pollutants in discharges from municipal separate storm sewers after construction is completed.”

Federal NPDES regulation 40 CFR 122.44(d)(1) requires municipal storm water permits to include any requirements necessary to “[a]chieve water quality standards established under section 303 of the CWA, including State narrative criteria for water quality.”

**Sections F.1.a and F.1.b** (General Plan and Environmental Review Process) require the Copermittees to update and revise their General Plan (or equivalent plan) and environmental review processes to ensure water quality and watershed protection principles are included. The Copermittees are required to detail any changes to the General Plan or environmental review process in their Jurisdictional Runoff Management Program Annual Reports. The General Plan must be updated to include water quality and watershed protection principles for all new development and redevelopment projects.

The change made to these sections requires updating the General Plan and Environmental Review Process on an as-needed basis. Each Copermittee has either updated, is in the process of updating, or has assessed its General Plan to ensure the General Plans include the required principles and are in compliance with Order No. R9-2004-001.

**Section F.1.c** (Approval Process Criteria and Requirements) requires that all development projects (regardless of size) implement BMPs to reduce storm water pollutant discharges to the MEP. Source control and site design BMP requirements were not clearly described in this section of Order No. R9-2004-001. Additional detail has been added to this section to better describe the source control and site design BMPs needed for implementation. This additional detail is consistent with the

requirements of the SSMP, also known in Riverside County as the Water Quality Management Plan (WQMP). However, only source control and site design BMPs that apply to all types of development projects are required (e.g., properly designed trash storage areas).

The requirements are consistent with Order No. R9-2004-001. However, some elements are not contained in the current DAMP<sup>167</sup> (e.g., buffer zones). One exception is that Order No. R9-2004-001's requirement that applicants must provide evidence of coverage under the General Industrial Permit has been removed, since industrial tenants for a development project are usually not known during the planning stage.

The section has also been modified to reflect the prohibition of over-irrigation runoff to the MS4, as well as LID requirements. Additionally, this section requires the use of native and/or low water use plants for landscaping, and rainwater harvesting, where feasible.

**Sections F.1.d and F.1.d.(1)** (Standard Storm Water Mitigation Plans and Definition of Priority Development Project) require the Copermittees to review and update their SSMPs (also known in Riverside County as Water Quality Management Plans – WQMPs) for compliance with the Order. The sections also require all Priority Development Projects falling under certain categories to meet SSMP requirements. The update is necessary to ensure that the Copermittees' SSMPs are consistent with the changes that have been made to the Order's SSMP requirements. The requirement for the development/adoption of a Model SSMP has been removed since a model was completed and adopted in 2005.

The SSMP section of the Order has been reformatted for clarity. There are also some significant changes. Changes have been made in response to USEPA program evaluations, recent BMP development and effectiveness studies, recent reports on the magnitude of problems caused by hydromodification, and reviews of annual reports and the ROWD submitted by the Copermittees.

In addition, the Order requires that a one-acre threshold be phased in over two years for the priority development category. This one-acre threshold was selected to be consistent with the State Water Board's Phase II NPDES requirements for small municipalities (Order No. 2003-0005-DWQ). The one-acre threshold is also included to be consistent with the State Water Board's Construction General Permit (Order No. 2009-0009-WQO), to ensure all Development Projects subject to the post-construction BMP requirements of the Construction General Permit will implement SSMP post-construction BMP requirements. The one-acre determination applies to the amount of ground area disturbed, not the total size of the parcel or project. Each Copermittee may also lower this threshold if desired.

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<sup>167</sup> Riverside County Copermittees. *Drainage Area Management Plan (DAMP)2006*. July 21, 2006.

**Section F.1.d.(2)** (Priority Development Project Categories) includes several changes to improve, simplify, and clarify the Priority Development Project categories.

One of the most significant changes is that where a new Development Project feature, such as a parking lot, falls into a Priority Development Project Category, the entire project footprint is subject to SSMP requirements. This criterion was not included in Order No. R9-2004-001. It is included, however, in the Model San Diego SSMP that was approved by the San Diego Water Board in 2002. It is included in this Order because existing development inspections by Riverside County municipalities show that facilities included in the Priority Development Project Categories routinely pose threats to water quality. This permit requirement will improve water quality and program efficiency by preventing future problems associated with partly treated storm water runoff from redevelopment sites. This approach to improving storm water runoff from existing developments is practicable because municipalities have a better ability to regulate new developments than existing developments.

Another significant change is a new category for any new development projects that create 10,000 square feet or more of impervious surfaces (collectively over the entire project site). This category applies to commercial, industrial, residential, mixed use, and public projects on private or public land.

Section F.1.d.(2)(g) was modified to allow the Copermittees to develop a standard roadway design and post-construction BMP guidance document that could be used by the Copermittees in lieu of a project specific SSMP for each public works road construction project. The guidance document must comply with the SSMP requirements, including the LID and hydromodification BMP requirements. The roadway design and post-construction BMP guidance must be included in the updated SSMP, and may be utilized after the San Diego Water Board has determined that the updated SSMP is acceptable.

Development of new industrial sites was not included as a category in the Priority Development Projects in Order No. R9-2004-001 because industrial NPDES requirements already establish storm water criteria. Industrial sites are now included in the new development category of the Order to be consistent with Phase II rules and to close loopholes.

**Section F.1.d.(3)** (Pollutants of Concern) requires Copermittees to update their procedures for identifying pollutants of concern for each Priority Development Project. This is important to do periodically because of changing water quality conditions and designations of impairments or areas of concern. Furthermore Copermittees continually learn more about pollutant-generating activities as they conduct inspections and investigations, and that information must be incorporated into the SSMP process.

**Section F.1.d.(4)** (Low Impact Development BMP Requirements) requires the Copermittees to require each Priority Development Project to implement low impact development (LID) BMPs to reduce the amount of polluted storm water runoff from

those sites. The Copermittees' ROWD proposes to revise the Riverside County Storm Water Quality BMP Design Handbook to incorporate LID design concepts.<sup>168</sup> The primary approach in LID site design BMPs is to limit the permanent loss of existing infiltration capacity because loss of infiltration is a major contributor to wet weather pollution discharges. General means to accomplish that goal include retaining natural infiltration areas of a site and limiting the amount of impervious surfaces. The Order does not require a specific or relative amount of pervious surfaces be added to a project. The Order seeks to retain on-site capture of the 85<sup>th</sup> percentile storm.

The Copermittees must require LID BMPs to be implemented for each Priority Development Project, unless found to be technically infeasible. LID BMPs must be formally considered during the plan review process for Priority Development Projects. The LID review process for each Priority Development Project is expected to include an assessment of LID BMP techniques to infiltrate, filter, store, evaporate, and/or retain runoff close to the source of the runoff. The review process is also expected to include an assessment of the potential collection of storm water for on site and off site reuse opportunities. In cases where LID BMPs are found to be technically infeasible, the Copermittees may grant a waiver to the Priority Development Project for all or a portion of the LID BMP requirements.

The Order directs the Copermittees to require new development projects to employ certain classes of LID site design BMPs. The required LID site design BMPs take advantage of features that are incorporated into the Priority Development Project, such as landscaping or walkways. It also requires that projects seek to maintain natural water drainage features rather than instinctively convey water in buried pipes and engineered ditches that eliminate natural water quality treatment functions. These types of site design BMPs are both effective and achievable.

LID BMPs must be sized and designed to ensure onsite retention without runoff, of the volume of runoff produced from a 24-hour 85<sup>th</sup> percentile storm event ("design capture volume"). This is consistent with other municipal storm water NPDES permits recently adopted by the Los Angeles and Santa Ana Water Boards, as well as the permit recently adopted by the San Diego Water Board for Orange County. The requirement for a numerical BMP design standard is well established for treatment control BMPs and is required in permits throughout the nation such as in Pennsylvania, West Virginia, Georgia, and Washington D.C. Since the 85<sup>th</sup> percentile storm event has previously been used as the numeric design standard for treatment control BMPs; the same size storm event can be applied as the numeric design standard for LID BMPs. The average 24-hour, 85<sup>th</sup> percentile rainfall for the Riverside County portion of the San Diego Region was calculated to be approximately 0.6 inches of rain.<sup>169</sup>

The retention and restoration of natural drainage features, such as ephemeral streams, wetlands, and depressions, can be particularly important because small tributaries are essential to the maintenance of the chemical, biological, and physical

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<sup>168</sup> Riverside County Copermittees. 2009. Report of Waste Discharge (San Diego Region).

<sup>169</sup> San Diego Water Board, 2004. Fact Sheet/Technical report for Order No. R9-2004-001, dated July 14, 2004.

integrity of larger water bodies.<sup>170</sup> The loss and modification of such natural water resources to accommodate post-development storm water management leads to direct and indirect adverse effects on water quality that are felt both on the project site and off the site within the watershed.<sup>171,172,173</sup> Effects to aquatic beneficial uses from altered drainage features can occur downstream and upstream. The length of upstream or downstream effect of channel modifications is dependant on the specific structure type and channel slope.<sup>174</sup> For instance, road culverts can act as partial barriers to upstream distribution of native aquatic macroinvertebrates in urban streams, while bridges can provide adequate passage.<sup>175</sup> As a result of the adverse effects to water quality and beneficial uses, the State of California nonpoint source pollution program management measures for urban areas includes limiting the destruction of natural drainage features and natural conveyance areas.<sup>176</sup> Additionally, any project proposing to discharge dredge and/or fill material to waters of the United States and/or State is required to obtain a CWA section 401 Water Quality Certification and/or Waste Discharge Requirements from the San Diego Water Board or State Water Board.

LID site design BMP options do not need to be costly.<sup>177</sup> Some design options, such as concave vegetated surfaces or routing rooftop or walkway runoff to landscaped areas, are cost neutral.<sup>178</sup> Other LID site design BMPs, such as minimizing parking stall widths or use of efficient irrigation devices, are oftentimes already required. In addition, use of LID site design BMPs reduces storm water runoff quantity, allowing for treatment control BMPs and other storm water infrastructure on site to be smaller, therefore savings costs for both developers and municipalities.<sup>179,180</sup>

Because of the potential economic and environmental benefits of using LID site design, the U.S. Department of Housing and Urban Development, Office of Policy

<sup>170</sup> Aquatic scientists comment letter (April 10, 2003) on the Advanced Notice of Proposed Rulemaking (ANPRM) on the Clean Water Act Regulatory Definition of "Waters of the United States." (Docket ID No. OW-2002-0050). This letter is a synthesis of scientific information regarding ephemeral, intermittent, and headwater streams. It was written to USEPA by 85 leading aquatic scientists.

<sup>171</sup> Wright, Tiffany, et al. 2006. *Direct and Indirect Impacts of Urbanization on Wetland Quality*. Prepared by the Center for Watershed Protection for the USEPA Office of Wetlands, Oceans, and Watersheds. 81p. Available on-line at <http://www.cwp.org>

<sup>172</sup> Konrad, Christopher P. and Derek K. Booth, 2005. *Hydrologic Changes in Urban Streams and Their Ecological Significance*. American Fisheries Society Symposium. Vol. 45 pp.157-177.

<sup>173</sup> Coleman, Derrick, et al. 2005. *Effect of Increases in Peak Flows and Imperviousness on the Morphology of Southern California Streams*. Technical Report No. 450 of the Southern California Coastal Water Research Project.

<sup>174</sup> Fischenich, J.C. 2001. "Impacts of stabilization measures," EMRRP Technical Notes Collection (ERDC TNEMRRP- SR-32), U.S. Army Engineer Research and Development Center, Vicksburg, MS. <http://www.wes.army.mil/el/emrrp>

<sup>175</sup> Blakely, Tanya J., et al. 2006. *Barriers To The Recovery Of Aquatic Insect Communities In Urban Streams* Freshwater Biology Vol. 51(9), 1634-1645.

<sup>176</sup> California Nonpoint Source Encyclopedia, Management Measure 3.1.b. Runoff from Developing Areas, Site Development and Management Measure 3.3.a. Runoff from Existing Development, Existing Development.

<sup>177</sup> USEPA, 2000. Low-Impact Development: A literature review. EPA-841-B-00-005. 35p.

<sup>178</sup> Bay Area Stormwater Management Agencies Association., 1999. Start at the Source. Forbes Custom Publishing. Available on-line at: [http://www.scvurppp-w2k.com/basmaa\\_satsm.htm](http://www.scvurppp-w2k.com/basmaa_satsm.htm). pp. 149.

<sup>179</sup> National Association of Home Builders Research Center. *Builders Guide to Low Impact Development*. Available on-line at <http://www.toolbase.org>

<sup>180</sup> National Association of Home Builders Research Center. *Municipal Guide to Low Impact Development*. Available on-line at <http://www.toolbase.org>

Development and Research, developed “*The Practice of Low Impact Development (LID)*” to assist the housing industry during the land development process.<sup>181</sup> This document focuses specifically on technologies that affect both the cost impacts and environmental issues associated with land development. Much of the report focuses on storm water management because LID storm water management systems can save capital costs for developers and maintenance costs for municipalities.<sup>182</sup> The executive summary of the HUD report notes:

*This approach to land development, called Low Impact Development (LID), uses various land planning and design practices and technologies to simultaneously conserve and protect natural resource systems and reduce infrastructure costs. LID still allows land to be developed, but in a cost-effective manner that helps mitigate potential environmental impacts. LID is best suited for new, suburban development.*

Developers can use site and structure designs that reduce building footprints, decrease the amount of paved infrastructure, and provide for dispersed drainage and infiltration of runoff from impervious surfaces to reduce the effective impervious surface.<sup>183</sup> The concept of effective impervious surface is important, because when runoff from these surfaces is directed to pervious areas rather to an impervious drainage system (i.e. curbs, gutters, street surfaces, storm drain pipes), it can infiltrate, evaporate, or be taken up by vegetation, thereby reducing the total volume of storm water runoff leaving a site.

In addition to all the benefits discussed above, LID BMPs have several other advantages over conventional treatment control BMPs. As previously discussed, implementing LID BMPs can save on maintenance costs for municipalities and property owners. LID BMPs are typically easier to operate and maintain compared to conventional mechanical treatment control BMP technologies. Because LID BMPs are easier to operate and maintain, they are also more reliable compared to conventional mechanical treatment control BMP technologies, thus more sustainable over the long term.

Through its process of conditioning development projects under the CWA section 401 Water Quality Certification program, the San Diego Water Board finds that the level of LID site design BMP implementation in the Order is feasible for all projects. The LID BMP requirements will help ensure that LID site design BMPs are implemented for new development projects. LID site design BMPs are a critical component of storm water runoff management at new development projects, since the LID BMPs provide multiple benefits including preservation of hydrologic conditions, reduction of pollutant discharges, cost effectiveness, and green space.

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<sup>181</sup> U.S. Department of Housing and Urban Development, Office of Policy Development and Research, 2003. *The Practice of Low Impact Development.* Prepared by: NAHB Research Center, Inc. Upper Marlboro, Maryland. Contract No. H-21314CA.

<sup>182</sup> Ibid. Executive Summary, p.x.

<sup>183</sup> Bay Area Stormwater Management Agencies Association. 2003. *Using Site Design Techniques to Meet Development Standards for Stormwater Quality.* Available on-line at: <http://www.basmaa.org/>

The Order provides the Copermitees with flexibility in implementing the LID site design BMP requirements by providing a LID BMP waiver program. The Riverside County Copermitees plan on allowing the implementation of the LID BMPs contained in the Riverside County LID Design Manual if retention LID BMPs are found to be technically infeasible to retain all of the design capture volume. Other LID BMP design and guidance manuals that are acceptable to the Copermitees and/or San Diego Water Board may also be considered.

If retention LID BMPs and/or other LID BMPs are technically infeasible to retain and/or treat all or part of the design capture volume for a Priority Development Project, a waiver may be granted for the remaining portion of the design capture volume. The waiver would allow the remaining portion of the design capture volume to be treated with conventional treatment control BMPs and some form of mitigation.

The use of conventional treatment control BMPs for Priority Development Projects is expected to be allowed by the Copermitees on a very limited basis, and only when a Copermitee finds that LID BMPs are technically infeasible for retaining and/or treating the full design capture volume. In such cases, the Copermitee may issue a waiver for the Priority Development Project from all or a portion of the LID BMP requirements. The LID BMP waiver program that must be developed and implemented by the Copermitee(s) is discussed below under section F.1.d.(7). The criteria that the Copermitee(s) may use to make a finding of technical infeasibility for implementing LID BMPs are also discussed under section F.1.d.(7).

**Section F.1.d.(5)** (Source Control BMP Requirements) requires that Priority Development Projects implement a minimum set of source control BMPs to protect the water quality of receiving waters from discharges of runoff from these projects. This section has been added to provide more detail and clarify the Order's requirements for source control BMPs. The minimum source control BMPs listed as required by this section must be implemented by each Priority Development Project. In cases where one or more of the minimum source control BMPs are not warranted as part of the site design for the Priority Development Project (e.g., no outdoor material storage and/or work areas), those source control BMPs are not expected to be implemented.

**Section F.1.d.(6)** (Treatment Control BMP Requirements) includes several design requirements for any treatment control BMPs that are allowed to be implemented (i.e. granted a waiver for all or part of the LID BMP requirements) on Priority Development Projects. These requirements are generally consistent with Order No. R9-2004-001, with two exceptions. First, the Order limits the selections of methods used to determine the appropriate volume of storm water runoff to be treated. The modification ensures that priority development project proponents utilize the most accurate information to determine the volume or flow of runoff which must be treated.

Second, the Order requires that treatment control BMPs selected for implementation at Priority Development Projects have a removal efficiency rating that is ranked with high

or medium pollutant removal frequency for the project's most significant pollutants of concern. The requirement allows exceptions for those projects that, with a feasibility analysis, can justify the use of a treatment control BMP with a low removal efficiency for a Priority Development Project. This requirement is needed because to date, the Copermittees have generally approved low removal efficiency treatment control BMPs without justification or evidence that use of higher efficiency treatment BMPs was considered and found to be infeasible. Specifically, it has been found during audits of the Copermittees' SSMP programs that many SSMP reports do not adequately describe the selection of treatment control BMPs.<sup>184</sup> Moreover, USEPA's contractor Tetra Tech, Inc. recommends that "project proponents should begin with the treatment control that is most effective at removing the pollutants of concern [...] and provide justification if that treatment control BMP is not selected."<sup>185</sup>

In addition, treatment control BMPs must be designed and implemented with measures to avoid the creation of nuisance or pollution associated with vectors, such as mosquitoes, rodents, and flies. Related guidelines are identified in guidance from CASQA.<sup>186</sup> Additional considerations are outlined in publications from the California Department of Health Services and University of California Division of Agriculture and Natural Resources.<sup>187</sup>

**Section F.1.d.(7)** (Low-Impact Development BMP Waiver Program) requires the Copermittees to develop, collectively or individually, a LID BMP waiver program. For some Priority Development Project sites, it may be technically infeasible to implement the required LID BMPs to retain and/or treat the design capture volume due to the site constraints. For this reason, the San Diego Water Board has added to the Order a requirement for the Copermittees to develop such a program. The LID BMP waiver program would provide the opportunity for development projects to avoid partial or full LID BMP implementation in exchange for implementation of conventional treatment control BMPs and mitigation. The program would maintain equal water quality benefits as properly implemented LID BMPs when partial LID BMPs are coupled with some form of mitigation.

LID BMPs are not limited to infiltration BMPs, and may also include storage, evaporation, evapotranspiration, filtration, and/or on site reuse BMPs. Thus, the San Diego Water Board expects that every site will be able to implement some form of LID BMPs to some extent. The LID BMP waiver program is expected to be used by the Copermittees on a limited basis, and only when a Copermittee finds that LID BMPs are technically infeasible for retaining and/or treating the full design capture volume. The Order provides several conditions under which a Copermittee may find that the

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<sup>184</sup> PG Environmental, 2008. Riverside County Flood Control and Water Conservation District and County of Riverside MS4 Inspection Report.

<sup>185</sup> Tetra Tech, Inc., 2005. Program Evaluation Report –San Diego Standard Urban Storm Water Mitigation Plan (SUSMP) Evaluation. P. 5.

<sup>186</sup> For example, see the California Stormwater BMP Handbook guidelines for Extended Detention Basins (TC-22) at <http://www.cabmphandbooks.org>.

<sup>187</sup> Marco Metzger. "Managing Mosquitoes in Stormwater Treatment Devices." University of California Division of Agriculture and Natural Resources Publication No. 8125. Available at <http://anrcatalog.ucdavis.edu>.

implementation of LID BMPs to retain and/or treat the design capture volume is technically infeasible [see section F.1.d.(7)(b)(i)-(iii)]. The Copermittees are not limited to the conditions listed in the Order, and may identify other conditions in the SSMP that would allow a finding of technical infeasibility.

Making a finding of technical infeasibility for the implementation of the LID BMP requirements on any Priority Development Project is at the discretion of each Copermittee through their SSMP plan review process. For any project proponent that would like to receive a waiver for all or part of the LID BMP requirements, the Copermittees may require and/or use any information to make a finding of technical infeasibility.

A separate technical report developed by the project proponent or the Copermittee to support a finding of technical infeasibility may not always be necessary to meet the requirements of this Order. In most cases, it is expected that the information that is provided in the project proponent's SSMP plan review documents (e.g., geotechnical reports, site design plans) will allow the Copermittees to determine whether or not it is technically feasible for LID BMPs to be implemented to retain and/or treat all or part of the design capture volume. The reason(s) for a Copermittee making a finding a technical infeasibility and granting a LID BMP waiver for any project must be provided in the Annual Report.

For Priority Development Projects that are granted a waiver for all or a portion of the LID BMP requirements, mitigation will be required to achieve water quality benefits that will be lost without the LID BMP retention and/or treatment. Any LID BMP waiver program which allows development projects to forgo all or part of the LID BMP implementation requirements must include mitigation provisions which will achieve similar water quality benefits. To ensure that this is the case for the LID BMP waiver program, minimum mitigation provisions for the program have been added to the Order.

Mitigation can be achieved on site or off site. On site mitigation may include additional sizing multipliers for conventional treatment control BMPs implemented on the site to treat a larger range of storm events to achieve the same or greater pollutant load removal expected from retention of the design capture volume. Off site mitigation may include other pollutant treatment projects that are not located on the site that will achieve the same or greater pollutant removal expected from on site LID BMPs for the design capture volume. For example, off site mitigation projects may include green streets projects, existing development retrofit projects, retrofit incentive programs, regional BMPs and/or riparian restoration projects. Off site mitigation projects may also satisfy the Order's retrofitting requirements in section F.3.d.

In addition to these mitigation options, the Order allows the Copermittees to develop and propose additional forms of mitigation (e.g., pollutant credit system, mitigation fund) that could be implemented as part of the LID BMP waiver program by the Copermittee(s). Any additional forms of mitigation proposed by the Copermittees

would be subject to approval by the San Diego Water Board Executive Officer prior to implementation.

**Section F.1.d.(8)** (LID and Treatment Control BMP Standards) addresses a need for the Copermittees to develop and apply consistent criteria for the design and maintenance of structural treatment BMPs. Correct BMP design is critical to ensure that BMPs are effective and perform as intended. Without design criteria, there is no assurance that this will occur, since there is no standard for design or review. As an example, Ventura County has developed a BMP manual that includes standard design procedure forms for BMPs. Ventura County's *Technical Guidance Manual for Storm Water Quality Control Measures* is available at <http://www.vcstormwater.org/publications.htm>.<sup>188</sup> CASQA also confirms the necessity of design criteria when it includes such criteria in its New Development and Redevelopment BMP Handbook.<sup>189</sup> This issue is noted in the ROWD, and the Copermittees propose to develop standard design checklist/plans/details for selected source control and treatment BMPs.<sup>190</sup>

**Section F.1.d.(9)** (Implementation Process) requires the Copermittee to implement a process to verify compliance with SSMP requirements. The process must identify at what point in the planning process that projects must meet SSMP requirements and what are roles/responsibilities of municipal departments. The intent of this requirement is to provide consistency in the application of the SSMP between the Copermittees. This requirement was included in previous Order No. R9-2004-001.

**Section F.1.d.(10)** (Post-construction BMP Review) requires the Copermittees to keep their SSMP up to date with BMP effectiveness studies for low-impact design and treatment control BMPs. This requirement will ensure that two important types of information be included in those efforts: Site design BMPs and treatment BMPs that are assessed as part of contracts with the State Water Board and San Diego Water Board. Projects funded with such state grants must include effectiveness assessments using a quality assurance plan. As a result, such studies generally provide reliable sources of local data and should be included in the SSMP.

**Sections F.1.e** (BMP Construction Verification) requires the Copermittees to verify that the BMPs are being constructed for each Priority Development Project subject to SSMP requirements (SSMP project). SSMP projects that improperly construct or fail to construct site design, source control, and treatment control BMPs can pose a significant threat to water quality. Section F.1.e is included in response to recommendations from USEPA.<sup>191</sup>

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<sup>188</sup> Ibid.

<sup>189</sup> California Stormwater Quality Association, 2003. Stormwater Best Management Practice Handbook – New Development and Redevelopment.

<sup>190</sup> Riverside County Copermittees. 2009. Report of Waste Discharge (San Diego Region).

<sup>191</sup> Federal Register / Vol. 64, No. 235 / Wednesday, December 8, 1999 / Rules and Regulations. P. 68845. USEPA recommends such practices in the Phase II storm water regulations, promoting "inspections during construction to verify BMPs are built as designed."

In some cases SSMP projects may wish to allow occupancy and/or use of a portion of the site prior to full completion of the project. Section F.1.e is not intended to require a project to be fully (i.e. all phases and areas) completed before the occupancy and/or intended use of a portion of the site is allowed. A Copermittee, however, must verify that the BMPs designed to treat and control pollutants from the completed portion of the project are properly constructed before the occupancy and/or intended use of the completed portion is allowed. The BMPs must be specifically designed to control pollutants from the completed portion of the site that will be occupied and/or used prior to the full completion of the SSMP project.

**Section F.1.f** (BMP Maintenance Tracking) is included in the Order to ensure the continued effectiveness of the post-construction BMP requirements. BMPs need to be properly constructed and adequately maintained to ensure that they are operating correctly and remain effective in removing pollutants from a project site's runoff prior to discharging to receiving waters.

To facilitate the tracking of BMP maintenance, each Copermittee must develop and maintain a database of Priority Development Projects subject to SSMP requirements (SSMP projects) and the post-construction BMPs implemented for each SSMP project. The inventory is not expected or required to include LID BMPs that are implemented on a lot by lot basis at single family residential houses. The inventory, however, must include the post-construction BMPs for all other development or redevelopment SSMP project sites.

The Order requires BMPs at all high priority SSMP project sites as well as all Copermittee project sites with BMPs to be inspected by the Copermittees annually. Other measures, verification methods, and inspection frequencies may be used for BMPs at lower priority SSMP project sites. SSMP project sites with the highest potential for causing or contributing to a threat to water quality or an existing impairment of water quality are required to be inspected by the Copermittees on an annual basis.

The prioritization of the SSMP project sites requiring inspections by the Copermittees will be developed by the Copermittees and reported in the updated JRMP. The prioritization of SSMP project sites may be revised on an annual basis based on inspection findings, and the Copermittees must report changes in prioritization, and justification for each change, in the Annual Report.

The Order includes several criteria that must be considered by the Copermittees in determining the priority of a SSMP project site's threat to water quality. Receiving waters that are listed as impaired by pollutants and/or with discharges exceeding action levels are water bodies most at risk for impairment of beneficial uses. Thus, at a minimum, high priority SSMP projects must include sites that are known or suspected to generate pollutants in an area that is tributary (i.e. upstream within the same Hydrologic Subarea) to a receiving water body listed as impaired for those pollutants; and/or, a receiving water body where exceedances of action levels for

those pollutants are observed; and/or, a receiving water body where exceedances of NALs for those pollutants are observed and the Copermittee has not been able to identify the source.

**Section F.1.h** (Hydromodification) expands and clarifies current requirements for control of MS4 discharges to limit hydromodification effects caused by changes in runoff resulting from development and urbanization. The requirements are based on findings and recommendations of the Riverside County Storm Water Program,<sup>192</sup> the Stormwater Monitoring Coalition (SMC),<sup>193,194</sup> and the Storm Water Panel on Numeric Effluent Limits (Numeric Effluent Panel).<sup>195</sup> Added specificity is needed due to the current lack of a clear standard for controlling hydromodification resulting from development. More specific requirements are also warranted because hydromodification is increasingly recognized as a major factor affecting water quality and beneficial uses.

Hydromodification is the change in a watershed's runoff characteristics resulting from development, together with associated morphological changes to channels receiving the runoff. As the total area of impervious surfaces increases, infiltration of rainfall decreases, causing more water to run off the surface and at a higher velocity than natural conditions. While erosion in channels is a naturally occurring process, increased runoff rates, volumes, and velocities from developed areas can produce erosive flows in channels under rainfall conditions which are unnatural and were not previously problematic. Moreover, runoff from developed areas increases the duration of time that channels are exposed to erosive flows. The increase in the volume of runoff and the length of time that erosive flows occur ultimately intensify the amount and potential of channel erosion, subsequently causing changes in sediment transport characteristics and the hydraulic geometry (width, depth, and slope) of channels.<sup>196</sup>

These types of changes have been documented in southern California. It has been reported that researchers studying flood frequencies in Riverside County have found that increases in watershed imperviousness of only 9-22 percent can result in increases in peak flow rates for the two-year storm event of up to 100 percent.<sup>197</sup> Such changes in runoff have significant impacts on channel morphology. It has recently been found that ephemeral/intermittent channels in southern California appear to be

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<sup>192</sup> Riverside County Copermittees. 2009. Report of Waste Discharge (San Diego Region).

<sup>193</sup> Coleman, Derrick, et al. 2005. *Effect of Increases in Peak Flows and Imperviousness on the Morphology of Southern California Streams*. Technical Report No. 450 of the Southern California Coastal Water Research Project.

<sup>194</sup> Stein, Eric and Susan Zaleski. 2005. *Managing Runoff to Protect Natural Streams: The Latest Developments on Investigation and Management of Hydromodification in California*. Proceedings of a special technical workshop co-sponsored by California Stormwater Quality Association (CASQA), Stormwater Monitoring Coalition (SMC), and University of Southern California Sea Grant (USC Sea Grant). Technical Report No. 475 of the Southern California Coastal Water Research Project.

<sup>195</sup> Storm Water Panel Recommendations to the California State Water Resources Control Board. 2006. *The Feasibility of Numeric Effluent Limits Applicable to Discharges of Storm Water Associated with Municipal, Industrial, and Construction Activities*.

<sup>196</sup> Santa Clara Valley Urban Runoff Pollution Prevention Program, 2005. *Hydromodification Management Plan*. P. 1-1.

<sup>197</sup> Schueler and Holland, 2000. *Storm Water Strategies for Arid and Semi-Arid Watersheds* (Article 66). *The Practice of Watershed Protection*.

more sensitive to changes in imperviousness than channels in other areas. Morphology of small channels in southern California was found to change with only 2-3 percent watershed imperviousness, as opposed to 7-10 percent watershed imperviousness in other parts of the nation.<sup>198</sup>

Sediment that would normally be eroded from the developed areas (i.e. naturally eroded if the area remained undeveloped) is typically coarser grained and deposited closer to the source. Coarser grained sediments that are deposited also provide or contribute to habitat that is more hospitable to aquatic flora and fauna.

Developed areas and increased impervious surface change the types and quality of sediment that are discharged in runoff to the channels under rainfall conditions, which can have an adverse impact on downstream habitats. Sediment in runoff from developed areas and impervious surfaces are typically finer grained, which remains suspended for longer periods of time and can affect aquatic flora (e.g., reduce photosynthesis by limiting transmittance of light) and fauna (e.g., interfere with respiration). Several types of pollutants generated on developed areas (e.g., pesticides, nutrients, bacteria, metals, hydrocarbons) also tend to adsorb on to finer grained sediments. In addition, finer grained sediments get deposited further away from the source or point of discharge. These changes in the characteristics and quality of the sediment in the runoff from developed areas also contribute to the hydromodification effects on downstream channels.

Effects of hydromodification are evident in Riverside County and recognized by the Copermittees. Analyses of bioassessment data within the San Diego Region has indicated that physical changes to stream channels caused by hydromodification are likely responsible, in part, for the low bioassessment scores in urbanized settings.<sup>199</sup> This pattern is consistent under Order No. R9-2004-001, although non-reference bioassessment monitoring was limited to two sites located at mass loading stations. These sites consistently exhibited poor or very poor IBI scores and sub-optimal or marginal habitat. In addition to poor habitat, water chemistry and toxicity impacts were documented at mass and tributary loading stations, likely exacerbating the observed low IBI scores.<sup>200</sup> It is important to recognize that the physical changes in stream channels are a direct result of MS4 discharges, but that two separate mechanisms are involved in bringing about those changes. First, is a change in the flow regime caused by the increase in impervious surfaces and loss of natural conveyance systems. Discharges to receiving waters from the MS4 outfalls do not mimic the natural discharges from former tributaries to that receiving water, and the change results in erosion. Second, the physical stream habitat in many places has been severely modified in order to efficiently convey those increased storm water discharges to the ocean. Where streams are hardened and/or buried to convey storm water, they

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<sup>198</sup> Coleman, et. al., 2005. Effect of Increases in Peak Flows and Imperviousness on the Morphology of Southern California Streams. P. iv.

<sup>199</sup> See San Diego Water Board Order No. R9-2009-002 Fact Sheet.

<sup>200</sup> Riverside County Copermittees Fiscal Year 2008-2009 Santa Margarita Watershed Annual Progress Report.

cannot provide adequate water quality and other necessary conditions to support beneficial uses. Both of these issues are addressed in the Order.

The Copermitees' recognize the need to improve management of hydromodification. The ROWD proposes to revise the SSMP to incorporate additional information from ongoing hydromodification studies conducted by the SMC. The Order allows the Copermitees to adopt criteria consistent with future SMC findings in the development of their Hydromodification Management Plan.

Section F.1.h. requires the Copermitees to submit a draft Hydromodification Management Plan (HMP) on or before June 30, 2013. This will provide the Copermitees over 2 years to develop the draft HMP.

Section F.1.h (1) describes several elements that must be included in the HMP. For example, the HMP must identify a method for assessing susceptibility of channel segments which receive runoff discharges from Priority Development Projects, and include a channel standard to ensure that the stability of the channel is not compromised as a result of discharges from the Priority Development Projects. The HMP must also identify a range of flows where Priority Development Projects could cause hydromodification effects and subsequent stream instability.

Maintaining the pre-development flows and durations from a Priority Development Project will significantly reduce the potential for increased erosion caused by development. Loss of natural sediment that will be removed because of otherwise pervious areas covered by the impervious development and removal of pollutants in runoff from Priority Development Projects, however, can still increase the potential for increased erosion. Runoff that is discharged from a project that lacks sediment becomes "sediment hungry" and can result in increased erosion upstream and downstream from the point of discharge. Thus, the HMP must also identify a method and compensate for the loss of sediment supply that is expected due to development and include a performance and/or design standard that will be able to mitigate for that expected loss of sediment supply.

The HMP must require Priority Development Projects to implement control measures (such as LID or detention basins) to prevent hydromodification and resultant degradation of stream conditions upstream and/or downstream of project sites. To compare post-project flow rates and durations to pre-project flow rates and durations, the HMP must specify that the pre-development (naturally occurring) flow rates and durations shall be used when assessing pre-project conditions, so that the naturally occurring hydrology throughout the watershed is eventually restored.

In cases where a stream has been armored with concrete, rip rap, or other man-made materials, the HMP shall require the assessment of a comparable soft-bottom channel as the channel standard, as opposed to using the characteristics of the hardened channel as the channel standard. This is to ensure that hydromodification management measures are already in place should any portion of the hardened

channel be returned to its natural state, thereby restoring the physical integrity of the creek and its Beneficial Uses. The only exceptions are for projects that discharge storm water runoff into underground storm drains or conveyance channels with bed and banks that have been concrete lined all the way to water storage reservoirs or lakes, where effects from hydromodification are not expected. Other exceptions that are acceptable to the San Diego Water Board may be identified in the final HMP.

The HMP must also include metrics for assessing impacts to downstream watercourses from Priority Development Projects, as well as assessing improvements to these watercourses. The metrics must be able to assess changes to the channels as Priority Development Projects are developed and constructed in the watershed. Monitoring and evaluating changes to the physical conditions of the channels receiving runoff discharges from Priority Development Projects will provide the Copermittees data that can be used to determine whether or not the HMP is effective at reducing the increased erosive forces caused by development and impervious surfaces over time.

In addition to metrics to assess changes to the physical conditions of the channels, the Copermittees must monitor and evaluate the biological conditions (e.g., habitat quality, benthic flora and fauna, IBI scores) of the channels. This is because historic hydromodification impacts, such as concrete lining and channelization, are suspected to have impacted the natural physical habitat of urban streams resulting in low IBI scores. The Copermittee's 2008-2009 monitoring report indicated decreased IBI scores at mass loading stations below urbanized watersheds, in part due to marginal or suboptimal habitat. The Monitoring and Reporting Program in the Order includes new requirements for monitoring of habitat for bioassessment, with the "Full" suite of physical/habitat characterization measurements found in the SWAMP Bioassessment Standard Operating Procedures being required with each bioassessment sample. Additional bioassessment sites are also required at locations higher in the watershed, which is expected to more closely reflect localized impacts. Therefore, the IBI scores required by the Monitoring and Reporting Program will be a useful metric in terms of assessing both impacts to streams from Priority Development Projects and improvements due to implementation of the HMP management measures. The Copermittees may also develop or utilize other metrics and identify other monitoring locations that can be used to assess the effectiveness of the HMP on the physical and biological conditions of the channels.

In addition to the control measures that must be included in the HMP to prevent or minimize hydromodification effects from Priority Development Projects, section F.1.h.(2) requires the HMP to include additional management measures that can be used on Priority Development Projects based on a prioritized consideration of the following elements in this order: 1) site-design control measures, 2) on-site management measures, 3) the use of regional control measures upstream of receiving waters, and lastly, 4) in-stream management and control measures (not to include reinforcement with non-naturally occurring materials). The suite of management measures must also include stream restoration as a viable option to achieve the channel standard and subsequently restore Beneficial Uses. In-stream controls are

expected to be in the form of stream restoration or rehabilitation. The use of stream restoration is expected to be an option that is used in conjunction with other on site management measures and not by itself as the only management measure. Stream restoration or rehabilitation projects that are considered in-stream controls for the purpose of preventing or minimizing hydromodification effects do not include projects that use non-naturally occurring materials (e.g., concrete, rip-rap, or gabions, etc.), but may include projects that use natural materials and/or create stable and sustainable channel configurations.

The San Diego Water Board recognizes that fully achieving post-project runoff flow rates and durations that do not exceed pre-development (naturally occurring) runoff flow rates and durations on redevelopment projects with existing impervious surfaces may be challenging. Thus, section F.1.h.(3) has been included to allow the Copermittees to propose, as part of the HMP, a waiver program specifically for Priority Development Projects that are redevelopment projects, as defined by section F.1.d.(1)(b). Because redevelopment projects may not be able to achieve post-project runoff flow rates and durations that do not exceed pre-development (naturally occurring) runoff flow rates and durations through onsite management and control measures, offsite mitigation measures may be required. Redevelopment projects must achieve post-project runoff flow rates and durations that are less than or equal to pre-project and down to pre-development runoff flow rates and durations to be eligible to receive a waiver under the program. For a redevelopment project, the pre-project runoff flow rates and durations are those currently being discharged by the existing development prior to the redevelopment project being built. Meeting pre-project runoff flow rates and durations is usually a less stringent performance criteria than meeting the pre-development runoff flow rates and durations. Implementing BMPs to meet the pre-project flow rates and durations is significantly easier and cheaper for a redevelopment project compared to meeting pre-development flow rates and durations. If a project is granted a waiver, the estimated incremental hydromodification impacts from not achieving the pre-development (naturally occurring) runoff flow rates and durations for the project site must be fully mitigated with offsite mitigation. Offsite mitigation measures may include utilizing regional hydrologic control measures (e.g., regional detention or infiltration basins) or rehabilitation of stream channels to achieve sustainable channel configurations.

Section F.1.h (6) describes interim hydromodification criteria that must be implemented by the Copermittees until the final HMP is found to be adequate by the San Diego Water Board Executive Officer. The Copermittees currently have hydromodification requirements in the SSMP (section 4.4 of the Riverside County WQMP). Until the final HMP is required to be implemented, the Copermittees must continue implementing their existing hydromodification requirements. The existing hydromodification requirements<sup>201</sup> allow exemptions for Priority Development Projects if they meet one of three conditions. One of those conditions is if a project discharges directly to a publicly-owned, operated and maintained MS4. This condition has been

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<sup>201</sup> Riverside County Copermittees, 2006 (updated in 2009). Riverside County Water Quality Management Plan (WQMP), Section 4.4.

too broadly applied and has resulted in many projects being exempt from the hydromodification requirements in the past.

Therefore, the Order modifies the conditions that may exempt Priority Development Projects from implementing the interim hydromodification criteria. The modifications to the conditions are minor and can be implemented in the interim until the final HMP is approved. This allows the Copermitees to focus their resources on development of the final HMP.

Finally, the requirements included in section F.1.h do not supersede the LID BMP requirements in section F.1.d. (4). In certain situations, the requirements to incorporate LID BMPs will satisfy the requirements for hydromodification management. Using LID is a viable option for both accomplishing hydromodification management and pollutant load reductions.

**Section F.1.i** (Unpaved Roads Development) specifically requires the Copermitees to implement or require implementation of BMPs for erosion and sediment control after construction of all new unpaved roads. As discussed for Finding D.1c, design and source control BMPs for unpaved roads are needed to minimize the discharge of sediment to the MS4s and receiving waters, especially during storm events. There are several guidance documents available (see Discussion for Finding D.1.c) that include design and source control BMPs that can be readily implemented by the Copermitees for the development of new unpaved roads.

## F.2. Construction Component

The following legal authority applies to section F.2:

**Broad Legal Authority:** CWA sections 402(p)(3)(B)(ii-iii), CWC section 13377, and Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(B, C, E, and F) and 40 CFR 122.26(d)(2)(iv).

**Specific Legal Authority:** Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(D) provides that the proposed management program include “A description of a program to implement and maintain structural and non-structural best management practices to reduce pollutants in storm water runoff from construction sites to the municipal storm sewer system.”

Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(D)(1) provides that the proposed management program include “A description of procedures for site planning which incorporate consideration of potential water quality impacts.”

Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(D)(2) provides that the proposed management program include “A description of requirements for nonstructural and structural best management practices.”

Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(D)(3) provides that the proposed management program include “A description of procedures for identifying priorities for inspecting sites and enforcing control measures which consider the nature of the construction activity, topography, and the characteristics of soils and receiving water quality.”

Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(D)(4) provides that the proposed management program include “A description of appropriate educational and training measures for construction site operators.”

Federal NPDES regulation 40 CFR 122.26(d)(2)(i)(A) provides that each Copermittee must demonstrate that it can control “through ordinance, permit, contract, order or similar means, the contribution of pollutants to the municipal storm sewer by storm water discharges associated with industrial activity and the quality of storm water discharged from site of industrial activity.”

Federal NPDES regulation 40 CFR 122.26(b)(14) provides that “The following categories of facilities are considered to be engaging in ‘industrial activity’ for the purposes of this subsection: [...] (x) Construction activity including cleaning, grading and excavation activities [...].”

Federal NPDES regulation 40 CFR 122.44(d)(1)(i) requires NPDES permits to include limitations to “control all pollutants or pollutant parameters (either conventional, nonconventional, or toxic pollutants) which the Director determines are or may be discharged at a level which will cause, have reasonable potential to cause, or contribute to an excursion above any State water quality standard, including State narrative criteria for water quality.”

**Section F.2** has additions to ensure the protection of threatened and endangered species and requires the consideration of potential impacts from the use of Active/Passive Sediment Treatment (AST) at sites determined by the Copermittees to be exceptional threats to water quality. These requirements were added to ensure additional protection of the Beneficial Uses of waters of the State.

**Section F.2.a** (Ordinance Update) requires each Copermittee to review and update its grading and storm water ordinances as necessary to comply with the MS4 permit. By updating the grading and storm water ordinances, the Copermittees will have the necessary legal authority to require construction sites to implement effective BMPs that will reduce pollutant discharges to the maximum extent practicable. The Order allows the Copermittees 365 days to review and update their ordinances. The 365 days should be adequate to allow for the relatively minor changes that might be needed since their ordinances were last updated under Order No. R9-2004-001.

**Section F.2.b** (Source Identification) requires the Copermittees to develop and update a watershed based inventory of all construction sites regardless of size or ownership. This section has been modified to require the inventory be updated regularly, rather than annually because constructions sites tend to change often within the course of a year. More frequent updates will ensure the Copermittees have a more accurate inventory of construction sites within their jurisdiction. A regularly updated inventory of active construction sites will assist the Copermittees in ensuring that all sites are inspected per Order requirements. The Order does not specify the frequency of updates, and instead relies on each Copermittee to develop updates appropriate to local construction activity. Failure to maintain a useful inventory would be a violation of the Order.

**Section F.2.c** (Site Planning and Project Approval Process) requires Copermittees to incorporate consideration of potential water quality impacts prior to approval and issuance of construction and grading permits.

This section now requires the Copermittees to review project proponents' runoff management plans for compliance with local regulations, policies, and procedures. USEPA recommends that it is often easier and more effective to incorporate storm water quality controls during the site plan review process or earlier.<sup>202</sup> In the Phase I storm water regulations, USEPA states that a primary control technique is good site planning.<sup>203</sup> USEPA goes on to say that the most efficient controls result when a comprehensive storm water management system is in place.<sup>204</sup> To determine if a construction site is in compliance with construction and grading ordinances and permits, USEPA states that the "MS4 operator should review the site plans submitted by the construction site operator before ground is broken."<sup>205</sup> Site plan review aids in compliance and enforcement efforts since it alerts the "MS4 operator early in the process to the planned use or non-use of proper BMPs and provides a way to track new construction activities."<sup>206</sup>

The Copermittees have the discretion to determine the depth and detail of the review, as well as the method by which the review will be conducted. The Copermittees review must at least verify that the project proponent's runoff management plan complies with the Copermittee's construction, storm water, and grading ordinances and permits prior to issuing the permit.

**Section F.2.d** (BMP Implementation) includes modifications to the requirements for each Copermittee to designate and ensure implementation of a set of minimum BMPs at construction sites. These modifications are based on San Diego Water Board findings and experience during implementation of Order No. R9-2004-001.

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<sup>202</sup> USEPA, 1992. Guidance 833-8-92-002. Section 6.3.2.1.

<sup>203</sup> Federal Register / Vol. 55, No. 222 / Friday, November 16, 1990 / Rules and Regulations. P. 48034.

<sup>204</sup> Ibid.

<sup>205</sup> USEPA, 2000. Guidance 833-R-00-002. Section 4.6.2.4, P. 4-30.

<sup>206</sup> Ibid., P. 4-31.

As a result, the Order requires a minimum set of BMPs to be designated for all sites. In addition to the minimum set of BMPs, enhanced BMPs must be designated and implemented for sites tributary to (i.e. upstream within the same Hydrologic Subarea of) a 303(d) listed water body, or within, directly adjacent to, or discharging directly to ESAs. Enhanced BMPs are control actions and measures specifically targeted to the pollutant or condition of concern and of higher quality and effectiveness than the minimum control measures otherwise required. Enhanced BMPs are expected to be better and more effective for pollutant removal than the minimum set of BMPs.

For sites that are identified as exceptional threat to water quality, active/passive sediment treatment (AST) is required to be implemented in addition to the minimum set and/or enhanced sediment control BMPs. AST is required at construction sites that are identified by the Copermittee as an exceptional threat to water quality due to high turbidity or suspended sediment levels in the site's effluent even when other sediment control BMPs have been implemented. In cases where the Copermittee's designated minimum set of BMPs and/or enhanced BMPs are not able or expected to be able to reduce turbidity or suspended sediment levels to a level that will be protective of water quality, AST is necessary and is considered MEP for the discharges from these sites.

AST has been effectively implemented extensively in the other states and in the Central Valley Region of California.<sup>207</sup> In addition, the San Diego Water Board's inspectors have observed AST being effectively implemented at large sites greater than 100 acres and at small, less than 5 acre, in-fill sites. AST is often necessary for Copermittees to ensure that discharges from construction sites are not causing or contributing to a violation of water quality standards. For example, the Basin Plan lists the water quality objective for turbidity as 20 NTU for all hydrologic areas and subareas except for the Coronado HA (10.10) and the Tijuana Valley (11.10). For certain construction sites with high clay content soils, large slopes and exposed areas, the only technology that is likely to meet 20 NTU is AST combined with erosion and sediment controls. To ensure the MEP standard and water quality standards are met, the requirement for implementation of AST at exceptional threat construction sites has been added to the Order, while still providing sufficient flexibility for each Copermittee's unique program.

The Copermittees may define types of construction sites, and/or at any time identify any construction sites after inspections, that are considered exceptional threats to water quality warranting AST. AST may include any sediment control technologies that are capable of reducing turbidity or suspended sediment levels in a construction site's discharge to meet water quality standards in receiving waters.

The Order does not include seasonal restrictions on grading. Seasonal restrictions on grading for storm water are difficult to implement due to the conflict between seasonal grading restrictions, avian breeding and nesting seasons and the seasonal passage of

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<sup>207</sup> State Water Board, 2004. Conference on Advanced Treatment at Construction Sites.

endangered salmonids; therefore the seasonal grading restrictions have not been included with the other BMPs in the Order. For example, the Least Bell's Vireo and the Coastal California Gnatcatcher, found in southern California, are listed as federally endangered and threatened, respectively.<sup>208</sup> Permits issued by the California Department of Fish and Game (CDFG) restrict grading during these birds' breeding seasons, which is from April 10 to August 31 for the Least Bell's Vireo<sup>209</sup> and from February 15 to August 31 for the Coastal California Gnatcatcher.<sup>210</sup> Ideally storm water restrictions on grading would be during the rainy season from October 1 through April 30.<sup>211</sup> Combined, these restrictions would limit construction grading to be during the month of September, which is infeasible. Section D.2.d of the Order still requires project proponents to minimize grading during the rainy season and coincide grading with seasonal dry weather periods to the extent feasible.

**Section F.2.e** (Inspections) establishes criteria for inspections based on risk factors including size, season, and location of the construction site. Modifications have been made to requirements of Order No. R9-2004-001 based on the experience of the Copermitees and San Diego Water Board construction programs.

The types of construction sites that must be inspected every two weeks during the rainy season have been changed from Order No. R9-2004-001. In general, because large construction sites (i.e. greater than 50 acres) have been closely scrutinized during the last permit period, they tend to be adequately implementing BMPs. Smaller construction sites (i.e. site with less than 50 acres), however, were not inspected as frequently and can pose a significant threat to water quality. The final rule recently promulgated by USEPA for construction sites<sup>212</sup> identified construction sites with 20 or more acres of land disturbed at one time as posing a significant threat to water quality during the rainy season. Thus, the San Diego Water Board recognized that smaller construction sites needed to be inspected more frequently. As with the construction inspection requirements that were recently adopted for the Orange County Phase I MS4s, this Order requires sites in active grading during the rainy season that are over 30 acres, rather than sites over 50 acres, be inspected every two weeks.

The Order also lowers the size of construction sites adjacent to or discharging directly to ESAs that receive scrutiny. Order No. R9-2004-001 requires such sites five acres and more to be inspected every two weeks during the rainy season. This Order requires such sites one acre and above and tributary to (i.e. with the same Hydrologic Subarea of) a CWA section 303(d) water body segment impaired for sediment; or within, directly adjacent to, or discharging directly to a receiving water within an ESA to be inspected every two weeks during the rainy season and once during August or

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<sup>208</sup> State of California, Department of Fish and Game, 2010. State and Federally Listed Endangered and Threatened Animals of California.

<sup>209</sup> United States Department of the Interior, Fish and Wildlife Service, 2001. Least Bell's Vireo Survey Guidelines.

<sup>210</sup> United States Department of the Interior, Fish and Wildlife Service, 1997. Coastal California Gnatcatcher (*Poliioptila californica californica*) Presence/Absence Survey Guidelines.

<sup>211</sup> San Diego Water Board, 2001. Order No. 2001-01, San Diego County MS4 Permit. Directive F.2.g.(2).

September. The lower size threshold is consistent with Phase II storm water permits and the Construction General Permit, State Water Board Order No. 2009-0009-DWQ.

The Copermittees also have the discretion to define or identify other construction sites that are significant threats to water quality that must be inspected every two weeks. Several factors are provided that must be considered by each Copermittee in evaluating threat to water quality.

Finally, types of construction sites that must be inspected at least monthly during the rainy season have been changed from Order No. R9-2004-001. All construction sites with one acre or more of soil disturbance must be inspected monthly during the rainy season instead of just 3 times during the rainy season. This level of inspection is necessary by the Copermittees to ensure adequate compliance with their grading, building, storm water or other water quality related orders and provisions.

This section also requires the Copermittees to track the number of inspections for each inventoried construction site. This requirement has been added to ensure that the Copermittees can demonstrate that construction sites are inspected at the minimum frequencies.

**Section F.2.g** requires the Copermittees to notify the San Diego Water Board when high level enforcement has been issued to a construction site as a result of storm water violations. The Copermittees will define the types of high level enforcement that will warrant a notification of the San Diego Water Board in their JRMPs. Copermittees are also required to annually notify the San Diego Water Board of construction sites that have alleged violations. This section was added to enhance San Diego Water Board and Copermittee communication and coordination in regulating construction sites.

### F.3 Existing Development Component

#### **F.3.a. Municipal**

The following legal authority applies to section D.3.a:

**Broad Legal Authority:** CWA sections 402(p)(3)(B)(ii-iii), CWC section 13377, and Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(B, C, E, and F) and 40 CFR 122.26(d)(2)(iv).

**Specific Legal Authority:** Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(A)(1) provides that the proposed management program include “A description of maintenance activities and a maintenance schedule for structural controls to reduce pollutants (including floatables) in discharges from municipal separate storm sewers.”

Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(A)(3) provides that the proposed management program include “A description for operating and maintaining public streets, roads and highways and procedures for reducing the impact on receiving

waters of discharges from municipal storm sewer systems, including pollutants discharged as a result of de-icing activities.”

Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(A)(4) provides that the proposed management program include “A description of procedures to assure that flood management projects assess the impacts on the water quality of receiving water bodies and that existing structural flood control devices have been evaluated to determine if retrofitting the device to provide additional pollutant removal from storm water is feasible.”

Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(A)(5) provides that the proposed management program include “A description of a program to monitor pollutants in runoff from operating or closed municipal landfills or other treatment, storage or disposal facilities for municipal waste, which shall identify priorities and procedures for inspections and establishing and implementing control measures for such discharges.”

Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(A)(6) provides that the proposed management program include “A description of a program to reduce to the maximum extent practicable, pollutants in discharges from municipal separate storm sewers associated with the application of pesticides, herbicides, and fertilizer which will include, as appropriate, controls such as educational activities, permits, certifications, and other measures for commercial applicators and distributors, and controls for application in public right-of-ways and at municipal facilities.”

Federal NPDES regulation 40 CFR 122.44(d)(1)(i) requires NPDES permits to include limitations to “control all pollutants or pollutant parameters (either conventional, nonconventional, or toxic pollutants) which the Director determines are or may be discharged at a level which will cause, have reasonable potential to cause, or contribute to an excursion above any State water quality standard, including State narrative criteria for water quality.”

**Section F.3.a.(2)** (General BMP Implementation) requires the Copermittees to designate minimum BMPs for general municipal areas and activities, regardless of their threat to water quality. BMPs must also be designated for special events. The designated minimum BMPs required to be implemented at a site can be based on the sources or activities present at the site. Threat to water quality is used to determine inspection frequencies in section F.3.a.(8).

**Section F.3.a.(3), F.3.a.(4), and F.3.a.(5)** (BMP Implementation for Specific Categories) establishes requirements for specific categories of activities and areas. These are selected based on the CWA and findings of the Copermittees in annual reports and ROWD that identify these activities as warranting special attention.

Pesticides, Herbicides, and Fertilizers. 40 CFR 122.26(d)(2)(iv)(A)(6) requires a description of a storm water program for pesticides, herbicides, and fertilizers. In addition, water quality data demonstrates widespread presence of such pollutants in

receiving waters and MS4 discharges. In response to similar requirements of Order No. R9-2004-001, the Copermittees have developed a specific Integrated Pest Management, Pesticides, and Fertilizer guidelines.

Flood Control Structures. In order to more closely meet the intent of the federal regulations and guidance, the requirement has been modified. 40 CFR 122.26(d)(2)(iv)(A)(4) requires "A description of procedures to assure that flood management projects assess the impacts on the water quality of receiving water bodies and that existing structural flood control devices have been evaluated to determine if retrofitting the device to provide additional pollutant removal from storm water is feasible." Retrofitting flood control devices can reduce storm water pollutants and improve water quality.

USEPA expands on the federal provision with the following information: "Storm water management devices and structures that focus solely on water quantity are usually not designed to remove pollutants, and may sometimes harm aquatic habitat and aesthetic values".<sup>213</sup> As flood control structures and other elements of the MS4 age and retrofitting becomes necessary, opportunities for water quality improvements arise.

Conveyance systems which take water quality consideration into account (such as grassed swales, vegetated detention ponds, etc.) can often cost less to construct than traditional concrete systems. Evaluation of the applicability of such systems during retrofitting must occur to ensure that pollutants in storm water runoff are reduced to the maximum extent practicable. USEPA supports utilizing BMPs for pollution reduction in flood management projects, stating that "The proposed management program must demonstrate that flood management projects take into account the effects on the water quality of receiving water bodies. [...] Opportunities for pollutant reduction should be considered".<sup>214</sup>

There are generally two types of retrofits for flood control structures. The first type involves adding an engineered device to an existing structure in order to treat or divert runoff. Examples include catch basin inlet filters/screens, ultraviolet disinfection facilities, hydrodynamic separators, and diversions to the sanitary sewer. The second type involves re-installing pervious or natural treatment features to facilities. Examples include removing concrete portions of conveyances to create pervious conveyances; and creating treatment wetlands within flood detention facilities. The later type of retrofit is preferred by the San Diego Water Board. They are likely more sustainable over the long-term because they may require less rigorous operation and maintenance than the former. They may also provide the additional benefit of providing significant

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<sup>213</sup> USEPA, 1992. Guidance Manual for the Preparation of Part II of the NPDES Permit Applications for Discharges from Municipal Separate Storm Sewer Systems. Washington D.C. EPA/833-B-92-002.

<sup>214</sup> Ibid.

or incidental opportunities for beneficial uses (e.g., recreation, wildlife, water supply).<sup>215,216</sup>

Sweeping of Municipal Areas. Sweeping municipal areas would likely be done in the absence of the Order. However, in certain cases it is an important component of a jurisdictional runoff management program. The Order contains requirements to ensure that the use of street sweeping is optimized for runoff applications if it is to be used and reported as a BMP.

**Section F.3.a.(6)** (Operation and Maintenance of MS4 and Treatment Controls) requires the Copermittees to inspect and remove waste from their MS4s prior to the rainy season.

Maintenance is critical to the successful implementation of every storm water runoff management program. USEPA finds that “Lack of maintenance often limits the effectiveness of storm water structural controls such as detention/retention basins and infiltration devices. [...] The proposed program should provide for maintenance logs of, and identify specific maintenance activities for, each class of control, such as removing sediment from retention ponds every five years, cleaning catch basins annually, and removing litter from channels twice a year.

If maintenance activities are scheduled infrequently, inspections must be scheduled to ensure that the control is operating adequately. In cases where scheduled maintenance is not appropriate, maintenance should be based on inspections of the control structure or frequency of storm events. If maintenance depends on the results of inspections or if it occurs infrequently, the applicant must provide an inspection schedule. The applicant should also identify the municipal department(s) responsible for the maintenance program”.<sup>217</sup> The MS4 maintenance requirements are based on the above USEPA recommendations. This maintenance will help ensure that structural controls are in adequate condition to be effective year round, but especially at the beginning of and throughout the rainy season.

Two requirements have been added to the Order that were not within Order No. R9-2004-001. Subsection (iii) allows a decreased inspection frequency for facilities that are routinely clean, and subsection (iv) requires trash to be removed from open channels and detention basins in a timely manner. Typically, Copermittees have reported annual or semi-annual creek cleanups as significant BMPs. The large volumes of trash reported to be removed during these events demonstrates the significant amount of trash that accumulates in the channels. In order to reduce the effect of the trash, the Order requires that trash be removed more frequently.

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<sup>215</sup> Burton, Carmen et al. 2005. Assessing Water Source and Channel Type as Factors Affecting Benthic Macroinvertebrate and Periphyton Assemblages in the Highly Urbanized Santa Ana River Basin, California. American Fisheries Society Symposium. Vol.47 pp.239-262.

<sup>216</sup> Stromberg, Juliet C. 2001. Restoration of Riparian Vegetation in the South-Western United States: the importance of flow regimes and fluvial dynamism. Journal of Arid Environments. Vol.49, pp.17-34.

<sup>217</sup> USEPA, 1992. Guidance Manual for the Preparation of Part II of the NPDES Permit Applications for Discharges from Municipal Separate Storm Sewer Systems. Washington D.C. EPA/833-B-92-002.

**Section F.3.a.(7)** (Infiltration from Sanitary Sewer to MS4) requires the Copermittees to implement controls and measures to prevent and eliminate sewage infiltration or seepage from municipal sanitary sewers to MS4s through thorough, routine preventive maintenance of the MS4.

**Sections F.3.a.(8) and F.3.a.(9)** (Inspections and Enforcement) establishes a minimum set of municipal areas and activities for oversight and inspection by the Copermittees and requires that Copermittees properly enforce runoff requirements at municipal areas and activities.

**Section F.3.a.(10)** (Copermittee Maintained Unpaved Roads Maintenance) requires the Copermittees to implement or require implementation of BMPs for erosion and sediment control during and after maintenance activities on the unpaved roads that the Copermittees are responsible for maintaining, particularly in or adjacent to stream channels or wetlands. As discussed for Finding D.1c, source control BMPs for unpaved roads are needed to minimize the discharge of sediment to the MS4s and receiving waters. There are several guidance documents available (see Discussion for Finding D.1.c) that include BMPs that can be readily implemented by the Copermittees for the development of new unpaved roads. This requirement is necessary to ensure the Copermittees minimize the discharge of sediment from their unpaved roads used for their maintenance activities.

### **F.3.b. Commercial / Industrial**

The following legal authority applies to section F.3.b:

**Broad Legal Authority:** CWA sections 402(p)(3)(B)(ii-iii), CWC section 13377, and Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(B, C, E, and F) and 40 CFR 122.26(d)(2)(iv).

**Specific Legal Authority:** Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(C) provides that the proposed management program include “A description of a program to monitor and control pollutants in storm water discharges to municipal systems from municipal landfills, hazardous waste treatment, disposal and recovery facilities, industrial facilities that are subject to section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA), and industrial facilities that the municipal permit applicant determines are contributing a substantial pollutant loading to the municipal storm sewer system.”

Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(C)(1) provides that the Copermittee must “identify priorities and procedures for inspections and establishing and implementing control measures for such discharges.”

Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(C)(2) provides that the proposed management program shall “Describe a monitoring program for storm water discharges associated with the industrial facilities identified in paragraph (d)(2)(iv)(C)

of this section, to be implemented during the term of the permit, including the submission of quantitative data on the following constituents: any pollutants limited in effluent guidelines subcategories, where applicable; any pollutant listed in an existing NPDES permit for a facility; oil and grease, COD, pH, BOD<sub>5</sub>, TSS, total phosphorus, total Kjeldhal nitrogen, nitrate plus nitrite nitrogen, and any information on discharges required under 40 CFR 122.21(g)(7)(iii) and (iv).”

Federal NPDES regulation 40 CFR 122.26(d)(2)(ii) provides that the Copermittee “Provide an inventory, organized by watershed of the name and address, and a description (such as Standard Industrial Classification [SIC] codes) which best reflects the principal products or services provided by each facility which may discharge, to the municipal separate storm sewer, storm water associated with industrial activity.”

Federal NPDES regulation 40 CFR 122.44(d)(1)(i) requires NPDES permits to include limitations to “control all pollutants or pollutant parameters (either conventional, nonconventional, or toxic pollutants) which the Director determines are or may be discharged at a level which will cause, have reasonable potential to cause, or contribute to an excursion above any State water quality standard, including State narrative criteria for water quality.”

Federal NPDES regulation 40 CFR 122.26(d)(2)(i)(A) provides that each Copermittee must demonstrate that it can control “through ordinance, permit, contract, order or similar means, the contribution of pollutants to the municipal storm sewer by storm water discharges associated with industrial activity and the quality of storm water discharged from site of industrial activity.”

Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(A) provides that the Copermittee develop a proposed management program which includes “A description of structural and source control measures to reduce pollutants from runoff from commercial and residential areas that are discharged from the municipal storm sewer system that are to be implemented during the life of the permit, accompanied with an estimate of the expected reduction of pollutant loads and a proposed schedule for implementing such controls.”

**Section F.3.b.(1)** (Source Identification) requires that botanical and zoological gardens and exhibits, building material retailers and storage, animal boarding facilities and kennels, mobile pet services, plumbing services, and power washing services be included in the Copermittees’ inventory of commercial sites/sources. These commercial or industrial sites and sources have been identified by the Copermittees and/or the San Diego Water Board as facilities that may contribute a significant pollutant load to the MS4. In cases where a particular type of facility is not present or known to operate within a Copermittee’s jurisdiction, there is no expectation that there would be any such facilities included in the inventory. If, however, that type of facility does become established or begins operating within a Copermittee’s jurisdiction during the period of this Order, the Copermittees are expected to identify those sites or sources and include them in their inventory of commercial or industrial facilities. This

is not a significant change because Order No. R9-2004-001 requires that any commercial or industrial site or source determined by a Copermittee to contribute a significant pollutant load to the MS4 be added to its inventory of commercial or industrial sites.

The inventory of commercial and industrial facilities is expected to be reviewed and, if necessary, updated at least annually and included in the Annual Report. The inventory is expected to include the prioritization of each facility to ensure the facility is inspected at the correct frequency. If changes are made to the prioritization for any facilities, justification for the changes is expected to be reported in the Annual Report. The inventory is the foundation for the tracking of BMP implementation, number and date(s) of inspections performed, inspection findings, violations, and enforcement actions for each commercial or industrial facility, all of which are expected to be included in the Annual Report.

**Section F.3.b.(3)** (Mobile Businesses Program) requires each Copermittee to develop and implement a program to reduce the discharge of storm water pollutants from mobile businesses to the MEP and to prevent the discharge of non-storm water. Mobile businesses are service industries that travel to the customer to perform the service rather than the customer traveling to the business to receive the service. Examples of mobile businesses are power washing, mobile vehicle washers, carpet cleaners, port-a-potty servicing, pool and fountain cleaning, mobile pet groomers, plumbers, and landscapers. These mobile services produce waste streams that could potentially impact water quality if appropriate BMPs are not implemented.

Order No. R9-2004-001 also requires BMP implementation for certain mobile businesses (e.g., mobile vehicle washing and mobile carpet cleaning). These storm water requirements of Order No. R9-2004-001 are not significantly different from the existing requirements. The Order specifies the Copermittees must prevent non storm water dry weather flows from entering the MS4 (see section C.2.b). Special attention is required for mobile businesses because of the difficulty of controlling discharges from mobile businesses with existing programs.

Mobile businesses present a unique difficulty in storm water regulation. Due to the transient nature of the business, the regular, effective practice of unannounced inspections is difficult to implement. Also, tracking these mobile businesses is difficult because they are often not permitted or licensed and their services cross Copermittee jurisdictions. Mobile businesses that operate within a municipality may be based in another municipality or even outside the Region.

The Order takes into account the difficulties in regulating mobile businesses. The Copermittees may choose to cooperate in developing and implementing their programs for mobile businesses, including sharing of mobile business inventories, BMP requirements, enforcement action information, and education. Sharing information will allow the Copermittees to better identify and track mobile businesses operating in their jurisdictions.

Because BMPs have been developed already, but communication with mobile businesses may be difficult, the Order provides broad flexibility to the Copermittees for developing a targeted program within the Commercial portion of each JRMP.

**Section F.3.b.(4)** (Inspection of Industrial and Commercial Sites/Sources) includes requirements for inspections of industrial and commercial sites/sources. The Order is similar to the Order No. R9-2004-001 in requiring that inspections check for coverage under the General Industrial Permit; assessment of compliance with Copermittee ordinances and permits related to storm water and non-storm water runoff; assessment of BMP implementation, maintenance, and effectiveness; visual observations for non-storm water discharges, potential illicit connections, and potential discharge of pollutants in storm water runoff; and education and outreach on storm water pollution prevention.

The Order also requires that inspections include review of BMP implementation plans if the site uses or is required to use such a plan, and the review of facility monitoring data if the site monitors its runoff. BMP implementation plans do not include SSMPs required pursuant to section F.1.d. If a facility is not required to have a BMP implementation plan or required to collect monitoring data, the inspection does not need to include a review of this information. BMP implementation plans and monitoring data are expected to be available for any facility that is covered under the General Industrial Permit. The BMP implementation plans and monitoring data can provide the inspector pertinent information that can be used during the visual inspection of the facility (e.g., BMPs implemented, maintenance records for BMPs, pollutants in storm water runoff). The Copermittees' inspectors have the discretion to determine the depth and detail of the review and use of the information in conducting the inspection.

Changes in the Order's requirements for inspection procedures mimic USEPA's guidance: "Site inspections should include (1) an evaluation of the pollution prevention plan and any other pertinent documents, and (2) an onsite visual inspection of the facility to evaluate the potential for discharges of contaminated storm water from the site and to assess the effectiveness of the pollution prevention plan."<sup>218</sup> In 1999, USEPA "recognized visual inspection as a baseline BMP for over 10 years," and "visual inspections are an effective way to identify a variety of problems. Correcting these problems can improve the water quality of the receiving water."<sup>219</sup>

Inspection frequencies in the Order have been modified from Order No. R9-2004-001. Order No. R9-2004-001 specifies frequencies for inspecting commercial/industrial sites based on threat to water quality and requires high priority sites to be inspected annually. For sites not identified as high priority, each site must be inspected at least once within a 5 year period.

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<sup>218</sup> USEPA, 1992. Guidance 833-8-92-002, section 6.3.3.4 "Inspection and Monitoring".

<sup>219</sup> USEPA, 1999. 832-F-99-046, "Storm Water Management Fact Sheet – Visual Inspection".

Also, the option for implementing a third party certification program is included. To the extent that third party certifications are conducted to fulfill the inspection requirements for this section of this Order, the Copermitttee will be responsible for conducting and documenting quality assurance and quality control of the third-party certifications. The Copermitttees may propose a third party certification program that must receive approval from the San Diego Water Board Executive Officer prior to implementation. The Order includes several requirements that must be included in the third party certification program in order for it to be considered for approval by the San Diego Water Board.

**Section F.3.b.(6)** (Reporting of Non-Compliant Sites) has been added as additional notification to the San Diego Water Board regarding commercial and industrial sites. Copermitttees are required to annually notify, prior to the rainy season, the San Diego Water Board of commercial and industrial sites that have any unresolved high level enforcement actions. This was added to enhance San Diego Water Board and Copermitttee communication. Information may be provided as part of the JRMP annual report if submitted prior to the rainy season.

### **F.3.c. Residential**

The following legal authority applies to section F.3.c:

**Broad Legal Authority:** CWA sections 402(p)(3)(B)(ii-iii), CWC section 13377, and Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(B, C, E, and F) and 40 CFR 122.26(d)(2)(iv).

**Specific Legal Authority:** Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(A) provides that the Copermitttee develop a proposed management program which includes “A description of structural and source control measures to reduce pollutants from runoff from commercial and residential areas that are discharged from the municipal storm sewer system that are to be implemented during the life of the permit, accompanied with an estimate of the expected reduction of pollutant loads and a proposed schedule for implementing such controls.”

Federal NPDES regulation 40 CFR 122.44(d)(1)(i) requires NPDES permits to include limitations to “control all pollutants or pollutant parameters (either conventional, nonconventional, or toxic pollutants) which the Director determines are or may be discharged at a level which will cause, have reasonable potential to cause, or contribute to an excursion above any State water quality standard, including State narrative criteria for water quality.”

**Section F.3.c.(4)** (Common Interest Areas / Home Owner Association Areas / Mobile Home Parks) includes requirements for common interest areas / homeowners' associations and mobile home parks. Many residential neighborhoods and some commercial areas within the jurisdiction of the Copermitttees are within common interest developments and are, therefore, subject to management of common areas by associations. The Declaration of the Covenants, Conditions and Restrictions (CC&Rs)

contains the ground rules for the operation of such an association. CC&Rs are an appropriate method for protecting the common plan of developments and to provide for a mechanism for financial support for the upkeep of common areas including roads, storm drains, and other components of storm water conveyance systems.

This Order interprets common interest areas as property subject to the codes and ordinance and enforcement mechanisms of the city or county in which it resides and, therefore, holds the local government responsible for the discharge of wastes from storm water conveyance systems located within these areas.

### **Section F.3.d. Retrofitting Existing Development**

The following legal authority applies to section F.3.d:

**Legal Authority:** The legal authority for retrofitting existing development is the same legal authority as that identified for municipal, industrial, commercial and residential development sections (See fact sheet discussion on those sections, F.3.a – c). In particular, CWA sections 402(p)(3)(B)(ii-iii), and CWC section 13377 give the Regional Water Board the legal authority to require retrofitting of existing development.

**Section F.3.d** has been added to require a plan for the retrofit of existing development (see Finding D.3.h and Discussion). This section contains specific requirements for a program to retrofit existing development. When appropriately applied as in this Order, retrofitting existing development meets MEP standards.

Existing BMPs are not sufficient, as evidenced by 303(d) listings and exceedances of Water Quality Objectives from the Copermittees monitoring reports. More advanced BMPs, including the retrofitting of existing development with LID, are part of the iterative process. Previous permits limited the requirement of treatment control BMPs to new development and redevelopment. Based on the current rate of redevelopment compared to existing BMPs, the use of LID only on new and redevelopment will not adequately address current water quality pollution and problems, including downstream hydromodification. Retrofitting existing development is practicable for a municipality through a systematic evaluation, prioritization and implementation plan focused on impaired water bodies, pollutants of concern, areas of downstream hydromodification, feasibility and effective communication and cooperation with private property owners. The retrofitting requirements are based largely on guidance from the USEPA<sup>220</sup> and the Center for Watershed Protection.<sup>221</sup>

**Section F.3.d.(1)** requires the Copermittees to identify and inventory areas of existing development within their jurisdiction as candidates for retrofitting projects. The Copermittees are expected to examine the inventories that they are maintaining as required under sections F.3.a-c, inspection findings, and any other forms of data and information to identify the candidates for retrofitting projects. Several areas of existing

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<sup>220</sup> USEPA, MS4 Permit Improvement Guide, EPA 833-R-10-001, April, 2010.

<sup>221</sup> Center for Watershed Protection, Urban Subwatershed Restoration Manual No. 3, Urban Stormwater Retrofit Practices Manual, Version 1.0, July/August 2007.

development that must be identified as candidates for retrofitting projects are listed. Based in part on guidance developed by the Center for Watershed Protection, these areas of existing development are expected to provide the most immediate improvements for water quality through retrofitting. This list of areas that must be considered does not limit the Copermittees from identifying other areas within their jurisdiction that may be evaluated for retrofitting projects.

**Section F.3.d.(2)** requires each Copermittee to evaluate the candidates identified under section F.3.d.(1) and rank them based on several criteria. One or more types of retrofit source control or treatment control BMPs may be evaluated for each candidate. Landowner cooperation is among the criteria to evaluate and prioritize retrofitting. For example, retrofitting projects on publicly owned properties are likely and expected to be feasible with sufficient funding secured.

**Section F.3.d.(4)** requires each Copermittee to cooperate with private property owners to encourage the implementation of site specific retrofitting projects. Because the Copermittees have limited authority to directly require retrofitting projects on private property, the Copermittees must encourage private property owners to implement retrofitting projects through indirect programs and incentives. Several programs and incentives that have been successful in other areas are provided in the Order for the Copermittees consideration in developing their practices to encourage private property owners to retrofit their sites. This list, however, does not limit the Copermittees from identifying and considering other practices that may be effective in encouraging private property owners to implement retrofitting projects on their sites.

**Section F.3.d.(5)** requires retrofit BMPs that are implemented to be tracked in accordance with section F.1.f. The retrofit BMPs must also be inspected. Retrofit BMPs on publicly owned properties must be inspected per section F.1.f. Privately owned retrofit BMPs must be inspected as needed to ensure proper operation and maintenance. Tracking and inspecting retrofit BMPs is necessary for the Copermittee to ensure that the retrofit BMPs are not removed and are maintained to remain effective. Inspections can also provide the Copermittee useful information on the effectiveness of individual retrofit BMPs. For retrofit BMPs on publicly owned properties, tracking and inspection will correct any problems with the BMPs as soon as a problem arises and will ensure proper maintenance.

For retrofit BMPs on privately owned properties, retrofit BMPs are expected to be implemented and maintained by the property owner on a voluntary basis. The retrofit BMPs must be tracked by the Copermittees, but their inspections are required less frequently due to access issues (i.e. on an as-needed basis). Voluntary retrofitting projects do not warrant frequent Copermittee inspections due to the property owner's willingness to retrofit. Periodic inspections may be performed to ensure the site owner has not removed the retrofit BMPs. Periodic inspections would also ensure that the retrofit BMPs remain effective by providing an opportunity for the inspector to educate the original and subsequent site owner(s) if the retrofit BMP is not operating effectively and requires some maintenance.

#### F.4. Illicit Discharge Detection and Elimination

The following legal authority applies to section F.4:

**Broad Legal Authority:** CWA sections 402(p)(3)(B)(ii-iii), CWC section 13377, and Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(B, C, E, and F) and 40 CFR 122.26(d)(2)(iv).

**Specific Legal Authority:** Federal NPDES regulations 40 CFR 122.26(d)(2)(iv)(B) provides that the proposed management program “shall be based on a description of a program, including a schedule, to detect and remove (or require the discharger to the municipal storm sewer to obtain a separate NPDES permit for) illicit discharges and improper disposal into the storm sewer.”

Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(B)(1) provides that the Copermittee include in its proposed management program “a program, including inspections, to implement and enforce an ordinance, orders or similar means to prevent illicit discharges to the municipal storm sewer system.”

Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(B)(2) provides that the Copermittee include in its proposed management program “a description of procedures to conduct on-going field screening activities during the life of the permit, including areas or locations that will be evaluated by such field screens.”

Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(B)(3) provides that the Copermittee include in its proposed management program “procedures to be followed to investigate portions of the separate storm sewer system that, based on the results of the field screen, or other appropriate information, indicate a reasonable potential of containing illicit discharges or other sources of non-storm water.”

Federal NPDES regulations 40 CFR 122.26(d)(2)(iv)(B)(4) provides that the Copermittee include in its proposed management program “a description of procedures to prevent, contain, and respond to spills that may discharge into the municipal separate storm sewer.”

Federal NPDES regulations 40 CFR 122.26(d)(2)(iv)(B)(5) provides that the Copermittee include in its proposed management program “a description of a program to promote, publicize, and facilitate public reporting of the presence of illicit discharges or water quality impacts associated with discharges from municipal separate storm sewers.”

Federal NPDES regulations 40 CFR 122.26(d)(2)(iv)(B)(6) provides that the Copermittee include in its proposed management program “a description of educational activities, public information activities, and other appropriate activities to facilitate the proper management and disposal of used oil and toxic materials.”

Federal NPDES regulations 40 CFR 122.26(d)(2)(iv)(B)(7) provides that the Copermittee include in its proposed management program “a description of controls to limit infiltration of seepage from municipal sanitary sewers to municipal separate storm sewer systems where necessary.”

**Section F.4.a** (Prevent and Detect Illicit Discharges and Connections) requires the Copermittees to implement a program to actively seek and eliminate IC/IDs. Additional wording has been added to this section to clarify and ensure that all appropriate municipal personnel (i.e. field personnel) are utilized in the program to observe and report these illicit discharges and connections.

**Section F.4.b** (Maintain MS4 Map) requires each Copermittee to maintain an updated map of its entire MS4 and the corresponding drainage areas within its jurisdiction. The Order specifies that the map must include the segments of the storm sewer system owned, operated, and maintained by the Copermittee, and include locations of all known inlets, connections with other MS4s, and outfalls to the Copermittee’s MS4. Knowing where their inlets, access points, connections with other MS4s, and outfalls are located will allow the Copermittees to better track, identify, and eliminate IC/IDs. The use of a geographic information system (GIS) by the Copermittees is strongly encouraged for the MS4 map. The Riverside County Flood Control and Water Conservation District (RCFCD) currently maintains a GIS layer that is a compilation of all the Copermittee MS4 maps. Although an individual Copermittee may not have GIS capabilities, each Copermittee has agreements with RCFCD for providing updated MS4 maps to the RCFCD to update this GIS layer and subsequent submittal to the San Diego Water Board.

**Section F.4.e** (Investigation / Inspection and Follow-Up) requires the Copermittees to conduct follow up investigations and inspect portions of the MS4 for illicit discharges and connections, based on dry weather effluent analytical monitoring results. The section also requires the Copermittees to establish criteria for triggering follow up investigations. Additional language has been added to this section to clarify the minimum level of effort and timeframes for follow up investigations when dry weather limitations are exceeded. This section requires the Copermittees to include and evaluate the specified action levels in their response criteria and to develop response criteria for pollutants without action levels.

Timely investigation and follow up of exceedances is necessary to identify sources of illicit discharges, especially since many of the discharges are transitory. The requirements for immediate response to obvious illicit discharges and a 2 business day minimum response time when field screening action levels are exceeded is necessary to ensure timely response by the Copermittees. When analytical data indicate an exceedance of action levels, the Copermittee(s) have 5 business days to confirm the need to initiate an investigation to identify the source of the exceedance. The Copermittees are expected to investigate for potential sources of the pollutant(s) that may have caused the exceedance of action levels upstream of the collection point and collect additional analytical and field data as necessary. If the quality of the data

is confirmed to be unreliable or inaccurate and the investigation indicates there were no sources of the pollutant that could have caused an exceedance of the applicable action level, then further investigation is no longer warranted and should be documented in the Annual Report.

**Section F.4.f** (Elimination of Illicit Discharges and Connections) requires the Copermittee(s) to take immediate action to initiate steps necessary to eliminate illicit discharges, illicit discharge sources, and illicit connections that have been detected as a result of the investigations required under section F.4.e. The steps necessary to eliminate the illicit discharge or connection are typically initiated with identifying and contacting the person responsible for the illicit discharge or connection. The Copermittee(s) are expected to eliminate the detected illicit discharges and connections as soon as possible after they are able to contact the person responsible for the illicit discharge or connection. The steps expected and/or necessary to eliminate illicit discharges and connections under different scenarios and for different sources should be developed and implemented by the Copermittee(s). These steps may be outlined by the Copermittee(s) in their JRMPs.

In some cases, the Copermittee(s) may determine that one of the necessary steps is to contact the San Diego Water Board to assist in resolving and eliminating illicit discharges and connections. The Copermittee(s), however, are expected to exhaust all of their available administrative and enforcement authorities and mechanisms for addressing and eliminating illicit discharges and connections before contacting the San Diego Water Board for assistance.

**Section F.4.h** (Prevent and Response to Sewage Spills and Other Spills) requires each Copermittee to implement measures to prevent and respond to spills into its MS4. These requirements are consistent with Order No. R9-2004-001 and based on federal regulations at 40 CFR 122.26(d)(2)(iv)(B)(4). Those federal NPDES regulations clearly require that owners and operators of MS4s have procedures to prevent, contain, and respond to spills that may discharge into the municipal separate storm sewer.

The Order includes sewage and non-sewage spills in the requirement for spill prevention and response. Federal regulations clearly define sewage as an illicit discharge that must be addressed by municipalities (see Phase II Final Rule, p.68758). Sewage is an illicit discharge to the MS4 that threatens public health. As such, the Copermittees must implement measures to prevent sewage from entering the MS4 system and must respond to illicit discharges that have entered the system. This section has been revised to clarify that management measures and procedures must be implemented to prevent, respond to, and cleanup spills. In addition to the management measures and procedures, a mechanism for the Copermittees to be notified of spills is necessary in order for those management measures and procedures to be implemented as soon as possible after a spill has occurred. The facilitation of public reporting of illicit discharges required by section F.4.c, in addition to regular and open communication with other agencies (e.g., sanitary sewer districts),

may also serve as a mechanism for notifying the Copermittees of spills within their jurisdiction.

Section F.3.a.(7) of the Order includes requirements for measures that must be taken to prevent sewage spills. Examples of measures being implemented by Copermittees include inspections of fats, oils, and grease management at restaurants. Other preventative measures can be implemented during routine planning efforts for new development and redevelopment projects. Similarly, building permit inspections should be used to verify the integrity of the sanitary and storm sewer infrastructure and ensure that cross-connections between the two are avoided.

#### F.5. Public Participation Component

The following legal authority applies to section F.5:

**Broad Legal Authority:** CWA sections 402(p)(3)(B)(ii-iii), CWC section 13377, and Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(B, C, E, and F) and 40 CFR 122.26(d)(2)(iv).

No significant changes from Order No. R9-2004-001 have been made to this section of the Order.

#### F.6. Education Component

The following legal authority applies to section F.6:

**Broad Legal Authority:** CWA sections 402(p)(3)(B)(ii-iii), CWC section 13377, and Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(B, C, E, and F) and 40 CFR 122.26(d)(2)(iv).

**Specific Legal Authority:** Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(A)(6) provides that the proposed management program include "A description of a program to reduce to the maximum extent practicable, pollutants in discharges from municipal separate storm sewers associated with the application of pesticides, herbicides, and fertilizer which will include, as appropriate, controls such as *educational activities*, permits, certifications, and other measures for commercial applicators and distributors, and controls for application in public right-of-ways and at municipal facilities."

Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(B)(6) provides that the proposed management program include "A description of educational activities, public information activities, and other appropriate activities to facilitate the proper management and disposal of used oil and toxic materials."

Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(D)(4) provides that the proposed management program include "A description of appropriate educational and training measures for construction site operators."

**Section F.6** (Education Component) includes an introductory paragraph that is the same as in Order No. R9-2004-001, except for the addition of New Development / Redevelopment Project Applicants, Developers, Contractors, Property Owners, and other Responsible Parties to the list of target communities.

**Section F.6.a** (General Requirements) includes education topics that are required for the education programs developed and implemented for the target communities. The Copermittees can choose how and to what degree to address these topics. Some topics may be more important for certain target communities.

The requirement for educational activities, public information activities, and other appropriate activities to facilitate the proper management and disposal of used oil and toxic materials has been moved to this section from the Illicit Discharge Detection and Elimination section.

**Section F.6.b** (Specific Requirements) includes requirements for specific target communities, which are in addition to the general requirements. The education and training requirements previously included in other sections of Order No. R9-2004-001 (i.e. Development Planning, Construction, Existing Development) have been removed and consolidated under this section. Specific education requirements are included for: 1) the Copermittees' departments and personnel (i.e. staff and contractors, and Planning Boards and Elected Officials, if applicable), 2) new development / redevelopment and construction sites, 3) commercial and industrial sites/sources, and 4) residential and general public communities.

**Section F.6.b.(1)** (Copermittee Departments and Personnel) requires the Copermittees to implement an education program for their staff and contractors. Education is required at all levels of municipal staff and contractors. Education is especially important for the staff responsible for planning and development review, oversight, inspection and enforcement of construction activities, selecting and implementing BMPs for Copermittee areas, inspection and enforcement of industrial and commercial facilities, and other Copermittee activities which might result in discharges of pollutants if proper BMPs are not used.

Education of Copermittee departments and personnel may be conducted with joint and/or individual training programs (i.e. on a regional and/or jurisdictional scale), and may include both formal and informal training. The Copermittees may choose the scale and methods for educating their departments and personnel.

The annual training required for construction, building, code enforcement, grading review staffs, inspectors, and other responsible construction staff requires the training to occur annually, prior to the rainy season.

**Section F.6.b.(2)** (New Development / Redevelopment and Construction Sites) requires the Copermitees to educate parties responsible for a project (i.e. project applicants, developers, contractors, property owners, community planning groups, and other responsible parties) about storm water issues and BMPs. Different levels of training will be needed for planning groups, owners, developers, contractors, and construction workers, but all should get a general education of storm water requirements. Education of all construction workers can prevent unintentional discharges, such as discharges by workers who are not aware that they are not allowed to wash things down the storm drains. Training for BMP installation workers is imperative because the BMPs will fail if not properly installed and maintained. Training for field level workers can be formal or informal tail-gate format.

**Section F.6.b.(3)** (Commercial and Industrial Sites / Sources) requires the Copermitees to notify the owner/operator of each of their inventoried commercial and industrial sites/sources of the BMP requirements applicable to the site/source at least twice during the five-year period of the Order. Notification of BMP requirements may be fulfilled during the business license application/renewal process and/or during site inspections. Notifying commercial and industrial sites/sources of the BMP requirements will ensure the business owners are aware of the appropriate BMPs to implement that prevent discharges of pollutants from these sites/sources.

**Section F.6.b.(4)** (Residential and General Public) requires the target audiences for residential and general public communities to include underserved target audiences (e.g., disadvantaged communities), residents and managers of Common Interest Areas / Homeowner Associations, and owners and residents of mobile home parks. These communities are frequently neglected or underserved by most water quality education programs, but can be significant sources of pollutants. Thus, it is important for the residential and general public education programs to reach out to and educate these communities on their potential impacts to water quality.

## G. Watershed Water Quality Workplan

The following legal authority applies to section G:

**Broad Legal Authority:** CWA sections 402(p)(3)(B)(ii-iii), CWC section 13377, and Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(B, C, E, and F) and 40 CFR 122.26(d)(2)(iv).

**Specific Legal Authority:** Federal NPDES regulation 40 CFR 122.26(a)(3)(ii) states: “The Director may [...] issue distinct permits for appropriate categories of discharges [...] including, but not limited to [...] all discharges within a system that discharge to the same watershed [...]”

Federal NPDES regulations 40 CFR 122.26(a)(3)(v) states: “Permits for all or a portion of all discharges from large or medium municipal separate storm sewer systems that are issued on a system-wide, jurisdiction-wide, watershed, or other basis may specify different conditions relating to different discharges covered by the permit, including different management programs for different drainage areas [watersheds] which contribute storm water to the system.”

Federal NPDES regulation 40 CFR 122.26(a)(5) states: “The Director may issue permits for municipal separate storm sewers that are designated under paragraph (a)91)(v) of this section on a system-wide basis, a jurisdiction-wide basis, watershed basis, or other appropriate basis.”

Federal NPDES regulation 40 CFR 122.26(d)(2)(iv) states: “Proposed programs may impose controls on a system-wide basis, a watershed basis, a jurisdiction basis, or on individual outfalls.”

**Section G** requires Copermittees to continue implementation of their watershed runoff management program (WRMP), however the implementation approach has changed. Order No. R9-2004-001 required a Watershed SWMP that included a collaborative strategy to abate the sources and reduce the discharges causing high priority water quality problems. This strategy was to guide each watershed Copermittee’s selection and implementation of Watershed Activities, so that the activities selected and implemented would remove that pollutant contribution responsible for the identified high priority water quality problem. Outcomes of these requirements were not able to demonstrate improvements to water quality.

Revised language in Order No. R9-2010-0016 attempts to focus each watershed Copermittee’s efforts and resources on addressing the highest water quality problems in the watershed by focusing attention on the health of the receiving water body and the most efficient use of the watershed Copermittee’s time and resources. Order No. R9-2010-0016 requires the watershed Copermittees to develop and follow a workplan approach towards assessing receiving water body conditions, prioritizing the highest

priority water quality problems, implementing effective BMPs, and measuring water quality improvement in the receiving water.

**Section G.1.** (Watershed Workplan Components) requires the watershed Copermittees to develop a workplan that will implement a collective watershed strategy to assess and prioritize the water quality problems, and identify, address, and mitigate the highest priority water quality issues/pollutants within the Upper Santa Margarita watershed's receiving waters. This section specifies the minimum components that must be included in the Watershed Workplan. Development of a workplan rather than watershed activities will allow the Copermittees flexibility to iteratively modify their watershed strategy over the course of future planning years as priorities change.

**Section G.2** (Watershed Workplan Implementation) requires the Copermittee's to begin implementing the Watershed Workplan within 90 days of submittal unless otherwise directed by the San Diego Water Board. The Watershed Workplan must meet the requirements of the Order. The San Diego Water Board expects that implementing the Watershed Workplan, which will coordinate the Copermittees' efforts in the watershed, will result in water quality improvements sooner than later. If there are deficiencies in the Watershed Workplan, the San Diego Water Board will provide guidance to remedy those deficiencies as appropriate.

**Section G.3** (Copermittee Collaboration) requires the Copermittees to collaborate to develop and implement the Watershed Workplan. Watershed Copermittee collaboration must include frequent regularly scheduled meetings. Because there are several other agencies with MS4s in the Upper Santa Margarita watershed that the Copermittees have indicated in the ROWD are a source of pollutants that may discharge into the MS4 systems of the Copermittees, the Copermittees are also required to pursue interagency agreements, or similar cooperative efforts, with non-Copermittee owners of the MS4 (such as Caltrans, Native American tribes, and school districts) to control the contribution of pollutants from one portion of the shared MS4 to another portion of the shared MS4. In addition, the Copermittees are required, as appropriate, to participate in watershed management efforts to address water quality issues within the entire Santa Margarita Watershed (such as the County of San Diego and United States Marine Corps Camp Pendleton).

**Section G.4** (Public Participation) requires the Copermittees to implement a watershed-specific public participation mechanism within each watershed. A required component of the watershed-specific public participation mechanism must be a minimum 30-day public review of the Watershed Workplan. Opportunity for the public to review and comment on the Watershed Workplan must occur before the workplan is implemented.

**Section G.5** (Watershed Workplan Review and Updates) requires the Copermittees to review and update the Watershed Workplan annually to identify needed changes to the prioritized water quality problem(s) listed in the workplan. This section requires the Copermittees to review and update their workplan each year to incorporate changing priorities and evolving watershed strategies.

**Section G.6** (Pyrethroid Toxicity Reduction Evaluation) requires the Copermittees to incorporate the pyrethroid pollutant reduction program into the Watershed Workplan, as described in the ROWD.

## H. Fiscal Analysis

The following legal authority applies to section H:

**Broad Legal Authority:** CWA sections 402(p)(3)(B)(ii-iii), CWC section 13377, and Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(B, C, E, and F) and 40 CFR 122.26(d)(2)(iv).

**Specific Legal Authority:** Federal NPDES regulation 40 CFR 122.26(d)(2)(vi) provides that “[The Copermittee must submit] for each fiscal year to be covered by the permit, a fiscal analysis of the necessary capital and operation and maintenance expenditures necessary to accomplish the activities of the programs under paragraphs (d)(2)(iii) and (iv) of this section. Such analysis shall include a description of the source of funds that are proposed to meet the necessary expenditures, including legal restrictions on the use of such funds.”

**Section H** has been expanded in order to develop more useful and meaningful fiscal reporting. A revamped fiscal reporting strategy will provide the San Diego Water Board and the Copermittees with better capability to manage performance of the programs.

The Copermittees’ effort is expected to provide standardization of reporting so that figures between Copermittees are comparable, which is one of many types of information which can be used by the San Diego Water Board to better understand Copermittee program implementation. Standardization and comparison of fiscal analysis reporting is supported by the State Water Board funded NPDES Stormwater Cost Survey, which finds that “standards for reporting costs and storm water activities are needed to allow accurate cost comparisons to be made between storm water activities.”<sup>222</sup> This document also provides guidance regarding categorization of expenditures for tracking and reporting.

The Order establishes a criterion for when Copermittees must add narrative evaluations to the tables. This will address some of the variability in reporting and will provide the public and San Diego Water Board with improved understanding of how resources are shifted in response to annual assessments. This will also help ensure that projected annual costs adequately reflect planned program modifications described in the annual reports.

The San Diego Water Board has chosen not to require a description of fiscal benefits realized from implementation of the storm water protection program. This is a recommendation from the National Association of Flood and Stormwater Management

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<sup>222</sup> Currier, et al., 2005. *NPDES Storm Water Cost Survey Final Report*. Prepared for California State Water Resources Control Board by Office of Water Programs, California State University, Sacramento. P. 63.

Agencies.<sup>223</sup> For instance, the current fiscal assessment does not address city-wide fiscal benefits of protection (e.g., public health, tourism, property values, economic activity, beneficial uses, etc.), even though many costs currently reported to the San Diego Water Board are for related activities. This type of assessment may help Copermittees improve the allocation of resources and it may help the Copermittees secure adequate funding for the program. Finally, it will provide a clearer picture of the storm water and non-storm water runoff program to the public and San Diego Water Board. However, qualitative assessments could be overly subjective and most Copermittees likely lack the ability to provide accurate quantitative assessments. The San Diego Water Board encourages Copermittees to consider means for conducting assessments of fiscal benefits derived from the programs. Such assessments could be conducted on a regional scale similar to studies of program costs conducted by the State Water Board.<sup>224</sup>

Currently, each Riverside County municipality's annual report includes a table based on a template developed by the principal Copermittee. The template was meant to facilitate reporting consistency among the Copermittees. The annual report table contains estimates of spending during the reported period and estimates of the next year's spending.

Review of the fiscal analysis tables included in the annual reports has not been as straightforward as expected, and the value of the information is moderate. The reviews indicate that cities do not use consistent methods to fill in the tables because they use different accounting and budgeting processes, and certain storm water program expenditures are not easily categorized into the table formats. Furthermore, storm water permit-related activities involve several departments, which makes it difficult for the storm water manager to gather and decipher actual costs.

These issues also make it difficult for the Copermittees to accurately compartmentalize expenditures within the format. As a result, the current financial reporting provides estimates at best and cannot be reliably used to compare program implementation among most municipalities.

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<sup>223</sup> National Association of Flood and Stormwater Management Agencies. 2006. *Guidance for Municipal Stormwater Funding*. Prepared under a grant provided by the USEPA.

<sup>224</sup> State Water Board, 2005. NPDES Stormwater Cost Survey.

## I. Total Maximum Daily Loads

The following legal authority applies to section I:

**Broad Legal Authority:** CWA section 303(d)(1)(A) and (C), and Federal regulations 40 CFR 130.2(i), 40 CFR 130.7(b)(1) and 40 CFR 122.44(d)(1)(vii)(B).

**Specific Legal Authority:** Federal NPDES regulation 40 CFR 122.44(d)(1)(vii)(B) requires that NPDES permit requirements incorporate water quality based effluent limitations that must be consistent with the requirements and assumptions of wasteload allocations (WLAs) assigned to the MS4 as part of the calculated TMDLs.

**Section I.1.** is a placeholder for the requirements and WLAs assigned to the Copermittees' MS4 discharges of any future TMDLs that are adopted by the San Diego Water Board.

**Section I.2** includes, by reference to Santa Ana Water Board Order No. R8-2010-0033, including the relevant sections of the fact sheet and findings (and subsequent revisions), the requirements and WLAs assigned to the MS4s for the Lake Elsinore/Canyon Lake (San Jacinto Watershed) Nutrient TMDLs that are being implemented for the Santa Ana Water Board. Because the San Jacinto Watershed is within the boundaries of the Santa Ana Water Board's region, the Lake Elsinore/Canyon Lake Nutrient TMDLs and its requirements must be implemented by the Cities of Murrieta and Wildomar for the areas within their jurisdictions located in the Santa Ana Region (Region 8).

## J. Program Effectiveness Component

The following legal authority applies to section J:

**Broad Legal Authority:** CWA sections 402(p)(3)(B)(ii-iii), CWC section 13377, and Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(B, C, E, and F) and 40 CFR 122.26(d)(2)(iv).

**Specific Legal Authority:** Federal NPDES regulation 40 CFR 122.26(d)(2)(v) provides that the Copermittees must include “Estimated reductions in loadings of pollutants from discharges of municipal storm sewer constituents from municipal storm sewer systems expected as the result of the municipal storm water quality management program. The assessment shall also identify known impacts of storm water controls on ground water.” Under Federal NPDES regulation 40 CFR 122.42(c) applicants must provide annual reports on the progress of their storm water management programs.

**Section J.1** (Program Effectiveness Assessments) of the Order requires the Copermittees to assess the effectiveness of the implementation of their jurisdictional, watershed, and monitoring programs and activities. The Riverside County Storm Water Program is supportive of the CASQA effort, and use of CASQA assessment techniques is consistent with the methodology proposed in the ROWD.<sup>225,226</sup>

This section requires the Copermittees to establish assessment measures or methods for each of the six outcome levels described by CASQA that will be used to assess the effectiveness of the Jurisdictional Runoff Management Program (JRMP) and Watershed Workplan implementation at (1) reducing the discharge of storm water pollutants from its MS4 to the MEP; (2) prohibit non-storm water discharges; and (3) preventing runoff discharges from the MS4 from causing or contributing to a violation of water quality standards.

The effectiveness assessment measures or methods must be established and included as part of the updated JRMPs and Watershed Workplan that are due on or before June 30, 2012. Beginning with the Annual Report due in 2013, the Copermittees are required to annually perform the assessments using the established assessment measures or methods.

**Section J.2** (Respond to Assessments) of the Order requires the Copermittees to improve jurisdictional and watershed activities or BMPs when they are found to be ineffective or when water quality impairments are continuing. This requirement fulfills the purpose of conducting effectiveness assessments – to improve and refine the Copermittees’ programs. The requirement is consistent with USEPA’s Phase II

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<sup>225</sup> The Riverside County Copermittees proposed an assessment strategy based on the CASQA Municipal Stormwater Program Effectiveness Assessment Guidance in section 6.1.2.1 of the ROWD.

<sup>226</sup> CASQA 2007. Municipal Stormwater Program Effectiveness Assessment Guidance.

regulations, which state: "If the permittee determines that its original combination of BMPs are not adequate to achieve the objectives of the municipal program, the MS4 should revise its program to implement BMPs that are adequate [...]."<sup>227</sup>

Each Copermittee must update the effectiveness assessment work plan and schedule to address any program modifications and improvements in response to the findings of their assessment. The updates to the work plan and schedule must be incorporated into the applicable Annual Report.

**Section J.3** (Assessment and Response Reporting) of the Order describes the information required to be submitted in the Annual Report pertaining to program effectiveness assessments, review, and response. A summary of the effectiveness assessments, responses to the effectiveness assessments, and any steps implemented to improve the Copermittee's ability to assess program effectiveness must be included with the Annual Report. The reporting will demonstrate whether Copermittees have appropriately responded to the effectiveness assessments.

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<sup>227</sup> Federal Register / Vol. 64, No. 235 / Wednesday, December 8, 1999 / Rules and Regulations. P. 68762.

## K. Reporting

The following legal authority applies to section K:

**Broad Legal Authority:** CWA sections 402(p)(3)(B)(ii-iii), CWC section 13377, and Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(B, C, E, and F) and 40 CFR 122.26(d)(2)(iv).

**Specific Legal Authority:** Federal NPDES regulation 40 CFR 122.42(c) requires that “The operator of a large or medium municipal separate storm sewer system or a municipal separate storm sewer system that has been designated by the director under § 122.26(a)(1)(v) of this part must submit an annual report by the anniversary of the date of the issuance of the permit for such system. The report shall include: (1) The status of implementing the components of the storm water management program that are established as permit conditions; (2) Proposed changes to the storm water management program that are established as permit condition. Such proposed changes shall be consistent with § 122.26(d)(2)(iii) of this part; (3) Revisions, if necessary, to the assessment of controls and the fiscal analysis reported in the permit application under § 122.26(d)(2)(iv) and (d)(2)(v) of this part; (4) A summary of data, including monitoring data, that is accumulated throughout the reporting year; (5) Annual expenditures and budget for year following each annual report; (6) A summary describing the number and nature of enforcement actions, inspections, and public education programs; (7) Identification of water quality improvements or degradation.”

CWC section 13267 provides that “the Regional Board may require than any person who has discharged [...] shall furnish, under penalty of perjury, technical or monitoring reports which the regional board requires.”

**Section K.1** (Runoff Management Plans) outlines the process and due dates for submitting JRMPs and Watershed Workplan. The information to be included in the Jurisdictional and Watershed plans must be sufficient to demonstrate the capacity to implement the requirements of section F and G, respectively, of the Order.

In many cases, the requirements of the Order should not necessitate a complete rewrite of the plans, as was basically done in 2005. Only sections of the Order which are new or have been significantly changed should warrant rewriting of plans' sections. The San Diego Water Board plans to work with the Copermittees and provide guidance regarding where JRMPs and Watershed Workplan must be updated in accordance with the Order. This will help ensure that rewriting, reporting, and review efforts are minimized.

**Section K.2** (Other Required Reports and Plans) include requirements for information to be included in the SSMP update, the HMP, and the Report of Waste Discharge (ROWD) for the next permit reissuance. The Order requires submittal of an updated SSMP on or before June 30, 2012; a draft HMP on or before June 30, 2013; and a

ROWD 180 days in advance of the expiration of this Order. The section also identifies the minimum information to be included in the ROWD, based on USEPA's May 17, 1996 guidance "Interpretive Policy Memorandum on Reapplication Requirements for Municipal Separate Storm Sewer Systems."

**Section K.3** (Annual Reports) outlines the process and roles of the Copermittees for developing and submitting the JRMP Annual Report. Information to be included in the Annual Reports is described in section K.3.a.(3).

Each Copermittee is required to maintain records demonstrating that Permit activity requirements have been met, which allows the San Diego Water Board to confirm compliance as needed, such as via inspections, program audits, or requests for information per CWC sections 13225 and 13267.

Reporting requirements in the Order focus on results and responses to the effectiveness assessments conducted by the Copermittees. This will allow the San Diego Water Board to determine how appropriately municipalities adapt and tailor their programs to findings from activities and monitoring results. Assessment of progress toward meeting the objectives is possible because the data collected by the Copermittees under Order No. R9-2004-001 can be used to establish baseline conditions. Compared to activity-based reporting, this will greatly enhance the ability of the San Diego Water Board, Copermittees, and the public to determine whether the programs are successful.

The Order reduces the amount of program activity-based reporting from Order No. R9-2004-001. Under the CASQA assessment model, activity-based reporting includes primarily outcomes that document compliance with permit requirements (Level 1 outcomes), rather than being indicators of the impact of activity implementation.<sup>228</sup> This approach is consistent with guidance from the USEPA, which notes that annual reports should highlight program effectiveness as well as describing activities.<sup>229</sup> This emphasis is also consistent with recommendations from the National Academy of Public Administration in its report to USEPA on Evaluating Environmental Progress, which suggest that reviewing activities data provides limited value when evaluating the effectiveness of programs and resulting environmental conditions.<sup>230</sup>

The Order maintains some reporting requirements for certain activity-based outcomes. These are mostly focused on activities that establish or revise municipal processes related to storm water runoff and management. The processes required by the Order are especially important in situations where sustaining water quality improvements may require activities that extend beyond the five-year period of the NPDES permit.

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<sup>228</sup> Level 1 outcomes under the CASQA guidance include documentation that required activities have been implemented.

<sup>229</sup> USEPA 2007. *MS4 Program Evaluation Guidance*. USEPA Office of Wastewater Management EPA-833-R-07-003. January 2007 field test version.

<sup>230</sup> National Academy of Public Administration 2001. *Evaluating Environmental Progress: How EPA and the States Can Improve the Quality of Enforcement and Compliance Information* (June 2001). <http://www.napawash.org>

In addition, the Order maintains many activity-based reporting requirements related to enforcement of local requirements, with an emphasis on the results from such activities. This is intended to facilitate review of the contributions that inspection and enforcement activities have made toward meeting the goals of the Order. Reporting of these types of activities is supported by recommendations from the National Academy of Public Administration in its report to the USEPA: *Evaluating Environmental Progress: How EPA and the States Can Improve the Quality of Enforcement and Compliance Information* (June 2001).<sup>231</sup> Other activity-based reporting has been reduced to selected items based on consideration of program priorities.

Another source of prioritization for activity-based reporting is the *Storm Water Panel Recommendations to the California State Water Resources Control Board The Feasibility of Numeric Effluent Limits Applicable to Discharges of Storm Water Associated with Municipal, Industrial and Construction Activities* (June 19, 2006). In particular, the panel highlighted needs to improve the design, maintenance, and inspections of best management practices.

**Section K.4** (Interim Reporting Requirements) specifies that the JRMP Annual Reports must be submitted in accordance with the requirements of Order No. R9-2004-001 prior to submittal of the JRMPs required under section K.1a.

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<sup>231</sup> The National Academy of Public Administration report is available on-line at <http://www.napawash.org>

## L. Modification of Programs

The following legal authority applies to section L:

**Broad Legal Authority:** CWA sections 402(p)(3)(B)(ii-iii), CWC section 13377, and Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(B, C, E, and F) and 40 CFR 122.26(d)(2)(iv).

**Section L** of the Order provides a process for the Copermittees to modify their runoff management programs. This process will be useful so that the Copermittees can continue to refine and improve their programs based on the findings of their annual program effectiveness assessments. The process allows for minor modifications to the Copermittees' programs where the Copermittees can exhibit that the modifications meet or exceed existing legal requirements under the Order. Such a process avoids lengthy and time consuming formal approvals of proposed modifications before the San Diego Water Board, while still ensuring compliance with applicable legal standards and the Order. The process included in the Order is based on a process utilized by the California Regional Water Quality Control Board, San Francisco Bay Region (San Francisco Bay Water Board) in their MS4 permit for Alameda County.<sup>232</sup>

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<sup>232</sup> San Francisco Bay Water Board, 2003. Order No. R2-2003-0021. P. 45.

**M. Principal Permittee Responsibilities**

The following legal authority applies to section M:

**Broad Legal Authority:** CWA sections 402(p)(3)(B)(ii-iii), CWC section 13377, and Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(B, C, E, and F) and 40 CFR 122.26(d)(2)(iv).

**Specific Legal Authority:** Federal NPDES regulation 40 CFR 122.26(a)(3)(iii)(C) provides that "A regional authority may be responsible for submitting a permit application."

Federal NPDES regulation 40 CFR 122.26(d)(2)(i)(D) provides that "[The Copermitttee must demonstrate that it can control] through interagency agreements among coapplicants the contribution of pollutants from one portion of the municipal system to another portion of the municipal system."

No significant changes were made to this section.

**N. Receiving Waters and MS4 Discharge Monitoring and Reporting Program**

The following legal authority applies to section N:

**Broad Legal Authority:** CWA sections 402, 402(p)(3)(B)(ii-iii), CWC section 13377, and Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(B, C, E, and F) and 40 CFR 122.26(d)(2)(iv).

**Specific Legal Authority:** Federal NPDES regulations 40 CFR 122.26(d)(2)(iii) and 122.44 require the Copermitees to conduct a comprehensive monitoring program.

See section T of this Fact Sheet/Technical Report for a discussion of changes to the Receiving Waters Monitoring and Reporting Program.

## O. Standard Provisions, Reporting Requirements, And Notifications

The following legal authority applies to section O:

**Broad Legal Authority:** CWA sections 402(p)(3)(B)(ii-iii), CWC section 13377, and Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(B, C, E, and F) and 40 CFR 122.26(d)(2)(iv).

**Specific Legal Authority:** Standard provisions, reporting requirements, and notifications are consistent to all NPDES permits and are generally found in Federal NPDES regulation 40 CFR 122.41.

**Section O.2** of the Order has been changed to remove the statement that all plans and reports submitted in compliance with the Order are an enforceable part of the Order. This statement has been removed because it is unnecessary. The Order itself contains sufficient detailed requirements to ensure that compliance with discharge prohibitions, receiving water limitations, non-storm water action levels and the narrative standard of MEP for storm water are achieved. Implementation by the Copermittees of programs in compliance with the Order's requirements, prohibitions, and receiving water limitations is the pertinent compliance standard to be used under the Order, as opposed to assessing compliance by reviewing the Copermittees' implementation of their plans alone.

Rather than being substantive components of the Order itself, the Copermittees' management plans are simply descriptions of their runoff management programs required under the Order. These plans serve as procedural correspondence which guides program implementation and aids the Copermittees and San Diego Water Board in tracking implementation of the programs. In this manner, the plans are not functional equivalents of the Order. For these reasons, the Copermittees' runoff management plans need not be an enforceable part of the Order.

**P. Attachment A – Basin Plan Prohibitions**

The following legal authority applies to Attachment A:

**Broad Legal Authority:** CWA sections 402(p)(3)(B)(ii-iii), CWC section 13377, and Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(B, C, E, and F) and 40 CFR 122.26(d)(2)(iv).

**Specific Legal Authority:** CWC section 13243 provides that “A regional board, in a water quality control plan or in waste discharge requirements, may specify certain conditions or areas where the discharge of waste, or certain types of waste, will not be permitted.”

CWC section 13263(a) provides that waste discharge requirements prescribed by the San Diego Water Board implement the Basin Plan.

No significant changes were made to this attachment.

**Q. Attachment B – Standard Provisions**

The following legal authority applies to Attachment B:

**Broad Legal Authority:** CWA sections 402(p)(3)(B)(ii-iii), CWC section 13377, and Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(B, C, E, and F) and 40 CFR 122.26(d)(2)(iv).

**Specific Legal Authority:** Standard provisions, reporting requirements, and notifications are consistent to all NPDES permits and are generally found in Federal NPDES regulation 40 CFR 122.41.

Attachment B includes Standard Provisions which have been developed by the State Water Board. These Standard Provisions ensure that NPDES permits are consistent and compatible with USEPA's federal regulations. Some Standard Provisions sections specific to publicly owned sewage treatment works are not included in Attachment B.

**R. Attachment C – Definitions**

The following legal authority applies to Attachment C:

**Broad Legal Authority:** CWA sections 402(p)(3)(B)(ii-iii), CWC section 13377, and Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(B, C, E, and F) and 40 CFR 122.26(d)(2)(iv).

Attachment C contains definitions for terms found in the Order. In addition, definitions for terms previously defined in Order No. R9-2004-001 Attachment C, but which are not found in the current Order, have been deleted.

An additional section which includes acronyms and abbreviations has been added. This is to ensure clarity and prevent confusion of terms. Definitions have been added for new terms used in the permit to provide a clear understanding of their meaning and use.

**S. Attachment D – Summary of Submittals**

The following legal authority applies to Attachment D:

**Broad Legal Authority:** CWA sections 402(p)(3)(B)(ii-iii), CWC section 13377, 13383, and Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(B, C, E, and F) and 40 CFR 122.26(d)(2)(iv) and 122.44(i).

**Specific Legal Authority:** Federal NPDES regulation 40 CFR 122.42(c) requires that “The operator of a large or medium municipal separate storm sewer system or a municipal separate storm sewer system that has been designated by the director under § 122.26(a)(1)(v) of this part must submit an annual report by the anniversary of the date of the issuance of the permit for such system. The report shall include: (1) The status of implementing the components of the storm water management program that are established as permit conditions; (2) Proposed changes to the storm water management program that are established as permit condition. Such proposed changes shall be consistent with § 122.26(d)(2)(iii) of this part; (3) Revisions, if necessary, to the assessment of controls and the fiscal analysis reported in the permit application under § 122.26(d)(2)(iv) and (d)(2)(v) of this part; (4) A summary of data, including monitoring data, that is accumulated throughout the reporting year; (5) Annual expenditures and budget for year following each annual report; (6) A summary describing the number and nature of enforcement actions, inspections, and public education programs; (7) Identification of water quality improvements or degradation.”

CWC section 13267 provides that “the regional board may require than any person who has discharged [...] shall furnish, under penalty of perjury, technical or monitoring reports which the regional board requires.”

Attachment D to the Order provides a table summary of scheduled submittals required by the Order. Unscheduled submittals are no longer added to the table, since there is no proper due date for such submittals. A task summary has not been created for the Order, since the previous task summary was found to be redundant, repeating information found in the submittal summary and elsewhere in the Order.

A Jurisdictional Runoff Management Program (JRMP) Annual Report Checklist has been added to the reporting requirements. This addition is to determine and ensure that all requirements of the permit are being met. A Jurisdictional Runoff Management Program (JRMP) Annual Report Checklist has been added to the reporting requirements. This addition is to determine and ensure that all requirements of the permit are being met.

## T. Attachment E - Receiving Waters and MS4 Discharge Monitoring and Reporting Program

The following legal authority applies to the Receiving Waters and MS4 Discharge Monitoring and Reporting Program:

**Broad Legal Authority:** CWA sections 402, 402(p)(3)(B)(ii-iii), CWC section 13377, and Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(B, C, E, and F) and 40 CFR 122.26(d)(2)(iv), 122.44 and 122.45.

**Specific Legal Authority:** Federal NPDES regulations 40 CFR 122.26(d)(2)(iii) requires the Copermittees to conduct a comprehensive monitoring program.

Federal NPDES regulation 40 CFR 122.42(c) requires that “The operator of a large or medium municipal separate storm sewer system or a municipal separate storm sewer system that has been designated by the director under § 122.26(a)(1)(v) of this part must submit an annual report by the anniversary of the date of the issuance of the permit for such system. The report shall include: (1) The status of implementing the components of the storm water management program that are established as permit conditions; (2) Proposed changes to the storm water management program that are established as permit condition. Such proposed changes shall be consistent with § 122.26(d)(2)(iii) of this part; (3) Revisions, if necessary, to the assessment of controls and the fiscal analysis reported in the permit application under § 122.26(d)(2)(iv) and (d)(2)(v) of this part; (4) A summary of data, including monitoring data, that is accumulated throughout the reporting year; (5) Annual expenditures and budget for year following each annual report; (6) A summary describing the number and nature of enforcement actions, inspections, and public education programs; (7) Identification of water quality improvements or degradation.”

CWC section 13267 provides that “the regional board may require than any person who has discharged [...] shall furnish, under penalty of perjury, technical or monitoring reports which the regional board requires.”

### I. Purpose

According to USEPA, the benefits of sampling data include, but are not limited to:

1. Providing a means for evaluating the environmental risk of storm water discharges by identifying types and amounts of pollutants present;
2. Determining the relative potential for storm water discharges to contribute to water quality impacts or water quality standard violations;
3. Identifying potential sources of pollutants; and

4. Eliminating or controlling identified sources more specifically through permit conditions.<sup>233</sup>

Equally important, monitoring programs are an essential link in the improvement of storm water management efforts. Data collected from monitoring programs can be assessed to determine the effectiveness of management programs and practices, which is vital for the success of the iterative approach used to meet the MEP standard for storm water. When water quality data indicate that water quality standards or objectives are being exceeded, particular pollutants, sources, and drainage areas can be identified and targeted for specific management efforts. When data indicate that a particular BMP or program component is not effective, improved efforts can be selected and implemented.

Considering the benefits described above, the Receiving Waters Monitoring and Reporting Program (MRP) has been designed to determine impacts to receiving water quality and beneficial uses from storm water runoff and to use the results to refine the Copermitees' storm water runoff management programs for the reduction of storm water pollutant loadings to the MEP. For non-storm water discharges, monitoring has been designed to identify and eliminate prohibited illicit discharges and to determine appropriate actions to take in response to dry weather non-storm water action levels. Additionally, the results from dry weather non-storm water monitoring can be used to evaluate exempted non-storm water discharges as a source or conveyance of pollutants. The primary goals of the MRP include:

1. Assess compliance with Order No. R9-2010-0016;
2. Measure and improve the effectiveness of the Copermitees' runoff management programs;
3. Assess the chemical, physical, and biological impacts of receiving waters from MS4 discharges;
4. Characterize storm water runoff discharges;
5. Identify sources of specific pollutants;
6. Prioritize drainage and sub-drainage areas that need management actions;
7. Detect and eliminate illicit discharges and illicit connections to the MS4;
8. Assess the overall health of receiving waters; and
9. Provide information to implement required BMP improvements

Each of the components of the MRP is necessary to meet the objectives listed above. In addition, the MRP has been designed in accordance with the guidance provided by the Southern California Stormwater Monitoring Coalition's Model Monitoring Technical Committee in its August 2004 "Model Monitoring Program for Municipal Separate Storm Sewer Systems in Southern California." This guidance document was developed in response to Senate Bill 72 (Kuehl), which addressed the standardization of sampling and analysis protocols in municipal storm water monitoring programs. The technical committee which developed the guidance included representatives from

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<sup>233</sup> USEPA, 1992. NPDES Storm Water Sampling Guidance Document. EPA/833-B-92-001.

Southern California Regional Water Boards (including the San Diego Water Board), municipal storm water Copermittees (including Riverside County Flood Control District), Heal the Bay, and the Southern California Coastal Water Research Project.

As its title suggests, the guidance essentially developed a model municipal storm water monitoring program for use in Southern California. The model program is structured around five fundamental management questions, outlined below. The MRP is designed as an iterative step towards ensuring that the Copermittees' monitoring program can fully answer each of the five management questions.

1. Are conditions in receiving waters protective, or likely to be protective, of beneficial uses?
2. What is the extent and magnitude of the current or potential receiving water problems?
3. What is the relative storm water runoff contribution to the receiving water problem(s)?
4. What are the sources of storm water runoff that contribute to receiving water problem(s)?
5. Are conditions in receiving waters getting better or worse?

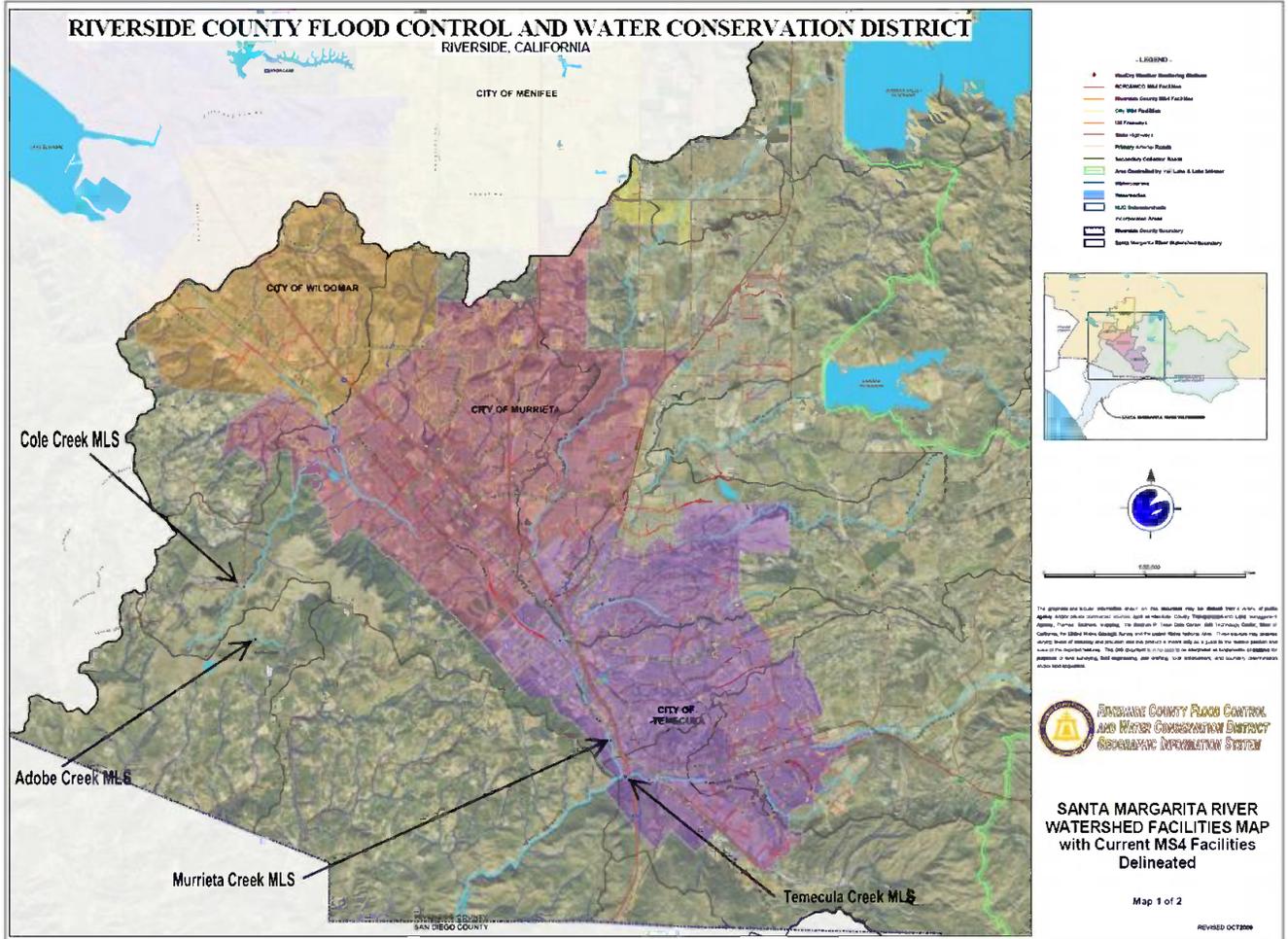
The three MS4 NPDES permits within San Diego Water Board jurisdiction each have very similar core monitoring requirements that include receiving water monitoring, effluent monitoring, and special studies (see Finding E.12 and Discussion). The justifications for each component of the monitoring program are discussed below.

## **II. Monitoring Program**

The Monitoring Program has been organized into distinct sections and includes receiving water monitoring, MS4 effluent monitoring, a monitoring program in high priority inland aquatic habitat, and special studies. Each monitoring program is expected to answer specific questions and achieve goals outlined in section I. Some of these questions require the linkage of both receiving water monitoring and MS4 discharge monitoring that is required in the Order. As such, the Monitoring Program has been written to allow the Copermittees to utilize the same data and/or sampling effort where monitoring requirements overlap. For example, the Copermittees may elect to develop a Trash Special Study where the sampling is done at the same location and time as stream assessment monitoring. The Copermittees may evaluate the goals and questions of the Monitoring Program when evaluating how required monitoring programs may overlap.

**Section II.A.1** (Mass Loading Station Monitoring) of the MRP requires mass loading and toxicity monitoring at monitoring stations located at the bottom of the Riverside County portion of the Santa Margarita watershed (see figure below).

**Locations of Mass Loading Stations (MLS) under Order No. R9-2004-0001**



The intent of current mass loading monitoring as conducted by the Copermitttees under Order No. R9-2004-001 is to use water chemistry data from storm events and dry weather flows to calculate pollutant loads and to assess water quality with respect to applicable acute and chronic toxicity criteria from the California Toxics Rule (CTR) and bioassessment as part of the triad monitoring approach.<sup>234</sup> The mass loading monitoring that is required by the Order will provide data representing event mean concentrations of pollutants, total pollutant loadings, and toxicity conditions from specific drainage areas. Mass loading monitoring stations are recommended by the Model Monitoring Technical Committee in order to answer management questions 1, 2, and 5.<sup>235</sup> The stations are also expected to contribute towards meeting MRP goals

<sup>234</sup> Riverside County Copermitttees. 2009. Report of Waste Discharge, section 6.4 .

<sup>235</sup> Model Monitoring Technical Committee, 2004. Model Monitoring Program for Municipal Separate Storm Sewer Systems in Southern California. Chapter 5.

1, 2, 3, 4, 6, and 8. The locations of the mass loading monitoring stations are not changed from Order No. R9-2004-001. The MRP, however, retains flexibility to allow the Copermittees to propose changing the location of a mass loading station. The Copermittees may also propose additional mass loading stations should they determine more are needed. The Copermittees will identify a permanent mass loading reference station for the permit term.

Some revisions to the required list of constituents to be monitored at mass loading stations have been made. The changes are made to be compatible with the federal NPDES regulations and in response to data collected during the current permit term. Audits of the Copermittees' monitoring program and reviews of annual reports during the last permit term have found consistent shortcomings in the Copermittees' monitoring programs. As a result, some changes have been made to the monitoring requirements. The changes include:

1. All events must now include: Biological Oxygen Demand, 5-day Chemical Oxygen Demand, Total Organic Carbon, Dissolved Organic Carbon. These are specifically required by 40 CFR 122.26(d)(2)(iii)(A) and (B), but were omitted from collection and reporting required by Order No. R9-2004-001.
2. Carbamate and Pyrethroid pesticides must be monitored. Pyrethroid pesticides were identified from TIEs conducted in response to toxicity observed during sampling as part of the triad approach at Temecula and Murrieta Creek. Long term monitoring of pesticide presence is critical to evaluate Copermittees BMP efforts and program effectiveness. Carbamate pesticides are utilized in residential, agricultural and commercial applications, and have been shown to have negative direct and indirect impacts on aquatic invertebrates and vertebrates, as well as associated riparian species.<sup>236</sup> In addition, the National Marine Fisheries Service (NMFS) issued a Biological Opinion in 2009 that concluded pesticide products containing carbaryl and carbofuran are likely to jeopardize 22 listed salmonids, including Southern California Steelhead.<sup>237</sup>
3. Impaired water body pollutants. Specific pollutants have been added in response to the U.S. Environmental Protection Agency approval of California's 2004-2006 and the San Diego Water Board approval of the 2008 303(d) List.

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<sup>236</sup> See:

Boone and James. 2003. Interactions of an insecticide, herbicide, and natural stressors in amphibian community mesocosms. *Ecological Applications*: 13(3) pp. 829-841.

Hanazato. 2001. Pesticide effects on freshwater zooplankton: an ecological perspective. *Environmental Pollution*: 112 pp. 1-10.

USGS. 1999. Field Manual of Wildlife Diseases: General Field Procedures and Diseases of Birds. Chapter 39.

California Department of Pesticide Regulation. 2010. Urban Pesticide Monitoring in Northern and Southern California. <http://www.cdpr.ca.gov/docs/emon/surfwtr/presentations.htm>

<sup>237</sup> NMFS. 2009. Endangered Species Act Section 7 Consultation Biological Opinion: Environmental Protection Agency Registration of Pesticides Containing Carbaryl, Carbofuran, and Methomyl.

4. A requirement to collect a grab sample for total petroleum hydrocarbons whenever a sheen is observed has been added based upon results from IC/ID programs in existing southern California NPDES MS4 permits.
5. The required organisms for toxicity testing have changed from the previous order to be consistent with USEPA guidance.<sup>238</sup> *Ceriodaphnia dubia* (water flea) has been replaced with *Pimephales promelas* (fathead minnow) to provide at least three test species from different phyla. *Hyalella azteca* has been retained as a test organism due to sensitivity to pyrethroid pesticides.
6. A constituent-specific table has been added to provide clarity to the list of pollutants that are required to be monitored as part of the triad approach.
7. More prescriptive reporting requirements have been added in the event the Copermittees fail to monitor the required number of mass loading events.

**Section II.A.2** (Stream Assessment Monitoring) of the MRP requires the Copermittees to conduct bioassessment monitoring using a multiple lines of evidence approach which includes collection of benthic macroinvertebrates and algae, a full physical habitat assessment, water chemistry sampling, and toxicity testing. Bioassessment monitoring is a cost-effective tool that measures the effects of water quality over time.<sup>239</sup> It is an important indicator of stream health and impacts from storm water and non-storm water runoff. It can detect impacts that chemical and toxicity monitoring alone cannot. USEPA encourages permitting authorities to consider requiring biological monitoring methods in conjunction with chemical and toxicity testing to fully characterize the nature and extent of impacts from runoff.<sup>240</sup> Therefore, the San Diego Water Board commonly requires bioassessment monitoring in MS4 and other types of discharge permits.

Bioassessment is the direct measurement of the biological, chemical, and physical condition, and attainment of beneficial uses of receiving waters (typically using benthic macroinvertebrates, periphyton, and fish). Bioassessment monitoring integrates the effects of both water chemistry (including toxicity) and physical habitat impacts (e.g., sedimentation or erosion) of various discharges on the biological community native to the receiving waters. Moreover, bioassessment is a direct measurement of the impact of cumulative, sub-lethal doses of pollutants that may be below reasonable water chemistry detection limits, but that still have biological affects.

Because bioassessment focuses on communities of living organisms as integrators of cumulative impacts resulting from water quality or habitat degradation, it defines the ecological risks resulting from storm water and non-storm water MS4 runoff.

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<sup>238</sup> USEPA, 1991. Technical Support Document for Water Quality Based Toxics Control. EPA 505-2-90-001.

<sup>239</sup> California Department of Fish and Game, 2002. California Regional Water Quality Control Board, San Diego Region 2002 Biological Assessment Report: Results of May 2001 Reference Site Study and Preliminary Index of Biotic Integrity.

<sup>240</sup> USEPA, 1999. Rapid Bioassessment Protocols for Use in Wadeable Streams and Rivers. EPA 841-B-99-002. P. 2-5.

Bioassessment not only identifies that an impact has occurred, but also measures the effect of the impact and tracks recovery when control or restoration measures have been taken. These features make bioassessment a powerful tool to assess compliance, evaluate the effectiveness of BMPs, and to track both short and long-term trends (MRP goals 1, 2, 3, and 8). Bioassessment can also help answer management questions 1, 2, and 5.

The Order also identifies the most current established protocol to be used in identifying bioassessment reference stations. The protocol referenced in the Order is specified because it provides a qualitative and repeatable method for identifying reference sites. Moreover, the protocol is well established, since it has been peer reviewed and published.

The Order includes four significant modifications to the bioassessment monitoring required under Order No. R9-2004-001. These changes include:

1. Bioassessment monitoring must be consistent with the State Water Board's Surface Water Ambient Monitoring Program (SWAMP) Standard Operating Procedures (SOP) as amended.<sup>241</sup>
2. Bioassessment monitoring is to include an assessment of periphyton (algae).<sup>242</sup> Advantages of bioassessment using periphyton include: (1) they have rapid reproduction rates and very short life cycles, making them valuable indicators of short-term impacts; (2) as primary producers, they are most directly affected by physical and chemical factors; (3) sampling is easy and inexpensive; and (4) algal assemblages are sensitive to some pollutants which may not visibly affect other aquatic assemblages.<sup>243</sup> Future bioassessment must use algal IBI scores, when developed.
3. The number of bioassessment stations has been increased from three to six. The Copermittees currently conduct bioassessment monitoring at one reference station and at the two mass loading stations at Temecula and Murrieta Creek. The increase in required sampling is needed to evaluate more localized impacts higher in the Santa Margarita Hydrologic Unit (HU) in conjunction with SAL and NAL monitoring, as well as to evaluate any impacts that occur from hydromodification. The additional required reference station will aid in detecting any differences in bioassessment scores over time that may be independent of MS4 discharges.
4. The bioassessment section title has been changed to Stream Assessment Monitoring. This was done to prevent confusion by the Copermittees in

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<sup>241</sup> SWAMP February 2007 (amended September 2008). Standard Operating Procedures for Collecting Benthic Macroinvertebrate Samples and Associated Physical and Chemical Data for Ambient Bioassessments in California

<sup>242</sup> SWAMP June 2009. Standard Operating Procedures for Collecting Stream Algae Samples and Associated Physical Habitat and Chemical Data for Ambient Bioassessments in California.

<sup>243</sup> USEPA, 1999. Rapid Bioassessment Protocols for Use in Wadeable Streams and Rivers. EPA 841-B-99-002. P. 3-3.

understanding sampling differences between mass loading stations and bioassessment sites. Under Order No. 2004-0001 all bioassessment sites were co-located with mass loading stations. Thus, the collection of water chemistry and toxicity data was done simultaneously for mass loading and bioassessment purposes, which prevented duplicative water chemistry and toxicity testing. For new "Stream Assessment Monitoring" sites not located at mass loading stations, the nomenclature for monitoring has been changed to prevent possible misinterpretation of the term "bioassessment" to mean only the collection of benthic macroinvertebrates and physical habitat data.

**Section II.A.3** (Follow-up Analysis and Actions) of the MRP requires the Copermittees to use the results of the receiving water monitoring to determine if impacts from MS4 discharges are occurring and when follow-up actions are necessary. The triad approach allows a wide range of measurements to be combined to more efficiently identify pollutants, their sources, and appropriate follow-up actions. Results from the three types of monitoring must be assessed to evaluate the extent and causes of pollution in receiving waters and to prioritize management actions to eliminate or reduce the sources. The framework provided is to be used to determine conclusions from the data and appropriate follow-up actions. The framework is proposed by the Copermittees and derived from the Model Monitoring Program for Municipal Separate Storm Sewer Systems in Southern California.<sup>244</sup> These follow-up actions are expected to primarily help answer management questions 2 and 4, as well as address MRP goals 2, 4, 5, 6 and 7.

When, based on the framework in Table 3 of the MRP, data indicates the presence of toxic pollutants in runoff, the Copermittees are required to conduct a Toxicity Identification Evaluation (TIE). A TIE is a set of procedures used to identify the specific chemical(s) responsible for toxicity to aquatic organisms. When discharges are toxic to a test organism, a TIE must be conducted to confirm potential constituents of concern and rule out others, therefore allowing Copermittees to determine and prioritize appropriate management actions. If a sample is toxic to more than one species, it is necessary to determine the toxicant(s) affecting each species. If the type and source of pollutants can be identified based on the data alone and an analysis of potential sources in the drainage area, a TIE is not necessary.

When a TIE identifies a pollutant associated with MS4 discharge as a cause of toxicity, it is then necessary to conduct follow-up actions to identify the causative agents of toxicity, isolate the sources of toxicity, evaluate the effectiveness of toxicity control options, and then confirm the reduction in toxicity. Follow-up actions should analyze all potential source(s) causing toxicity, potential BMPs to eliminate or reduce the pollutants causing toxicity, and suggested monitoring to demonstrate that toxicity has been removed.

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<sup>244</sup> Model Monitoring Technical Committee, 2004. Model Monitoring Program for Municipal Separate Storm Sewer Systems in Southern California. P. 5-61.

**Section II.A.4** (Regional Monitoring Programs) of the MRP identifies that the San Diego Water Board recognizes the importance of regional monitoring efforts to answer monitoring questions and/or address problems that may not be specific to only the Santa Margarita hydrologic unit (see Finding E.12 and Discussion). Additionally, the Copermittees' jurisdiction does not encompass the entire Santa Margarita hydrologic unit, as portions of the hydrologic unit include, but are not limited to, San Diego County, tribal lands, the Cleveland National Forest, and Marine Corps Base at Camp Pendleton.

**Section II.B** (Wet Weather MS4 Discharge Monitoring) of the MRP requires the Copermittees to develop and implement a program, in accordance with 40 CFR 122.26(d)(2)(iii), to monitor and characterize pollutants in discharges of storm water effluent from major MS4 outfalls. Currently the Copermittees do not monitor the discharge of storm water from the MS4 outfalls. As a result, a substantial amount of information regarding the quality of MS4 effluent is unknown, and in-stream stations monitored under R9-2004-001 have not accurately characterized MS4 effluent data during the permit term.<sup>245</sup> The collection of wet-weather MS4 effluent data will enable the Copermittees to assess the effectiveness of existing storm water BMP measures, estimate cumulative annual pollutant loads from MS4 storm water discharges, and estimate seasonal pollutant loads from individual major outfalls. This data can be used to more effectively target storm water management program efforts. The MRP also requires compliance with section D of the Order for Storm Water Action Levels.

The monitoring of outfalls is expected to be used to identify storm drains that are discharging pollutants in concentrations that may pose a threat to receiving waters. Source investigations are expected to be conducted as a response to the data. The Copermittees are required to monitor for those pollutants in 40CFR 122.26(d)(2)(iii)(B); for 303(d) listed pollutants for the Santa Margarita Hydrologic Unit; and for pollutants with Storm Water Action Levels.

The MRP provides the Copermittees great flexibility in assigning stations and sampling frequency for wet-weather monitoring. Copermittees are to propose the number and frequency of monitoring stations, thus proposing the overall cost of their program. The San Diego Water Board will review the proposed program to ensure it will comply with Federal regulations and section D of the Order for Storm Water Action Levels.

The monitoring requirements also include a requirement to measure receiving water hardness when comparing storm water MS4 discharge data to Storm Water Action Levels for priority pollutants (e.g. metals). The effect of these constituents upon receiving waters will vary depending upon the hardness of receiving waters.

**Section II.B.2** (Source Identification Monitoring) requires the Copermittees to develop and implement a program to identify sources of discharges of pollutants causing the high priority water quality problems within each hydrologic subarea. The current

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<sup>245</sup> Riverside County Copermittees. 2009. Report of Waste Discharge, section 5.1.

source identification monitoring program conducted by the Copermitees has not been demonstrated to be effective due to the continued receiving water monitoring that documents persistent exceedances of water quality objectives for 303(d) listed pollutants, as well as the listing of new water bodies and pollutants (see Finding C.7). Furthermore, all monitoring conducted under Order R9-2004-001 focused on receiving water conditions rather than MS4 effluent discharges. Outside of required toxicity identification and reduction evaluations, little to no source identification was conducted for observed exceedances of water quality standards in receiving waters.

Identification of sources causing high priority water quality problems is a central purpose of storm water runoff management programs. Monitoring which enables the Copermitees to identify sources of water quality problems aids the Copermitees in focusing their management efforts, improving their programs and choosing additional and/or better BMPs. In turn, the Copermitees' programs can abate identified sources, which will improve the quality of storm water runoff discharges and receiving waters. This monitoring is needed to address management questions 3 and 4, in addition to ensuring that pollutants in storm water discharges from the MS4 are reduced to the MEP. Moreover, in its review of the San Diego County Copermitees' monitoring proposal, Tetra Tech, Inc. finds that "after some years of assessment monitoring, it is time to look more systematically at determining the relative urban contributions and the sources of urban runoff that contribute to identified receiving water problems."<sup>246</sup>

**Section II.C** (Non-Storm Water Dry Weather Action Levels) of the MRP describes the monitoring to be conducted by the Copermitees to determine compliance with dry weather, non-storm water action levels.

The section for Dry Weather Non-Storm Water Action Level Monitoring has taken the place of Illicit Discharge Detection and Elimination Monitoring under the previous Order. This change is required to assess compliance with action levels for non-storm water discharges from the MS4 into receiving waters while the Copermitees simultaneously conduct Illicit Discharge Detection and Elimination activities. The prior Order did not require the testing of non-storm water MS4 effluent prior to discharge into receiving waters, and thus Illicit Discharge Detection and Elimination Monitoring was conducted in receiving waters that were technically considered part of the MS4 but did not necessarily contain solely MS4 effluent. Discussions between the San Diego Water Board and Copermitees identified this shortcoming, which is reflected in the Copermitees Annual Reports (2007-08 and 2008-09), and the Copermitees have requested the point of monitoring for non-storm water be changed to sample MS4 effluent.<sup>247</sup> The required sampling frequency has great flexibility and allows Copermitees to sample a representative number of discharge points while the sampling methodology continues to be grab sampling. Additionally, the selection of representative outfalls or other identified stations has been clarified to ensure that those selected are consistent with federal requirements under 40 CFR 122.26(d) and section C of the Order.

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<sup>246</sup> Tetra Tech Inc., 2006. Review of San Diego County MS4 Monitoring Program.

<sup>247</sup> Riverside County Copermitees ROWD, January 2009. Section 7.8.2.

**Section II.C.2** (Source Identification Monitoring) requires the Copermittees to develop and implement a program to identify the sources of pollutants in non-storm water discharges. The section provides clarification that the program must utilize action levels pursuant to section C of the Order as a source identification response criteria. The source identification monitoring program is required under sections C, F.4.d, and F.4.e of the Order and to comply with 40 CFR 122.26(d)(2)(iv)(B), which requires the Copermittees have a program to detect and remove illicit discharges into the MS4.

**Section II.D** (High Priority Inland Aquatic Habitat) of the MRP describes required monitoring to be done in order to assess if MS4 storm water and/or non-storm water discharges are affecting high priority aquatic and/or riparian species. The existing monitoring program does almost all monitoring at or near mass loading stations, which are located at and below the confluence of multiple major hydrologic subareas. While this approach may estimate cumulative loadings and impacts from entire hydrologic areas, it provides little information regarding localized impacts to receiving waters subject to MS4 discharges, especially for high priority habitats. This approach is also recommended by the Southern California Stormwater Monitoring Coalition's Model Monitoring Technical Committee as an integral part of a storm water monitoring program. The Model Monitoring Technical Committee, which includes a member from RCFCD, recommends the use of "site-specific stations focused on the status of high-priority inland habitats of concern, with monitoring based primarily on the Triad approach for dry weather sampling and on chemistry and toxicity for wet weather."<sup>248</sup>

The monitoring of MS4 discharges into high-priority inland habitats is of special importance to the species which rely on the habitat subject to the discharge. The Santa Margarita River, and its tributaries, has been designated with BIOL, WARM, COLD, RARE and WILD beneficial uses, in part due to the presence of threatened and endangered species.<sup>249</sup> Portions of the Santa Margarita HU also include areas designated as critical habitat by state and Federal agencies. Federal and State threatened and endangered species are particularly susceptible to negative direct and indirect effects of MS4 discharges because the habitat available to them has already been reduced, restricted, and/or degraded, and their populations have already been reduced to low levels.<sup>250</sup> Therefore, short-term or chronic degradation of habitat or exposure to pollutants caused by MS4 discharges results in a proportionally high level of negative impact to already impacted beneficial uses. Threatened or endangered species with reduced habitat availability may be restricted from avoiding pollutants associated with MS4 discharges,<sup>251</sup> and any reproductive impacts from pollutants would likely have significant negative effects on already low population sizes.

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<sup>248</sup> Model Monitoring Technical Committee, 2004. Model Monitoring Program for Municipal Separate Storm Sewer Systems in Southern California.

<sup>249</sup> See Federal Register 50 CFR 71.11 and the California Code of Regulations, Title 14 Section 670.5.

<sup>250</sup> Carroll, R., Augspurger, C., Dobson, A., Franklin, J., Orians, G., Reid, W., Tracy, R., Wilcove, D. and J. Wilson. 1996. Strengthening the use of science in achieving the goals of the Endangered Species Act: An Assessment by the Ecological Society of America. *Ecological Applications*. 6(1) pp. 1-11.

<sup>251</sup> For example, see National Marine Fisheries Service Draft Southern Steelhead Recovery Plan, July 2009.

Information regarding the extent of environmentally-sensitive habitats is available from sources familiar to the Copermittees.<sup>252</sup> Examples include the Western Riverside Multiple Species Habitat Conservation Plan, Santa Margarita HU assessments conducted by the U.S. Army Corps of Engineers, and California Department of Fish and Game Ecological Reserves. Therefore, a relatively small level of effort will be required to collect information to determine high priority inland aquatic habitats. In addition, the Copermittees already are required to have updated inventories of inland MS4 outfall locations. As a result, a monitoring plan can be developed within 36 months to address the new requirement.

**Section II.E.2 (Sediment Toxicity Study)** includes a requirement that the Copermittees conduct a sediment toxicity special study. This study has been added to the Monitoring and Reporting requirements to assess the quality of stream sediments and possible contamination due to runoff from the MS4. Toxicity tests focusing on aqueous toxicity may not account for the full toxicity of receiving waters if constituents, such as heavy metals or pesticides, are bound to sediments. Southern California studies have shown that stream sediments can exhibit significant levels of toxic metals and pesticides, including pyrethroids.<sup>253,254</sup> Additionally, the Copermittees have identified the presence of aqueous toxicity at both mass loading stations due to pyrethroid pesticides, but their presence in sediments is unknown.

**Section II.E.3 (Trash and Litter Investigation)** includes a requirement that the Copermittees conduct a Trash and Litter Investigation (see Finding C.8 and Discussion). The objective of the study is to evaluate the quantity, type, and source(s) of trash and litter in receiving waters (see Finding E.12 and Discussion regarding regional efforts). Although trash can impair beneficial uses, the amount and type of trash discharged into receiving waters from the Copermittee(s) MS4 is unknown. Thus, the Copermittees have largely been unable to assess the effectiveness of their BMPs that target trash as a pollutant. The special study requires the Copermittees to utilize previously developed protocols to determine the source of trash and litter in receiving waters, assess BMP effectiveness, and implement additional BMPs if needed according to the requirements of the Order. Qualitative and quantitative protocols for trash assessment have already been developed for San Diego County and the San Francisco Bay Region. These protocols are required to be used in the development of the special study, are expected to reduce Copermittee costs, and promote regional consistency in trash and litter assessments.

**Section II.E.4 (Agricultural, Federal and Tribal Input Study)** includes a requirement for the Copermittees to draft and subsequently conduct a special study to determine the water quality of storm water flows which are entering their MS4 from agricultural,

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<sup>252</sup> See Riverside County Copermittees ROWD, January 2009. Section 4.3.3.

<sup>253</sup> Holmes, R.W., Anderson, B.S., Phillips, B.M., Hunt, J.W., Crane, D.B., Mekebri, A. and V. Connor. 2008. Statewide Investigation of the Role of Pyrethroid Pesticides in Sediment Toxicity in California's Urban Waterways. *Environmental Science Technology* 42: 7003-7009.

<sup>254</sup> Crane, D.B. and C. Younghans-Haug. 1992. Oxadiazon residue concentrations in sediment, fish, and shellfish from a combined residential/agricultural area in Southern California. *Bulletin of Environmental Contamination and Toxicology*. Volume 48, no. 4.

federal and tribal areas. The objective of the study is to determine the type, quantity and estimated loading of pollutants in these discharges. In the ROWD, the Copermittees specifically state their concern regarding the quality of storm water which is discharged into their MS4 from such areas, and state that these discharges may affect overall water quality, primarily in the Murrieta and Temecula Creek watersheds.<sup>255</sup> However, no data, information, or analyses were presented or identified on the level of pollutants in such flows into their MS4. The special study has been designed with sampling frequency and parameter requirements that lend flexibility to the Copermittees. The minimum requirements are limited to grab samples for pollutants expected to be present in storm water discharges and at a number of representative sites chosen by the Copermittees. The special study requires testing to be source specific (e.g. only sampling discharge into from one of the three sources) and does not allow for sampling to be done on co-mingled flows within the MS4. Additionally, the Copermittees may elect to conduct composite sampling, toxicity testing, more targeted sites, or a combination thereof.

**Section II.E.5** (MS4 and Receiving Water Maintenance Study) includes a requirement that the Copermittees investigate impacts to Beneficial Uses from routine removal of vegetation from portions of the MS4 that are also receiving waters (see Finding D.3.c and Discussion). The objective of the study is to determine if there are short-term or long-term in-stream water quality impacts from maintenance activities and to assess if the activities exacerbate the impairment of receiving waters 303(d) listed as impaired wholly or partially from MS4 discharges. Receiving waters within the Copermittees jurisdiction have been routinely cleared of vegetation by the Copermittees as part of their MS4 maintenance programs without mitigation efforts. The in-stream modification of vegetation may result in changes in water quality and Beneficial Uses from changes in nutrient cycling, the storage of organic matter, infiltration, flow attenuation, temperature and erosion potential.<sup>256,257,258</sup> The relative contribution, if any, of maintenance activities to CWA 303(d) water quality impairments is unknown. The program is also expected to work in conjunction with other permit requirements of the Order. For example, the Copermittees may choose to utilize study results when implementing the HMP, LID, and retrofitting programs.

**Section II.E.6** (Intermittent and Ephemeral Stream Perennial Conversion Study) includes a study to assess specifically exempted non-storm water discharges<sup>259</sup> into surface waters and discharges into MS4s covered under a separate NPDES permit in order to determine if the exempted discharges and/or separate NPDES discharges to the MS4 are causing or contributing to a condition of pollution, contamination or nuisance. For ephemeral and intermittent inland surface waters, modification of flows

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<sup>255</sup> Riverside County Copermittees ROWD, January 2009. Sections 3.2 and 3.3.

<sup>256</sup> Fischenich, J.C. and R.R. Copeland. 2001. Environmental Considerations for Vegetation in Flood Control Channels. US Army Corps of Engineers.

<sup>257</sup> Shade et al. 2005. Hydrologic exchange and N uptake by riparian vegetation in an arid-land stream. *Journal of North American Benthological Society*. 24(1):19–28.

<sup>258</sup> Warner, R.E. and K.M. Hendrix. 1984. California Riparian Systems: Ecology, Conservation, and Productive Management. pp. 160-189. University of California Press.

<sup>259</sup> See Finding C.15 of the Order for discussion of exempted non-storm water discharges.

may impact beneficial uses through modification of in-stream ecology including, but not limited to, sediment transport, biogeochemical functioning, water temperature, non-native species presence and exclusion of native species.<sup>260,261</sup> The objective of the study is to determine if the alteration of natural in-stream hydrologic regimes from intermittent or ephemeral to perennial due to exempted non-storm water discharges has modified the beneficial uses of the receiving water. The evaluation includes both qualitative and quantitative measurements of parameters which will help the Copermittees determine if exempted discharges and/or separate NPDES discharges into the MS4 are causing a condition of pollution, contamination, or nuisance. Such a determination would potentially require an action to be taken by the Copermittee(s) (i.e. prohibition of an exempted discharge), permit modification for a separate NPDES permit, and/or an action by the San Diego Water Board.

**Section II.F** (Monitoring Provisions) of the MRP includes monitoring provisions which are standard requirements for all municipal storm water permits.

### III. Reporting Program

**Section III** of the MRP discusses submittal of the Planned Monitoring Program, the Receiving Waters and MS4 Discharge Monitoring Annual Reports, and Interim Reporting Requirements. For the purposes of Receiving Waters and MS4 Discharge Monitoring and Reporting Program, required reviews and approvals by the San Diego Water Board of draft monitoring plans, proposals or protocols shall be conducted by the San Diego Water Board Executive Officer.

**Section III.C** (Table of Reporting Requirements) has been added to the MRP to provide a quick reference for all required reporting dates found in the MRP

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<sup>260</sup> Naiman, R.J., Bunn, S.E., Nilsson, C., Petts, G.E., Pinay, G., and L.C. Thompson. 2002. Legitimizing Fluvial Ecosystems as Users of Water: An Overview. *Environmental Management*. 30(4) pp. 455-467.

<sup>261</sup> Marchetti, M.P., Light, T., Moyle, P.B. and J.H. Viers. 2004. Fish Invasions in California Watersheds: Testing Hypotheses Using Landscape Patterns. *Ecological Applications*. 14(5) pp. 1507-1525.

**U. Attachment F - Source Data**

Attachment F contains data utilized for the development of Storm Water Action Levels and Non-storm Water Action Levels.

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
SAN DIEGO REGION**

**ORDER NO. R9-2013-0001,  
AS AMENDED BY ORDER NOS. R9-2015-0001 AND R9-2015-0100  
NPDES NO. CAS0109266**

**NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT  
AND WASTE DISCHARGE REQUIREMENTS FOR  
DISCHARGES FROM THE MUNICIPAL SEPARATE STORM SEWER SYSTEMS (MS4s)  
DRAINING THE WATERSHEDS WITHIN THE SAN DIEGO REGION**

The San Diego County Copermittees in Table 1a are subject to waste discharge requirements set forth in this Order.

**Table 1a. San Diego County Copermittees**

City of Carlsbad	City of Oceanside
City of Chula Vista	City of Poway
City of Coronado	City of San Diego
City of Del Mar	City of San Marcos
City of El Cajon	City of Santee
City of Encinitas	City of Solana Beach
City of Escondido	City of Vista
City of Imperial Beach	County of San Diego
City of La Mesa	San Diego County Regional Airport Authority
City of Lemon Grove	San Diego Unified Port District
City of National City	

The Orange County Copermittees in Table 1b are subject to waste discharge requirements set forth in this Order.

**Table 1b. Orange County Copermittees<sup>1</sup>**

City of Aliso Viejo	City of Rancho Santa Margarita
City of Dana Point	City of San Clemente
City of Laguna Beach	City of San Juan Capistrano
City of Laguna Hills	City of Laguna Woods
City of Laguna Niguel	County of Orange
City of Mission Viejo	Orange County Flood Control District

<sup>1</sup> While not listed in Table 1b., the City of Lake Forest remains a Copermittee under this Order until the later effective date of this Order or the effective date of Santa Ana Water Board Tentative Order No. R8-2015-0001. Thereafter, the City of Lake Forest will no longer be considered a Copermittee under this Order because its Phase I MS4 discharges will be regulated by the Santa Ana Water Board pursuant to Water Code section 13228 designation. The requirements of this Order that apply to the City of Lake Forest for the duration of this Order, however, are described in Finding 29 and Footnote 2 to Table B-1.

The Riverside County Copermittees in Table 1c are subject to waste discharge requirements set forth in this Order.

**Table 1c. Riverside County Copermittees**

City of Murrieta	County of Riverside
City of Temecula	Riverside County Flood Control and Water Conservation District
City of Wildomar	

The term Copermittee in this Order refers to any San Diego County, Orange County, or Riverside County Copermittee covered under this Order, unless specified otherwise.

This Order provides permit coverage for the Copermittee discharges described in Table 2.

**Table 2. Discharge Locations and Receiving Waters**

Discharge Points	Locations throughout San Diego Region
Discharge Description	Municipal Separate Storm Sewer System (MS4) Discharges
Receiving Waters	Inland Surface Waters, Enclosed Bays and Estuaries, and Coastal Ocean Waters of the San Diego Region

**Table 3. Administrative Information**

This Order was adopted by the San Diego Water Board on:	<b>May 8, 2013</b>
Order No. R9-2013-0001 became effective on:	<b>June 27, 2013</b>
This Order as amended by R9-2015-0001 became effective on:	<b>April 1, 2015</b>
This Order as amended by R9-2015-0100 became effective on:	<b>January 7, 2016</b>
This Order will expire on:	<b>June 27, 2018</b>
The Copermittees 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.	

I, David W. Gibson, 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, San Diego Region, on May 8, 2013, as amended by adoption of Order No. R9-2015-0001 on February 11, 2015, and as amended by adoption of Order No. R9-2015-0100 on November 18, 2015.



David W. Gibson  
 Executive Officer

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## I. FINDINGS

The California Regional Water Quality Control Board, San Diego Region (San Diego Water Board), finds that:

### *JURISDICTION*

- 1. MS4 Ownership or Operation.** Each of the Copermitees owns or operates an MS4, through which it discharges storm water and non-storm water into waters of the U.S. within the San Diego Region. These MS4s fall 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) a small MS4 that is "interrelated" to a medium or large MS4; or (3) an MS4 which contributes to a violation of a water quality standard; or (4) an MS4 which is a significant contributor of pollutants to waters of the U.S.
- 2. Legal and Regulatory Authority.** This Order is issued pursuant to section 402 of the federal Clean Water Act (CWA) and implementing regulations (Code of Federal Regulations [CFR] Title 40, Part 122 [40 CFR 122]) adopted by the United States Environmental Protection Agency (USEPA), and chapter 5.5, division 7 of the California Water Code (CWC) (commencing with section 13370). This Order serves as an NPDES permit for discharges from MS4s to surface waters. This Order also serves as waste discharge requirements (WDRs) pursuant to article 4, chapter 4, division 7 of the CWC (commencing with section 13260).

The San Diego Water Board has the legal authority to issue a regional MS4 permit pursuant to its authority under CWA section 402(p)(3)(B) and 40 CFR 122.26(a)(1)(v). The USEPA also made it clear that the permitting authority, in this case the San Diego Water Board, has the flexibility to establish system- or region-wide permits (55 Federal Register [FR] 47990, 48039-48042). The regional nature of this Order will ensure consistency of regulation within watersheds and is expected to result in overall cost savings for the Copermitees and San Diego Water Board.

The federal regulations make it clear that the Copermitees need only comply with permit conditions relating to discharges from the MS4s for which they are operators (40 CFR 122.26(a)(3)(vi)). This Order does not require the Copermitees to manage storm water outside of their jurisdictional boundaries, but rather to work collectively to improve storm water management within watersheds.

- 3. CWA NPDES Permit Conditions.** Pursuant to CWA section 402(p)(3)(B), NPDES permits for storm water discharges from MS4s must include requirements to effectively prohibit non-storm water discharges into MS4s, and require controls to reduce the discharge of pollutants in storm water to the maximum extent practicable (MEP), and to require other provisions as the San Diego Water Board determines are appropriate to control such pollutants. This Order prescribes conditions to assure compliance with the CWA requirements for owners and operators of MS4s to effectively prohibit non-storm water discharges into the MS4s, and require controls to reduce the discharge of pollutants in storm water from the MS4s to the MEP.

**4. CWA and CWC Monitoring Requirements.** CWA section 308(a) and 40 CFR 122.41(h),(j)-(l) and 122.48 require that NPDES permits must specify monitoring and reporting requirements. Federal regulations applicable to large and medium MS4s also specify additional monitoring and reporting requirements in 40 CFR 122.26(d)(1)(iv)(D), 122.26(d)(1)(v)(B), 122.26(d)(2)(i)(F), 122.26(d)(2)(iii)(D), 122.26(d)(2)(iv)(B)(2) and 122.42(c). CWC section 13383 authorizes the San Diego Water Board to establish monitoring, inspection, entry, reporting and recordkeeping requirements. This Order establishes monitoring and reporting requirements to implement federal and State requirements. This Order also includes requirements for the Orange County Copermittees to participate in, and together with South Orange County Wastewater Authority and Orange County Health Care Agency, share responsibility for implementing the unified approach to beach water quality monitoring and assessment program set forth in the October 2014 report, *Workgroup Recommendation for a Unified Beach Water Quality Monitoring and Assessment Program in South Orange County*, issued pursuant to CWC section 13383 in the San Diego Water Board December 5, 2014 Letter Directive.

**5. Total Maximum Daily Loads.** CWA section 303(d)(1)(A) requires that “[e]ach state shall identify those waters within its boundaries for which the effluent limitations are not stringent enough to implement any water quality standard applicable to such waters.” The CWA also requires states to establish a priority ranking of impaired water bodies known as Water Quality Limited Segments and to establish Total Maximum Daily Loads (TMDLs) for such waters. This priority list of impaired water bodies is called the Clean Water Act Section 303(d) List of Water Quality Limited Segments, commonly referred to as the 303(d) List. The CWA requires the 303(d) List to be updated every two years.

TMDLs are numerical calculations of the maximum amount of a pollutant that a water body can assimilate and still meet water quality standards. A TMDL is the sum of the allowable loads of a single pollutant from all contributing point sources (waste load allocations or WLAs) and non-point sources (load allocations or LAs), background contribution, plus a margin of safety. Discharges from MS4s are point source discharges. The federal regulations (40 CFR 122.44(d)(1)(vii)(B)) require that NPDES permits incorporate water quality based effluent limitations (WQBELs) developed to protect a narrative water quality criterion, a numeric water quality criterion, or both, consistent with the assumptions and requirements of any available WLA for the discharge. Requirements of this Order implement the TMDLs established by the San Diego Water Board or USEPA as of the date this Order was amended in 2015. This Order establishes WQBELs consistent with the assumptions and requirements of all available TMDL WLAs assigned to discharges from the Copermittees’ MS4s.

**6. Non-Storm Water Discharges.** Pursuant to CWA section 402(p)(3)(B)(ii), this Order requires each Copermittee to effectively prohibit discharges of non-storm water into its MS4. Nevertheless, non-storm water discharges into and from the

MS4s continue to be reported to the San Diego Water Board by the Copermittees and other persons. Monitoring conducted by the Copermittees, as well as the 303(d) List, have identified dry weather, non-storm water discharges from the MS4s as a source of pollutants causing or contributing to receiving water quality impairments in the San Diego Region. The federal regulations (40 CFR 122.26(d)(2)(iv)(B)(1)) require the Copermittees to have a program to prevent illicit discharges to the MS4. The federal regulations, however, allow for specific categories of non-storm water discharges or flows to be addressed as illicit discharges only where such discharges are identified as sources of pollutants to waters of the U.S.

- 7. In-Stream Treatment Systems.** Pursuant to federal regulations (40 CFR 131.10(a)), in no case shall a state adopt waste transport or waste assimilation as a designated use for any waters of the U.S. Authorizing the construction of a runoff treatment facility within a water of the U.S., or using the water body itself as a treatment system or for conveyance to a treatment system, would be tantamount to accepting waste assimilation as an appropriate use for that water body. Runoff treatment must occur prior to the discharge of runoff into receiving waters. Treatment control best management practices (BMPs) must not be constructed in waters of the U.S. Construction, operation, and maintenance of a pollution control facility in a water body can negatively impact the physical, chemical, and biological integrity, as well as the beneficial uses, of the water body.

#### *DISCHARGE CHARACTERISTICS AND RUNOFF MANAGEMENT*

- 8. Point Source Discharges of Pollutants.** Discharges from the MS4s contain waste, as defined in the CWC, and pollutants that adversely affect the quality of the waters of the state. A discharge from an MS4 is a “discharge of pollutants from a point source” into waters of the U.S. as defined in the CWA. Storm water and non-storm water discharges from the MS4s contain pollutants that cause or threaten to cause a violation of surface water quality standards, as outlined in the Water Quality Control Plan for the San Diego Basin (Basin Plan). Storm water and non-storm water discharges from the MS4s are subject to the conditions and requirements established in the Basin Plan for point source discharges.
- 9. Potential Beneficial Use Impairment.** The discharge of pollutants and/or increased flows from MS4s may cause or threaten to cause the concentration of pollutants to exceed applicable receiving water quality objectives and impair or threaten to impair designated beneficial uses resulting in a condition of pollution, contamination, or nuisance.
- 10. Pollutants Generated by Land Development.** Land development has created and continues to create new sources of non-storm water discharges and pollutants in storm water discharges as human population density increases. This brings higher levels of car emissions, car maintenance wastes, municipal sewage, pesticides, household hazardous wastes, pet wastes, and trash. Pollutants from these sources are dumped or washed off the surface by non-storm water or storm water flows into

and from the MS4s. When development converts natural vegetated pervious ground cover to impervious surfaces such as paved highways, streets, rooftops, and parking lots, the natural absorption and infiltration abilities of the land are lost. Therefore, runoff leaving a developed area without BMPs that can maintain pre-development runoff conditions will contain greater pollutant loads and have significantly greater runoff volume, velocity, and peak flow rate than pre-development runoff conditions from the same area.

**11. Runoff Discharges to Receiving Waters.** The MS4s discharge runoff into lakes, drinking water reservoirs, rivers, streams, creeks, bays, estuaries, coastal lagoons, the Pacific Ocean, and tributaries thereto within the eleven hydrologic units comprising the San Diego Region. Historic and current development makes use of natural drainage patterns and features as conveyances for runoff. Rivers, streams and creeks in developed areas used in this manner are part of the Copermittees' MS4s regardless of whether they are natural, anthropogenic, or partially modified features. In these cases, the rivers, streams and creeks in the developed areas of the Copermittees' jurisdictions are both an MS4 and receiving water. Numerous receiving water bodies and water body segments have been designated as impaired by the San Diego Water Board pursuant to CWA section 303(d).

**12. Pollutants in Runoff.** The most common pollutants in runoff discharged from the MS4s include total suspended solids, sediment, pathogens (e.g., bacteria, viruses, protozoa), heavy metals (e.g., cadmium, copper, lead, and zinc), petroleum products and polynuclear aromatic hydrocarbons, synthetic organics (e.g., pesticides, herbicides, and PCBs), nutrients (e.g., nitrogen and phosphorus), oxygen-demanding substances (e.g., decaying vegetation, animal waste), detergents, and trash. As operators of the MS4s, the Copermittees cannot passively receive and discharge pollutants from third parties. By providing free and open access to an MS4 that conveys discharges to waters of the U.S., the operator essentially accepts responsibility for discharges into the MS4 that it does not prohibit or otherwise control. These discharges may cause or contribute to a condition of pollution or a violation of water quality standards.

**13. Human Health and Aquatic Life Impairment.** Pollutants in runoff discharged from the MS4s can threaten and adversely affect human health and aquatic organisms. Adverse responses of organisms to chemicals or physical agents in runoff range from physiological responses such as impaired reproduction or growth anomalies to mortality. Increased volume, velocity, rate, and duration of storm water runoff greatly accelerate the erosion of downstream natural channels. This alters stream channels and habitats and can adversely affect aquatic and terrestrial organisms.

**14. Water Quality Effects.** The Copermittees' water quality monitoring data submitted to date documents persistent exceedances of Basin Plan water quality objectives for runoff-related pollutants at various watershed monitoring stations. Persistent toxicity has also been observed at several watershed monitoring stations. In addition, bioassessment data indicate that the majority of the monitored receiving waters have

Poor to Very Poor Index of Biological Integrity (IBI) ratings. These findings indicate that runoff discharges are causing or contributing to water quality impairments, and are a leading cause of such impairments in the San Diego Region. Non-storm water discharges from the MS4s have been shown to contribute significant levels of pollutants and flow in arid, developed Southern California watersheds, and contribute significantly to exceedances of applicable receiving water quality objectives.

**15. Non-Storm Water and Storm Water Discharges.** Non-storm water discharges from the MS4s are not considered storm water discharges and therefore are not subject to the MEP standard of CWA section 402(p)(3)(B)(iii), which is explicitly for “Municipal ... *Stormwater Discharges* (emphasis added)” from the MS4s. Pursuant to CWA 402(p)(3)(B)(ii), non-storm water discharges into the MS4s must be effectively prohibited.

**16. Best Management Practices.** Waste and pollutants which are deposited and accumulate in MS4 drainage structures will be discharged from these structures to waters of the U.S. unless they are removed. These discharges may cause or contribute to, or threaten to cause or contribute to, a condition of pollution in receiving waters. For this reason, pollutants in storm water discharges from the MS4s can be and must be effectively reduced in runoff by the application of a combination of pollution prevention, source control, and treatment control BMPs. Pollution prevention is the reduction or elimination of pollutant generation at its source and is the best “first line of defense.” Source control BMPs (both structural and non-structural) minimize the contact between pollutants and runoff, therefore keeping pollutants onsite and out of receiving waters. Treatment control BMPs remove pollutants that have been mobilized by storm water or non-storm water flows.

**17. BMP Implementation.** Runoff needs to be addressed during the three major phases of development (planning, construction, and use) in order to reduce the discharge of storm water pollutants to the MEP, effectively prohibit non-storm water discharges, and protect receiving waters. Development which is not guided by water quality planning policies and principles can result in increased pollutant load discharges, flow rates, and flow durations which can negatively affect receiving water beneficial uses. Construction sites without adequate BMP implementation result in sediment runoff rates which greatly exceed natural erosion rates of undisturbed lands, causing siltation and impairment of receiving waters. Existing development can generate substantial pollutant loads which are discharged in runoff to receiving waters. Retrofitting areas of existing development with storm water pollutant control and hydromodification management BMPs is necessary to address storm water discharges from existing development that may cause or contribute to a condition of pollution or a violation of water quality standards.

**18. Water Quality Improvements.** Since 1990, the Copermittees have been developing and implementing programs and BMPs intended to effectively prohibit non-storm water discharges to the MS4s and control pollutants in storm water

discharges from the MS4s to receiving waters. As a result, several water body / pollutant combinations have been de-listed from the CWA Section 303(d) List, beach closures have been significantly reduced, and public awareness of water quality issues has increased. The Copermitttees have been able to achieve improvements in water quality in some respects, but significant improvements to the quality of receiving waters and discharges from the MS4s are still necessary to meet the requirements and objectives of the CWA.

**19. Long Term Planning and Implementation.** Federal regulations require municipal storm water permits to expire 5 years from adoption, after which the permit must be renewed and reissued. The San Diego Water Board recognizes that the degradation of water quality and impacts to beneficial uses of the waters in the San Diego Region occurred over several decades. The San Diego Water Board further recognizes that a decade or more may be necessary to realize demonstrable improvement to the quality of waters in the San Diego Region. This Order includes a long term planning and implementation approach that will require more than a single permit term to complete.

#### *WATER QUALITY STANDARDS*

**20. Basin Plan.** The San Diego Water Board adopted the Water Quality Control Plan for the San Diego Basin (Basin Plan) on September 8, 1994, that designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for receiving waters addressed through the plan. The Basin Plan was subsequently approved by the State Water Resources Control Board (State Water Board) on December 13, 1994. Subsequent revisions to the Basin Plan have also been adopted by the San Diego Water Board and approved by the State Water Board. Requirements of this Order implement the Basin Plan.

The Basin Plan identifies the following existing and potential beneficial uses for inland surface waters in the San Diego Region: Municipal and Domestic Supply (MUN), Agricultural Supply (AGR), Industrial Process Supply (PROC), Industrial Service Supply (IND), Ground Water Recharge (GWR), Contact Water Recreation (REC1), Non-contact Water Recreation (REC2), Warm Freshwater Habitat (WARM), Cold Freshwater Habitat (COLD), Wildlife Habitat (WILD), Rare, Threatened, or Endangered Species (RARE), Freshwater Replenishment (FRSH), Hydropower Generation (POW), and Preservation of Biological Habitats of Special Significance (BIOL). The following additional existing and potential beneficial uses are identified for coastal waters of the San Diego Region: Navigation (NAV), Commercial and Sport Fishing (COMM), Estuarine Habitat (EST), Marine Habitat (MAR), Aquaculture (AQUA), Migration of Aquatic Organisms (MIGR), Spawning, Reproduction, and/or Early Development (SPWN), and Shellfish Harvesting (SHELL).

**21. Ocean Plan.** The State Water Board adopted the Water Quality Control Plan for Ocean Waters of California, California Ocean Plan (Ocean Plan) in 1972 and amended it in 1978, 1983, 1988, 1990, 1997, 2000, and 2005. The State Water Board adopted the latest amendment on October 16, 2012 and it became effective on August 19, 2013. The Ocean Plan is applicable, in its entirety, to point source discharges to the ocean. Requirements of this Order implement the Ocean Plan.

The Ocean Plan identifies the following beneficial uses of ocean waters of the state to be protected: Industrial water supply; water contact and non-contact recreation, including aesthetic enjoyment; navigation; commercial and sport fishing; mariculture; preservation and enhancement of designated Areas of Special Biological Significance; rare and endangered species; marine habitat; fish spawning and shellfish harvesting.

**22. Sediment Quality Control Plan.** On September 16, 2008, the State Water Board adopted the Water Quality Control Plan for Enclosed Bays and Estuaries – Part 1 Sediment Quality (Sediment Quality Control Plan). The Sediment Quality Control Plan became effective on August 25, 2009. The Sediment Quality Control Plan establishes: 1) narrative sediment quality objectives for benthic community protection from exposure to contaminants in sediment and to protect human health, and 2) a program of implementation using a multiple lines of evidence approach to interpret the narrative sediment quality objectives. Requirements of this Order implement the Sediment Quality Control Plan.

**23. National Toxics Rule and California Toxics Rule.** USEPA adopted the National Toxics Rule (NTR) on December 22, 1992, and later amended it on May 4, 1995 and November 9, 1999. About forty criteria in the NTR applied in California. On May 18, 2000, USEPA adopted the California Toxics Rule (CTR). The CTR promulgated new toxics criteria for California and, in addition, incorporated the previously adopted NTR criteria that were applicable in the state. The CTR was amended on February 13, 2001. These rules contain water quality criteria for priority pollutants.

**24. Antidegradation Policy.** This Order is in conformance with the federal Antidegradation Policy described in 40 CFR 131.12, and State Water Board Resolution No. 68-16, *Statement of Policy with Respect to Maintaining High Quality Waters in California*. Federal regulations at 40 CFR 131.12 require that the State water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy in State Water Board Resolution No. 68-16. State Water Board Resolution No. 68-16 incorporates the federal antidegradation policy where the federal policy applies under federal law. State Water Board Resolution No. 68-16 requires that existing quality of waters be maintained unless degradation is justified based on specific findings. The Basin Plan implements, and incorporates by reference, both the State and federal antidegradation policies. The Fact Sheet of this Order contains additional discussion about antidegradation.

**25. Anti-Backsliding Requirements.** Section 402(o)(2) 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 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 effluent limitations in the previous permits. The Fact Sheet of this Order contains additional discussion about anti-backsliding.

#### *CONSIDERATIONS UNDER FEDERAL AND STATE LAW*

**26. Coastal Zone Act Reauthorization Amendments.** Section 6217(g) of the Coastal Zone Act Reauthorization Amendments of 1990 (CZARA) 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 source pollution: agriculture, silviculture, urban, marinas, and hydromodification. This Order addresses the management measures required for the urban category, with the exception of septic systems. The runoff management programs developed pursuant to this Order fulfill the need for coastal cities to develop a runoff non-point source plan identified in the Non-Point Source Program Strategy and Implementation Plan. The San Diego Water Board addresses septic systems through the administration of other programs.

**27. Endangered Species Act.** 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 USC sections 1531 to 1544). This Order requires compliance with receiving water limits, and other requirements to protect the beneficial uses of waters of the State. The Copermittees are responsible for meeting all requirements of the applicable Endangered Species Act.

**28. Report of Waste Discharge Process.** The waste discharge requirements set forth in this Order are based upon the Report of Waste Discharge submitted by the San Diego County Copermittees prior to the expiration of Order No. R9-2007-0001 (NPDES No. CAS0109266), the Report of Waste Discharge submitted by the Orange County Copermittees prior to the expiration of Order No. R9-2009-0002 (CAS0108740), and the Report of Waste Discharge submitted by the Riverside County Copermittees prior to the expiration of Order No. R9-2010-0016 (CAS0108766).

The federal regulations (40 CFR 122.21(d)(2)) and CWC section 13376 impose a duty on the Copermittees to reapply for continued coverage through submittal of a Report of Waste Discharge no later than 180 days prior to expiration of a currently effective permit. The expiration date of this Order as shown in Table 3, and requirement to file a Report of Waste Discharge no later than 180 days prior to the

expiration date of the Order, applies jointly to the San Diego County, Orange County, and Riverside County Copermittees.

**29. Regional Water Board Designation.** The Cities of Laguna Hills, Laguna Woods, Lake Forest, Menifee, Murrieta, and Wildomar are located partially within the jurisdictions of the California Regional Water Quality Control Board, Santa Ana Region (Santa Ana Water Board) and the San Diego Water Board and their discharges are subject to regulation by both Regional Water Boards. CWC section 13228 provides a way to streamline the regulation of entities whose jurisdictions straddle the border of two or more Regions. CWC section 13228 is implemented in this Order at the request of these six cities and to ease the regulatory burden of municipalities that lie in both the San Diego Water Board's and the adjacent Santa Ana Water Board's jurisdiction. MS4 discharges from these municipalities are regulated by the San Diego Water Board and Santa Ana Water Board as follows:

- a. Pursuant to CWC section 13228, the Cities of Laguna Hills, Laguna Woods, and Lake Forest submitted written requests that one Regional Water Board be designated to regulate Phase I MS4 discharges for each of the Cities. The Santa Ana Water Board and the San Diego Water Board have entered into an agreement dated February 10, 2015, whereby the Cities of Laguna Woods and Laguna Hills are largely regulated by the San Diego Water Board under this Order, including those portions of the Cities of Laguna Woods and Laguna Hills not within the San Diego Water Board's jurisdiction, upon the effective date of this Order or Santa Ana Water Board Order No. R8-2015-0001, whichever is later. Similarly, the City of Lake Forest, including those portions of the City of Lake Forest within the San Diego Water Board's jurisdiction, is largely regulated by the Santa Ana Water Board under Order No. R8-2015-0001 (NPDES No. CAS618030) upon the later effective date of this Order or Order No. R8-2015-0001. The agreement provides that the City of Lake Forest is required to retain, and continue implementation of, its over-irrigation discharge prohibition in Title 15, Chapter 14.030, List (b) of the City Municipal Code for regulating storm water quality throughout its jurisdiction. The agreement also requires the City of Lake Forest to actively participate during development and implementation of the Aliso Creek Watershed Management Area Water Quality Improvement Plan required pursuant to this Order. Each Regional Water Board retains the authority to enforce provisions of its Phase I MS4 permits issued to each city but compliance will be determined based upon the Phase I MS4 permit in which a particular city is regulated as a Copermittee under the terms of the agreement (Water Code section 13228 (b)). Under the terms of the agreement, any TMDL and associated MS4 permit requirements issued by the San Diego Water Board or the Santa Ana Water Board which include the Cities of Laguna Woods, Laguna Hills or Lake Forest as a responsible party, will be incorporated into the appropriate Phase I MS4 permit by reference. Enforcement of the applicable TMDL will remain with the Regional Water Board which has jurisdiction over the targeted impaired water body. Applicable TMDLs subject to the terms of the agreement include, but are not limited to, the Santa Ana Water Board's San

Diego Creek/Newport Bay TMDL and the San Diego Water Board's Indicator Bacteria Project I Beaches and Creeks TMDL. The San Diego Water Board will periodically review the effectiveness of the agreement during each MS4 permit reissuance. Based on this periodic review the San Diego Water Board may terminate the agreement with Santa Ana Water Board or otherwise modify the agreement subject to the approval of the Santa Ana Water Board.

- b. Pursuant to CWC section 13228, the Cities of Murrieta, Wildomar, and Menifee submitted written requests that one Regional Water Board be designated to regulate Phase I MS4 discharges for each of the Cities. The Santa Ana Water Board and the San Diego Water Board have entered into an agreement dated October 26, 2015, whereby the Cities of Murrieta and Wildomar are largely regulated by the San Diego Water Board under this Order, including those portions of the Cities of Murrieta and Wildomar not within the San Diego Water Board's jurisdiction, upon the effective date of this Order. Similarly, the City of Menifee is largely regulated by the Santa Ana Water Board under Order No. R8-2010-0033 as it may be amended or reissued, including those portions of the City of Menifee within the San Diego Water Board's jurisdiction, upon the effective date of this Order. The agreement also requires the City of Menifee to actively participate during development and implementation of the Santa Margarita River Watershed Management Area Water Quality Improvement Plan required pursuant to this Order. Each Regional Water Board retains the authority to enforce provisions of its Phase I MS4 permits issued to each city but compliance will be determined based upon the Phase I MS4 permit in which a particular city is regulated as a Copermittee under the terms of the agreement (Water Code section 13228 (b)). Under the terms of the agreement, any TMDL and associated MS4 permit requirements issued by the San Diego Water Board or the Santa Ana Water Board which include the Cities of Menifee, Murrieta, or Wildomar as a responsible party, will be incorporated into the appropriate Phase I MS4 permit by reference. Enforcement of the applicable TMDL will remain with the Regional Water Board which has jurisdiction over the targeted impaired water body. Applicable TMDLs subject to the terms of the agreement include, but are not limited to, the Santa Ana Water Board's Lake Elsinore/Canyon Lake Nutrient TMDLs. The San Diego Water Board will periodically review the effectiveness of the agreement during each MS4 permit reissuance. Based on this periodic review the San Diego Water Board may terminate the agreement with Santa Ana Water Board or otherwise modify the agreement subject to the approval of the Santa Ana Water Board.

**30. Integrated Report and Clean Water Act Section 303(d) List.** The San Diego Water Board and State Water Board submit an Integrated Report to USEPA to comply with the reporting requirements of CWA sections 303(d), 305(b) and 314, which lists the attainment status of water quality standards for water bodies in the San Diego Region. USEPA issued its *Guidance for 2006 Assessment, Listing and Reporting Requirements Pursuant to Sections 303(d), 305(b) and 314 of the Clean Water Act* on July 29, 2005, which advocates the use of a five category approach for

classifying the attainment status of water quality standards for water bodies in the Integrated Report. Water bodies included in Category 5 in the Integrated Report indicate at least one beneficial use is not being supported or is threatened, and a TMDL is required. Water bodies included in Category 5 in the Integrated Report are placed on the 303(d) List.

Water bodies with available data and/or information that indicate at least one beneficial use is not being supported or is threatened, but a TMDL is not required, are included in Category 4 in the Integrated Report. Impaired surface water bodies may be included in Category 4 if a TMDL has been adopted and approved (Category 4a); if other pollution control requirements required by a local, state or federal authority are stringent enough to implement applicable water quality standards within a reasonable period of time (Category 4b); or, if the failure to meet an applicable water quality standard is not caused by a pollutant, but caused by other types of pollution (Category 4c).

Implementation of the requirements of this Order may allow the San Diego Water Board to include surface waters impaired by discharges from the Copermittees' MS4s in Category 4 in the Integrated Report for consideration during the next 303(d) List submittal by the State to USEPA.

**31. Economic Considerations.** The California Supreme Court has ruled that although CWC section 13263 requires the State and Regional Water Boards (collectively Water Boards) to consider factors set forth in CWC section 13241 when issuing an NPDES permit, the Water Board may not consider the factors to justify imposing pollutant restrictions that are less stringent than the applicable federal regulations require. (*City of Burbank v. State Water Resources Control Bd.* (2005) 35 Cal.4<sup>th</sup> 613, 618, 626-627.) However, when pollutant restrictions in an NPDES permit are more stringent than federal law requires, CWC section 13263 requires that the Water Boards consider the factors described in CWC section 13241 as they apply to those specific restrictions.

As noted in the following finding, the San Diego Water Board finds that the requirements in this Order are not more stringent than the minimum federal requirements. Therefore, a CWC section 13241 analysis is not required for permit requirements that implement the effective prohibition on the discharge of non-storm water into the MS4 or for controls to reduce the discharge of pollutants in storm water to the MEP, or other provisions that the San Diego Water Board has determined appropriate to control such pollutants, as those requirements are mandated by federal law. Notwithstanding the above, the San Diego Water Board has developed an economic analysis of the requirements in this Order. The economic analysis is provided in the Fact Sheet.

**32. Unfunded Mandates.** This Order does not constitute an unfunded local government mandate subject to subvention under Article XIII B, Section (6) of the California Constitution for several reasons, including, but not limited to, the following:

- a. This Order implements federally mandated requirements under CWA section 402 (33 USC section 1342(p)(3)(B)).
- b. The local agency Copermittees' obligations under this Order are similar to, and in many respects less stringent than, the obligations of non-governmental and new dischargers who are issued NPDES permits for storm water and non-storm water discharges.
- c. The local agency Copermittees have the authority to levy service charges, fees, or assessments sufficient to pay for compliance with this Order.
- d. The Copermittees have requested permit coverage in lieu of compliance with the complete prohibition against the discharge of pollutants contained in CWA section 301(a) (33 USC section 1311(a)) and in lieu of numeric restrictions on their MS4 discharges (i.e. effluent limitations).
- e. 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 XIII B, Section (6) of the California Constitution.
- f. The provisions of this Order to implement TMDLs are federal mandates. The CWA requires TMDLs to be developed for water bodies that do not meet federal water quality standards (33 USC section 1313(d)). Once the USEPA or a state develops a TMDL, federal law requires that permits must contain water quality based effluent limitations consistent with the assumptions and requirements of any applicable wasteload allocation (40 CFR 122.44(d)(1)(vii)(B)).

See the Fact Sheet for further discussion of unfunded mandates.

**33. California Environmental Quality Act.** The issuance of waste discharge requirements and an NPDES permit for the discharge of runoff from MS4s to waters of the U.S. is exempt from the requirement for preparation of environmental documents under the California Environmental Quality Act (CEQA) (Public Resources Code, Division 13, Chapter 3, section 21000 et seq.) in accordance with CWC section 13389.

#### STATE WATER BOARD DECISIONS

**34. Compliance with Prohibitions and Limitations.** The receiving water limitation language specified in this Order is consistent with language recommended by the USEPA and established in State Water Board Order WQ 99-05, *Own Motion Review of the Petition of Environmental Health Coalition to Review Waste Discharge Requirements Order No. 96-03, NPDES Permit No. CAS0108740*, adopted by the State Water Board on June 17, 1999. The receiving water limitation language in this Order requires storm water discharges from MS4s to not cause or contribute to a violation of water quality standards, which is to be achieved through an iterative approach requiring the implementation of improved and better-tailored BMPs over time. Implementation of the iterative approach to comply with receiving water

limitations based on applicable water quality standards is necessary to ensure that storm water discharges from the MS4 will not ultimately cause or contribute to violations of water quality standards and will not create conditions of pollution, contamination, or nuisance.

The San Diego, Orange County, and Riverside County Copermittees have asserted that the prohibitions and limitations may result in many years of noncompliance because years of technical efforts may ultimately be required to achieve compliance with the prohibitions and limitations, especially for wet weather discharges. To address this concern, this Order includes an option that allows a Copermittee to be deemed in compliance with the prohibitions and limitations where more than one permit term may be necessary to achieve full compliance with the prohibitions and limitations. One or more Copermittees within a Watershed Management Area can choose to implement this option.

An alternative compliance pathway option has been included in this Order consistent with the approach described in Order WQ 2015-0075, *In the Matter of Review of Order No. R4-2012-0175, NPDES Permit No. CAS004001, Waste Discharge Requirements for Municipal Separate Storm Sewer System (MS4) Discharges within the Coastal Watersheds of Los Angeles County, Except Those Discharges Originating from the City of Long Beach MS4*, adopted by the State Water Board on June 16, 2015. State Water Board Order WQ 2015-0075 directs the Regional Water Boards to consider a watershed-based planning and implementation approach to compliance with receiving water limitations when issuing Phase I MS4 permits going forward. Order WQ 2015-0075 included seven principles that the Regional Water Boards are expected to follow when incorporating an alternative compliance pathway into an MS4 permit. The Fact Sheet discusses the incorporation of the seven principles stipulated in State Water Board Order WQ 2015-0075 into the alternative compliance pathway option in this Order.

**35. Special Conditions for Areas of Special Biological Significance.** On March 20, 2012, the State Water Board approved Resolution No. 2012-0012 approving a general exception to the Ocean Plan prohibition against discharges to Areas of Special Biological Significance (ASBS) for certain nonpoint source discharges and NPDES permitted municipal storm water discharges (General Exception). On June 19, 2012, the State Water Board adopted Order No. 2012-0031, amending the General Exception to require pollutant reductions to be achieved within six years in accordance with ASBS Compliance Plans and ASBS Pollution Prevention Plans. The General Exception requires monitoring and testing of marine aquatic life and water quality in several ASBS to protect California's coastline during storms when rain water overflows into coastal waters. Specific terms, prohibitions, and special conditions were adopted to provide special protections for marine aquatic life and natural water quality in ASBS. The City of San Diego's municipal storm water discharges to the San Diego Marine Life Refuge in La Jolla, and the City of Laguna Beach's municipal storm water discharges to the Heisler Park ASBS are subject to the terms and conditions of the General Exception as amended. The Special Protections contained in Attachment B to the General Exception as amended are

applicable to these discharges, and are hereby incorporated into Attachment A of this Order.

### *ADMINISTRATIVE FINDINGS*

- 36. Executive Officer Delegation of Authority.** The San Diego Water Board by prior resolution has delegated all matters that may legally be delegated to its Executive Officer to act on its behalf pursuant to CWC section 13223. Therefore, the Executive Officer is authorized to act on the San Diego Water Board's behalf on any matter within this Order unless such delegation is unlawful under CWC section 13223 or this Order explicitly states otherwise.
- 37. Standard Provisions.** Standard Provisions, which apply to all NPDES permits in accordance with 40 CFR 122.41, and additional conditions applicable to specified categories of permits in accordance with 40 CFR 122.42, are provided in Attachment B to this Order.
- 38. Fact Sheet.** The Fact Sheet for this Order contains background information, regulatory and legal citations, references and additional explanatory information and data in support of the requirements of this Order. The Fact Sheet is hereby incorporated into this Order and constitutes part of the Findings of this Order.
- 39. Public Notice.** In accordance with State and federal laws and regulations, the San Diego Water Board notified the Copermittees, and interested agencies and persons of its intent to prescribe waste discharge requirements for the control of discharges into and from the MS4s to waters of the U.S. and has provided them with an opportunity to submit their written comments and recommendations. Details of notification are provided in the Fact Sheet.
- 40. Public Hearings.** The San Diego Water Board held a public hearing on April 10 and 11, 2013, that was continued to May 8, 2013 and heard and considered all comments pertaining to the terms and conditions of this Order. The San Diego Water Board also held a public workshop on October 8, 2015, and a public hearing on February 11, 2015, and heard and considered all comments pertaining to the amendment of this Order through Order No. R9-2015-0001. The San Diego Water Board also held a public hearing on November 18, 2015, and heard and considered all comments pertaining to the amendment of this Order through Order No. R9-2015-0100. Details of these public hearings are provided in the Fact Sheet.
- 41. Effective Date.** This Order serves as an NPDES permit pursuant to CWA section 402 or amendments thereto, and as to the San Diego County Copermittees listed in Table 1a, became effective fifty (50) days after the date of its adoption, and as to the Orange County Copermittees listed in Table 1b, became effective on April 1, 2015, after Order No. R9-2015-0001 was adopted, and as to the Riverside County Copermittees listed in Table 1c, became effective on January 7, 2016, after Order No. R9-2015-0100 was adopted, provided that the Regional Administrator, USEPA, Region IX, does not object to this Order.

**42. Review by the State Water Board.** Any person aggrieved by this action of the San Diego Water Board may petition the State Water Board to review the action in accordance with CWC 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 that 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 on the Internet at: [http://www.waterboards.ca.gov/public\\_notices/petitions/water\\_quality](http://www.waterboards.ca.gov/public_notices/petitions/water_quality) or will be provided upon request.

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**THEREFORE, IT IS HEREBY ORDERED** that the Copermittees, in order to meet the provisions contained in division 7 of the CWC (commencing with section 13000) and regulations adopted thereunder, and the provisions of the CWA and regulations adopted thereunder, must each comply with the requirements of this Order. This action in no way prevents the San Diego Water Board from taking enforcement action for past violations of the previous Order applicable to the Copermittees. If any part of this Order is subject to a temporary stay of enforcement, unless otherwise specified, the Copermittees must comply with the analogous portions of the previous Order, which will remain in effect for all purposes during the pendency of the stay.

## **II. PROVISIONS**

### **A. PROHIBITIONS AND LIMITATIONS**

The purpose of this provision is to describe the conditions under which storm water and non-storm water discharges into and from MS4s are prohibited or limited. The goal of the prohibitions and limitations is to protect the water quality and designated beneficial uses of waters of the state from adverse impacts caused or contributed to by MS4 discharges. This goal will be accomplished through the implementation of water quality improvement strategies and runoff management programs that effectively prohibit non-storm water discharges into the Copermittees' MS4s, and reduce pollutants in storm water discharges from the Copermittees' MS4s to the MEP.

#### **1. Discharge Prohibitions**

- a.** Discharges from MS4s in a manner causing, or threatening to cause, a condition of pollution, contamination, or nuisance in receiving waters of the state are prohibited.
- b.** Non-storm water discharges into MS4s are to be effectively prohibited, through the implementation of Provision E.2, unless such discharges are authorized by a separate NPDES permit.
- c.** Discharges from MS4s are subject to all waste discharge prohibitions in the Basin Plan, included in Attachment A to this Order.
- d.** Storm water discharges from the City of San Diego's MS4 to the San Diego Marine Life Refuge in La Jolla, and the City of Laguna Beach's MS4 to the Heisler Park ASBS are authorized under this Order subject to the Special Protections contained in Attachment B to State Water Board Resolution No. 2012-0012, as amended by State Water Board Resolution No. 2012-0031, applicable to these discharges, included in Attachment A to this Order. All other discharges from the Copermittees' MS4s to ASBS are prohibited.

## 2. Receiving Water Limitations

- a. Discharges from MS4s must not cause or contribute to the violation of water quality standards in any receiving waters, including but not limited to all applicable provisions contained in:
- (1) The San Diego Water Board's Basin Plan, including beneficial uses, water quality objectives, and implementation plans;
  - (2) State Water Board plans for water quality control including the following:
    - (a) Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Waters and Enclosed Bays and Estuaries (Thermal Plan), and
    - (b) The Ocean Plan, including beneficial uses, water quality objectives, and implementation plans;
  - (3) State Water Board policies for water and sediment quality control including the following:
    - (a) Water Quality Control Policy for the Enclosed Bays and Estuaries of California,
    - (b) Sediment Quality Control Plan which includes the following narrative objectives for bays and estuaries:
      - (i) Pollutants in sediments shall not be present in quantities that, alone or in combination, are toxic to benthic communities, and
      - (ii) Pollutants shall not be present in sediments at levels that will bioaccumulate in aquatic life to levels that are harmful to human health,
    - (c) The Statement of Policy with Respect to Maintaining High Quality of Waters in California;<sup>2</sup>
  - (4) Priority pollutant criteria promulgated by the USEPA through the following:
    - (a) National Toxics Rule (NTR)<sup>3</sup> (promulgated on December 22, 1992 and amended on May 4, 1995), and
    - (b) California Toxics Rule (CTR).<sup>4,5</sup>
- b. Discharges from MS4s composed of storm water runoff must not alter natural ocean water quality in an ASBS.

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<sup>2</sup> State Water Board Resolution No. 68-16

<sup>3</sup> 40 CFR 131.36

<sup>4</sup> 65 Federal Register 31682-31719 (May 18, 2000), adding Section 131.38 to 40 CFR

<sup>5</sup> If a water quality objective and a CTR criterion are in effect for the same priority pollutant, the more stringent of the two applies.

### **3. Effluent Limitations**

#### **a. TECHNOLOGY BASED EFFLUENT LIMITATIONS**

Pollutants in storm water discharges from MS4s must be reduced to the MEP.<sup>6</sup>

#### **b. WATER QUALITY BASED EFFLUENT LIMITATIONS**

Each Copermittee must comply with applicable WQBELs established for the TMDLs in Attachment E to this Order, pursuant to the applicable TMDL compliance schedules.

### **4. Compliance with Discharge Prohibitions and Receiving Water Limitations**

Each Copermittee must achieve compliance with Provisions A.1.a, A.1.c and A.2.a of this Order through timely implementation of control measures and other actions as specified in Provisions B and E of this Order, including any modifications. The Water Quality Improvement Plans required under Provision B must be designed and adapted to ultimately achieve compliance with Provisions A.1.a, A.1.c and A.2.a.

**a.** If exceedance(s) of water quality standards persist in receiving waters notwithstanding implementation of this Order, the Copermittees must comply with the following procedures:

(1) For exceedance(s) of a water quality standard in the process of being addressed by the Water Quality Improvement Plan, the Copermittee(s) must implement the Water Quality Improvement Plan as accepted by the San Diego Water Board, and update the Water Quality Improvement Plan, as necessary, pursuant to Provision F.2.c;

(2) Upon a determination by either the Copermittees or the San Diego Water Board that discharges from the MS4 are causing or contributing to a new exceedance of an applicable water quality standard not addressed by the Water Quality Improvement Plan, the Copermittees must submit the following updates to the Water Quality Improvement Plan pursuant to Provision F.2.c or as part of the Water Quality Improvement Plan Annual Report required under Provision F.3.b, unless the San Diego Water Board directs an earlier submittal:

(a) The water quality improvement strategies being implemented that are effective and will continue to be implemented,

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<sup>6</sup> This does not apply to MS4 discharges which receive subsequent treatment to reduce pollutants in storm water discharges to the MEP prior to entering receiving waters (e.g., low flow diversions to the sanitary sewer). Runoff treatment must occur prior to the discharge of runoff into receiving waters per Finding 7.

- (b) Water quality improvement strategies (i.e. BMPs, retrofitting projects, stream and/or habitat rehabilitation projects, adjustments to jurisdictional runoff management programs, etc.) that will be implemented to reduce or eliminate any pollutants or conditions that are causing or contributing to the exceedance of water quality standards,
    - (c) Updates to the schedule for implementation of the existing and additional water quality improvement strategies, and
    - (d) Updates to the monitoring and assessment program to track progress toward achieving compliance with Provisions A.1.a, A.1.c and A.2.a of this Order;
  - (3) The San Diego Water Board may require the incorporation of additional modifications to the Water Quality Improvement Plan required under Provision B. The applicable Copermittees must submit any modifications to the update to the Water Quality Improvement Plan within 90 days of notification that additional modifications are required by the San Diego Water Board, or as otherwise directed;
  - (4) Within 90 days of the San Diego Water Board determination that the modifications to the Water Quality Improvement Plan required under Provision A.4.a.(3) meet the requirements of this Order, the applicable Copermittees must revise the jurisdictional runoff management program documents to incorporate the modified water quality improvement strategies that have been and will be implemented, the implementation schedule, and any additional monitoring required; and
  - (5) Each Copermittee must implement the updated Water Quality Improvement Plan.
- b.** The procedure set forth above to achieve compliance with Provisions A.1.a, A.1.c and A.2.a of this Order do not have to be repeated for continuing or recurring exceedances of the same water quality standard(s) following implementation of scheduled actions unless directed to do otherwise by the San Diego Water Board.
  - c.** Nothing in Provisions A.4.a and A.4.b prevents the San Diego Water Board from enforcing any provision of this Order while the applicable Copermittees prepare and implement the above update to the Water Quality Improvement Plan and jurisdictional runoff management programs.

**B. WATER QUALITY IMPROVEMENT PLANS**

The purpose of this provision is to develop Water Quality Improvement Plans that guide the Copermittees’ jurisdictional runoff management programs towards achieving the outcome of improved water quality in MS4 discharges and receiving waters. The goal of the Water Quality Improvement Plans is to further the Clean Water Act’s objective to protect, preserve, enhance, and restore the water quality and designated beneficial uses of waters of the state. This goal will be accomplished through an adaptive planning and management process that identifies the highest priority water quality conditions within a watershed and implements strategies through the jurisdictional runoff management programs to achieve improvements in the quality of discharges from the MS4s and receiving waters.

**1. Watershed Management Areas**

The Copermittees must develop a Water Quality Improvement Plan for each of the Watershed Management Areas in Table B-1. A total of ten Water Quality Improvement Plans must be developed for the San Diego Region.

**Table B-1. Watershed Management Areas**

Hydrologic Unit(s)	Watershed Management Area	Major Surface Water Bodies	Responsible Copermittees
San Juan (901.00)	South Orange County	<ul style="list-style-type: none"> <li>- Aliso Creek</li> <li>- San Juan Creek</li> <li>- San Mateo Creek</li> <li>- Pacific Ocean</li> <li>- Heisler Park ASBS</li> </ul>	<ul style="list-style-type: none"> <li>- City of Aliso Viejo</li> <li>- City of Dana Point</li> <li>- City of Laguna Beach</li> <li>- City of Laguna Hills<sup>1</sup></li> <li>- City of Laguna Niguel</li> <li>- City of Laguna Woods<sup>1</sup></li> <li>- City of Lake Forest<sup>2</sup></li> <li>- City of Mission Viejo</li> <li>- City of Rancho Santa Margarita</li> <li>- City of San Clemente</li> <li>- City of San Juan Capistrano</li> <li>- County of Orange</li> <li>- Orange County Flood Control District</li> </ul>
Santa Margarita (902.00)	Santa Margarita River	<ul style="list-style-type: none"> <li>- Murrieta Creek</li> <li>- Temecula Creek</li> <li>- Santa Margarita River</li> <li>- Santa Margarita Lagoon</li> <li>- Pacific Ocean</li> </ul>	<ul style="list-style-type: none"> <li>- City of Menifee<sup>3</sup></li> <li>- City of Murrieta<sup>4</sup></li> <li>- City of Temecula</li> <li>- City of Wildomar<sup>4</sup></li> <li>- County of Riverside</li> <li>- County of San Diego</li> <li>- Riverside County Flood Control and Water Conservation District</li> </ul>
San Luis Rey (903.00)	San Luis Rey River	<ul style="list-style-type: none"> <li>- San Luis Rey River</li> <li>- San Luis Rey Estuary</li> <li>- Pacific Ocean</li> </ul>	<ul style="list-style-type: none"> <li>- City of Oceanside</li> <li>- City of Vista</li> <li>- County of San Diego</li> </ul>

**Table B-1. Watershed Management Areas**

Hydrologic Unit(s)	Watershed Management Area	Major Surface Water Bodies	Responsible Copermittees
Carlsbad (904.00)	Carlsbad	- Loma Alta Slough - Buena Vista Lagoon - Agua Hedionda Lagoon - Batiquitos Lagoon - San Elijo Lagoon - Pacific Ocean	- City of Carlsbad - City of Encinitas - City of Escondido - City of Oceanside - City of San Marcos - City of Solana Beach - City of Vista - County of San Diego
San Dieguito (905.00)	San Dieguito River	- San Dieguito River - San Dieguito Lagoon - Pacific Ocean	- City of Del Mar - City of Escondido - City of Poway - City of San Diego - City of Solana Beach - County of San Diego
Penasquitos (906.00)	Penasquitos	- Los Penasquitos Lagoon - Pacific Ocean	- City of Del Mar - City of Poway - City of San Diego - County of San Diego
	Mission Bay	- Mission Bay - Pacific Ocean - San Diego Marine Life Refuge ASBS	- City of San Diego
San Diego (907.00)	San Diego River	- San Diego River - Pacific Ocean	- City of El Cajon - City of La Mesa - City of San Diego - City of Santee - County of San Diego
Pueblo San Diego (908.00) Sweetwater (909.00) Otay (910.00)	San Diego Bay	- Sweetwater River - Otay River - San Diego Bay - Pacific Ocean	- City of Chula Vista - City of Coronado - City of Imperial Beach - City of La Mesa - City of Lemon Grove - City of National City - City of San Diego - County of San Diego - San Diego County Regional Airport Authority - San Diego Unified Port District
Tijuana (911.00)	Tijuana River	- Tijuana River - Tijuana Estuary - Pacific Ocean	- City of Imperial Beach - City of San Diego - County of San Diego

## Notes:

1. By agreement dated February 10, 2015, pursuant to Water Code section 13228, the Phase I MS4 discharges within the jurisdiction of the City of Laguna Hills and the City of Laguna Woods located in the Santa Ana Region are regulated by San Diego Water Board Order No. R9-2013-0001 as amended by Order No. R9-2015-0001, upon the later effective date of Order No. R9-2015-0001 or Santa Ana Water Board Tentative Order No. R8-2015-0001. The City of Laguna Hills and Laguna Woods must also comply with the requirements of the San Diego Creek/Newport Bay TMDL in section XVIII of Santa Ana Water Board Order No. R8-2015-0001.
2. By agreement dated February 10, 2015, pursuant to Water Code section 13228, Phase I MS4 discharges within the City of Lake Forest located within the San Diego Water Board Region are regulated by the Santa Ana Water Board Order No. R8-2015-0001 (NPDES No. CAS618030) upon the later effective date of this Order or Santa Ana Water Board Tentative Order No. R8-2015-0001. In accordance with the terms of the agreement between the San Diego Water Board and the Santa Ana Water Board, the City of Lake Forest must implement the requirements of the Bacteria TMDL in Attachment E of this Order, participate in preparation and implementation of the Water Quality Improvement Plan for the Aliso Creek Watershed Management Area as described in Provision B of this Order and continue implementation of its over-irrigation discharge prohibition in its City Ordinance, Title 15, Chapter 15, section 14.030, List (b).
3. By agreement dated October 26, 2015, pursuant to Water Code section 13228, Phase I MS4 discharges within the City of Menifee located within the San Diego Water Board Region are regulated by the Santa Ana Water Board Order No. R8-2010-0033 as it may be amended or reissued (NPDES No. CAS618033) upon the later effective date of this Order. In accordance with the terms of the agreement between the San Diego Water Board and the Santa Ana Water Board, the City of Menifee must participate in preparation and implementation of the Water Quality Improvement Plan for the Santa Margarita River Watershed Management Area as described in Provision B of this Order.
4. By agreement dated October 26, 2015, pursuant to Water Code section 13228, the Phase I MS4 discharges within the jurisdiction of the City of Murrieta and the City of Wildomar located in the Santa Ana Region are regulated by San Diego Water Board Order No. R9-2013-0001 as amended by Orders No. R9-2015-0001 and R9-2015-0100. The City of Murrieta and City of Wildomar must also comply with the requirements of the Lake Elsinore/Canyon Lake Nutrient TMDLs in section VI.D.2 of Santa Ana Water Board Order No. R8-2010-0033, or corresponding section as it may be amended or reissued.

## **2. Priority Water Quality Conditions**

The Copermittees must identify the water quality priorities within each Watershed Management Area that will be addressed by the Water Quality Improvement Plan. Where appropriate, Watershed Management Areas may be separated into subwatersheds to focus water quality prioritization and jurisdictional runoff management program implementation efforts by receiving water.

### **a. ASSESSMENT OF RECEIVING WATER CONDITIONS**

The Copermittees must consider the following, at a minimum, to identify water quality priorities based on impacts of MS4 discharges on receiving water beneficial uses:

- (1) Receiving waters listed as impaired on the CWA Section 303(d) List of Water Quality Limited Segments (303(d) List);
- (2) TMDLs adopted and under development by the San Diego Water Board;
- (3) Receiving waters recognized as sensitive or highly valued by the Copermittees, including estuaries designated under the National Estuary Program under CWA section 320, marine protected areas, wetlands defined by the State or U.S. Fish and Wildlife Service's National Wetlands Inventory as wetlands, waters having the Preservation of Biological Habitats of Special Significance (BIOL) beneficial use designation, and receiving waters identified as ASBS subject to the provisions of Attachment B to State Water Board Resolution No. 2012-0012 (see Attachment A);
- (4) The receiving water limitations of Provision A.2;
- (5) Known historical versus current physical, chemical, and biological water quality conditions;
- (6) Available, relevant, and appropriately collected and analyzed physical, chemical, and biological receiving water monitoring data, including, but not limited to, data describing:
  - (a) Chemical constituents,
  - (b) Water quality parameters (i.e. pH, temperature, conductivity, etc.),
  - (c) Toxicity Identification Evaluations for both receiving water column and sediment,
  - (d) Trash impacts,

- (e) Bioassessments, and
- (f) Physical habitat;
- (7) Available evidence of erosional impacts in receiving waters due to accelerated flows (i.e. hydromodification);
- (8) Available evidence of adverse impacts to the chemical, physical, and biological integrity of receiving waters; and
- (9) The potential improvements in the overall condition of the Watershed Management Area that can be achieved.

**b. ASSESSMENT OF IMPACTS FROM MS4 DISCHARGES**

The Copermittees must consider the following, at a minimum, to identify the potential impacts to receiving waters that may be caused or contributed to by discharges from the Copermittees' MS4s:

- (1) The discharge prohibitions of Provision A.1 and effluent limitations of Provision A.3; and
- (2) Available, relevant, and appropriately collected and analyzed storm water and non-storm water monitoring data from the Copermittees' MS4 outfalls;
- (3) Locations of each Copermittee's MS4 outfalls that discharge to receiving waters;
- (4) Locations of MS4 outfalls that are known to persistently discharge non-storm water to receiving waters likely causing or contributing to impacts on receiving water beneficial uses;
- (5) Locations of MS4 outfalls that are known to discharge pollutants in storm water causing or contributing to impacts on receiving water beneficial uses; and
- (6) The potential improvements in the quality of discharges from the MS4 that can be achieved.

**c. IDENTIFICATION OF PRIORITY WATER QUALITY CONDITIONS**

- (1) The Copermittees must use the information gathered for Provisions B.2.a and B.2.b to develop a list of priority water quality conditions as pollutants, stressors and/or receiving water conditions that are the highest threat to receiving water quality or that most adversely affect the quality of receiving waters. The list must include the following information for each priority water quality condition:

- (a) The beneficial use(s) associated with the priority water quality condition;
  - (b) The geographic extent of the priority water quality condition within the Watershed Management Area, if known;
  - (c) The temporal extent of the priority water quality condition (e.g., dry weather and/or wet weather);
  - (d) The Copermittees with MS4s discharges that may cause or contribute to the priority water quality condition; and
  - (e) An assessment of the adequacy of and data gaps in the monitoring data to characterize the conditions causing or contributing to the priority water quality condition, including a consideration of spatial and temporal variation.
- (2) The Copermittees must identify the highest priority water quality conditions to be addressed by the Water Quality Improvement Plan, and provide a rationale for selecting a subset of the water quality conditions identified pursuant to Provision B.2.c.(1) as the highest priorities.

**d. IDENTIFICATION OF MS4 SOURCES OF POLLUTANTS AND/OR STRESSORS**

The Copermittees must identify and prioritize known and suspected sources of storm water and non-storm water pollutants and/or other stressors associated with MS4 discharges that cause or contribute to the highest priority water quality conditions identified under Provision B.2.c. The identification of known and suspected sources of pollutants and/or stressors that cause or contribute to the highest priority water quality conditions as identified for Provision B.2.c must consider the following:

- (1) Pollutant generating facilities, areas, and/or activities within the Watershed Management Area, including:
  - (a) Each Copermittee's inventory of construction sites, commercial facilities or areas, industrial facilities, municipal facilities, and residential areas,
  - (b) Publicly owned parks and/or recreational areas,
  - (c) Open space areas,
  - (d) All currently operating or closed municipal landfills or other treatment, storage or disposal facilities for municipal waste, and

- (e) Areas not within the Copermittees' jurisdictions (e.g., Phase II MS4s, tribal lands, state lands, federal lands) that are known or suspected to be discharging to the Copermittees' MS4s;
- (2) Locations of the Copermittees' MS4s, including the following:
- (a) All MS4 outfalls that discharge to receiving waters, and
  - (b) Locations of major structural controls for storm water and non-storm water (e.g., retention basins, detention basins, major infiltration devices, etc.);
- (3) Other known and suspected sources of non-storm water or pollutants in storm water discharges to receiving waters within the Watershed Management Area, including the following:
- (a) Other MS4 outfalls (e.g., Phase II Municipal and Caltrans),
  - (b) Other NPDES permitted discharges,
  - (c) Any other discharges that may be considered point sources (e.g., private outfalls), and
  - (d) Any other discharges that may be considered non-point sources (e.g., agriculture, wildlife or other natural sources);
- (4) Review of available data, including but not limited to:
- (a) Findings from the Copermittees' illicit discharge detection and elimination programs,
  - (b) Findings from the Copermittees' MS4 outfall discharge monitoring,
  - (c) Findings from the Copermittees' receiving water monitoring,
  - (d) Findings from the Copermittees' MS4 outfall discharge and receiving water assessments, and
  - (e) Other available, relevant, and appropriately collected data, information, or studies related to pollutant sources and/or stressors that contribute to the highest priority water quality conditions as identified for Provision B.2.c.
- (5) The adequacy of the available data to identify and prioritize sources and/or stressors associated with MS4 discharges that cause or contribute to the highest priority water quality conditions identified under Provision B.2.c.

**e. IDENTIFICATION OF POTENTIAL WATER QUALITY IMPROVEMENT STRATEGIES**

The Copermittees must evaluate the findings identified under Provisions B.2.a-d, and identify potential strategies that can result in improvements to water quality in MS4 discharges and/or receiving waters within the Watershed Management Area. Potential water quality improvement strategies that may be implemented within the Watershed Management Area must include the following:

- (1) Structural BMPs, non-structural BMPs, incentives, or programs that can potentially be implemented to address the highest priority water quality conditions identified under Provision B.2.c, or MS4 sources of pollutants or stressors identified under Provision B.2.d,
- (2) Retrofitting projects in areas of existing development within the Watershed Management Area that can potentially be implemented to reduce MS4 sources of pollutants or stressors identified under Provision B.2.d causing or contributing to the highest priority water quality conditions identified under Provision B.2.c, and
- (3) Stream, channel, and/or habitat rehabilitation projects within the Watershed Management Area that can potentially be implemented to protect and/or improve conditions in receiving waters from MS4 pollutants and/or stressors identified under Provision B.2.d causing or contributing to the highest priority water quality conditions identified under Provision B.2.c.

**3. Water Quality Improvement Goals, Strategies and Schedules**

The Copermittees must identify and develop specific water quality improvement goals and strategies to address the highest priority water quality conditions identified within a Watershed Management Area. The water quality improvement goals and strategies must address the highest priority water quality conditions by effectively prohibiting non-storm water discharges to the MS4, reducing pollutants in storm water discharges from the MS4 to the MEP, and protecting the water quality standards of receiving waters.

**a. WATER QUALITY IMPROVEMENT GOALS AND SCHEDULES**

**(1) Numeric Goals**

The Copermittees must develop and incorporate numeric goals<sup>7</sup> into the Water Quality Improvement Plan. Numeric goals must be used to support

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<sup>7</sup> Interim and final numeric goals may take a variety of forms such as TMDL established WQBELs, action levels, pollutant concentration, load reductions, number of impaired water bodies delisted from the List of Water Quality Impaired Segments, Index of Biotic Integrity (IBI) scores, or other appropriate metrics. Interim and final numeric goals are not necessarily limited to one criterion or indicator, but may include multiple criteria and/or indicators. Except for TMDL established WQBELs, interim and final numeric goals and corresponding schedules may be revised through the adaptive management process under Provision B.5.

Water Quality Improvement Plan implementation and measure reasonable progress towards addressing the highest priority water quality conditions identified under Provision B.2.c. The Copermittees must establish and incorporate the following numeric goals in the Water Quality Improvement Plan:

- (a) Final numeric goals must be based on measureable criteria or indicators capable of demonstrating one or more of the following:
  - (i) Discharges from the Copermittees' MS4s will not cause or contribute to exceedances of water quality standards in receiving waters, AND/OR
  - (ii) The conditions of receiving waters and associated habitat are protected from MS4 discharges, AND/OR
  - (iii) Beneficial uses of receiving waters are protected from MS4 discharges and will be supported.
  
- (b) Interim numeric goals must be based on measureable criteria or indicators capable of demonstrating reasonable incremental progress toward achieving the final numeric goals in the receiving waters and/or MS4 discharges as follows:
  - (i) One or more interim numeric goals may be established to demonstrate progress toward achieving each final numeric goal,
  - (ii) For each final numeric goal, at least one interim numeric goal must be expressed as a reasonable increment toward achievement of the final numeric goal,
  - (iii) For each final numeric goal, reasonable interim numeric goals must be established to be accomplished during each 5 year period between the acceptance of the Water Quality Improvement Plan and the achievement of the final numeric goals.

## (2) Schedules for Achieving Numeric Goals

The Copermittees must develop and incorporate schedules for achieving the numeric goals into the Water Quality Improvement Plan. The schedules must demonstrate reasonable progress toward achieving the final numeric goals required for Provision B.3.a.(1). The Copermittees must incorporate the schedules for achieving the numeric goals into the Water Quality Improvement Plan based on the following considerations:

- (a) Final dates for achieving all final numeric goals must be established considering the following:

- (i) Final compliance dates for any applicable TMDLs in Attachment E to this Order;
  - (ii) Compliance schedules for any ASBS subject to the provisions of Attachment B to State Water Board Resolution No. 2012-0012 (see Attachment A);
  - (iii) Achievement of the final numeric goals for the highest water quality priorities must be as soon as possible;
  - (iv) Final dates for achieving the final numeric goals must reflect a realistic assessment of the shortest practicable time required based on the temporal and spatial extent and factors associated with the highest priority water quality conditions identified under Provision B.2.c, and taking into account the time reasonably required to implement the water quality improvement strategies required pursuant to Provision B.3.b.
- (b) Interim dates for achieving all interim numeric goals must be established considering the following:
- (i) Interim compliance dates for any applicable TMDLs in Attachment E to this Order;
  - (ii) Compliance schedules for any ASBS subject to the provisions of Attachment B to State Water Board Resolution No. 2012-0012 (see Attachment A);
  - (iii) Interim dates for achieving the interim numeric goals must reflect a realistic assessment of the shortest practicable time reasonably required, taking into account the time needed to implement new or significantly expanded programs and securing financing, if necessary; and
  - (iv) For each final numeric goal, at least one interim numeric goal must be established that the Copermittees will work toward achieving within the term of this Order.

**b. WATER QUALITY IMPROVEMENT STRATEGIES AND SCHEDULES**

Based on the likely effectiveness and efficiency of the potential water quality improvement strategies identified under Provision B.2.e to effectively prohibit non-storm water discharges to the MS4, reduce pollutants in storm water discharges from the MS4 to the MEP, protect the beneficial uses of receiving waters from MS4 discharges, and/or achieve the interim and final numeric goals identified under Provision B.3.a, the Copermittees must identify the strategies that will be implemented in each Watershed Management Area as follows:

(1) Jurisdictional Strategies

- (a) Each Copermittee in the Watershed Management Area must identify the strategies that will be implemented within its jurisdiction as part of its jurisdictional runoff management program requirements under Provisions E.2 through E.7, including descriptions of the following:
- (i) For each of the inventories developed for its jurisdiction, as required under Provisions D.2.a.(1), E.3.e.(2), E.4.b, and E.5.a, each Copermittee must identify the known and suspected areas or sources causing or contributing to the highest priority water quality conditions in the Watershed Management Area that the Copermittee will focus on in its efforts to effectively prohibit non-storm water discharges to its MS4, reduce pollutants in storm water discharges from its MS4 to the MEP, and achieve the interim and final numeric goals identified under Provision B.3.a;
  - (ii) BMPs that each Copermittee will implement, or require to be implemented, as applicable, for those areas or sources within its jurisdiction;
  - (iii) Education programs that each Copermittee will implement, as applicable, for those areas or sources within its jurisdiction;
  - (iv) Frequencies that each Copermittee will conduct inspections on those areas or sources within its jurisdiction;
  - (v) Incentive and enforcement programs that each Copermittee will implement, as applicable, for those areas or sources within its jurisdiction; and
  - (vi) Any other BMPs, incentives, or programs that each Copermittee will implement for those areas or sources within its jurisdiction.
- (b) Identify the optional jurisdictional strategies that each Copermittee will implement within its jurisdiction, as necessary, to effectively prohibit non-storm water discharges to its MS4, reduce pollutants in storm water discharges from its MS4 to the MEP, protect the beneficial uses of receiving waters from MS4 discharges, and/or achieve the interim and final numeric goals identified under Provision B.3.a. Descriptions of the optional jurisdictional strategies must include:
- (i) BMPs, incentives, or programs that may be implemented by the Copermittee within its jurisdiction in addition to the requirements of Provisions B.3.b.(1)(a);
  - (ii) Incentives or programs that may be implemented by the Copermittee to encourage or implement projects to retrofit areas of existing development within its jurisdiction;

- (iii) Incentives or programs that may be implemented by the Copermittee to encourage or implement projects that will rehabilitate the conditions of channels or habitats within its jurisdiction;
  - (iv) The funds and/or resources that must be secured by the Copermittee to implement the optional strategies described for Provisions B.3.b.(1)(b)(i)-(iii) within its jurisdiction; and
  - (v) The circumstances necessary to trigger implementation of the optional jurisdictional strategies, in addition to the requirements of Provision B.3.b.(1)(a), to achieve the interim and final numeric goals within the schedules established under Provision B.3.a.
- (c) Identify the strategies that will be implemented by the Copermittee in coordination with or with the cooperation of other agencies (e.g. Caltrans, water districts, school districts) and/or entities (e.g. non-governmental organizations) within its jurisdiction.

## (2) Watershed Management Area Strategies

The Copermittees must identify the optional regional or multi-jurisdictional strategies that will be implemented in the Watershed Management Area, as necessary, to effectively prohibit non-storm water discharges to the MS4, reduce pollutants in storm water discharges from the MS4 to the MEP, protect the beneficial uses of receiving waters from MS4 discharges, and/or achieve the interim and final numeric goals identified under Provision B.3.a. Descriptions of the optional regional or multi-jurisdictional strategies must include:

- (a) Regional or multi-jurisdictional BMPs, incentives, or programs that may be implemented by the Copermittees in the Watershed Management Area;
- (b) Incentives or programs that may be implemented by the Copermittees in the Watershed Management Area to encourage or implement regional or multi-jurisdictional projects to retrofit areas of existing development;
- (c) Incentives or programs that may be implemented by the Copermittees to encourage or implement regional or multi-jurisdictional projects that will rehabilitate the conditions of channels, streams, or habitats within the Watershed Management Area;
- (d) The funds and/or resources that must be secured by the Copermittees to implement the optional strategies described for Provisions B.3.b.(2)(a)-(c) within the Watershed Management Area; and

- (e) The circumstances necessary to trigger implementation of the optional regional or multi-jurisdictional strategies to achieve the interim and final numeric goals within the schedules established under Provision B.3.a.

### (3) Schedules for Implementing Strategies

The Copermittees must develop reasonable schedules for implementing the water quality improvement strategies identified under Provisions B.3.b.(1) and B.3.b.(2) to achieve the interim and final numeric goals identified and schedules established under Provision B.3.a. The Copermittees must incorporate the schedules to implement the water quality improvement strategies into the Water Quality Improvement Plan as follows:

- (a) Each Copermittee must develop schedules for the jurisdictional strategies identified pursuant to Provisions B.3.b.(1)(a)-(b). Each schedule must specify:
  - (i) If each jurisdictional strategy identified pursuant to Provision B.3.b.(1)(a) will or will not be initiated upon acceptance of the Water Quality Improvement Plan;
  - (ii) For each jurisdictional strategy identified pursuant to Provision B.3.b.(1)(a) that will not be initiated upon acceptance of the Water Quality Improvement Plan, the shortest practicable time in which each jurisdictional strategy will be initiated after acceptance of the Water Quality Improvement Plan;
  - (iii) For each optional jurisdictional strategy identified pursuant to Provision B.3.b.(1)(b), a realistic assessment of the shortest practicable time required to:
    - [a] Secure the resources needed to fund the optional jurisdictional strategy, and
    - [b] Procure the resources, materials, labor, and applicable permits necessary to initiate implementation of the optional jurisdictional strategy;
  - (iv) If each jurisdictional strategy identified pursuant to Provisions B.3.b.(1)(a)-(b) is expected to be continuously implemented (e.g. inspections) or completed within a schedule (e.g. construction of structural BMP); and
  - (v) If a jurisdictional strategy identified pursuant to Provisions B.3.b.(1)(a)-(b) is expected to be completed within a schedule, the anticipated time to complete based on a realistic assessment of the shortest practicable time required.

- (b) The Copermittees in the Watershed Management Area must develop schedules for the regional or multi-jurisdictional strategies identified pursuant to Provision B.3.b.(2). Each schedule must specify:
- (i) A realistic assessment of the shortest practicable time to:
    - [a] Secure the resources needed to fund the optional regional or multi-jurisdictional strategy, and
    - [b] Procure the resources, materials, labor, and permits necessary to initiate the implementation of the optional regional or multi-jurisdictional strategy;
  - (ii) If each regional or multi-jurisdictional strategy identified pursuant to Provision B.3.b.(2) is expected to be continuously implemented (e.g. inspections) or completed within a schedule (e.g. construction of structural BMP); and
  - (iii) If a regional or multi-jurisdictional strategy and/or activity identified pursuant to Provisions B.3.b.(2) is expected to be completed within a schedule, the anticipated time to complete based on a realistic assessment of the shortest practicable time required.

(4) Optional Watershed Management Area Analysis

- (a) For each Watershed Management Area, the Copermittees have the option to perform a Watershed Management Area Analysis for the purpose of developing watershed-specific requirements for structural BMP implementation, as described in Provision E.3.c.(3). The Watershed Management Area Analysis must include GIS layers (maps) as output. The analysis must include the following information, to the extent it is available, in order to characterize the Watershed Management Areas:
- (i) A description of dominant hydrologic processes, such as areas where infiltration or overland flow likely dominates;
  - (ii) A description of existing streams in the watershed, including bed material and composition, and if they are perennial or ephemeral;
  - (iii) Current and anticipated future land uses;
  - (iv) Potential coarse sediment yield areas; and
  - (v) Locations of existing flood control structures and channel structures, such as stream armoring, constrictions, grade control structures, and hydromodification or flood management basins.
- (b) The Copermittees must use the results of the Watershed Management Area Analysis performed pursuant to Provision B.3.b.(4)(a) to identify and compile a list of candidate projects that could potentially be used as

alternative compliance options for Priority Development Projects, to be implemented in lieu of onsite structural BMP performance requirements described in Provisions E.3.c.(1) and E.3.c.(2)(a). Specifically, the Copermittees must identify opportunities to be included in the list of candidate projects in each Watershed Management Area, such as:

- (i) Stream or riparian area rehabilitation;
  - (ii) Retrofitting existing infrastructure to incorporate storm water retention or treatment;
  - (iii) Regional BMPs;
  - (iv) Groundwater recharge projects;
  - (v) Water supply augmentation projects; and
  - (vi) Land purchases to preserve floodplain functions.
- (c) The Copermittees must use the results of the Watershed Management Area Analysis performed pursuant to Provision B.3.b.(4)(a) to identify areas within the Watershed Management Area where it is appropriate to allow Priority Development Projects to be exempt from the hydromodification management BMP performance requirements described in Provision E.3.c.(2), including supporting rationale.

#### **c. PROHIBITIONS AND LIMITATIONS COMPLIANCE OPTION**

Each Copermittee has the option to utilize the implementation of the Water Quality Improvement Plan to demonstrate compliance with the requirements of Provisions A.1.a, A.1.c, A.1.d, A.2, and A.3.b within a Watershed Management Area subject to the following conditions:

- (1) A Copermittee is eligible to be deemed in compliance with Provisions A.1.a, A.1.c, A.1.d, A.2, and A.3.b within a Watershed Management Area when the Water Quality Improvement Plan for a Watershed Management Area incorporates the following:
- (a) Numeric goals, water quality improvement strategies, and schedules developed pursuant to Provisions B.3.a and B.3.b that include the following:
    - (i) Interim and final WQBELs established by the TMDLs in Attachment E to this Order applicable to the Copermittee's jurisdiction within the Watershed Management Area; AND
    - (ii) Interim and final numeric goals for any ASBS subject to the provisions of Attachment B to State Water Board Resolution No. 2012-0012

(included as Attachment A to this Order) applicable to the Copermittee's jurisdiction within the Watershed Management Area; AND

- (iii) Interim and final numeric goals applicable to the Copermittee's MS4 discharges within the Watershed Management Area expressed as numeric concentration-based or load-based goals for all pollutants and conditions listed on the Clean Water Act Section 303(d) List of Water Quality Impaired Segments<sup>8</sup> for the receiving waters in the Watershed Management Area that do not have a TMDL incorporated into Attachment E to this Order; AND/OR
- (iv) Interim and final numeric goals for pollutants and conditions identified as receiving water priorities in the Water Quality Improvement Plan that will result in chemical, physical, and biological conditions protective of the beneficial uses of the receiving waters impacted by the Copermittee's MS4 discharges within the Watershed Management Area; AND
- (v) The Copermittee has the option to include interim and final numeric goals applicable to the Copermittee's MS4 discharges and/or receiving waters within the Watershed Management Area for any pollutants or conditions in addition to those described in Provisions B.3.c.(1)(a)(i)-(iv); AND
- (vi) Schedules for achieving each final numeric goal that reflect a realistic assessment of the shortest practicable time needed for achievement; AND
- (vii) For each final numeric goal developed pursuant to Provisions B.3.a and B.3.c.(1)(a)(i)-(v), annual milestones<sup>9</sup> and the dates for their achievement must be included within each of the next five (5) Water Quality Improvement Plan Annual Report reporting periods, or until the final numeric goal is achieved. Annual milestones and the dates for their achievement for the 5 Water Quality Improvement Plan Annual Report reporting periods of the next permit term, or until the final numeric goal is achieved, must be provided as part of the Report of Waste Discharge required pursuant to Provision F.5.

(b) An analysis that meets all of the following conditions:

- (i) The analysis, with clearly stated assumptions included in the analysis, must quantitatively demonstrate that the implementation of

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<sup>8</sup> 2010 and subsequent 303(d) Lists

<sup>9</sup> Annual milestones for each final numeric goal must be clearly and directly linked to, or demonstrate progress is being made toward the achievement of the final numeric goal. The annual milestones may consist of water quality improvement strategy implementation phases, interim numeric goals, and other acceptable metrics. The annual milestones may address multiple numeric goals and/or multiple water bodies, as applicable and appropriate.

- the water quality improvement strategies required under Provision B.3.b will achieve the final numeric goals within the schedules developed pursuant to Provisions B.3.a and B.3.c.(1)(a).
- (ii) The development of the analysis must include a public participation process which allows the public to review and provide comments on the analysis methodology utilized and the assumptions included in the analysis. Public comments and responses must be included as part of the analysis documentation included in the Water Quality Improvement Plan.
  - (iii) The analysis may be performed by an individual Copermittee or jointly by two or more Copermittees choosing to utilize this compliance option for their jurisdictions within the Watershed Management Area.
  - (iv) The analysis must be updated as part of the iterative approach and adaptive management process required under Provisions B.5.a-b.
- (c) Specific monitoring and assessments required pursuant to Provision B.4.a that will be performed by the Copermittee capable of 1) demonstrating whether the implementation of the water quality improvement strategies are making progress toward achieving the numeric goals in accordance with the established schedules developed pursuant to Provisions B.3.a and B.3.c.(1)(a), and 2) determining whether interim and final numeric goals have been achieved. The specific monitoring and assessments must be updated as part of the iterative approach and adaptive management process required under Provision B.5.c.
- (d) Documentation showing that the numeric goals, schedules, and annual milestones proposed pursuant to Provision B.3.c.(1)(a), the analysis performed pursuant to Provision B.3.c.(1)(b), and the specific monitoring and assessments proposed pursuant to Provision B.3.c.(1)(c) have been reviewed by the Water Quality Improvement Consultation Panel (see Provision F.1.a.(1)(b)). Updates must be reviewed by the Water Quality Improvement Consultation Panel for any recommendations.
- (2) Each Copermittee that voluntarily completes the requirements of Provision B.3.c.(1) is deemed in compliance with Provisions A.1.a, A.1.c, A.1.d, A.2, and A.3.b for the pollutants and conditions for which numeric goals are developed when the Water Quality Improvement Plan, incorporating the requirements of Provision B.3.c.(1), is accepted by the San Diego Water Board pursuant to Provision F.1.b or F.2.c. The Copermittee is deemed in compliance during the term of this Order as long as:
- (a) The Copermittee is implementing the water quality improvement strategies within its jurisdiction developed pursuant to Provision B.3.b.(1) and in

compliance with the schedules for implementing the strategies established pursuant to Provisions B.3.b.(3)(a) and B.3.c.(1)(a)(vii); AND

- (b) The Copermittee is performing the monitoring and assessments developed pursuant to Provision B.3.c.(1)(c); AND
- (c) The Copermittee's assessments in the Water Quality Improvement Plan Annual Report submitted pursuant to Provision F.3.b.(3) support a conclusion that: 1) the Copermittee is in compliance with the annual milestones and dates for achievement developed pursuant to Provision B.3.c.(1)(a)(vii), OR 2) the Copermittee has provided acceptable rationale and recommends appropriate modifications to the interim numeric goals, and/or water quality improvement strategies, and/or schedules to improve the rate of progress toward achieving the final numeric goals developed pursuant to Provisions B.3.a and B.3.c.(1)(a)(i)-(vi); AND
- (d) Any proposed modifications to the numeric goals, strategies, schedules, and/or annual milestones are accepted by the San Diego Water Board as part of subsequent updates to the Water Quality Improvement Plan pursuant to Provision F.2.c;<sup>10</sup> AND
- (e) The Copermittee is implementing the requirements of Provision A.4.a.

#### **4. Water Quality Improvement Monitoring and Assessment Program**

- a. The Copermittees in each Watershed Management Area must develop and incorporate an integrated monitoring and assessment program into the Water Quality Improvement Plan that assesses: 1) the progress toward achieving the numeric goals and schedules, 2) the progress toward addressing the highest priority water quality conditions for each Watershed Management Area, and 3) each Copermittee's overall efforts to implement the Water Quality Improvement Plan.
- b. The monitoring and assessment program must incorporate the monitoring and assessment requirements of Provision D, which may allow the Copermittees to modify the program to be consistent with and focus on the highest priority water quality conditions for each Watershed Management Area.
- c. For Watershed Management Areas with applicable TMDLs, the monitoring and assessment program must incorporate the specific monitoring and assessment requirements of Attachment E.

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<sup>10</sup> A request for proposed changes to the Water Quality Improvement Plan does not stay any permit condition.

- d. For Watershed Management Areas with any ASBS, the water quality monitoring and assessment program must incorporate the monitoring requirements of Attachment B to State Water Board Resolution No. 2012-0012 (see Attachment A).

## **5. Iterative Approach and Adaptive Management Process**

The Copermittees in each Watershed Management Area must implement the iterative approach pursuant to Provision A.4 to adapt the Water Quality Improvement Plan, monitoring and assessment program, and jurisdictional runoff management programs to become more effective toward achieving compliance with Provisions A.1.a, A.1.c and A.2.a, and must include the following:

### **a. RE-EVALUATION OF PRIORITY WATER QUALITY CONDITIONS**

The priority water quality conditions and potential water quality improvement strategies included in the Water Quality Improvement Plan pursuant to Provisions B.2.c and B.2.e may be re-evaluated by the Copermittees as needed during the term of this Order as part of the Water Quality Improvement Plan Annual Report. Re-evaluation and recommendations for modifications to the priority water quality conditions and potential water quality improvement strategies must be provided in the Report of Waste Discharge, and must consider the following:

- (1) Achieving the outcome of improved water quality in MS4 discharges and receiving waters through implementation of the water quality improvement strategies identified in the Water Quality Improvement Plan;
- (2) New information developed when the requirements of Provisions B.2.a-c have been re-evaluated;
- (3) Spatial and temporal accuracy of monitoring data collected to inform prioritization of water quality conditions and implementation strategies to address the highest priority water quality conditions;
- (4) Availability of new information and data from sources other than the jurisdictional runoff management programs within the Watershed Management Area that informs the effectiveness of the actions implemented by the Copermittees;
- (5) San Diego Water Board recommendations; and
- (6) Recommendations for modifications solicited through a public participation process.

**b. ADAPTATION OF GOALS, STRATEGIES AND SCHEDULES**

The water quality improvement goals, strategies and schedules, included in the Water Quality Improvement Plan pursuant to Provisions B.3, must be re-evaluated and adapted as new information becomes available to result in more effective and efficient measures to address the highest priority water quality conditions identified pursuant to Provision B.2.c. Re-evaluation of and modifications to the water quality improvement goals, strategies and schedules must be provided in the Water Quality Improvement Plan Annual Report, and must consider the following:

- (1) Modifications to the priority water quality conditions based on Provision B.5.a;
- (2) Progress toward achieving interim and final numeric goals in receiving waters and MS4 discharges for the highest priority water quality conditions in the Watershed Management Area,
- (3) Progress toward achieving outcomes according to established schedules;
- (4) New policies or regulations that may affect identified numeric goals;
- (5) Measurable or demonstrable reductions of non-storm water discharges to and from each Copermittee's MS4;
- (6) Measurable or demonstrable reductions of pollutants in storm water discharges from each Copermittee's MS4 to the MEP;
- (7) New information developed when the requirements of Provisions B.2.b and B.2.d have been re-evaluated;
- (8) Efficiency in implementing the Water Quality Improvement Plan;
- (9) San Diego Water Board recommendations; and
- (10) Recommendations for modifications solicited through a public participation process.

**c. ADAPTATION OF MONITORING AND ASSESSMENT PROGRAM**

The water quality improvement monitoring and assessment program, included in the Water Quality Improvement Plan pursuant to Provision B.4, must be re-evaluated and adapted when new information becomes available. Re-evaluation and recommendations for modifications to the monitoring and assessment program, pursuant to the requirements of Provision D, may be provided in the Water Quality Improvement Plan Annual Report, but must be provided in the Report of Waste Discharge.

**d. ADAPTATION OF PROHIBITIONS AND LIMITATIONS COMPLIANCE OPTION**

If a Copermittee has implemented the Prohibitions and Limitations Compliance Option allowed to be included in the Water Quality Improvement Plan pursuant to Provision B.3.c, the Copermittee must re-evaluate and adapt the numeric goals, water quality improvement strategies, schedules, and annual milestones required under Provision B.3.c.(1) when significant new information becomes available, or with the Report of Waste Discharge required pursuant to Provision F.5. Significant changes in the numeric goals, water quality improvement strategies, schedules, or annual milestones requires an update to the analysis required under Provision B.3.c.(2).

**6. Water Quality Improvement Plan Submittal, Updates, and Implementation**

- a. The Copermittees must submit and commence implementation of the Water Quality Improvement Plans in accordance with the requirements of Provision F.1.
- b. The Copermittees must submit proposed updates to the Water Quality Improvement Plan for acceptance by the San Diego Water Board Executive Officer in accordance with the requirements of Provision F.2.c.

### C. ACTION LEVELS

The purpose of this provision is for the Copermittees to incorporate numeric action levels in the Water Quality Improvement Plans. The goal of the action levels is to guide Water Quality Improvement Plan implementation efforts and measure progress towards the protection of water quality and designated beneficial uses of waters of the state from adverse impacts caused or contributed to by MS4 discharges. This goal will be accomplished through monitoring and assessing the quality of the MS4 discharges during the implementation of the Water Quality Improvement Plans.

#### 1. Non-Storm Water Action Levels<sup>11</sup>

The Copermittees must develop and incorporate numeric non-storm water action levels (NALs) into the Water Quality Improvement Plan to: 1) support the development and prioritization of water quality improvement strategies for effectively prohibiting non-storm water discharges to the MS4s, 2) assess the effectiveness of the water quality improvement strategies toward addressing MS4 non-storm water discharges, required pursuant to Provision D.4.b.(1), and 3) support the detection and elimination of non-storm water and illicit discharges to the MS4, required pursuant to Provision E.2.<sup>12</sup>

a. The following NALs must be incorporated:

##### (1) Non-Storm Water Discharges from MS4s to Ocean Surf Zone

**Table C-1. Non-Storm Water Action Levels for Discharges from MS4s to Ocean Surf Zone**

Parameter	Units	AMAL	MDAL	Instantaneous Maximum	Basis
Total Coliform	MPN/100 ml	1,000	-	10,000/1,000 <sup>1</sup>	OP
Fecal Coliform	MPN/100 ml	200 <sup>2</sup>	-	400	OP
<i>Enterococci</i>	MPN/100 ml	35	-	104 <sup>3</sup>	OP

Abbreviations/Acronyms

AMAL – average monthly action level  
 OP – Ocean Plan water quality objective

MDAL – maximum daily action level  
 MPN/100 ml – most probable number per 100 milliliters

Notes:

- Total coliform density NAL is 1,000 MPN/100 ml when the fecal/total coliform ratio exceeds 0.1.
- Fecal coliform density NAL is 200 MPN per 100 ml during any 30 day period.
- This value has been set to the Basin Plan water quality objective for saltwater “designated beach areas.”

<sup>11</sup> NALs incorporated into the Water Quality Improvement Plans are not considered by the San Diego Water Board to be enforceable effluent limitations, unless the NAL is based on a WQBEL expressed as an interim or final effluent limitation for a TMDL in Attachment E and the interim or final compliance date has passed.

<sup>12</sup> The Copermittees may utilize NALs or other benchmarks currently established by the Copermittees as interim NALs until the Water Quality Improvement Plans are accepted by the San Diego Water Board Executive Officer.

(2) Non-Storm Water Discharges from MS4s to Bays, Harbors, and Lagoons/Estuaries

**Table C-2. Non-Storm Water Action Levels for Discharges from MS4s to Bays, Harbors, and Lagoons/Estuaries**

Parameter	Units	AMAL	MDAL	Instantaneous Maximum	Basis
Turbidity	NTU	75	-	225	OP
pH	Units	Within limit of 6.0 to 9.0 at all times			OP
Fecal Coliform	MPN/100 ml	200 <sup>1</sup>	-	400 <sup>2</sup>	BP
<i>Enterococci</i>	MPN/100 ml	35	-	104 <sup>3</sup>	BP
Priority Pollutants	µg/L	See Table C-3			

Abbreviations/Acronyms:

AMAL – average monthly action level  
 OP – Ocean Plan water quality objective  
 NTU – Nephelometric Turbidity Units  
 µg/L – micrograms per liter

MDAL – maximum daily action level  
 BP – Basin Plan water quality objective  
 MPN/100 ml – most probable number per 100 milliliters

Notes:

1. Based on a minimum of not less than five samples for any 30-day period.
2. The NAL is reached if more than 10 percent of total samples exceed 400 MPN per 100 ml during any 30 day period.
3. This value has been set to the Basin Plan water quality objective for saltwater “designated beach areas” and is not applicable to water bodies that are not designated with the water contact recreation (REC-1) beneficial use.

**Table C-3. Non-Storm Water Action Levels for Priority Pollutants**

Parameter	Units	Freshwater (CTR)		Saltwater (CTR)	
		MDAL	AMAL	MDAL	AMAL
Cadmium	µg/L	**	**	16	8
Copper	µg/L	*	*	5.8	2.9
Chromium III	µg/L	**	**	-	-
Chromium VI	µg/L	16	8.1	83	41
Lead	µg/L	*	*	14	2.9
Nickel	µg/L	**	**	14	6.8
Silver	µg/L	*	*	2.2	1.1
Zinc	µg/L	*	*	95	47

Abbreviations/Acronyms:

CTR – California Toxic Rule  
 AMAL – average monthly action level  
 µg/L – micrograms per liter  
 MDAL – maximum daily action level

Notes:

- \* Action levels developed on a case-by-case basis (see below)
- \*\* Action levels developed on a case-by-case basis (see below), but calculated criteria are not to exceed Maximum Contaminant Levels (MCLs) under the California Code of Regulations, Title 22, Division 4, Chapter 15, Article 4, Section 64431

The Cadmium, Copper, Chromium (III), Lead, Nickel, Silver and Zinc NALs for MS4 discharges to freshwater receiving waters will be developed on a case-by-case basis based on site-specific water quality data (receiving water hardness). For these priority pollutants, refer to 40 CFR 131.38(b)(2).

(3) Non-Storm Water Discharges from MS4s to Inland Surface Waters

**Table C-4. Non-Storm Water Action Levels for Discharges from MS4s to Inland Surface Waters**

Parameter	Units	AMAL	MDAL	Instantaneous Maximum	Basis
Dissolved Oxygen	mg/L	Not less than 5.0 in WARM waters and not less than 6.0 in COLD waters			BP
Turbidity	NTU	-	20	See MDAL	BP
pH	Units	Within limit of 6.5 to 8.5 at all times			BP
Fecal Coliform	MPN/100 ml	200 <sup>1</sup>	-	400 <sup>2</sup>	BP
<i>Enterococci</i>	MPN/100 ml	33	-	61 <sup>3</sup>	BP
Total Nitrogen	mg/L	-	1.0	See MDAL	BP
Total Phosphorus	mg/L	-	0.1	See MDAL	BP
MBAS	mg/L	-	0.5	See MDAL	BP
Iron	mg/L	-	0.3	See MDAL	BP
Manganese	mg/L	-	0.05	See MDAL	BP
Priority Pollutants	µg/L	See Table C-3			

Abbreviations/Acronyms:

AMAL – average monthly action level	MDAL – maximum daily action level
BP – Basin Plan water quality objective	WARM – warm freshwater habitat beneficial use
COLD – cold freshwater habitat beneficial use	MBAS – Methylene Blue Active Substances
NTU – Nephelometric Turbidity Units	MPN/100 ml – most probable number per 100 milliliters
mg/L – milligrams per liter	µg/L – micrograms per liter

Notes:

1. Based on a minimum of not less than five samples for any 30-day period.
2. The NAL is reached if more than 10 percent of total samples exceed 400 MPN per 100 ml during any 30 day period.
3. This value has been set to the Basin Plan water quality objective for freshwater “designated beach areas” and is not applicable to water bodies that are not designated with the water contact recreation (REC-1) beneficial use.

b. If not identified in Provision C.1.a, NALs must be identified, developed and incorporated in the Water Quality Improvement Plan for any pollutants or waste constituents that cause or contribute, or are threatening to cause or contribute to a condition of pollution or nuisance in receiving waters associated with the highest priority water quality conditions related to non-storm water discharges from the MS4s. NALs must be based on:

- (1) Applicable water quality standards which may be dependent upon site-specific or receiving water-specific conditions or assumptions to be identified by the Copermitees; or
- (2) Applicable numeric WQBELs required to meet the WLAs established for the TMDLs in Attachment E to this Order.

c. For the NALs incorporated into the Water Quality Improvement Plan, the Copermitees may develop and incorporate secondary NALs specific to the Watershed Management Area at levels greater than the NALs required by Provisions C.1.a and C.1.b which can be utilized to further refine the prioritization and assessment of water quality improvement strategies for effectively prohibiting non-storm water discharges to the MS4s, as well as the detection and

elimination of non-storm water and illicit discharges to and from the MS4. The secondary NALs may be developed using an approach acceptable to the San Diego Water Board.

- d. Dry weather monitoring data from MS4 outfalls collected in accordance with Provision D.2.b may be utilized to develop or revise NALs based on watershed-specific data, subject to San Diego Water Board Executive Officer approval.

## 2. Storm Water Action Levels<sup>13</sup>

The Copermittees must develop and incorporate numeric storm water action levels (SALs) in the Water Quality Improvement Plans to: 1) support the development and prioritization of water quality improvement strategies for reducing pollutants in storm water discharges from the MS4s, and 2) assess the effectiveness of the water quality improvement strategies toward reducing pollutants in storm water discharges, required pursuant to Provision D.4.b.(2).<sup>14</sup>

- a. The following SALs for discharges of storm water from the MS4 must be incorporated:

**Table C-5. Storm Water Action Levels for Discharges from MS4s to Receiving Waters**

Parameter	Units	Action Level
Turbidity	NTU	126
Nitrate & Nitrite (Total)	mg/L	2.6
Phosphorus (Total P)	mg/L	1.46
Cadmium (Total Cd)*	µg/L	3.0
Copper (Total Cu)*	µg/L	127
Lead (Total Pb)*	µg/L	250
Zinc (Total Zn)*	µg/L	976

Abbreviations/Acronyms:

NTU – Nephelometric Turbidity Units  
mg/L – milligrams per liter  
µg/L – micrograms per liter

Notes:

\* The sampling must include a measure of receiving water hardness at each MS4 outfall. If a total metal concentration exceeds the corresponding metals SAL in Table C-5, that concentration must be compared to the California Toxics Rule criteria and the USEPA 1-hour maximum concentration for the detected level of receiving water hardness associated with that sample. If it is determined that the sample's total metal concentration for that specific metal exceeds that SAL, but does not exceed the applicable USEPA 1-hour maximum concentration criterion for the measured level of hardness, then the sample result will not be considered above the SAL for that measurement.

<sup>13</sup> SALs incorporated into the Water Quality Improvement Plans are not considered by the San Diego Water Board to be enforceable effluent limitations, unless the SAL is based on a WQBEL expressed as an interim or final effluent limitation for a TMDL in Attachment E and the interim or final compliance date has passed.

<sup>14</sup> The Copermittees may utilize SALs or other benchmarks currently established by the Copermittees as interim SALs until the Water Quality Improvement Plans are accepted by the San Diego Water Board Executive Officer.

- b.** If not identified in Provision C.2.a, SALs must be identified, developed and incorporated in the Water Quality Improvement Plan for pollutants or waste constituents that cause or contribute, or are threatening to cause or contribute to a condition of pollution or nuisance in receiving waters associated with the highest priority water quality conditions related to storm water discharges from the MS4s. SALs must be based on:
- (1) Federal and State water quality guidance and/or water quality standards; and
  - (2) Site-specific or receiving water-specific conditions; or
  - (3) Applicable numeric WQBELs required to meet the WLAs established for the TMDLs in Attachment E to this Order.
- c.** For the SALs incorporated into the Water Quality Improvement Plan, the Copermittees may develop and incorporate secondary SALs specific to the Watershed Management Area at levels greater than the SALs required by Provisions C.2.a and C.2.b which can be utilized to further refine the prioritization and assessment of water quality improvement strategies for reducing pollutants in storm water discharges from the MS4s. The secondary SALs may be developed based on the approaches recommended by the State Water Board's Storm Water Panel<sup>15</sup> or using an approach acceptable to the San Diego Water Board.
- d.** Wet weather monitoring data from MS4 outfalls collected in accordance with Provision D.2.c may be used to develop or revise SALs based upon watershed-specific data, subject to San Diego Water Board Executive Officer approval.

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<sup>15</sup> Storm Water Panel Recommendations to the California State Water Resources Control Board: The Feasibility of Numeric Effluent Limits Applicable to Discharges of Storm Water Associated with Municipal, Industrial and Construction Activities (June 2006)

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## **D. MONITORING AND ASSESSMENT PROGRAM REQUIREMENTS**

The purpose of this provision is for the Copermittees to monitor and assess the impact on the conditions of receiving waters caused by discharges from the Copermittees' MS4s under wet weather and dry weather conditions. The goal of the monitoring and assessment program is to inform the Copermittees about the nexus between the health of receiving waters and the water quality condition of the discharges from their MS4s. This goal will be accomplished through monitoring and assessing the conditions of the receiving waters, discharges from the MS4s, pollutant sources and/or stressors, and effectiveness of the water quality improvement strategies implemented as part of the Water Quality Improvement Plans.

### **1. Receiving Water Monitoring Requirements**

The Copermittees must develop and conduct a program to monitor the condition of the receiving waters in each Watershed Management Area during dry weather and wet weather. Following San Diego Water Board acceptance of the Water Quality Improvement Plans for each Watershed Management Area, the Copermittees must conduct long-term receiving water monitoring during implementation of the Water Quality Improvement Plan to assess the long term trends and determine if conditions in receiving waters are improving. Any available monitoring data not collected specifically for this Order that meet the quality assurance criteria of the Copermittees and the monitoring requirements of this Order may be utilized by the Copermittees. The Copermittees must conduct the following receiving water monitoring procedures:

#### **a. TRANSITIONAL RECEIVING WATER MONITORING**

Until the monitoring requirements and schedules of Provisions D.1.b-e are incorporated into a Water Quality Improvement Plan that is accepted by the San Diego Water Board pursuant to Provision F.1.b, the Copermittees must conduct the following receiving water monitoring in the Watershed Management Area:

- (1) Continue the receiving water monitoring programs required in Order Nos. R9-2007-0001 (Monitoring and Reporting Program No. R9-2007-0001 Sections II.A.1-A.5), R9-2009-0002, and R9-2010-0016, unless the Executive Officer provides conditional approval for Copermittees to proceed with implementation of the proposed monitoring and assessment program developed in accordance with Provision B.4;
- (2) Continue the monitoring in the Hydromodification Management Plans approved by the San Diego Water Board;
- (3) Participate in the following regional receiving water monitoring programs, as applicable to the Watershed Management Area:

- (a) Storm Water Monitoring Coalition Regional Monitoring,
  - (b) Southern California Bight Regional Monitoring, and
  - (c) Sediment Quality Monitoring;
- (4) Implement the monitoring programs developed as part of any implementation plans or load reduction plans (e.g. Bacteria Load Reduction Plans, Comprehensive Load Reduction Plans) for the TMDLs in Attachment E to this Order; and
- (5) For Watershed Management Areas with ASBS, implement the monitoring requirements of Attachment B to State Water Board Resolution No. 2012-0012, included in Attachment A to this Order.

**b. LONG-TERM RECEIVING WATER MONITORING STATIONS**

The Copermittees must select at least one long-term receiving water monitoring station from among the existing mass loading stations, temporary watershed assessment stations, bioassessment stations, and stream assessment stations previously established by the Copermittees to be representative of the receiving water quality in the Watershed Management Area. Additional long-term receiving water monitoring stations must be selected where necessary to support the implementation and adaptation of the Water Quality Improvement Plan.

**c. DRY WEATHER RECEIVING WATER MONITORING**

During the term of the Order, the Copermittees must perform monitoring during at least three dry weather monitoring events at each of the long-term receiving water monitoring stations. At least one monitoring event must be conducted during the dry season (May 1 – September 30) and at least one monitoring event must be conducted during a dry weather period during the wet season (October 1 – April 30), after the first wet weather event of the season, with an antecedent dry period of at least 72 hours following a storm event producing measureable rainfall of greater than 0.1 inch.

**(1) Dry Weather Receiving Water Field Observations**

For each dry weather monitoring event, the Copermittees must record field observations consistent with Table D-1 at each long-term receiving water monitoring station.

**Table D-1. Field Observations for Receiving Water Monitoring Stations**

Field Observations
<ul style="list-style-type: none"><li>• Station identification and location</li><li>• Presence of flow, or pooled or ponded water</li><li>• If flow is present:<ul style="list-style-type: none"><li>- Flow estimation (i.e. width of water surface, approximate depth of water, approximate flow velocity, flow rate)</li><li>- Flow characteristics (i.e. presence of floatables, surface scum, sheens, odor, color)</li></ul></li><li>• If pooled or ponded water is present:<ul style="list-style-type: none"><li>- Characteristics of pooled or ponded water (i.e. presence of floatables, surface scum, sheens, odor, color)</li></ul></li><li>• Station description (i.e. deposits or stains, vegetation condition, structural condition, and observable biology)</li><li>• Presence and assessment of trash in and around station</li></ul>

**(2) Dry Weather Receiving Water Field Monitoring**

For each dry weather monitoring event, if conditions allow the collection of the data, the Copermittees must monitor and record the parameters in Table D-2 at each long-term receiving water monitoring station.

**Table D-2. Field Monitoring Parameters for Receiving Water Monitoring Stations**

Parameters
<ul style="list-style-type: none"><li>• pH</li><li>• Temperature</li><li>• Specific conductivity</li><li>• Dissolved oxygen</li><li>• Turbidity</li></ul>

**(3) Dry Weather Receiving Water Analytical Monitoring**

For each dry weather monitoring event, the Copermittees must collect and analyze samples from each long-term receiving water monitoring station as follows:

- (a) Analytes that are field measured are not required to be analyzed by a laboratory;
- (b) The Copermittees must implement consistent sample collection methods for regional comparability of data, unless site-specific conditions indicate the need for alternate methods;
- (c) Grab samples may be collected for pH, temperature, specific conductivity, dissolved oxygen, turbidity, hardness, and indicator bacteria;

- (d) For all other constituents, composite samples must be collected for a duration adequate to be representative of changes in pollutant concentrations and runoff flows using one of the following techniques:
- (i) Time-weighted composites composed of 24 discrete hourly samples, which may be collected through the use of automated equipment, or
  - (ii) Flow-weighted composites collected over a typical 24-hour period, which may be collected through the use of automated equipment;
- (e) Only one analysis of the composite of aliquots is required;
- (f) Analysis for the following constituents is required:
- (i) Constituents contributing to the highest priority water quality conditions identified in the Water Quality Improvement Plan,
  - (ii) Constituents listed as a cause for impairment of receiving waters in the Watershed Management Area listed on the CWA section 303(d) List,
  - (iii) Constituents for implementation plans or load reduction plans (e.g. Bacteria Load Reduction Plans, Comprehensive Load Reduction Plans) developed for watersheds where the Copermitttees are listed responsible parties under the TMDLs in Attachment E to this Order,
  - (iv) Applicable NAL constituents, and
  - (v) Constituents listed in Table D-3.

**Table D-3. Analytical Monitoring Constituents for Receiving Water Monitoring Stations**

Conventionals, Nutrients	Metals (Total and Dissolved)	Pesticides	Indicator Bacteria
<ul style="list-style-type: none"> <li>• Total Dissolved Solids</li> <li>• Total Suspended Solids</li> <li>• Turbidity</li> <li>• Total Hardness</li> <li>• Total Organic Carbon</li> <li>• Dissolved Organic Carbon</li> <li>• Sulfate</li> <li>• Methylene Blue Active Substances (MBAS)</li> <li>• Total Phosphorus</li> <li>• Orthophosphate</li> <li>• Nitrite<sup>1</sup></li> <li>• Nitrate<sup>1</sup></li> <li>• Total Kjeldhal Nitrogen</li> <li>• Ammonia</li> </ul>	<ul style="list-style-type: none"> <li>• Arsenic</li> <li>• Cadmium</li> <li>• Chromium</li> <li>• Copper</li> <li>• Iron</li> <li>• Lead</li> <li>• Mercury</li> <li>• Nickel</li> <li>• Selenium</li> <li>• Thallium</li> <li>• Zinc</li> </ul>	<ul style="list-style-type: none"> <li>• Organophosphate Pesticides</li> <li>• Pyrethroid Pesticides</li> </ul>	<ul style="list-style-type: none"> <li>• Total Coliform</li> <li>• Fecal Coliform<sup>2</sup></li> <li>• <i>Enterococcus</i></li> </ul>

Notes:  
 1. Nitrite and nitrate may be combined and reported as nitrite+nitrate.  
 2. *E. Coli* may be substituted for Fecal Coliform.

**(4) Dry Weather Receiving Water Toxicity Monitoring**

For each dry weather monitoring event, the Copermittees must collect grab or composite samples from each long-term receiving water monitoring station to be analyzed for aquatic toxicity in accordance with Table D-4. When the State Water Board’s Policy for Toxicity Assessment and Control (Toxicity Policy) is approved and in effect, the San Diego Water Board Executive Officer may direct the Copermittees to replace current toxicity program elements with standardized procedures in the Toxicity Policy.

**Table D-4. Dry Weather Chronic<sup>1</sup> Toxicity Testing for Receiving Water Monitoring Stations**

Organism	Units	Test	USEPA Protocol
<b>Freshwater</b>			
<i>Pimephales promelas</i> (Fathead Minnow)	Pass / Fail	Larval Survival and Growth	EPA-821-R-02-013
<i>Ceriodaphnia dubia</i> (Daphnid)	Pass / Fail	Survival and Production	EPA-821-R-02-013
<i>Selenastrum capricornutum</i> (Green Algae)	Pass / Fail	Growth	EPA-821-R-02-013
<b>Marine and Estuarine</b>			
<i>Strongylocentrotus purpuratus</i> (Purple Sea Urchin)	Pass / Fail	Embryo-Larval Development	EPA-600-R-95-136

Notes:

1. Chronic toxicity testing is not required at receiving water monitoring stations located at mass loading stations if the channel flows are diverted year-round during dry weather conditions to the sanitary sewer for treatment.

(a) **Freshwater Test Species and Methods:** If samples are collected in receiving waters with salinity less than 1 ppt, the Copermittees must follow the methods for chronic toxicity tests as established in 40 CFR 136.3 using a single-concentration test design for routine monitoring, or a five-concentration test design for additional toxicity testing if the limitation is exceeded. The Copermittees must estimate the critical life stage chronic toxicity on undiluted samples in accordance with species and short term test methods in Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms (EPA-821-R-02-013; Table IA, 40 CFR 136). Additional test species may be used by the Copermittees if approved by the San Diego Water Board Executive Officer. The Copermittees must conduct:

- (i) A static renewal toxicity test with the fathead minnow, *Pimephales promelas* (Larval Survival and Growth Test Method 1000.0);
- (ii) A static renewal toxicity test with the daphnid, *Ceriodaphnia dubia* (Survival and Reproduction Test Method 1002.0); and
- (iii) A static renewal toxicity test with the green alga, *Selenastrum capricornutum* (also named *Raphidocelis subcapitata*) (Growth Test Method 1003.0).

- (b) Marine and Estuarine Test Species and Methods: If samples are collected in receiving waters with salinity greater or equal to 1 ppt, the Copermittees must follow the methods for chronic toxicity tests as established in 40 CFR 136.3 using a single-concentration test design for routine monitoring, or a five-concentration test design for additional toxicity testing if the limitation is exceeded. The Copermittees must conduct the following critical life state chronic toxicity tests on undiluted samples in accordance with species and short term test methods in Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to West Coast Marine and Estuarine Organisms (EPA-600-R-95-136; 1995). Artificial sea salts must be used to increase sample salinity. The Copermittees must conduct a static non-renewal toxicity test with the purple sea urchin, *Strongylocentrotus purpuratus* (Embryo-larval Development Test Method). Additional species may be used by the Copermittees if approved by the San Diego Water Board Executive Officer.
- (c) Holding Times: All toxicity tests must be conducted as soon as possible following sample collection. The 36-hour sample holding time for test initiation shall be targeted. However, no more than 72 hours shall elapse before the conclusion of sample collection and test initiation.
- (d) Test Species Sensitivity Screening: To determine the most sensitive test species for freshwater, the Copermittees must screen 2 wet weather and 2 dry weather toxicity tests with a vertebrate, an invertebrate, and a plant species. After this screening period, subsequent monitoring must be conducted using the most sensitive test species. Alternatively, if a sensitive test species has already been determined, or if there is prior knowledge of potential toxicant(s) and a test species is sensitive to such toxicant(s), then monitoring must be conducted using only that test species. Sensitive test species determinations must also consider the most sensitive test species used for proximal receiving water monitoring. Rescreening must occur once each permit term.
- (e) Chronic toxicity test biological endpoint data must be analyzed using the Test of Significant Toxicity t-test approach specified in *National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document* (USEPA, Office of Wastewater Management, Washington, D.C., EPA-833-R-10-003, 2010). For this monitoring program, the critical chronic instream waste concentration (IWC) is set at 100 percent receiving water (i.e. no dilution) for receiving water samples. A 100 percent receiving water and a control must be tested.
- (f) Toxicity Identification Evaluation (TIE) / Toxicity Reduction Evaluation (TRE): If chronic toxicity is detected in receiving waters, the Copermittees must discuss the need for conducting a TIE/TRE in the assessments

required under Provision D.4.a.(2), and develop a plan for implementing the TIE/TRE to be incorporated in the Water Quality Improvement Plan.

(5) Dry Weather Receiving Water Bioassessment Monitoring

Bioassessment monitoring for each long-term receiving water monitoring station is required at least once during the term of this Order. The Copermitees must conduct bioassessment monitoring during at least one dry weather monitoring event at each long-term receiving water monitoring station as follows:

- (a) The following bioassessment samples and measurements must be collected:
- (i) Macroinvertebrate samples must be collected in accordance with the “Reachwide Benthos (Multihabitat) Procedure” in the most current Surface Water Ambient Monitoring Program (SWAMP) Bioassessment Standard Operating Procedures (SOP), and amendments, as applicable;<sup>16</sup>
  - (ii) The “Full” suite of physical habitat characterization measurements must be collected in accordance with the most current SWAMP Bioassessment SOP, and as summarized in the SWAMP Stream Habitat Characterization Form – Full Version;<sup>17</sup> and
  - (iii) Freshwater algae samples must be collected in accordance with the SWAMP Standard Operating Procedures for Collecting Algae Samples.<sup>18</sup> Analysis of samples must include algal taxonomic composition (diatoms and soft algae) and algal biomass.
- (b) The bioassessment samples, measurements, and appropriate water chemistry data must be used to calculate the following:
- (i) An Index of Biological Integrity (IBI) for macroinvertebrates for each monitoring station where bioassessment monitoring was conducted, based on the most current calculation method;<sup>19</sup> and

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<sup>16</sup> Ode, P.R.. 2007. Standard operating procedures for collecting macroinvertebrate samples and associated physical and chemical data for ambient bioassessments in California. California State Water Resources Control Board Surface Water Ambient Monitoring Program (SWAMP) Bioassessment SOP 001. [http://www.swrcb.ca.gov/water\\_issues/programs/swamp/tools.shtml#monitoring](http://www.swrcb.ca.gov/water_issues/programs/swamp/tools.shtml#monitoring)

<sup>17</sup> Available at:

[http://www.waterboards.ca.gov/water\\_issues/programs/swamp/docs/reports/fieldforms\\_fullversion052908.pdf](http://www.waterboards.ca.gov/water_issues/programs/swamp/docs/reports/fieldforms_fullversion052908.pdf)

<sup>18</sup> Fetscher et al. 2009. Standard Operating Procedures for Collecting Stream Algae Samples and Associated Physical Habitat and Chemical Data for Ambient Bioassessments in California.

<sup>19</sup> The most current calculation method at the time the Order was adopted is outlined in “A Quantitative Tool for Assessing the Integrity of Southern California Coastal Streams” (Ode, et al. 2005. Environmental Management. Vol. 35, No. 1, pp. 1-13). If an updated or new calculation method is developed, either both

(ii) An IBI for algae for each monitoring station where bioassessment monitoring was conducted, when a calculation method is developed.<sup>20</sup>

(c) In lieu of the requirements of Provision D.1.c.(5)(a), the Copermittees may conduct the bioassessment monitoring in accordance with the “Triad” assessment approach<sup>21</sup> to calculate the IBIs required for Provision D.1.c.(5)(b). The Copermittees must conduct sampling, analysis, and reporting of specified in-stream biological and habitat data according to the protocols specified in the SCCWRP Technical Report No. 539, or subsequent protocols, if developed.

(6) Dry Weather Receiving Water Hydromodification Monitoring

In addition to the hydromodification monitoring conducted as part of the Copermittees’ Hydromodification Management Plans, hydromodification monitoring for each long-term receiving water monitoring station is required at least once during the term of this Order. The Copermittees must collect the following hydromodification monitoring observations and measurements within an appropriate domain of analysis during at least one dry weather monitoring event for each long-term receiving water monitoring station:

(a) Channel conditions, including:

- (i) Channel dimensions,
- (ii) Hydrologic and geomorphic conditions, and
- (iii) Presence and condition of vegetation and habitat;

(b) Location of discharge points;

(c) Habitat integrity;

(d) Photo documentation of existing erosion and habitat impacts, with location (i.e. latitude and longitude coordinates) where photos were taken;

(e) Measurement or estimate of dimensions of any existing channel bed or bank eroded areas, including length, width, and depth of any incisions; and

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(i.e. current and updated/new) methods must be used, or historical IBIs must be recalculated with the updated or new calculation method.

<sup>20</sup> When a calculation method is developed, IBIs must be calculated for all available and appropriate historical data.

<sup>21</sup> Stormwater Monitoring Coalition Model Monitoring Technical Committee, 2004. Model Monitoring Program for Municipal Separate Storm Sewer Systems in Southern California. Technical Report #419. August 2004.

- (f) Known or suspected cause(s) of existing downstream erosion or habitat impact, including flow, soil, slope, and vegetation conditions, as well as upstream land uses and contributing new and existing development.

**d. WET WEATHER RECEIVING WATER MONITORING**

During the term of the Order, the Copermittees must perform monitoring during at least three wet weather monitoring events at each long-term receiving water monitoring station. At least one wet weather monitoring event must be conducted during the first wet weather event of the wet season (October 1 – April 30), and at least one wet weather monitoring event during a wet weather event that occurs after February 1.

(1) Wet Weather Receiving Water Field Observations

For each wet weather monitoring event, the following narrative descriptions and observations must be recorded at each long-term receiving water monitoring station:

- (a) A narrative description of the station that includes the location, date and duration of the storm event(s) sampled, rainfall estimates of the storm event, and the duration between the storm event sampled and the end of the previous measurable (greater than 0.1 inch rainfall) storm event;
- (b) The flow rates and volumes measured or estimated (data from nearby USGS gauging stations may be utilized, or flow rates may be measured or estimated in accordance with the USEPA Storm Water Sampling Guidance Document (EPA-833-B-92-001), section 3.2.1, or other method proposed by the Copermittees that is acceptable to the San Diego Water Board);
- (c) Station condition (i.e. deposits or stains, vegetation condition, structural condition, observable biology); and
- (d) Presence and assessment of trash in and around station.

(2) Wet Weather Receiving Water Field Monitoring

For each wet weather monitoring event, the Copermittees must monitor and record the parameters in Table D-2 at each long-term receiving water monitoring station.

(3) Wet Weather Receiving Water Analytical Monitoring

For each wet weather monitoring event, the Copermittees must collect and analyze samples from each long-term receiving water monitoring station as follows:

- (a) Analytes that are field measured are not required to be analyzed by a laboratory;
- (b) The Copermittees must implement consistent sample collection methods for regional comparability of data, unless site-specific conditions indicate the need for alternate methods;
- (c) Grab samples may be collected for pH, temperature, specific conductivity, dissolved oxygen, turbidity, hardness, and indicator bacteria;
- (d) For all other constituents, composite samples must be collected for a duration adequate to be representative of changes in pollutant concentrations and runoff flows using one of the following techniques:
  - (i) Time-weighted composites composed of 24 discrete hourly samples, which may be collected through the use of automated equipment, or
  - (ii) Flow-weighted composites collected over the length of the storm event or a typical 24-hour period, which may be collected through the use of automated equipment;
- (e) Only one analysis of the composite of aliquots is required;
- (f) Analysis for the following constituents is required:
  - (i) Constituents contributing to the highest priority water quality conditions identified in the Water Quality Improvement Plan,
  - (ii) Constituents listed as a cause for impairment of receiving waters in the Watershed Management Area listed on the CWA section 303(d) List,
  - (iii) Constituents for implementation plans or load reduction plans (e.g. Bacteria Load Reduction Plans, Comprehensive Load Reduction Plans) developed for watersheds where the Copermittees are listed responsible parties under the TMDLs in Attachment E to this Order,
  - (iv) Applicable SAL constituents, and
  - (v) Constituents listed in Table D-3.

#### (4) Wet Weather Receiving Water Toxicity Monitoring

For each wet weather monitoring event, the Copermittees must collect grab or composite samples from each long-term receiving water monitoring station to be analyzed for chronic aquatic toxicity in accordance with Provisions D.1.c.(4)(a)-(f).

**e. OTHER RECEIVING WATER MONITORING REQUIREMENTS**

**(1) Regional Monitoring**

The Copermittees must participate in the following regional receiving waters monitoring programs, as applicable to the Watershed Management Area:

(a) Storm Water Monitoring Coalition Regional Monitoring; and

(b) Southern California Bight Regional Monitoring and

(c) Unified Beach Water Quality Monitoring and Assessment Program.

The Orange County Copermittees shall participate in and, together with South Orange County Wastewater Authority and Orange County Health Care Agency, shall share responsibility for implementation of a unified regional beach water quality monitoring and assessment program in south Orange County, as set forth in the October 2014 report, *Workgroup Recommendation for a Unified Beach Water Quality Monitoring and Assessment Program in South Orange County*, issued pursuant to CWC section 13383 and subject to future revision in the San Diego Water Board December 5, 2014 Letter Directive.

**(2) Sediment Quality Monitoring**

The Copermittees must perform sediment monitoring to assess compliance with sediment quality receiving water limits applicable to MS4 discharges to enclosed bays and estuaries. The monitoring may be performed either by individual or multiple Copermittees to assess compliance with receiving water limits, or through participation in a water body monitoring coalition. A Sediment Monitoring Plan which satisfies the requirements of the State Water Board's Water Quality Control Plan for Enclosed Bays and Estuaries of California – Part 1 Sediment Quality (Sediment Control Plan) must be submitted as part of the monitoring and assessment program in the Water Quality Improvement Plan.

(a) The Sediment Monitoring Plan design must include the following:

(i) The elements required under Section VII.D (Receiving Water Limits Monitoring Frequency) and Section VII.E (Sediment Monitoring) of the Sediment Control Plan;

(ii) A Quality Assurance Project Plan (QAPP) describing the project objectives and organization, functional activities, and quality assurance/quality control protocols for the water and sediment monitoring; and

(iii) A schedule for completion of all sample collection and analysis activities and submission of Sediment Monitoring Reports.

- (b) The Copermittees must implement the Sediment Monitoring Plan in accordance with the schedule contained in the Sediment Monitoring Plan, unless otherwise directed in writing by the San Diego Water Board Executive Officer.
- (c) The Copermittees must incorporate a Sediment Monitoring Report as part of the Water Quality Improvement Plan Annual Report in accordance with the schedule contained in the Sediment Monitoring Plan, unless otherwise directed in writing by the San Diego Water Board Executive Officer. The Sediment Monitoring Report must contain the following information:
  - (i) Analysis: An evaluation, interpretation and tabulation of the water and sediment monitoring data, including interpretations and conclusions as to whether applicable Receiving Water Limitations in this Order have been attained at each sample station;
  - (ii) Sample Location Map: The locations, type, and number of samples must be identified and shown on a site map; and
  - (iii) California Environmental Data Exchange Network: A statement certifying that the monitoring data and results have been uploaded into the California Environmental Data Exchange Network (CEDEN).
- (d) Based on the Sediment Monitoring Report conclusions the San Diego Water Board may require a human health risk assessment to determine if the human health objective contained in Receiving Water Limitations in Provision A.2.a.(3)(b)(ii) has been attained at each sample station. In conducting a risk assessment, the Copermittees must consider any applicable and relevant information, including California Environmental Protection Agency's (Cal/EPA) Office of Environmental Health Hazard Assessment (OEHHA) policies for fish consumption and risk assessment, Cal/EPA's Department of Toxic Substances Control (DTSC) Risk Assessment, and USEPA Human Health Risk Assessment policies.

### (3) ASBS Monitoring

For Watershed Management Areas with ASBS, the Copermittees must implement the monitoring requirements of Attachment B to State Water Board Resolution No. 2012-0012, included in Attachment A to this Order.

## **f. ALTERNATIVE WATERSHED MONITORING REQUIREMENTS**

The San Diego Water Board may direct the Copermittees to participate in an effort to develop alternative watershed monitoring with other regulated entities, other interested parties, and the San Diego Water Board to refine, coordinate, and implement regional monitoring and assessment programs to determine the status and trends of water quality conditions in 1) coastal waters, 2) enclosed bays, harbors, estuaries, and lagoons, and 3) streams.

## **2. MS4 Outfall Discharge Monitoring Requirements**

The Copermittees must develop and conduct a program to monitor the discharges from the MS4 outfalls in each Watershed Management Area during dry weather and wet weather. Following San Diego Water Board acceptance of the Water Quality Improvement Plans for each Watershed Management Area, the Copermittees must conduct MS4 outfall discharge monitoring during implementation of the Water Quality Improvement Plan to assess the effectiveness of their jurisdictional runoff management programs toward effectively prohibiting non-storm water discharges into the MS4 and reducing pollutants in storm water discharges from their MS4s to the MEP. Any available monitoring data not collected specifically for this Order that meet the quality assurance criteria of the Copermittees and the monitoring requirements of this Order may be utilized by the Copermittees. The Copermittees must conduct the following MS4 outfall monitoring procedures:

### **a. TRANSITIONAL MS4 OUTFALL DISCHARGE MONITORING**

Until the monitoring requirements and schedules of Provisions D.2.b-c are incorporated into a Water Quality Improvement Plan that is accepted by the San Diego Water Board pursuant to Provision F.1.b, the Copermittees must conduct the following MS4 outfall discharge monitoring in the Watershed Management Area:

#### **(1) MS4 Outfall Discharge Monitoring Station Inventory**

Each Copermittee must identify all major MS4 outfalls that discharge directly to receiving waters within its jurisdiction and geo-locate those outfalls on a map of the MS4 pursuant to Provision E.2.b.(1). This information must be compiled into a MS4 outfall discharge monitoring station inventory, and must include the following information:

- (a) Latitude and longitude of MS4 outfall point of discharge;
- (b) Watershed Management Area;
- (c) Hydrologic subarea;
- (d) Outlet size;
- (e) Accessibility (i.e. safety and without disturbance of critical habitat);
- (f) Approximate drainage area; and

- (g) Classification of whether the MS4 outfall is known to have persistent dry weather flows, transient dry weather flows, no dry weather flows, or unknown dry weather flows.

(2) Transitional Dry Weather MS4 Outfall Discharge Field Screening Monitoring

Until the monitoring requirements and schedules of Provision D.2.b are incorporated into a Water Quality Improvement Plan that is accepted by the San Diego Water Board pursuant to Provision F.1.b, each Copermittee must perform dry weather MS4 outfall field screening monitoring to identify non-storm water and illicit discharges within its jurisdiction in accordance with Provision E.2.c, to determine which discharges are transient flows and which are persistent flows, and prioritize the dry weather MS4 discharges that will be investigated and eliminated in accordance with Provision E.2.d.

(a) Transitional Dry Weather MS4 Outfall Discharge Field Screening Monitoring Frequency

Each Copermittee must field screen the MS4 outfalls in its inventory developed pursuant to Provision D.2.a.(1) as follows:

- (i) For Copermittees with less than 125 major MS4 outfalls that discharge to receiving waters within a Watershed Management Area, at least 80 percent of the outfalls must be visually inspected two times per year during dry weather conditions. For any Copermittee with portions of its jurisdiction in more than one Watershed Management Area and more than 500 major outfalls, see Provision D.2.a.(2)(a)(iv).
- (ii) For Copermittees with 125 major MS4 outfalls or more, but less than or equal to 500 that discharge to receiving waters within a Watershed Management Area, all the outfalls must be visually inspected at least annually during dry weather conditions. For any Copermittee with portions of its jurisdiction in more than one Watershed Management Area and more than 500 major outfalls, see Provision D.2.a.(2)(a)(iv).
- (iii) For Copermittees with more than 500 major MS4 outfalls that discharge to receiving waters within a Watershed Management Area, at least 500 outfalls must be visually inspected at least annually during dry weather conditions. For any Copermittee with portions of its jurisdiction in more than one Watershed Management Area and more than 500 major outfalls, see Provision D.2.a.(2)(a)(iv). Copermittees with more than 500 major MS4 outfalls within a Watershed Management Area must identify and prioritize at least 500 outfalls to be inspected considering the following:

- [a] Assessment of connectivity of the discharge to a flowing receiving water;
  - [b] Reported exceedances of NALs in water quality monitoring data;
  - [c] Surrounding land uses;
  - [d] Presence of constituents listed as a cause for impairment of receiving waters in the Watershed Management Area listed on the CWA section 303(d) List; and
  - [e] Flow rate.
- (iv) For any Copermittee with portions of its jurisdiction in more than one Watershed Management Area and more than 500 major MS4 outfalls within its jurisdiction, at least 500 major MS4 outfalls within its inventory must be visually inspected at least annually during dry weather conditions. Copermittees with more than 500 major MS4 outfalls in more than one Watershed Management Area must identify and prioritize at least 500 outfalls to be inspected considering the following:
- [a] Assessment of connectivity of the discharge to a flowing receiving water;
  - [b] Reported exceedances of NALs in water quality monitoring data;
  - [c] Surrounding land uses;
  - [d] Presence of constituents listed as a cause for impairment of receiving waters in the Watershed Management Area listed on the CWA section 303(d) List; and
  - [e] Flow rate.
- (v) Inspections of major MS4 outfalls conducted in response to public reports and staff or contractor reports and notifications may count toward the required visual inspections of MS4 outfall discharge monitoring stations.
- (b) Transitional Dry Weather MS4 Outfall Discharge Field Screening Visual Observations
- (i) An antecedent dry period of at least 72 hours following any storm event producing measurable rainfall greater than 0.1 inch is required prior to conducting field screening visual observations during a field screening monitoring event.
  - (ii) During the field screening monitoring event, each Copermittee must record visual observations consistent with Table D-5 at each MS4 outfall discharge monitoring station inspected.

**Table D-5. Field Screening Visual Observations for MS4 Outfall Discharge Monitoring Stations**

<b>Field Observations</b>
<ul style="list-style-type: none"><li>• Station identification and location</li><li>• Presence of flow, or pooled or ponded water</li><li>• If flow is present:<ul style="list-style-type: none"><li>- Flow estimation (i.e. width of water surface, approximate depth of water, approximate flow velocity, flow rate)</li><li>- Flow characteristics (i.e. presence of floatables, surface scum, sheens, odor, color)</li><li>- Flow source(s) suspected or identified from non-storm water source investigation</li><li>- Flow source(s) eliminated during non-storm water source identification</li></ul></li><li>• If pooled or ponded water is present:<ul style="list-style-type: none"><li>- Characteristics of pooled or ponded water (i.e. presence of floatables, surface scum, sheens, odor, color)</li><li>- Known or suspected source(s) of pooled or ponded water</li></ul></li><li>• Station description (i.e. deposits or stains, vegetation condition, structural condition, observable biology)</li><li>• Presence and assessment of trash in and around station</li><li>• Evidence or signs of illicit connections or illegal dumping</li></ul>

- (iii) Each Copermittee must implement the requirements of Provisions E.2.d.(2)(c)-(e) based on the field observations required pursuant to Provision D.2.a.(2)(b)(ii).
- (iv) Each Copermittee must evaluate field observations together with existing information available from prior reports, inspections and monitoring results to determine whether any observed flowing, pooled, or ponded waters are likely to be transient or persistent flow.<sup>22</sup>

(c) **Transitional Dry Weather MS4 Outfall Discharge Field Screening Monitoring Records**

Based upon the results of the transitional dry weather MS4 outfall discharge field screening monitoring conducted pursuant to Provisions D.2.a.(2)(a)-(b), each Copermittee must update its MS4 outfall discharge monitoring station inventory, compiled pursuant to Provision D.2.a.(1), with any new information on the classification of whether the MS4 outfall produces persistent flow, transient flow, or no dry weather flow.

(3) **Transitional Wet Weather MS4 Outfall Discharge Monitoring**

Until the monitoring requirements and schedules of Provision D.2.c are incorporated into a Water Quality Improvement Plan that is accepted by the

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<sup>22</sup> Persistent flow is defined as the presence of flowing, pooled, or ponded water more than 72 hours after a measureable rainfall event of 0.1 inch or greater during three consecutive monitoring and/or inspection events. All other flowing, pooled, or ponded water is considered transient.

San Diego Water Board pursuant to Provision F.1.b, the Copermittees must conduct the following wet weather MS4 outfall discharge monitoring within the Watershed Management Area:

(a) Transitional Wet Weather MS4 Outfall Discharge Monitoring Stations

The Copermittees must select wet weather MS4 outfall discharge monitoring stations from the inventories developed pursuant to Provision D.2.a.(1) for each Watershed Management Area as follows:

- (i) At least five wet weather MS4 outfall discharge monitoring stations that are representative of storm water discharges from areas consisting primarily of residential, commercial, industrial, and typical mixed-use land uses present within the Watershed Management Area;
- (ii) At least one wet weather MS4 outfall discharge monitoring station for each Copermittee within the Watershed Management Area; and
- (iii) The County of San Diego may select at least two (2) wet weather MS4 outfall discharge monitoring stations for the portion of the Santa Margarita River Watershed Management Area within its jurisdiction to be monitored during the transitional period until the Riverside County Copermittees are notified of coverage under this Order. After the Riverside County Copermittees are notified of coverage under this Order, the Copermittees in the Watershed Management Area must select wet weather MS4 outfall discharge monitoring stations consistent with the requirements above.

(b) Transitional Wet Weather MS4 Outfall Discharge Monitoring Frequency

Each wet weather MS4 outfall discharge monitoring station selected pursuant to Provision D.2.a.(3)(a) must be monitored once during the wet season (October 1 – April 30). The wet weather monitoring events must be selected to be representative of the range of hydrological conditions experienced in the region. At least 10 percent of samples must be conducted during the first wet weather event of the wet season, to include at least one such sample in each Watershed Management Area..

(c) Transitional Wet Weather MS4 Outfall Discharge Field Observations

For each wet weather monitoring event, the following narrative descriptions and observations must be recorded at each wet weather MS4 outfall discharge monitoring station:

- (i) A narrative description of the station that includes the location, date and duration of the storm event(s) sampled, rainfall estimates of the storm event, and the duration between the storm event sampled and the end of the previous measurable (greater than 0.1 inch rainfall) storm event; and
  - (ii) The flow rates and volumes measured or estimated from the MS4 outfall (data from nearby USGS gauging stations may be utilized, or flow rates may be measured or estimated in accordance with the USEPA Storm Water Sampling Guidance Document (EPA-833-B-92-001), section 3.2.1, or other method proposed by the Copermittees that is acceptable to the San Diego Water Board);
- (d) Transitional Wet Weather MS4 Outfall Discharge Field Monitoring

For each wet weather monitoring event, the Copermittees must monitor and record the parameters in Table D-2 at each wet weather MS4 outfall discharge monitoring station.

- (e) Transitional Wet Weather MS4 Outfall Discharge Analytical Monitoring

For each wet weather monitoring event, the Copermittees must collect and analyze samples from each wet weather MS4 outfall discharge monitoring station as follows:

- (i) Analytes that are field measured are not required to be analyzed by a laboratory;
- (ii) The Copermittees must implement consistent sample collection methods for regional comparability of data, unless site-specific conditions indicate the need for alternate methods;
- (iii) Grab samples may be collected for pH, temperature, specific conductivity, dissolved oxygen, turbidity, and indicator bacteria;
- (iv) For all other constituents, composite samples must be collected for a duration adequate to be representative of changes in pollutant concentrations and runoff flows using one of the following techniques:
  - [a] Time-weighted composites collected over the length of the storm event or the first 24 hour period whichever is shorter, composed of discrete samples, which may be collected through the use of automated equipment, or
  - [b] Flow-weighted composites collected over the length of the storm event or a typical 24 hour period, whichever is shorter, which may be collected through the use of automated equipment, or
  - [c] If automated compositing is not feasible, a composite sample may be collected using a minimum of 4 grab samples, collected during

the first 24 hours of the storm water discharge, or for the entire storm water discharge if the storm event is less than 24 hours;

- (v) Only one analysis of the composite of aliquots is required;
- (vi) The samples must be analyzed for the following constituents:
  - [a] Constituents listed as a cause for impairment of receiving waters in the Watershed Management Area listed on the CWA section 303(d) List,
  - [b] Constituents for implementation plans or load reduction plans (e.g. Bacteria Load Reduction Plans, Comprehensive Load Reduction Plans) developed for watersheds where the Copermittees are listed responsible parties under the TMDLs in Attachment E to this Order, and
  - [c] Constituents listed in Table D-6.

**Table D-6. Analytical Monitoring Constituents for Wet Weather MS4 Outfall Discharge Monitoring Stations**

Conventionals, Nutrients	Metals (Total and Dissolved)	Indicator Bacteria
<ul style="list-style-type: none"> <li>• Total Dissolved Solids</li> <li>• Total Suspended Solids</li> <li>• Turbidity</li> <li>• Total Hardness</li> <li>• Total Organic Carbon</li> <li>• Dissolved Organic Carbon</li> <li>• Sulfate</li> <li>• Methylene Blue Active Substances (MBAS)</li> <li>• Total Phosphorus</li> <li>• Orthophosphate</li> <li>• Nitrite<sup>1</sup></li> <li>• Nitrate<sup>1</sup></li> <li>• Total Kjeldhal Nitrogen</li> <li>• Ammonia</li> </ul>	<ul style="list-style-type: none"> <li>• Arsenic</li> <li>• Cadmium</li> <li>• Chromium</li> <li>• Copper</li> <li>• Iron</li> <li>• Lead</li> <li>• Nickel</li> <li>• Selenium</li> <li>• Thallium</li> <li>• Zinc</li> </ul>	<ul style="list-style-type: none"> <li>• Total Coliform</li> <li>• Fecal Coliform<sup>2</sup></li> <li>• <i>Enterococcus</i></li> </ul>

Notes:

- 1. Nitrite and nitrate may be combined and reported as nitrite+nitrate.
- 2. *E. Coli* may be substituted for Fecal Coliform.

**(f) Other Transitional Wet Weather MS4 Outfall Discharge Monitoring**

The San Diego County Copermittees must continue the wet weather MS4 outfall monitoring program developed under Order No. R9-2007-0001, as approved by the San Diego Water Board, through its planned completion.

**b. DRY WEATHER MS4 OUTFALL DISCHARGE MONITORING**

Each Copermittee must perform dry weather MS4 outfall monitoring to identify non-storm water and illicit discharges within its jurisdiction pursuant to Provision

E.2.c, and to prioritize the dry weather MS4 discharges that will be investigated and eliminated pursuant to Provision E.2.d. Each Copermittee must conduct the following dry weather MS4 outfall discharge monitoring within its jurisdiction:

(1) Dry Weather MS4 Outfall Discharge Field Screening Monitoring

Each Copermittee must continue to perform the dry weather MS4 outfall discharge field screening monitoring in accordance with the requirements of Provision D.2.a.(2). The Copermittee may adjust the field screening monitoring frequencies and locations for the MS4 outfalls in its inventory, as needed, to identify and eliminate sources of persistent flow non-storm water discharges in accordance with the highest priority water quality conditions identified in the Water Quality Improvement Plan, provided the number of visual inspections performed is equivalent to the number of visual inspections required under Provision D.2.a.(2)(a).

(2) Non-Storm Water Persistent Flow MS4 Outfall Discharge Monitoring

Each Copermittee must perform non-storm water persistent flow MS4 outfall discharge monitoring to determine which persistent non-storm water discharges contain concentrations of pollutants below NALs, and which persistent non-storm water discharges impact receiving water quality during dry weather. Each Copermittee must conduct the following non-storm water persistent flow MS4 outfall discharge monitoring within its jurisdiction:

(a) Prioritization of Non-Storm Water Persistent Flow MS4 Outfalls

Based upon the dry weather MS4 outfall discharge field screening monitoring records developed pursuant to Provision D.2.a.(2)(c), each Copermittee must identify and prioritize the MS4 outfalls with persistent flows based on the highest priority water quality conditions identified in the Water Quality Improvement Plan and any additional criteria developed by the Copermittee, which may include historical data and data from sources other than what the Copermittee collects.

(b) Non-Storm Water Persistent Flow MS4 Outfall Discharge Monitoring Frequency

- (i) Based on the prioritization of major MS4 outfalls developed under Provision D.2.b.(2)(a), each Copermittee must identify, at a minimum, the 5 highest priority major MS4 outfalls with non-storm water persistent flows that the Copermittee will monitor within its jurisdiction in each Watershed Management Area. For Responsible Copermittees identified by a TMDL in Attachment E to this Order, if the 5 chosen outfall locations are not sufficient to determine compliance with the TMDL(s), then each Responsible Copermittee

must identify additional MS4 outfall monitoring locations within its jurisdiction sufficient to address compliance with the TMDL(s). If a Copermittee has less than 5 major outfalls within a Watershed Management Area, then the Copermittee must monitor all of its major MS4 outfalls with persistent flows within each Watershed Management Area. The location of the highest priority non-storm water persistent flow MS4 outfall monitoring stations must be identified on the map required pursuant to Provision E.2.b.(1). The map must specify which MS4 outfalls are being monitored for compliance with a TMDL.

- (ii) Each of the highest priority non-storm water persistent flow MS4 outfall monitoring stations identified pursuant to Provision D.2.b.(2)(b)(i) must be monitored under dry weather conditions at least semi-annually until one of the following occurs:
  - [a] The non-storm water discharges have been effectively eliminated (i.e. no flowing, pooled, or ponded water) for three consecutive dry weather monitoring events; or
  - [b] The source(s) of the persistent flows has been identified as a category of non-storm water discharges that does not require an NPDES permit and does not have to be addressed as an illicit discharge because it was not identified as a source of pollutants (i.e. constituents in non-storm water discharge do not exceed NALs), and the persistent flow can be re-prioritized to a lower priority; or
  - [c] The constituents in the persistent flow non-storm water discharge do not exceed NALs, and the persistent flow can be re-prioritized to a lower priority; or
  - [d] The source(s) of the persistent flows has been identified as a non-storm water discharge authorized by a separate NPDES permit.
- (iii) Where the criteria under Provision D.2.b.(2)(b)(ii) are not met, but the threat to water quality has been reduced by the Copermittee, the highest priority persistent flow MS4 outfall monitoring stations may be reprioritized accordingly for continued dry weather MS4 outfall discharge field screening monitoring required pursuant to Provision D.2.b.(1).
- (iv) Each Copermittee must document removal or re-prioritization of the highest priority persistent flow MS4 outfall monitoring stations identified under Provision D.2.b.(2)(a) in the Water Quality Improvement Plan Annual Report. Persistent flow MS4 outfall monitoring stations that have been removed must be replaced with the next highest prioritized major MS4 outfall in the Watershed Management Area within its jurisdiction, unless there are no remaining qualifying major MS4 outfalls within the Copermittee's jurisdiction in the Watershed Management Area.

(c) Non-Storm Water Persistent Flow MS4 Outfall Discharge Field Observations

During each semi-annual monitoring event, each Copermittee must record field observations consistent with Table D-5 at each of the highest priority persistent flow MS4 outfall monitoring stations within its jurisdiction.

(d) Non-Storm Water Persistent Flow MS4 Outfall Discharge Field Monitoring

During each semi-annual monitoring event, if conditions allow the collection of the data, each Copermittee must monitor and record the parameters in Table D-2 at each of the highest priority persistent flow MS4 outfall monitoring stations within its jurisdiction.

(e) Non-Storm Water Persistent Flow MS4 Outfall Discharge Analytical Monitoring

During each semi-annual monitoring event in which measurable flow is present, each Copermittee must collect and analyze samples from each of the highest priority persistent flow MS4 outfall monitoring stations within its jurisdiction as follows:

- (i) Analytes that are field measured are not required to be analyzed by a laboratory;
- (ii) The Copermittees must implement consistent sample collection methods for regional comparability of data, unless site-specific conditions indicate the need for alternate methods;
- (iii) Collect grab or composite samples to be analyzed at a qualified laboratory for the following constituents:
  - [a] Constituents contributing to the highest priority water quality conditions identified in the Water Quality Improvement Plan,
  - [b] Constituents listed as a cause for impairment of receiving waters in the Watershed Management Area listed on the CWA section 303(d) List,
  - [c] Constituents for implementation plans or load reduction plans (e.g. Bacteria Load Reduction Plans, Comprehensive Load Reduction Plans) developed for watersheds where the Copermittees are listed responsible parties under the TMDLs in Attachment E to this Order,
  - [d] Applicable NAL constituents, and
  - [e] Constituents listed in Table D-7. The Copermittees may adjust the list of constituents for the Watershed Management Area if historical data or supporting information can be provided that demonstrates or justifies the analysis of a constituent is not necessary.

**Table D-7. Analytical Monitoring Constituents for Persistent Flow MS4 Outfall Discharge Monitoring Stations**

Conventionals, Nutrients	Metals (Total and Dissolved)	Indicator Bacteria
<ul style="list-style-type: none"> <li>• Total Dissolved Solids</li> <li>• Total Suspended Solids</li> <li>• Total Hardness</li>   <li>• Total Phosphorus</li> <li>• Orthophosphate</li> <li>• Nitrite<sup>1</sup></li> <li>• Nitrate<sup>1</sup></li> <li>• Total Kjeldhal Nitrogen</li> <li>• Ammonia</li> </ul>	<ul style="list-style-type: none"> <li>• Cadmium</li> <li>• Copper</li> <li>• Lead</li> <li>• Zinc</li> </ul>	<ul style="list-style-type: none"> <li>• Total Coliform</li> <li>• Fecal Coliform<sup>2</sup></li> <li>• <i>Enterococcus</i></li> </ul>

Notes:

1. Nitrite and nitrate may be combined and reported as nitrite+nitrate.
2. *E. Coli* may be substituted for Fecal Coliform.

- (iv) If the Copermittee identifies and eliminates the source of the persistent flow non-storm water discharge, analysis of the sample is not required.

**C. WET WEATHER MS4 OUTFALL DISCHARGE MONITORING**

The Copermittees must perform wet weather MS4 outfall monitoring to identify pollutants in storm water discharges from the MS4s, to guide pollutant source identification efforts, and to determine compliance with the WQBELs associated with the applicable TMDLs in Attachment E to this Order. The Copermittees must conduct the following wet weather MS4 outfall discharge monitoring within the Watershed Management Area:

**(1) Wet Weather MS4 Outfall Discharge Monitoring Stations**

The Copermittees may adjust the wet weather MS4 outfall discharge monitoring locations in the Watershed Management Area, as needed, to identify pollutants in storm water discharges from MS4s, to guide pollutant source identification efforts, and to determine compliance with the WQBELs associated with the applicable TMDLs in Attachment E to this Order in accordance with the highest priority water quality conditions identified in the Water Quality Improvement Plan, provided the number of stations is at least equivalent to the number of stations required under Provision D.2.a.(3)(a). Additional outfall monitoring locations, above the minimum per jurisdiction, may be required to demonstrate compliance with the WQBELs associated with the applicable TMDLs in Attachment E.

(2) Wet Weather MS4 Outfall Discharge Monitoring Frequency

The Copermitees must monitor the wet weather MS4 outfall discharge monitoring stations in the Watershed Management Area at least once (1) per year. The Copermitees may need to increase the frequency of monitoring in order to identify pollutants in storm water discharges from the MS4s causing or contributing to the highest priority water quality conditions, to guide pollutant source identification efforts, or to determine compliance with the WQBELs associated with the applicable TMDLs in Attachment E to this Order.

(3) Wet Weather MS4 Outfall Discharge Field Observations

For each wet weather monitoring event, the following narrative descriptions and observations must be recorded at each wet weather MS4 outfall discharge monitoring station:

- (a) A narrative description of the station that includes the location, date and duration of the storm event(s) sampled, rainfall estimates of the storm event, and the duration between the storm event sampled and the end of the previous measurable (greater than 0.1 inch rainfall) storm event; and
- (b) The flow rates and volumes measured or estimated (data from nearby USGS gauging stations may be utilized, or flow rates may be measured or estimated in accordance with the USEPA Storm Water Sampling Guidance Document (EPA-833-B-92-001), section 3.2.1, or other method proposed by the Copermitees that is acceptable to the San Diego Water Board);

(4) Wet Weather MS4 Outfall Discharge Field Monitoring

For each wet weather monitoring event, the Copermitees must monitor and record the parameters in Table D-2 at each wet weather MS4 outfall discharge monitoring station.

(5) Wet Weather MS4 Outfall Discharge Analytical Monitoring

For each wet weather monitoring event, the Copermitees must collect and analyze samples from each wet weather MS4 outfall discharge monitoring station as follows:

- (a) Analytes that are field measured are not required to be analyzed by a laboratory;

- (b) The Copermitees must implement consistent sample collection methods for regional comparability of data, unless site-specific conditions indicate the need for alternate methods;
- (c) Grab samples may be collected for pH, temperature, specific conductivity, dissolved oxygen, turbidity, hardness, and indicator bacteria;
- (d) For all other constituents, composite samples must be collected for a duration adequate to be representative of changes in pollutant concentrations and runoff flows using one of the following techniques:
  - (i) Time-weighted composites collected over the length of the storm event or the first 24 hour period, whichever is shorter, composed of discrete samples, which may be collected through the use of automated equipment, or
  - (ii) Flow-weighted composites collected over the length of the storm event or a typical 24 hour period, whichever is shorter, which may be collected through the use of automated equipment, or
  - (iii) If automated compositing is not feasible, a composite sample may be collected using a minimum of 4 grab samples, collected during the first 24 hours of the storm water discharge, or for the entire storm water discharge if the storm event is less than 24 hours.
- (e) Only one analysis of the composite of aliquots is required;
- (f) Analysis for the following constituents is required:
  - (i) Constituents contributing to the highest priority water quality conditions identified in the Water Quality Improvement Plan,
  - (ii) Constituents listed as a cause for impairment of receiving waters in the Watershed Management Area listed on the CWA section 303(d) List,
  - (iii) Constituents for implementation plans or load reduction plans (e.g. Bacteria Load Reduction Plans, Comprehensive Load Reduction Plans) developed for watersheds where the Copermitees are listed responsible parties under the TMDLs in Attachment E to this Order,
  - (iv) Applicable SAL constituents, and
  - (v) The Copermitees may adjust the analytical monitoring required for the Watershed Management Area, if the Copermitees have historical data or supporting information that can demonstrate or provide justification that the analysis of a constituent is not necessary.

### 3. Special Studies

- a. Within the term of this Order, the Copermittees must initiate the following special studies:
  - (1) At least two special studies in each Watershed Management Area to address pollutant and/or stressor data gaps and/or develop information necessary to more effectively address the pollutants and/or stressors that cause or contribute to highest priority water quality conditions identified in the Water Quality Improvement Plan.
  - (2) At least one special study for the San Diego Region to address pollutant and/or stressor data gaps and/or develop information necessary to more effectively address the pollutants and/or stressors that are impacting receiving waters on a regional basis in the San Diego Region.
  - (3) One of the two special studies in each Watershed Management Area required pursuant to Provision D.3.a.(1) may be replaced by a special study implemented pursuant to Provision D.3.a.(2).
- b. The special studies must, at a minimum, be in conformance with the following criteria:
  - (1) The special studies must be related to the highest priority water quality conditions identified by the Copermittees in the Watershed Management Area and/or for the entire San Diego Region;
  - (2) The special studies developed pursuant to Provision D.3.a.(1) must:
    - (a) Be implemented within the applicable Watershed Management Area, and
    - (b) Require some form of participation by all the Copermittees within the Watershed Management Area;
  - (3) The special studies developed pursuant to Provision D.3.a.(2) must:
    - (a) Be implemented within the San Diego Region, and
    - (b) Require some form of participation by all Copermittees covered under the requirements of this Order.
  - (4) The Copermittees are encouraged to partner with environmental groups or third parties knowledgeable of watershed conditions to complete the required special studies.

- c.** Special studies developed to identify sources of pollutants and/or stressors should be pollutant and/or stressor specific and based on historical monitoring data and monitoring performed pursuant to Provisions D.1 and D.2. Development of source identification special studies should include the following:
- (1) A compilation of known information on the specific pollutant and/or stressor, including data on potential sources and movement of the pollutant and/or stressor within the watershed. Data generated by the Copermittees and others, as well as information available from a literature research on the pollutant and/or stressor should be compiled and analyzed as appropriate.
  - (2) An identification of data gaps, based on the compiled information generated on the specific pollutant and/or stressor identified in Provision D.3.c.(1). Source identification special studies should be developed to fill identified data gaps.
  - (3) A monitoring plan that will collect and provide data the Copermittees can utilize to do the following:
    - (a) Quantify the relative loading or impact of a pollutant and/or stressor from a particular source or pollutant generating activity;
    - (b) Improve understanding of the fate of a pollutant and/or stressor in the environment;
    - (c) Develop an inventory of known and suspected sources of a pollutant and/or stressor in the Watershed Management Area; and/or
    - (d) Prioritize known and suspected sources of a pollutant and/or stressor based on relative magnitude in discharges, geographical distribution (i.e., regional or localized), frequency of occurrence in discharges, human health risk, and controllability.
- d.** Special studies initiated prior to the effective date of this Order that meet the requirements of Provision D.3.b and are implemented during the term of this Order as part of the Water Quality Improvement Plan may be utilized to fulfill the special study requirements of Provision D.3.a. Special studies completed before the effective date of this Order cannot be utilized to fulfill the special study requirements of Provision D.3.a.
- e.** The Copermittees must submit the monitoring plans for the special studies in the Water Quality Improvement Plans required pursuant to Provision F.1.

- f. The Copermittees are encouraged to share the results of the special studies regionally among the Copermittees to provide information useful in improving and adapting the management of non-storm water and storm water runoff through the implementation of the Water Quality Improvement Plans.

#### **4. Assessment Requirements**

Each Copermittee must evaluate the data collected pursuant to Provisions D.1, D.2 and D.3, and information collected during the implementation of the jurisdictional runoff management programs required pursuant to Provision E, to assess the progress of the water quality improvement strategies in the Water Quality Improvement Plan toward achieving compliance with Provisions A.1.a, A.1.c and A.2.a. Assessments must be performed as described in the following provisions:

##### **a. RECEIVING WATERS ASSESSMENTS**

- (1) The Copermittees must assess and report the conditions of the receiving waters in the Watershed Management Area as follows:
  - (a) Based on data collected pursuant to Provision D.1.a, the assessments under Provision D.4.a.(2) must be included in the Transitional Monitoring and Assessment Program Annual Reports required pursuant to Provision F.3.b.(2).
  - (b) Based on the data collected pursuant to Provisions D.1.a-e, the assessments required under Provision D.4.a.(2) must be included in the Report of Waste Discharge required pursuant to Provision F.5.b.
- (2) The Copermittees must assess the status and trends of receiving water quality conditions in 1) coastal waters, 2) enclosed bays, harbors, estuaries, and lagoons, and 3) streams under dry weather and wet weather conditions. For each of the three types of receiving waters in each Watershed Management Area the Copermittees must:
  - (a) Determine whether or not the conditions of the receiving waters are meeting the numeric goals established pursuant to Provision B.3.a;
  - (b) Identify the most critical beneficial uses that must be protected to ensure overall health of the receiving water;
  - (c) Determine whether or not those critical beneficial uses are being protected;
  - (d) Identify short-term and/or long-term improvements or degradation of those critical beneficial uses;

- (e) Determine whether or not the strategies established in the Water Quality Improvement Plan contribute towards progress in achieving the interim and final numeric goals of the Water Quality Improvement Plan; and
- (f) Identify data gaps in the monitoring data necessary to assess Provisions D.4.a.(2)(a)-(e).

**b. MS4 OUTFALL DISCHARGES ASSESSMENTS**

(1) Non-Storm Water Discharges Reduction Assessments

- (a) Each Copermittee must assess and report the progress of its illicit discharge detection and elimination program, required to be implemented pursuant to Provision E.2, toward effectively prohibiting non-storm water and illicit discharges into the MS4 within its jurisdiction as follows:
  - (i) Based on data collected pursuant to Provisions D.2.a.(2), the assessments under Provision D.4.b.(1)(b) must be included in the Transitional Monitoring and Assessment Program Annual Reports required pursuant to Provision F.3.b.(2).
  - (ii) Based on the data collected pursuant to Provisions D.2.b, the assessments required under Provision D.4.b.(1)(c) must be included in the Water Quality Improvement Plan Annual Reports required pursuant to Provision F.3.b.(3).
  - (iii) Based on the data collected pursuant to Provisions D.2.b, the assessment required under Provision D.4.b.(1)(c) must be included in the Report of Waste Discharge required pursuant to F.5.b.
- (b) Based on the transitional dry weather MS4 outfall discharge field screening monitoring required pursuant to Provision D.2.a.(2), each Copermittee must assess and report the following:
  - (i) Identify the known and suspected controllable sources (e.g. facilities, areas, land uses, pollutant generating activities) of transient and persistent flows within the Copermittee's jurisdiction in the Watershed Management Area;
  - (ii) Identify sources of transient and persistent flows within the Copermittee's jurisdiction in the Watershed Management Area that have been reduced or eliminated; and
  - (iii) Identify modifications to the field screening monitoring locations and frequencies for the MS4 outfalls in its inventory necessary to identify and eliminate sources of persistent flow non-storm water discharges pursuant to Provision D.2.b.

- (c) Based on the dry weather MS4 outfall discharge field screening monitoring required pursuant to Provision D.2.b.(1), each Copermittee must assess and report the following:
- (i) The assessments required pursuant to Provision D.4.b.(1)(b);
  - (ii) Based on the data collected and applicable NALs in the Water Quality Improvement Plan, rank the MS4 outfalls in the Copermittee's jurisdiction according to potential threat to receiving water quality, and produce a prioritized list of major MS4 outfalls for follow-up action to update the Water Quality Improvement Plan, with the goal of eliminating persistent flow non-storm water discharges and/or pollutant loads in order of the ranked priority list through targeted programmatic actions and source investigations;
  - (iii) For the highest priority major MS4 outfalls with persistent flows that are in exceedance of NALs, identify the known and suspected sources within the Copermittee's jurisdiction in the Watershed Management Area that may cause or contribute to the NAL exceedances;
  - (iv) Each Copermittee must analyze the data collected pursuant to Provision D.2.b, and utilize a model or other method, to calculate or estimate the non-storm water volumes and pollutant loads collectively discharged from all the major MS4s outfalls in its jurisdiction identified as having persistent dry weather flows during the monitoring year. These calculations or estimates must be updated annually.
    - [a] Each Copermittee must calculate or estimate the annual non-storm water volumes and pollutant loads collectively discharged from the Copermittee's major MS4 outfalls to receiving waters within the Copermittee's jurisdiction, with an estimate of the percent contribution from each known source for each MS4 outfall;
    - [b] Each Copermittee must annually identify and quantify (i.e. volume and pollutant loads) sources of non-storm water not subject to the Copermittee's legal authority that are discharged from the Copermittee's major MS4 outfalls to downstream receiving waters.
  - (v) Each Copermittee must review the data collected pursuant to Provision D.2.b and findings from the assessments required pursuant to Provision D.4.b.(1)(c)(i)-(iv) at least once during the term of this Order to:

- [a] Identify reductions and progress in achieving reductions in non-storm water and illicit discharges to the Copermittee's MS4 in the Watershed Management Area;
  - [b] Assess the effectiveness of water quality improvement strategies being implemented by the Copermittees within the Watershed Management Area toward reducing or eliminating non-storm water and pollutant loads discharging from the MS4 to receiving waters within its jurisdiction, with an estimate, if possible, of the non-storm water volume and/or pollutant load reductions attributable to specific water quality strategies implemented by the Copermittee; and
  - [c] Identify modifications necessary to increase the effectiveness of the water quality improvement strategies implemented by the Copermittee in the Watershed Management Area toward reducing or eliminating non-storm water and pollutant loads discharging from the MS4 to receiving waters within its jurisdiction.
- (vi) Identify data gaps in the monitoring data necessary to assess Provisions D.4.b.(1)(c)(i)-(v).

## (2) Storm Water Pollutant Discharges Reduction Assessments

- (a) The Copermittees must assess and report the progress of the water quality improvement strategies, required to be implemented pursuant to Provisions B and E, toward reducing pollutants in storm water discharges from the MS4s within the Watershed Management Area as follows:
- (i) Based on data collected pursuant to Provisions D.2.a.(3), the assessments under Provision D.4.b.(2)(b) must be included in the Transitional Monitoring and Assessment Program Annual Reports required pursuant to Provision F.3.b.(2).
  - (ii) Based on the data collected pursuant to Provisions D.2.c, the assessments required under Provision D.4.b.(2)(c) must be included in the Water Quality Improvement Plan Annual Reports required pursuant to Provision F.3.b.(3).
  - (iii) Based on the data collected pursuant to Provisions D.2.c, the assessment required under Provisions D.4.b.(2)(c)-(d) must be included in the Report of Waste Discharge required pursuant to F.5.b.
- (b) Based on the transitional wet weather MS4 outfall discharge monitoring required pursuant to Provision D.2.a.(3) the Copermittees must assess and report the following:

- (i) The Copermittees must analyze the monitoring data collected pursuant to Provision D.2.a.(3), and utilize a watershed model or other method, to calculate or estimate the following for each monitoring year:
    - [a] The average storm water runoff coefficient for each land use type within the Watershed Management Area;
    - [b] The volume of storm water and pollutant loads discharged from each of the Copermittee's monitored MS4 outfalls in its jurisdiction to receiving waters within the Watershed Management Area for each storm event with measurable rainfall greater than 0.1 inch;
    - [c] The total flow volume and pollutant loadings discharged from the Copermittee's jurisdiction within the Watershed Management Area over the course of the wet season, extrapolated from the data produced from the monitored MS4 outfalls; and
    - [d] The percent contribution of storm water volumes and pollutant loads discharged from each land use type within each hydrologic subarea with a major MS4 outfall to receiving waters or within each major MS4 outfall to receiving waters in the Copermittee's jurisdiction within the Watershed Management Area for each storm event with measurable rainfall greater than 0.1 inch.
  - (ii) Identify modifications to the wet weather MS4 outfall discharge monitoring locations and frequencies necessary to identify pollutants in storm water discharges from the MS4s in the Watershed Management Area pursuant to Provision D.2.c.(1).
- (c) Based on the wet weather MS4 outfall discharge monitoring required pursuant to Provision D.2.c the Copermittees must assess and report the following:
- (i) The assessments required pursuant to Provision D.4.b.(2)(b);
  - (ii) Based on the data collected and applicable SALs in the Water Quality Improvement Plan, analyze and compare the monitoring data to the analyses and assumptions used to develop the Water Quality Improvement Plans, including strategies developed pursuant to Provision B.3, and evaluate whether those analyses and assumptions should be updated as a component of the adaptive management efforts pursuant to Provision B.5 for follow-up action to update the Water Quality Improvement Plan;
  - (iii) The Copermittees must review the data collected pursuant to Provision D.2.c and findings from the assessments required pursuant to Provisions D.4.b.(2)(c)(i)-(ii) at least once during the term of this Order to:

- [a] Identify reductions or progress in achieving reductions in pollutant concentrations and/or pollutant loads from different land uses and/or drainage areas discharging from the Copermitees' MS4s in the Watershed Management Area;
- [b] Assess the effectiveness of water quality improvement strategies being implemented by the Copermitees within the Watershed Management Area toward reducing pollutants in storm water discharges from the MS4s to receiving waters within the Watershed Management Area to the MEP, with an estimate, if possible, of the pollutant load reductions attributable to specific water quality strategies implemented by the Copermitees; and
- [c] Identify modifications necessary to increase the effectiveness of the water quality improvement strategies implemented by the Copermitees in the Watershed Management Area toward reducing pollutants in storm water discharges from the MS4s to receiving waters in the Watershed Management Area to the MEP.

(iv) Identify data gaps in the monitoring data necessary to assess Provisions D.4.b.(2)(c)(i)-(iii).

(d) The Copermitees must evaluate all the data collected pursuant to Provision D.2.c, and incorporate new outfall monitoring data into time series plots for each long-term monitoring constituent for the Watershed Management Area, and perform statistical trends analysis on the cumulative long-term wet weather MS4 outfall discharge water quality data set.

#### **c. SPECIAL STUDIES ASSESSMENTS**

The Copermitees must annually evaluate the results and findings from the special studies developed and implemented pursuant to Provision D.3, and assess their relevance to the Copermitees' efforts to characterize receiving water conditions, understand sources of pollutants and/or stressors, and control and reduce the discharges of pollutants from the MS4 outfalls to receiving waters in the Watershed Management Area. The Copermitees must report the results of the special studies assessments applicable to the Watershed Management Area, and identify any necessary modifications or updates to the Water Quality Improvement Plan based on the results in the Water Quality Improvement Plan Annual Reports required pursuant to Provision F.3.b.(3).

#### **d. INTEGRATED ASSESSMENT OF WATER QUALITY IMPROVEMENT PLAN**

As part of the iterative approach and adaptive management process required for the Water Quality Improvement Plan pursuant to Provision B.5, the Copermitees in each Watershed Management Area must integrate the data collected pursuant to Provisions D.1-D.3, the findings from the assessments required pursuant to

Provisions D.4.a-c, and information collected during the implementation of the jurisdictional runoff management programs required pursuant to Provision E to assess the effectiveness of, and identify necessary modifications to, the Water Quality Improvement Plan as follows:

- (1) The Copermittees must re-evaluate the priority water quality conditions and numeric goals for the Watershed Management Area, as needed, during the term of this Order pursuant to Provision B.5.a. The re-evaluation and recommendations for modifications to the priority water quality conditions, and/or numeric goals and corresponding schedules may be provided in the Water Quality Improvement Plan Annual Reports required pursuant to Provision F.3.b.(3), but must at least be provided in the Report of Waste Discharge pursuant to Provision F.5.b. The priority water quality conditions and numeric goals for the Watershed Management Area must be re-evaluated as follows:
  - (a) Re-evaluate the receiving water conditions in the Watershed Management Area in accordance with Provision B.2.a;
  - (b) Re-evaluate the impacts on receiving waters in the Watershed Management Area from MS4 discharges in accordance with Provision B.2.b;
  - (c) Re-evaluate the identification of MS4 sources of pollutants and/or stressors in accordance with Provision B.2.d;
  - (d) Identify beneficial uses of the receiving waters that are protected in accordance with Provision D.4.a;
  - (e) Evaluate the progress toward achieving the interim and final numeric goals for protecting impacted beneficial uses in the receiving waters.
- (2) The Copermittees must re-evaluate the water quality improvement strategies for the Watershed Management Area during the term of this Order pursuant to Provision B.5.b. The re-evaluation and recommendations for modifications to the water quality improvement strategies and schedules may be provided in the Water Quality Improvement Plan Annual Reports required pursuant to Provision F.3.b.(3), but must at least be provided in the Report of Waste Discharge pursuant to Provision F.5.b. The water quality improvement strategies for the Watershed Management Area must be re-evaluated as follows:
  - (a) Identify the non-storm water and storm water pollutant loads from the Copermittees' MS4 outfalls in the Watershed Management Area, calculated or estimated pursuant to Provisions D.4.b;

- (b) Identify the non-storm water and storm water pollutant load reductions, or other improvements to receiving water or water quality conditions, that are necessary to attain the interim and final numeric goals identified in the Water Quality Improvement Plan for protecting beneficial uses in the receiving waters;
  - (c) Identify the non-storm water and storm water pollutant load reductions, or other improvements to the quality of MS4 discharges, that are necessary for the Copermittees to demonstrate that non-storm water and storm water discharges from their MS4s are not causing or contributing to exceedances of receiving water limitations;
  - (d) Evaluate the progress of the water quality improvement strategies toward achieving the interim and final numeric goals identified in the Water Quality Improvement Plan for protecting beneficial uses in the receiving waters.
- (3) The Copermittees must re-evaluate and adapt the water quality monitoring and assessment program for the Watershed Management Area when new information becomes available to improve the monitoring and assessment program pursuant to Provision B.5.c. The re-evaluation and recommendations for modifications to the monitoring and assessment program may be provided in the Water Quality Improvement Plan Annual Reports required pursuant to Provision F.3.b.(3), but must at least be provided in the Report of Waste Discharge pursuant to Provision F.5.b. Modifications to the water quality monitoring and assessment program must be consistent with the requirements of Provision D.1-D.3. The re-evaluation of the water quality monitoring and assessment program for the Watershed Management Area must consider the data gaps identified by the assessments required pursuant to Provisions D.4.a-b, and results of the special studies implemented pursuant to Provision D.4.c.

## **5. Monitoring Provisions**

Each Copermittee must comply with all the monitoring, reporting, and recordkeeping provisions of the Standard Permit Provisions and General Provisions contained in Attachment B to this Order.

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## **E. JURISDICTIONAL RUNOFF MANAGEMENT PROGRAMS**

The purpose of this provision is for each Copermittee to implement a program to control the contribution of pollutants to and the discharges from the MS4 within its jurisdiction. The goal of the jurisdictional runoff management programs is to implement strategies that effectively prohibit non-storm water discharges to the MS4 and reduce the discharge of pollutants in storm water to the MEP. This goal will be accomplished through implementing the jurisdictional runoff management programs in accordance with the strategies identified in the Water Quality Improvement Plans.

Each Copermittee must update its jurisdictional runoff management program document, in accordance with Provision F.2.a, to incorporate all the requirements of Provision E. Until the Copermittee has updated its jurisdictional runoff management program document with the requirements of Provision E, the Copermittee must continue implementing its current jurisdictional runoff management program.

### **1. Legal Authority Establishment and Enforcement**

- a. Each Copermittee must establish, maintain, and enforce adequate legal authority within its jurisdiction to control pollutant discharges into and from its MS4 through statute, ordinance, permit, contract, order, or similar means. This legal authority must, at a minimum, authorize the Copermittee to:
  - (1) Prohibit and eliminate all illicit discharges and illicit connections to its MS4;
  - (2) Control the contribution of pollutants in discharges of runoff associated with industrial and construction activity to its MS4 and control the quality of runoff from industrial and construction sites, including industrial and construction sites which have coverage under the statewide General Permit for Discharges of Storm Water Associated with Industrial Activities (Industrial General Permit) or General Permit for Discharges of Storm Water Associated with Construction Activities (Construction General Permit), as well as to those sites which do not;
  - (3) Control the discharge of spills, dumping, or disposal of materials other than storm water into its MS4;
  - (4) Control through interagency agreements among Copermittees the contribution of pollutants from one portion of the MS4 to another portion of the MS4;
  - (5) Control, by coordinating and cooperating with other owners of the MS4 such as Caltrans, the U.S. federal government, or sovereign Native American Tribes through interagency agreements, where possible, the contribution of pollutants from their portion of the MS4 to the portion of the MS4 within the Copermittee's jurisdiction;

- (6) Require compliance with conditions in its statutes, ordinances, permits, contracts, orders, or similar means to hold dischargers to its MS4 accountable for their contributions of pollutants and flows;
  - (7) Require the use of BMPs to prevent or reduce the discharge of pollutants in storm water from its MS4 to the MEP;
  - (8) Require documentation on the effectiveness of BMPs implemented to prevent or reduce the discharge of pollutants in storm water from its MS4 to the MEP;
  - (9) Utilize enforcement mechanisms to require compliance with its statutes, ordinances, permits, contracts, orders, or similar means; and
  - (10) Carry out all inspections, surveillance, and monitoring procedures necessary to determine compliance and noncompliance with its statutes, ordinances, permits, contracts, orders, or similar means and with the requirements of this Order, including the prohibition of illicit discharges and connections to its MS4; the Copermittee must also have authority to enter, monitor, inspect, take measurements, review and copy records, and require regular reports from industrial facilities, including construction sites, discharging into its MS4.
- b. With the first Water Quality Improvement Plan Annual Report required pursuant to Provision F.3.b.(3), each Copermittee must submit a statement certified by its Principal Executive Officer, Ranking Elected Official, or Duly Authorized Representative that the Copermittee has taken the necessary steps to obtain and maintain full legal authority within its jurisdiction to implement and enforce each of the requirements contained in this Order.

## **2. Illicit Discharge Detection and Elimination**

Each Copermittee must implement a program to actively detect and eliminate illicit discharges and improper disposal into the MS4, or otherwise require the discharger to apply for and obtain a separate NPDES permit. The illicit discharge detection and elimination program must be implemented in accordance with the strategies in the Water Quality Improvement Plan described pursuant to Provision B.3.b.(1) and include, at a minimum, the following requirements:

### **a. NON-STORM WATER DISCHARGES**

Each Copermittee must address all non-storm water discharges as illicit discharges unless a non-storm water discharge is either identified as a discharge authorized by a separate NPDES permit, or identified as a category of non-storm water discharges or flows that must be addressed pursuant to the following requirements:

- PROVISION E: JURISDICTIONAL RUNOFF MANAGEMENT PROGRAMS
- E.1. Legal Authority Establishment and Enforcement
  - E.2. Illicit Discharge Detection and Elimination

- (1) Discharges of non-storm water to the MS4 from the following categories must be addressed as illicit discharges unless the discharge has coverage or meets the exception criteria under NPDES Permit No. CAG919003 (Order No. R9-2015-0013, as it may be amended or reissued) for discharges to surface waters within the San Diego Region:
  - (1) Uncontaminated pumped ground water;
  - (2) Discharges from foundation drains;<sup>23</sup>
  - (3) Water from crawl space pumps; and
  - (4) Water from footing drains.<sup>20</sup>
- (2) Discharges of non-storm water from water line flushing and water main breaks to the MS4 must be addressed as illicit discharges unless the discharge has coverage under NPDES Permit No. CAG679001 (Order No. R9-2010-0003, as it may be amended or reissued) or NPDES General Permit No. CAG140001 (Order 2014-0194-DWQ, as it may be amended or reissued). This category includes water line flushing and water main break discharges from water purveyors issued a water supply permit by the California Department of Public Health or federal military installations. Discharges from recycled or reclaimed water lines to the MS4 must be addressed as illicit discharges, unless the discharges have coverage under a separate NPDES permit.
- (3) Discharges of non-storm water to the MS4 from the following categories must be addressed by the Copermittee as illicit discharges only if the Copermittee or the San Diego Water Board identifies the discharge as a source of pollutants to receiving waters:
  - (a) Diverted stream flows;
  - (b) Rising ground waters;
  - (c) Uncontaminated ground water infiltration to MS4s;
  - (d) Springs;
  - (e) Flows from riparian habitats and wetlands;
  - (f) Discharges from potable water sources;

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<sup>23</sup> Provision E.2.a.(1) only applies to this category of non-storm water if the system is designed to be located at or below the groundwater table to actively or passively extract groundwater during any part of the year.

- (g) Discharges from foundation drains;<sup>24</sup> and
  - (h) Discharges from footing drains.<sup>21</sup>
- (4) Discharges of non-storm water to the MS4 from the following categories must be controlled by the requirements given below through statute, ordinance, permit, contract, order, or similar means. Discharges of non-storm water to the MS4 from the following categories not controlled by the requirements given below through statute, ordinance, permit, contract, order, or similar means must be addressed by the Copermittee as illicit discharges.
- (a) Air conditioning condensation
    - The discharge of air conditioning condensation should be directed to landscaped areas or other pervious surfaces, or to the sanitary sewer, where feasible.
  - (b) Individual residential vehicle washing
    - (i) The discharge of wash water should be directed to landscaped areas or other pervious surfaces where feasible; and
    - (ii) The minimization of water, washing detergent and other vehicle wash products used for residential vehicle washing, and the implementation of other practices or behaviors that will prevent the discharge of pollutants associated with individual residential vehicle washing from entering the MS4 must be encouraged.
  - (c) Dechlorinated swimming pool discharges
    - (i) Residual chlorine, algaecide, filter backwash, or other pollutants from swimming pools must be eliminated prior to discharging to the MS4; and
    - (ii) The discharge of saline swimming pool water must be directed to the sanitary sewer, landscaped areas, or other pervious surfaces that can accommodate the volume of water, unless the saline swimming pool water can be discharged via a pipe or concrete channel directly to a naturally saline water body (e.g. Pacific Ocean).
- (5) Firefighting discharges to the MS4 must be addressed by the Copermittee as illicit discharges only if the Copermittee or the San Diego Water Board identifies the discharge as a significant source of pollutants to receiving waters. Firefighting discharges to the MS4 not identified as a significant

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<sup>24</sup> Provision E.2.a.(3) only applies to this category of non-storm water discharge if the system is designed to be located above the groundwater table at all times of the year, and the system is only expected to discharge non-storm water under unusual circumstances.

source of pollutants to receiving waters, must be addressed, at a minimum, as follows:

(a) Non-emergency firefighting discharges

- (i) Building fire suppression system maintenance discharges (e.g. sprinkler line flushing) to the MS4 must be addressed as illicit discharges unless BMPs are implemented to prevent pollutants associated with such discharges to the MS4.
- (ii) Non-emergency firefighting discharges (i.e., discharges from controlled or practice blazes, firefighting training, and maintenance activities not associated with building fire suppression systems) must be addressed by a program, to be developed and implemented by the Copermittee, to reduce or eliminate pollutants in such discharges from entering the MS4.

(b) Emergency firefighting discharges

Each Copermittee should develop and encourage implementation of BMPs to reduce or eliminate pollutants in emergency firefighting discharges to the MS4s and receiving waters within its jurisdiction. During emergency situations, priority of efforts should be directed toward life, property, and the environment (in descending order). BMPs should not interfere with immediate emergency response operations or impact public health and safety.

- (6) If the Copermittee or San Diego Water Board identifies any category of non-storm water discharges listed under Provisions E.2.a.(1)-(4) as a source of pollutants to receiving waters, the category must be prohibited through ordinance, order, or similar means and addressed as an illicit discharge. Alternatively, the Copermittee may propose controls to be implemented for the category of non-storm water discharges as part of the Water Quality Improvement Plan instead of prohibiting the category of non-storm water discharges, and implement the controls if accepted by the San Diego Water Board as part of the Water Quality Improvement Plan.
- (7) Each Copermittee must, where feasible and priorities and resources allow, reduce or eliminate non-storm water discharges listed under Provisions E.2.a.(1)-(4) into its MS4, unless a non-storm water discharge is identified as a discharge authorized by a separate NPDES permit.

**b. PREVENT AND DETECT ILLICIT DISCHARGES AND CONNECTIONS**

Each Copermittee must include the following measures within its program to prevent and detect illicit discharges to the MS4:

- (1) Each Copermittee must maintain an updated map of its entire MS4 and the

corresponding drainage areas. The accuracy of the MS4 map must be confirmed during the field screening required pursuant to Provision E.2.c. The MS4 map must be included as part of the jurisdictional runoff management program document. Any geographic information system (GIS) layers or files used by the Copermittee to maintain the MS4 map must be made available to the San Diego Water Board upon request. The MS4 map must identify the following:

- (a) All segments of the MS4 owned, operated, and maintained by the Copermittee;
  - (b) All known locations of inlets that discharge and/or collect runoff into the Copermittee's MS4;
  - (c) All known locations of connections with other MS4s not owned or operated by the Copermittee (e.g. Caltrans MS4s);
  - (d) All known locations of MS4 outfalls and private outfalls that discharge runoff collected from areas within the Copermittee's jurisdiction;
  - (e) All segments of receiving waters within the Copermittee's jurisdiction that receive and convey runoff discharged from the Copermittee's MS4 outfalls;
  - (f) Locations of the MS4 outfalls, identified pursuant to Provision D.2.a.(1), within its jurisdiction; and
  - (g) Locations of the non-storm water persistent flow MS4 outfall discharge monitoring stations, identified pursuant to Provision D.2.b.(2), within its jurisdiction.
- (2) Each Copermittee must use Copermittee personnel and contractors to assist in identifying and reporting illicit discharges and connections during their daily employment activities.
  - (3) Each Copermittee must promote, publicize, and facilitate public reporting of the presence of illicit discharges or water quality impacts associated with discharges to or from the MS4, including the following methods for public reporting:
    - (a) Operate a public hotline, which can be Copermittee-specific or shared by the Copermittees, and must be capable of receiving reports in both English and Spanish 24 hours per day and seven days per week; and
    - (b) Designate an e-mail address for receiving electronic reports from the public, which can be Copermittee-specific or shared by the Copermittees,

and must be prominently displayed on the Copermittee's webpage and the Regional Clearinghouse required pursuant to Provision F.4.

- (4) Each Copermittee must implement practices and procedures (including a notification mechanism) to prevent, respond to, contain, and clean up any spills that may discharge into the MS4 within its jurisdiction from any source. The Copermittee must coordinate, to the extent possible, with spill response teams to prevent entry of spills into the MS4, and prevent contamination of surface water, ground water, and soil. The Copermittee must coordinate spill prevention, containment, and response activities throughout all appropriate Copermittee departments, programs, and agencies.
- (5) Each Copermittee must implement practices and procedures to prevent and limit infiltration of seepage from sanitary sewers (including private laterals and failing septic systems) to the MS4.
- (6) Each Copermittee must coordinate, when necessary, with upstream Copermittees and/or entities to prevent illicit discharges from upstream sources into the MS4 within its jurisdiction.

**c. FIELD SCREENING**

Each Copermittee must conduct field screening (i.e. visual observations, field testing, and/or analytical testing) of MS4 outfalls and other portions of its MS4 within its jurisdiction to detect non-storm water and illicit discharges and connections to the MS4 in accordance with the dry weather MS4 outfall discharge monitoring requirements in Provisions D.2.a.(2) and D.2.b.(1).

**d. INVESTIGATE AND ELIMINATE ILLICIT DISCHARGES AND CONNECTIONS**

Each Copermittee must include the following measures within its program to investigate and eliminate illicit discharges to the MS4:

- (1) Each Copermittee must prioritize and determine when follow-up investigations will be performed in response to visual observations and/or water quality monitoring data collected during an investigation of a detected non-storm water or illicit discharge to or from the MS4. The criteria for prioritizing investigations must consider the following:
  - (a) Pollutants identified as causing or contributing to the highest water quality priorities identified in the Water Quality Improvement Plan;
  - (b) Pollutants identified as causing or contributing, or threatening to cause or contribute to impairments in water bodies on the 303(d) List and/or in environmentally sensitive areas (ESAs), located within its jurisdiction;
  - (c) Pollutants identified from sources or land uses known to exist within the

area, drainage basin, or watershed that discharges to the portion of the MS4 within its jurisdiction included in the investigation;

- (d) Pollutants identified as causing or contributing to an exceedance of a NAL in the Water Quality Improvement Plan; and
  - (e) Pollutants identified as a threat to human health or the environment.
- (2) Each Copermittee must implement procedures to investigate and inspect portions of its MS4 that, based on reports or notifications, field screening, or other appropriate information, indicate a reasonable potential of receiving, containing, or discharging pollutants due to illicit discharges, illicit connections, or other sources of non-storm water. The procedures must include the following:
- (a) Each Copermittee must develop criteria to:
    - (i) Assess the validity of each report or notification received; and
    - (ii) Prioritize the response to each report or notification received.
  - (b) Each Copermittee must prioritize and respond to each valid report or notification (e.g., public reports, staff or contractor reports and notifications, etc.) of an incident in a timely manner.
  - (c) In accordance with the requirements of Provision E.2.d.(1), each Copermittee must investigate and seek to identify the source(s) of discharges of non-storm water where flows are observed in and from the MS4 during the field screening required pursuant to Provision D.2.b.(1) as follows:
    - (i) Obvious illicit discharges must be immediately investigated to identify the source(s) of non-storm water discharges;
    - (ii) The investigation must include field investigations to identify sources or potential sources for the discharge, unless the source or potential source has already been identified during previous investigations; and
    - (iii) The investigation may include follow-up field investigations and/or reviewing Copermittee inventories and other land use data to identify potential sources of the discharge.
  - (d) Each Copermittee must maintain records and a database of the following information:
    - (i) Location of incident, including hydrologic subarea, portion of MS4

- receiving the non-storm water or illicit discharge, and point of discharge or potential discharge from MS4 to receiving water;
- (ii) Source of information initiating the investigation (e.g., public reports, staff or contractor reports and notifications, field screening, etc.);
  - (iii) Date the information used to initiate the investigation was received;
  - (iv) Date the investigation was initiated;
  - (v) Dates of follow-up investigations;
  - (vi) Identified or suspected source of the illicit discharge or connection, if determined;
  - (vii) Known or suspected related incidents, if any;
  - (viii) Result of the investigation; and
  - (ix) If a source cannot be identified and the investigation is not continued, document the response pursuant to the requirements of Provision E.2.d.(4).
- (e) Each Copermittee must maintain records and, in accordance with the priorities of the Water Quality Improvement Plan, seek to identify the source(s) of non-storm water discharges from the MS4 where there is evidence of non-storm water having been discharged into or from the MS4 (e.g., pooled water), in accordance with MS4 outfall discharge monitoring requirements in Provisions D.2.a.(2) and D.2.b.(1).
- (3) Each Copermittee must initiate the implementation of procedures, in a timely manner, to eliminate all detected and identified illicit discharges and connections within its jurisdiction. The procedures must include the following responses:
- (a) Each Copermittee must enforce its legal authority, as required under Provision E.1, to eliminate illicit discharges and connections to the MS4.
  - (b) If the Copermittee identifies the source as a controllable source of non-storm water or illicit discharge or connection, the Copermittee must implement its Enforcement Response Plan pursuant to Provision E.6 and enforce its legal authority to prohibit and eliminate illicit discharges and connections to its MS4.
  - (c) If the Copermittee identifies the source of the discharge as a category of non-storm water discharges in Provision E.2.a, and the discharge is in exceedance of NALs in the Water Quality Improvement Plan, then the Copermittee must determine if: (1) this is an isolated incident or set of circumstances that will be addressed through its Enforcement Response Plan pursuant to Provision E.6, or (2) the category of discharge must be

addressed through the prohibition of that category of discharge as an illicit discharge pursuant to Provision E.2.a.(6).

- (d) If the Copermittee suspects the source of the non-storm water discharge as natural in origin (i.e. non-anthropogenically influenced) and in conveyance into the MS4, then the Copermittee must document and provide the data and evidence necessary to demonstrate to the San Diego Water Board that it is natural in origin and does not require further investigation.
  - (e) If the Copermittee is unable to identify and document the source of a recurring non-storm water discharge to or from the MS4, then the Copermittee must address the discharge as an illicit discharge and update its jurisdictional runoff management program to address the common and suspected sources of the non-storm water discharge within its jurisdiction in accordance with the Copermittee's priorities.
- (4) Each Copermittee must submit a summary of the non-storm water discharges and illicit discharges and connections investigated and eliminated within its jurisdiction with each Water Quality Improvement Plan Annual Report required under Provision F.3.b.(3) of this Order.

### **3. Development Planning**

Each Copermittee must use their land use and planning authorities to implement a development planning program in accordance with the strategies in the Water Quality Improvement Plan described pursuant to Provision B.3.b.(1) and includes, at a minimum, the following requirements:

#### **a. BMP REQUIREMENTS FOR ALL DEVELOPMENT PROJECTS**

Each Copermittee must prescribe the following BMP requirements during the planning process (i.e. prior to project approval and issuance of local permits) for all development projects (regardless of project type or size), where local permits are issued, including unpaved roads and flood management projects:

##### (1) General Requirements

- (a) Onsite BMPs must be located so as to remove pollutants from runoff prior to its discharge to any receiving waters, and as close to the source as possible;
- (b) Structural BMPs must not be constructed within waters of the U.S.
- (c) Onsite BMPs must be designed and implemented with measures to avoid the creation of nuisance or pollution associated with vectors (e.g.

mosquitos, rodents, or flies).

## (2) Source Control BMP Requirements

The following source control BMPs must be implemented at all development projects where applicable and feasible:

- (a) Prevention of illicit discharges into the MS4;
- (b) Storm drain system stenciling or signage;
- (c) Protect outdoor material storage areas from rainfall, run-on, runoff, and wind dispersal;
- (d) Protect materials stored in outdoor work areas from rainfall, run-on, runoff, and wind dispersal;
- (e) Protect trash storage areas from rainfall, run-on, runoff, and wind dispersal; and
- (f) Any additional BMPs determined to be necessary by the Copermittee to minimize pollutant generation at each project.

## (3) Low Impact Development (LID) BMP Requirements

The following LID BMPs must be implemented at all development projects where applicable and feasible:

- (a) Maintenance or restoration of natural storage reservoirs and drainage corridors (including topographic depressions, areas of permeable soils, natural swales, and ephemeral and intermittent streams);<sup>25</sup>
- (b) Buffer zones for natural water bodies (where buffer zones are technically infeasible, require project applicant to include other buffers such as trees, access restrictions, etc.);
- (c) Conservation of natural areas within the project footprint including existing trees, other vegetation, and soils;
- (d) Construction of streets, sidewalks, or parking lot aisles to the minimum widths necessary, provided public safety is not compromised;
- (e) Minimization of the impervious footprint of the project;

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<sup>25</sup> Development projects proposing to dredge or fill materials in waters of the U.S. must obtain a CWA Section 401 Water Quality Certification. Projects proposing to dredge or fill waters of the state must obtain waste discharge requirements.

- (f) Minimization of soil compaction to landscaped areas;
- (g) Disconnection of impervious surfaces through distributed pervious areas;
- (h) Landscaped or other pervious areas designed and constructed to effectively receive and infiltrate, retain and/or treat runoff from impervious areas, prior to discharging to the MS4;
- (i) Small collection strategies located at, or as close as possible to, the source (i.e. the point where storm water initially meets the ground) to minimize the transport of runoff and pollutants to the MS4 and receiving waters;
- (j) Use of permeable materials for projects with low traffic areas and appropriate soil conditions;
- (k) Landscaping with native or drought tolerant species; and
- (l) Harvesting and using precipitation.

**b. PRIORITY DEVELOPMENT PROJECTS**

Priority Development Projects are land development projects that fall under the planning and building authority of the Copermittee for which the Copermittee must impose specific requirements, in addition to those described in Provision E.3.a, including the implementation of structural BMPs to meet the performance requirements described in Provision E.3.c.

(1) Definition of Priority Development Project

Priority Development Projects include the following:

- (a) New development projects that create 10,000 square feet or more of impervious surfaces (collectively over the entire project site). This includes commercial, industrial, residential, mixed-use, and public development projects on public or private land.
- (b) Redevelopment projects that create and/or replace 5,000 square feet or more of impervious surface (collectively over the entire project site on an existing site of 10,000 square feet or more of impervious surfaces). This includes commercial, industrial, residential, mixed-use, and public development projects on public or private land.
- (c) New and redevelopment projects that create and/or replace 5,000 square feet or more of impervious surface (collectively over the entire project

site), and support one or more of the following uses:

- (i) Restaurants. This category is defined as a facility that sells prepared foods and drinks for consumption, including stationary lunch counters and refreshment stands selling prepared foods and drinks for immediate consumption (SIC code 5812).
  - (ii) Hillside development projects. This category includes development on any natural slope that is twenty-five percent or greater.
  - (iii) Parking lots. This category is defined as a land area or facility for the temporary parking or storage of motor vehicles used personally, for business, or for commerce.
  - (iv) Streets, roads, highways, freeways, and driveways. This category is defined as any paved impervious surface used for the transportation of automobiles, trucks, motorcycles, and other vehicles.
- (d) New or redevelopment projects that create and/or replace 2,500 square feet or more of impervious surface (collectively over the entire project site), and discharging directly to an Environmentally Sensitive Area (ESA). "Discharging directly to" includes flow that is conveyed overland a distance of 200 feet or less from the project to the ESA, or conveyed in a pipe or open channel any distance as an isolated flow from the project to the ESA (i.e. not commingled with flows from adjacent lands).
- (e) New development projects, or redevelopment projects that create and/or replace 5,000 square feet or more of impervious surface, that support one or more of the following uses:
- (i) Automotive repair shops. This category is defined as a facility that is categorized in any one of the following Standard Industrial Classification (SIC) codes: 5013, 5014, 5541, 7532-7534, or 7536-7539.
  - (ii) Retail gasoline outlets (RGOs). This category includes RGOs that meet the following criteria: (a) 5,000 square feet or more or (b) a projected Average Daily Traffic (ADT) of 100 or more vehicles per day.
- (f) New or redevelopment projects that result in the disturbance of one or more acres of land and are expected to generate pollutants post construction.

## (2) Special Considerations for Redevelopment Projects

The structural BMP performance requirements of Provision E.3.c are applicable to redevelopment Priority Development Projects, as defined in E.3.b.(1), as follows:

- (a) Where redevelopment results in the creation or replacement of impervious surface in an amount of less than fifty percent of the surface area of the previously existing development, then the structural BMP performance requirements of Provision E.3.c apply only to the creation or replacement of impervious surface, and not the entire development; or
- (b) Where redevelopment results in the creation or replacement of impervious surface in an amount of more than fifty percent of the surface area of the previously existing development, then the structural BMP performance requirements of Provision E.3.c apply to the entire development.

### (3) Priority Development Project Exemptions

Each Copermittee has the discretion to exempt the following projects from being defined as Priority Development Projects:

- (a) New or retrofit paved sidewalks, bicycle lanes, or trails that meet the following criteria:
  - (i) Designed and constructed to direct storm water runoff to adjacent vegetated areas, or other non-erodible permeable areas; OR
  - (ii) Designed and constructed to be hydraulically disconnected from paved streets or roads; OR
  - (iii) Designed and constructed with permeable pavements or surfaces in accordance with USEPA Green Streets guidance.<sup>26</sup>
- (b) Retrofitting or redevelopment of existing paved alleys, streets or roads that are designed and constructed in accordance with the USEPA Green Streets guidance.<sup>27</sup>

### **C. PRIORITY DEVELOPMENT PROJECT STRUCTURAL BMP PERFORMANCE REQUIREMENTS**

In addition to the BMP requirements listed for all development projects under Provision E.3.a, Priority Development Projects must also implement structural BMPs that conform to performance requirements described below.

#### (1) Storm Water Pollutant Control BMP Requirements

Each Copermittee must require each Priority Development Project to implement onsite structural BMPs to control pollutants in storm water that may be discharged from a project as follows:

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<sup>26</sup> See “Managing Wet Weather with Green Infrastructure – Municipal Handbook: Green Streets” (USEPA, 2008).

<sup>27</sup> Ibid.

- (a) Each Priority Development Project must be required to implement LID BMPs that are designed to retain (i.e. intercept, store, infiltrate, evaporate, and evapotranspire) onsite the pollutants contained in the volume of storm water runoff produced from a 24-hour 85<sup>th</sup> percentile storm event (design capture volume);<sup>28</sup>
- (i) If a Copermittee determines that implementing BMPs to retain the full design capture volume onsite for a Priority Development Project is not technically feasible, then the Copermittee may allow the Priority Development Project to utilize biofiltration BMPs. Biofiltration BMPs must be designed to have an appropriate hydraulic loading rate to maximize storm water retention and pollutant removal, as well as to prevent erosion, scour, and channeling within the BMP,<sup>29</sup> and must be sized to:
- [a] Treat 1.5 times the design capture volume not reliably retained onsite, OR
- [b] Treat the design capture volume not reliably retained onsite with a flow-thru design that has a total volume, including pore spaces and pre-filter detention volume, sized to hold at least 0.75 times the portion of the design capture volume not reliably retained onsite.
- (ii) If a Copermittee determines that biofiltration is not technically feasible, then the Copermittee may allow the Priority Development Project to utilize flow-thru treatment control BMPs to treat runoff leaving the site, AND mitigate for the design capture volume not reliably retained onsite pursuant to Provision E.3.c.(1)(b). Flow thru treatment control BMPs must be sized and designed to:
- [a] Remove pollutants from storm water to the MEP;
- [b] 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 2) the maximum flow rate of runoff produced by the 85<sup>th</sup> percentile hourly rainfall intensity (for each hour of a storm event), as determined from the local historical rainfall record, multiplied by a factor of two;

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<sup>28</sup> This volume is not a single volume to be applied to all areas covered by this Order. The size of the 85<sup>th</sup> percentile storm event is different for various parts of the San Diego Region. The Copermittees are encouraged to calculate the 85<sup>th</sup> percentile storm event for each of its jurisdictions using local rain data pertinent to its particular jurisdiction. In addition, isopluvial maps may be used to extrapolate rainfall data to areas where insufficient data exists in order to determine the volume of the local 85<sup>th</sup> percentile storm event in such areas. Where the Copermittees will use isopluvial maps to determine the 85<sup>th</sup> percentile storm event in areas lacking rain data, the Copermittees must describe their method for using isopluvial maps in its BMP Design Manuals.

<sup>29</sup> As part of the Copermittee's update to its BMP Design Manual, pursuant to Provision E.3.d, the Copermittee must provide guidance for hydraulic loading rates and other biofiltration design criteria necessary to maximize storm water retention and pollutant removal.

- [c] Be ranked with high or medium pollutant removal efficiency for the Priority Development Project's most significant pollutants of concern. Flow-thru treatment control BMPs with a low removal efficiency ranking must only be approved by a Copermittee when a feasibility analysis has been conducted which exhibits that implementation of flow-thru treatment control BMPs with high or medium removal efficiency rankings are infeasible for a Priority Development Project or portion of a Priority Development Project.
- (b) A Priority Development Project may be allowed to utilize alternative compliance under Provision E.3.c.(3) in lieu of complying with the storm water pollutant control BMP performance requirements of Provision E.3.c.(1)(a). The Priority Development Project must mitigate for the portion of the pollutant load in the design capture volume not retained onsite if Provision E.3.c.(3) is utilized. If a Priority Development Project is allowed to utilize alternative compliance, flow-thru treatment control BMPs must be implemented to treat the portion of the design capture volume that is not reliably retained onsite. Flow-thru treatment control BMPs must be sized and designed in accordance with Provisions E.3.c.(1)(a)(ii)[a]-[c].

## (2) Hydromodification Management BMP Requirements

Each Copermittee must require each Priority Development Project to implement onsite BMPs to manage hydromodification that may be caused by storm water runoff discharged from a project as follows:

- (a) Post-project runoff conditions (flow rates and durations) must not exceed pre-development runoff conditions by more than 10 percent (for the range of flows that result in increased potential for erosion, or degraded instream habitat downstream of Priority Development Projects).
  - (i) In evaluating the range of flows that results in increased potential for erosion of natural (non-hardened) channels, the lower boundary must correspond with the critical channel flow that produces the critical shear stress that initiates channel bed movement or that erodes the toe of channel banks.
  - (ii) The Copermittees may use monitoring results collected pursuant to Provision D.1.a.(2) to re-define the range of flows resulting in increased potential for erosion, or degraded instream habitat conditions, as warranted by the data.
- (b) Each Priority Development Project must avoid critical sediment yield areas known to the Copermittee or identified by the optional Watershed Management Area Analysis pursuant to Provision B.3.b.(4), or implement measures that allow critical coarse sediment to be discharged to receiving waters, such that there is no net impact to the receiving water.

(c) A Priority Development Project may be allowed to utilize alternative compliance under Provision E.3.c.(3) in lieu of complying with the performance requirements of Provision E.3.c.(2)(a). The Priority Development Project must mitigate for the post-project runoff conditions not fully managed onsite if Provision E.3.c.(3) is utilized.

(d) Exemptions

Each Copermittee has the discretion to exempt a Priority Development Project from the hydromodification management BMP performance requirements of Provisions E.3.c.(2) where the project discharges storm water runoff to:

- (i) Existing underground storm drains discharging directly to water storage reservoirs, lakes, enclosed embayments, or the Pacific Ocean;
- (ii) Conveyance channels whose bed and bank are concrete lined all the way from the point of discharge to water storage reservoirs, lakes, enclosed embayments, or the Pacific Ocean; or
- (iii) An area identified by the Copermittees as appropriate for an exemption by the optional Watershed Management Area Analysis incorporated into the Water Quality Improvement Plan pursuant to Provision B.3.b.(4).

(e) Interim Timeframe Exemptions

Until the Copermittees have updated their BMP Design Manual in accordance with Provision F.2.b with the requirements of Provision E, the Copermittees have the discretion to exempt a Priority Development Project from the hydromodification management BMP performance requirements of Provision E.3.c.(2) where the project discharges storm water runoff directly to:

- (i) An engineered channel conveyance system with a capacity to convey peak flows generated by the 10-year storm event all the way from the point of discharge to water storage reservoirs, lakes, enclosed embayments, or the Pacific Ocean; and
- (ii) Large river reaches with a drainage area larger than 100 square miles and a 100-year flow capacity in excess of 20,000 cubic feet per second, provided that properly sized energy dissipation is included at all Priority Development Project discharge points.

### (3) Alternative Compliance Program to Onsite Structural BMP Implementation

At the discretion of each Copermittee, Priority Development Projects may be allowed to participate in an alternative compliance program in lieu of implementing the onsite structural BMP performance requirements of Provisions E.3.c.(1) and E.3.c.(2)(a), provided that the Water Quality Improvement Plan includes the optional Watershed Management Area Analysis described in Provision B.3.b.(4), and Water Quality Equivalency calculations have been accepted by the San Diego Water Board's Executive Officer pursuant to Provision E.3.c.(3)(a). The alternative compliance program is available to a Priority Development Project only if the Priority Development Project applicant enters into a voluntary agreement with the Copermittee authorizing this arrangement. In addition to the voluntary agreement, relief from implementing structural BMPs onsite may be authorized by the Copermittee under the following conditions:

#### (a) Water Quality Equivalency

Copermittees must submit Water Quality Equivalency calculations for acceptance by the San Diego Water Board's Executive Officer prior to administering an alternative compliance program in order to establish a regional and technical basis for determining the water quality benefits associated with alternative compliance projects. Accepted Water Quality Equivalency calculations must be incorporated as part of any Copermittee's alternative compliance program necessary for evaluating Watershed Management Area Analysis candidate projects, project applicant-proposed alternative compliance projects, alternative compliance in lieu fee structures, and alternative compliance water quality credit systems as described in Provisions E.3.c.(3)(b)-(e).

#### (b) Watershed Management Area Analysis Candidate Projects

The Priority Development Project applicant agrees to fund, contribute funds to, or implement a candidate project identified by the Copermittees in the Watershed Management Area Analysis included in the Water Quality Improvement Plan, pursuant to Provisions B.3.b.(4) subject to the following conditions:

- (i) The Copermittee must determine that implementation of the candidate project will have a greater overall water quality benefit for the Watershed Management Area than fully complying with the performance requirements of Provisions E.3.c.(1) and E.3.c.(2)(a) onsite;
- (ii) If the Priority Development Project applicant chooses to fully or partially fund a candidate project, then the in-lieu fee structure described in Provision E.3.c.(3)(c) must be followed;

- (iii) If the Priority Development Project applicant chooses to fully or partially fund a candidate project, then the Copermittee must ensure that the funds to be obtained from the Priority Development Project applicant are sufficient to mitigate for impacts caused by not fully implementing structural BMPs onsite, pursuant to the performance requirements described in Provisions E.3.c.(1) and E.3.c.(2)(a);
  - (iv) If the Priority Development Project applicant chooses to implement a candidate project, then the Copermittee must ensure that pollutant control and/or hydromodification management within the candidate project are sufficient to mitigate for impacts caused by not implementing structural BMPs fully onsite, pursuant to the performance requirements described in Provisions E.3.c.(1) and E.3.c.(2)(a);
  - (v) The voluntary agreement to fund, partially fund, or implement a candidate project must include reliable sources of funding for operation and maintenance of the candidate project;
  - (vi) Design of the candidate project must be conducted under an appropriately qualified engineer, geologist, architect, landscape architect, or other professional, licenses where applicable, and competent and proficient in the fields pertinent to the candidate project design;
  - (vii) The candidate project must be constructed as soon as possible, but no later than 4 years after the certificate of occupancy is granted for the first Priority Development Project that contributed funds toward the construction of the candidate project, unless a longer period of time is authorized by the San Diego Water Board Executive Officer; and
  - (viii) If the candidate project is constructed after the Priority Development Project is constructed, the Copermittee must require temporal mitigation for pollutant loads and altered flows that are discharged from the Priority Development Project.
- (c) Project Applicant Proposed Alternative Compliance Projects

The Copermittee may allow a Priority Development Project applicant to propose and fund, contribute funds to, or implement an alternative compliance project not identified by the Watershed Management Area Analysis included in the Water Quality Improvement Plan pursuant to Provisions B.3.b.(4). This option is allowed provided the Copermittee determines that implementation of the alternative compliance project will have a greater overall water quality benefit for the Watershed Management Area than fully complying with the performance requirements of Provisions E.3.c.(1) and E.3.c.(2)(a) onsite, and is subject to the requirements described in Provisions E.3.c.(3)(a)(ii)-(viii).

(d) Alternative Compliance In-Lieu Fee Structure

If a Copermittee chooses to allow a Priority Development Project applicant to fund, or partially fund a candidate project or an alternative compliance project, then the Copermittee must develop and implement an in-lieu fee structure. This may be developed individually or with other Copermittees and/or entities, as a means for designing, developing, constructing, operating and maintaining offsite alternative compliance projects. The in-lieu fee must be transferred to the Copermittee (for public projects) or an escrow account (for private projects) prior to the construction of the Priority Development Project.

(e) Alternative Compliance Water Quality Credit System Option

The Copermittee may develop and implement an alternative compliance water quality credit system option, individually or with other Copermittees and/or entities, provided that such a credit system clearly exhibits that it will not allow discharges from Priority Development Projects to cause or contribute to a net impact over and above the impact caused by projects meeting the onsite structural BMP performance requirements of Provisions E.3.c.(1) and E.3.c.(2)(a). Any credit system that a Copermittee chooses to implement must be submitted to the San Diego Water Board Executive Officer for review and acceptance as part of the Water Quality Improvement Plan.

(4) Long-Term Structural BMP Maintenance

Each Copermittee must require the project applicant to submit proof of the mechanism under which ongoing long-term maintenance of all structural BMPs will be conducted.

(5) Infiltration and Groundwater Protection

(a) Structural BMPs designed to primarily function as large, centralized infiltration devices (such as large infiltration trenches and infiltration basins) must not cause or contribute to an exceedance of an applicable groundwater quality objective. At a minimum, such infiltration BMPs must be in conformance with the design criteria listed below, unless the development project applicant demonstrates to the Copermittee that one or more of the specific design criteria listed below are not necessary to protect groundwater quality. The design criteria listed below do not apply to small infiltration systems dispersed throughout a development project.

- (i) Runoff must undergo pretreatment such as sedimentation or filtration prior to infiltration;

- (ii) Pollution prevention and source control BMPs must be implemented at a level appropriate to protect groundwater quality at sites where infiltration BMPs are to be used;
  - (iii) Infiltration BMPs must be adequately maintained to remove pollutants in storm water to the MEP;
  - (iv) The vertical distance from the base of any infiltration BMP to the seasonal high groundwater mark must be at least 10 feet. Where groundwater basins do not support beneficial uses, this vertical distance criteria may be reduced, provided groundwater quality is maintained;
  - (v) The soil through which infiltration is to occur must have physical and chemical characteristics (e.g., appropriate cation exchange capacity, organic content, clay content, and infiltration rate) which are adequate for proper infiltration durations and treatment of runoff for the protection of groundwater beneficial uses;
  - (vi) Infiltration BMPs must not be used for areas of industrial or light industrial activity, and other high threat to water quality land uses and activities as designated by each Copermittee, unless source control BMPs to prevent exposure of high threat activities are implemented, or runoff from such activities is first treated or filtered to remove pollutants prior to infiltration; and
  - (vii) Infiltration BMPs must be located a minimum of 100 feet horizontally from any water supply wells.
- (b) The Copermittee may develop, individually or with other Copermittees, alternative mandatory design criteria to that listed above for infiltration BMPs which are designed to primarily function as centralized infiltration devices. Before implementing the alternative design criteria in the development planning process the Copermittee(s) must:
- (i) Notify the San Diego Water Board of the intent to implement the alternative design criteria submitted; and
  - (ii) Comply with any conditions set by the San Diego Water Board.

#### **d. BMP DESIGN MANUAL UPDATE**

Each Copermittee must update its BMP Design Manual<sup>30</sup> pursuant to Provision F.2.b. Until the Copermittee has updated its BMP Design Manual pursuant to Provision F.2.b.(1), the Copermittee must continue implementing its current BMP Design Manual. The Copermittee must implement the updated BMP Design Manual within 180 days following completion of the update pursuant to Provision

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<sup>30</sup> The BMP Design Manual was formerly known as the Standard Storm Water Mitigation Plan under Order Nos. R9-2007-0001, R9-2009-0002, and R9-2010-0016.

F.2.b.(1), unless directed otherwise by the San Diego Water Board Executive Officer. The date the BMP Design Manual is implemented is the “effective date” of the BMP Design Manual. The update of the BMP Design Manual required pursuant to Provision F.2.b.(1) must include the following:

- (1) Updated procedures to determine the nature and extent of storm water requirements applicable to a potential development or redevelopment projects. These procedures must inform project applicants of the storm water management requirements applicable to their project including, but not limited to, general requirements for all development projects, structural BMP design procedures and requirements, hydromodification management requirements, requirements specific to phased projects, and procedures specific to private developments and public improvement projects;
- (2) Updated procedures to identify pollutants and conditions of concern for selecting the most appropriate structural BMPs that consider, at a minimum, the following:
  - (a) Receiving water quality (including pollutants for which receiving waters are listed as impaired under the CWA section 303(d) List);
  - (b) Pollutants, stressors, and/or receiving water conditions that cause or contribute to the highest priority water quality conditions identified in the Water Quality Improvement Plan;
  - (c) Land use type of the project and pollutants associated with that land use type; and
  - (d) Pollutants expected to be present onsite.
- (3) Updated procedures for designing structural BMPs, including any updated performance requirements to be consistent with the requirements of Provision E.3.c for all structural BMPs listed in the BMP Design Manual;
- (4) Long-term maintenance criteria for each structural BMP listed in the BMP Design Manual; and
- (5) Alternative compliance criteria, in accordance with the requirements under Provision E.3.c.(3), if the Copermittee elects to allow Priority Development Projects within its jurisdiction to utilize alternative compliance.

**e. PRIORITY DEVELOPMENT PROJECT BMP IMPLEMENTATION AND OVERSIGHT**

Each Copermittee must implement a program that requires and confirms structural BMPs on all Priority Development Projects are designed, constructed, and maintained to remove pollutants in storm water to the MEP.

(1) Structural BMP Approval and Verification Process

- (a) Each Copermittee must require and confirm that all Priority Development Projects implement the requirements of Provision E.3, except that the Copermittee may allow previous land development requirements to apply to a Priority Development Project if the conditions of Provision E.3.e.(1)(a)(i) or Provision E.3.e.(1)(a)(ii) are met:
- (i) The Copermittee has, prior to the effective date of the BMP Design Manual required to be developed pursuant to Provision E.3.d:
- [a] Approved<sup>31</sup> a design that incorporates the storm water drainage system for the Priority Development Project in its entirety, including all applicable structural pollutant treatment control and hydromodification management BMPs consistent with the previous applicable MS4 permit requirements;<sup>32</sup> AND
  - [b] Issued a private project permit or approval, or functional equivalent for public projects, that authorizes the Priority Development Project applicant to commence construction activities based on a design that incorporates the storm water drainage system approved in conformance with Provision E.3.e.(1)(a)(i)[a]; AND
  - [c] Confirmed that there have been construction activities on the Priority Development Project site within the 365 days prior to the effective date of the BMP Design Manual, *OR* the Copermittee confirms that construction activities have commenced on the Priority Development Project site within the 180 days after the effective date of the BMP Design Manual, where construction activities are undertaken in reliance on the permit or approval, or functional equivalent for public projects, issued by the Copermittee in conformance with Provision E.3.e.(1)(a)(i)[b]; AND
  - [d] Issued all subsequent private project permits or approvals, or functional equivalent for public projects, that are needed to implement the design initially approved in conformance with Provision E.3.e.(1)(a)(i)[a] within 5 years of the effective date of the BMP Design Manual. The storm water drainage system for the Priority Development Project in its entirety, including all applicable structural pollutant treatment control and hydromodification management BMPs must remain in substantial conformity with the design initially approved in conformance with Provision E.3.e.(1)(a)(i)[a].

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<sup>31</sup> For public projects, a design stamped by the City or County Engineer, or engineer of record for the project is considered an approved design.

<sup>32</sup> Order Nos. R9-2007-0001, R9-2009-0002, and R9-2010-0016 for San Diego County, Orange County, and Riverside County Copermittees, respectively

- (ii) The Copermittee demonstrates it lacks the land use authority or legal authority to require a Priority Development Project to implement the requirements of Provision E.3.
- (b) Each Copermittee must identify the roles and responsibilities of its various municipal departments in implementing the structural BMP requirements, including each stage of a project from application review and approval through BMP maintenance and inspections.
- (c) Each Copermittee must require and confirm that appropriate easements and ownerships are properly recorded in public records and the information is conveyed to all appropriate parties when there is a change in project or site ownership.
- (d) Each Copermittee must require and confirm that prior to occupancy and/or intended use of any portion of the Priority Development Project, each structural BMP is inspected to verify that it has been constructed and is operating in compliance with all of its specifications, plans, permits, ordinances, and the requirements of this Order.

(2) Priority Development Project Inventory and Prioritization

- (a) Each Copermittee must develop, maintain, and update at least annually, a watershed-based database to track and inventory all Priority Development Projects and associated structural BMPs within its jurisdiction. Inventories must be accurate and complete beginning from December 2002 for the San Diego County Copermittees, February 2003 for the Orange County Copermittees, and July 2005 for the Riverside County Copermittees. The use of an automated database system, such as GIS, is highly recommended. The database must include, at a minimum, the following information:
  - (i) Priority Development Project location (address and hydrologic subarea);
  - (ii) Descriptions of structural BMP type(s);
  - (iii) Date(s) of construction;
  - (iv) Party responsible for structural BMP maintenance;
  - (v) Dates and findings of structural BMP maintenance verifications; and
  - (vi) Corrective actions and/or resolutions, when applicable.
- (b) Each Copermittee must prioritize the Priority Development Projects with structural BMPs within its jurisdiction. The designation of Priority Development Projects as high priority must consider the following:

- (i) The highest water quality priorities identified in the Water Quality Improvement Plan;
- (ii) Receiving water quality;
- (iii) Number and sizes of structural BMPs;
- (iv) Recommended maintenance frequency of structural BMPs;
- (v) Likelihood of operation and maintenance issues of structural BMPs;
- (vi) Land use and expected pollutants generated; and
- (vii) Compliance record.

(3) Structural BMP Maintenance Verifications and Inspections

Each Copermittee is required to verify that structural BMPs on each Priority Development Project are adequately maintained, and continue to operate effectively to remove pollutants in storm water to the MEP through inspections, self-certifications, surveys, or other equally effective approaches.

- (a) All (100 percent) of the structural BMPs at Priority Development Projects that are designated as high priority must be inspected directly by the Copermittee annually prior to each rainy season;
- (b) For verifications performed through a means other than direct Copermittee inspection, adequate documentation must be required by the Copermittee to provide assurance that the required maintenance of structural BMPs at each Priority Development Project has been completed; and
- (c) Appropriate follow-up measures (including re-inspections, enforcement, etc.) must be conducted to ensure that structural BMPs at each Priority Development Project continue to reduce pollutants in storm water to the MEP as originally designed.

**f. DEVELOPMENT PROJECT ENFORCEMENT**

Each Copermittee must enforce its legal authority established pursuant to Provision E.1 for all development projects, as necessary, to achieve compliance with the requirements of this Order, in accordance with its Enforcement Response Plan pursuant to Provision E.6.

#### **4. Construction Management**

Each Copermittee must implement a construction management program in accordance with the strategies in the Water Quality Improvement Plan described pursuant to Provision B.3.b.(1) and includes, at a minimum, the following requirements:

##### **a. PROJECT APPROVAL PROCESS**

Prior to issuance of any local permit(s) that allows the commencement of construction projects that involve ground disturbance or soil disturbing activities that can potentially generate pollutants in storm water runoff, each Copermittee must:

- (1) Require a pollution control plan, construction BMP plan, and/or an erosion and sediment control plan, to be submitted by the project applicant to the Copermittee;
- (2) Confirm the pollution control plan, construction BMP plan, and/or erosion and sediment control plan, complies with the local grading ordinance, other applicable local ordinances, and the requirements of this Order;
- (3) Confirm the pollution control, construction BMP, and/or erosion and sediment control plan, includes seasonally appropriate and effective BMPs and management measures described in Provision E.4.c, as applicable to the project; and
- (4) Verify that the project applicant has obtained coverage under the statewide Construction General Permit (Order 2009-0009-DWQ or subsequent Order), if applicable.

##### **b. CONSTRUCTION SITE INVENTORY AND TRACKING**

- (1) Each Copermittee must maintain and update, at least quarterly, a watershed-based inventory of all construction projects issued a local permit that allows ground disturbance or soil disturbing activities that can potentially generate pollutants in storm water runoff. The use of an automated database system, such as GIS, is highly recommended. The inventory must include:
  - (a) Relevant contact information for each site (e.g., name, address, phone, and email for the owner and contractor);
  - (b) The basic site information including location (address and hydrologic subarea), Waste Discharge Identification (WDID) number (if applicable), size of the site, and approximate area of disturbance;

- (c) Whether or not the site is considered a high threat to water quality, as defined in Provision E.4.b.(2) below;
  - (d) The project start and completion dates;
  - (e) The required inspection frequency, as defined in the Copermittee's jurisdictional runoff management program document;
  - (f) The date the Copermittee accepted or approved the pollution control plan, construction BMP plan, and/or erosion and sediment control plan; and
  - (g) Whether or not there are ongoing enforcement actions administered to the site.
- (2) Each Copermittee must identify all construction sites within its jurisdiction that represent a high threat to downstream surface water quality. The designation of construction sites as high threat to water quality must consider the following:
- (a) Sites located within a hydrologic subarea where sediment is known or suspected to contribute to the highest priority water quality conditions identified in the Water Quality Improvement Plan;
  - (b) Sites located within the same hydrologic subarea and tributary to a water body segment listed as impaired for sediment on the CWA section 303(d) List;
  - (c) Sites located within, directly adjacent to, or discharging directly to a receiving water within an ESA; and
  - (d) Other sites determined by the Copermittees or the San Diego Water Board as a high threat to water quality.

**c. CONSTRUCTION SITE BMP IMPLEMENTATION**

Each Copermittee must implement, or require the implementation of effective BMPs to reduce discharges of pollutants in storm water from construction sites to the MEP, and effectively prohibit non-storm water discharges from construction sites into the MS4. These BMPs must be site specific, seasonally appropriate, and construction phase appropriate. BMPs must be implemented at each construction site year round. Dry season BMP implementation must plan for and address unseasonal rain events that may occur during the dry season (May 1 through September 30). Copermittees must implement, or require the implementation of, BMPs in the following categories:

- (1) Project Planning;
- (2) Good Site Management “Housekeeping”, including waste management;
- (3) Non-storm Water Management;
- (4) Erosion Control;
- (5) Sediment Control;
- (6) Run-on and Run-off Control; and
- (7) Active/Passive Sediment Treatment Systems, where applicable.

**d. CONSTRUCTION SITE INSPECTIONS**

Each Copermittee must conduct construction site inspections to require and confirm compliance with its local permits and applicable local ordinances, and the requirements of this Order. Priority for site inspections must consider threat to water quality pursuant to Provision E.4.b as well as the nature of the construction activity, topography, and the characteristics of soils and receiving water quality.

(1) Inspection Frequency

- (a) Each Copermittee must conduct inspections at all inventoried sites, including high threat to water quality sites, at an appropriate frequency for each phase of construction to confirm the site reduces the discharge of pollutants in storm water from construction sites to the MEP, and effectively prohibits non-storm water discharges from entering the MS4.
- (b) Each Copermittee must establish appropriate inspection frequencies for high threat to water quality sites, and all other sites, for each phase of construction. Inspection frequencies appropriate for addressing the highest water quality priorities identified in the Water Quality Improvement Plan, and for complying with the requirements of this Order must be identified in each Copermittee’s jurisdictional runoff management program document.
- (c) Based upon inspection findings, each Copermittee must implement all follow-up actions (i.e., re-inspection, enforcement) necessary to require and confirm site compliance with its local permits and applicable local ordinances, and the requirements of this Order.

## (2) Inspection Content

Inspections of construction sites by the Copermittee must include, at a minimum:

- (a) Verification of coverage under the Construction General Permit (Notice of Intent (NOI) and/or WDID number) during initial inspections, when applicable;
- (b) Assessment of compliance with its local permits and applicable local ordinances related to pollution prevention, including the implementation and maintenance of applicable BMPs;
- (c) Assessment of BMP adequacy and effectiveness;
- (d) Visual observations of actual non-storm water discharges;
- (e) Visual observations of actual or potential discharge of sediment and/or construction related materials from the site;
- (f) Visual observations of actual or potential illicit connections; and
- (g) If any violations are found and BMP corrections are needed, inspectors must take and document appropriate actions in accordance with the Enforcement Response Plan pursuant to Provision E.6.

## (3) Inspection Tracking and Records

Each Copermittee must track all inspections and re-inspections at all inventoried construction sites. The Copermittee must retain all inspection records in an electronic database or tabular format, which must be made available to the San Diego Water Board upon request. Inspection records must include, at a minimum:

- (a) Site name, location (address and hydrologic subarea), and WDID number (if applicable);
- (b) Inspection date;
- (c) Approximate amount of rainfall since last inspection;
- (d) Description of problems observed with BMPs and indication of need for BMP addition/repair/replacement and any scheduled re-inspection, and date of re-inspection;
- (e) Descriptions of any other specific inspection comments which must, at a minimum, include rationales for longer compliance time;

- (f) Description of enforcement actions issued in accordance with the Enforcement Response Plan pursuant to Provision E.6; and
- (g) Resolution of problems noted and date problems fixed.

**e. CONSTRUCTION SITE ENFORCEMENT**

Each Copermittee must enforce its legal authority established pursuant to Provision E.1 for all its inventoried construction sites, as necessary, to achieve compliance with the requirements of this Order, in accordance with its Enforcement Response Plan pursuant to Provision E.6.

**5. Existing Development Management**

Each Copermittee must implement an existing development management program in accordance with the strategies in the Water Quality Improvement Plan described pursuant to Provision B.3.b.(1) and includes, at a minimum, the following requirements:

**a. EXISTING DEVELOPMENT INVENTORY AND TRACKING**

Each Copermittee must maintain, and update at least annually, a watershed-based inventory of the existing development within its jurisdiction that may discharge a pollutant load to and from the MS4. The use of an automated database system, such as GIS, is highly recommended. The inventory must, at a minimum, include:

- (1) Name, location (hydrological subarea and address, if applicable) of the following types of existing development with its jurisdiction:
  - (a) Commercial facilities or areas;
  - (b) Industrial facilities;
  - (c) Municipal facilities, including:
    - (i) MS4 and related structures,<sup>33</sup>
    - (ii) Roads, streets, and highways;
    - (iii) Parking facilities;
    - (iv) Municipal airfields;
    - (v) Parks and recreation facilities;

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<sup>33</sup> The inventory may refer to the MS4 map required to be maintained pursuant to Provision E.2.b.(1).

- (vi) Flood management facilities, flood control devices and structures;
  - (vii) Operating or closed municipal landfills;
  - (viii) Publicly owned treatment works (including water and wastewater treatment plants) and sanitary sewer collection systems;
  - (ix) Corporate yards, including maintenance and storage yards for materials, waste, equipment, and vehicles;
  - (x) Hazardous waste collection facilities;
  - (xi) Other treatment, storage or disposal facilities for municipal waste; and
  - (xii) Other municipal facilities that the Copermittee determines may contribute a significant pollutant load to the MS4.
- (d) Residential areas, which may be designated by one or more of the following:
- (i) Residential management area;
  - (ii) Drainage basin or area;
  - (iii) Land use (e.g., single family, multi-family, rural);
  - (iv) Neighborhood;
  - (v) Common Interest Area;
  - (vi) Home Owner Association;
  - (vii) Mobile home park; and/or
  - (viii) Other designations accepted by the San Diego Water Board Executive Officer.
- (2) A description of the facility or area, including the following information:
- (a) Classification as commercial, industrial, municipal, or residential;
  - (b) Status of facility or area as active or inactive;
  - (c) Identification if a business is a mobile business;
  - (d) SIC Code or NAICS Code, if applicable;
  - (e) Industrial General Permit NOI and/or WDID number, if applicable;
  - (f) Identification if a residential area is or includes a Common Interest Area / Home Owner Association, or mobile home park;

- (g) Identification of pollutants generated and potentially generated by the facility or area;
  - (h) Whether the facility or area is adjacent to an ESA;
  - (i) Whether the facility or area is tributary to and within the same hydrologic subarea as a water body segment listed as impaired on the CWA section 303(d) List and generates pollutants for which the water body segment is impaired; and
- (3) An annually updated map showing the location of inventoried existing development, watershed boundaries, and water bodies.

**b. EXISTING DEVELOPMENT BMP IMPLEMENTATION AND MAINTENANCE**

Each Copermittee must designate a minimum set of BMPs required for all inventoried existing development, including special event venues. The designated minimum BMPs must be specific to facility or area types and pollutant generating activities, as appropriate.

(1) Commercial, Industrial, and Municipal Facilities and Areas

(a) Pollution Prevention

Each Copermittee must require the use of pollution prevention methods by the commercial, industrial, and municipal facilities and areas in its inventoried existing development to address the priorities and strategies in the Water Quality Improvement Plan.

(b) BMP Implementation

Each Copermittee must require the implementation of designated BMPs at commercial facilities and areas, industrial facilities, and implement designated BMPs at municipal facilities in its inventoried existing development.

(c) BMP Operation and Maintenance

- (i) Each Copermittee must properly operate and maintain, or require the proper operation and maintenance of designated BMPs at commercial facilities and areas, industrial facilities, and municipal facilities in its inventoried existing development.
- (ii) Each Copermittee must implement a schedule of operation and maintenance activities for its MS4 and related structures (including

but not limited to catch basins, storm drain inlets, detention basins, etc.), and verify proper operation of all its municipal structural treatment controls designed to reduce pollutants (including floatables) in storm water discharges to or from its MS4s and related drainage structures. Operation and maintenance activities may include, but is not limited to, the following:

- [a] Inspections of the MS4 and related structures;
- [b] Cleaning of the MS4 and related structures; and
- [c] Proper disposal of materials removed from cleaning of the MS4 and related structures.

- (iii) Each Copermittee must implement a schedule of operation and maintenance for public streets, unpaved roads, paved roads, and paved highways within its jurisdiction to minimize pollutants that can be discharged in storm water.
- (iv) Each Copermittee must implement controls to prevent infiltration of sewage into the MS4 from leaking sanitary sewers. Copermittees that operate both a municipal sanitary sewer system and a MS4 must implement controls and measures to prevent and eliminate seeping sewage from infiltrating the MS4. Copermittees that do not operate both a municipal sanitary sewer system and a MS4 must coordinate with sewerage agencies to keep themselves informed of relevant and appropriate maintenance activities and sanitary sewage projects in their jurisdiction that may cause or contribute to seepage of sewage into the MS4.

(d) Pesticides, Herbicides, and Fertilizers BMPs

Each Copermittee must require the implementation of BMPs to reduce pollutants in storm water discharges to the MEP and effectively prohibit non-storm water discharges associated with the application, storage, and disposal of pesticides, herbicides and fertilizers from commercial facilities and areas and industrial facilities, and implement BMPs at municipal facilities in its inventoried existing development. Such BMPs must include, as appropriate, educational activities, permits, certifications and other measures for applicators and distributors.

(2) Residential Areas

(a) Pollution Prevention

Each Copermittee must promote and encourage the use of pollution prevention methods, where appropriate, by the residential areas in its inventoried existing development.

(b) BMP Implementation

Each Copermittee must promote and encourage the implementation of designated BMPs at residential areas in its inventoried existing development.

(c) BMP Operation and Maintenance

Each Copermittee must properly operate and maintain, or require the proper operation and maintenance of designated BMPs at residential areas in its inventoried existing development.

(d) Pesticides, Herbicides, and Fertilizers BMPs

Each Copermittee must promote and encourage the implementation of BMPs to reduce pollutants in storm water discharges to the MEP and effectively prohibit non-storm water discharges associated with the application, storage, and disposal of pesticides, herbicides and fertilizers from residential areas in its inventoried existing development.

**c. EXISTING DEVELOPMENT INSPECTIONS**

Each Copermittee must conduct inspections of inventoried existing development to ensure compliance with applicable local ordinances and permits, and the requirements of this Order.

(1) Inspection Frequency

- (a) Each Copermittee must establish appropriate inspection frequencies for inventoried existing development in accordance with the following requirements:
- (i) At a minimum, inventoried existing development must be inspected once every five years utilizing one or more of the following methods:
    - [a] Drive-by inspections by Copermittee municipal and contract staff;
    - [b] Onsite inspections by Copermittee municipal and contract staff; and/or
    - [c] Visual inspections of publicly accessible inventoried facilities or areas by volunteer monitoring or patrol programs that have been trained by the Copermittee;
  - (ii) The frequency of inspections must be appropriate to confirm that BMPs are being implemented to reduce the discharge of pollutants in storm water from the MS4 to the MEP and effectively prohibit non-storm water discharges to the MS4;

- (iii) The frequency of inspections must be based on the potential for a facility or area to discharge non-storm water and pollutants in storm water, and should reflect the priorities set forth in the Water Quality Improvement Plan;
  - (iv) Each Copermittee must annually perform onsite inspections of an equivalent of at least 20 percent of the commercial facilities and areas, industrial facilities, and municipal facilities in its inventoried existing development;<sup>34</sup> and
  - (v) Inventoried existing development must be inspected by the Copermittee, as needed, in response to valid public complaints.
- (b) Based upon inspection findings, each Copermittee must implement all follow-up actions (i.e. education and outreach, re-inspection, enforcement) necessary to require and confirm compliance with its applicable local ordinances and permits and the requirements of this Order, in accordance with its Enforcement Response Plan pursuant to Provision E.6.

## (2) Inspection Content

- (a) Inspections of existing development must include, at a minimum:
- (i) Visual inspections for the presence of actual non-storm water discharges;
  - (ii) Visual inspections for the presence of actual or potential discharge of pollutants;
  - (iii) Visual inspections for the presence of actual or potential illicit connections; and
  - (iv) Verification that the description of the facility or area in the inventory, required pursuant to Provision E.5.a.(2), has not changed.
- (b) Onsite inspections of existing development by the Copermittee must include, at a minimum:
- (i) Assessment of compliance with its applicable local ordinances and permits related to non-storm water and storm water discharges and runoff;
  - (ii) Assessment of the implementation of the designated BMPs;
  - (iii) Verification of coverage under the Industrial General Permit, when applicable; and

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<sup>34</sup> If any commercial, industrial, or municipal facilities or areas require multiple onsite inspections during any given year, those additional inspection may count toward the total annual inspection requirement. This requirement excludes linear municipal facilities (i.e., MS4 linear channels, sanitary sewer collection systems, streets, roads and highways).

- (iv) If any problems or violations are found, inspectors must take and document appropriate actions in accordance with the Enforcement Response Plan pursuant to Provision E.6.

### (3) Inspection Tracking and Records

Each Copermittee must track all inspections and re-inspections at all inventoried existing development. The Copermittee must retain all inspection records in an electronic database or tabular format, which must be made available to the San Diego Water Board upon request. Inspection records must include, at a minimum:

- (a) Name and location of the facility or area (address and hydrologic subarea) consistent with the inventory name and location, pursuant to Provision E.5.a.(1);
- (b) Inspection and re-inspection date(s);
- (c) Inspection method(s) (i.e. drive-by, onsite);
- (d) Observations and findings from the inspection(s);
- (e) For onsite inspections of existing development by Copermittee municipal or contract staff, the records must also include, as applicable:
  - (i) Description of any problems or violations found during the inspection(s);
  - (ii) Description of enforcement actions issued in accordance with the Enforcement Response Plan pursuant to Provision E.6; and
  - (iii) The date problems or violations were resolved.

#### **d. EXISTING DEVELOPMENT ENFORCEMENT**

Each Copermittee must enforce its legal authority established pursuant to Provision E.1 for all its inventoried existing development, as necessary, to achieve compliance with the requirements of this Order, in accordance with its Enforcement Response Plan pursuant to Provision E.6.

#### **e. RETROFITTING AND REHABILITATING AREAS OF EXISTING DEVELOPMENT**

##### (1) Retrofitting Areas of Existing Development

Each Copermittee must describe in its jurisdictional runoff management program document, a program to retrofit areas of existing development within its jurisdiction to address identified sources of pollutants and/or stressors that

contribute to the highest priority water quality conditions in the Watershed Management Area. The program must be implemented as follows:

- (a) Each Copermittee must identify areas of existing development as candidates for retrofitting, focusing on areas where retrofitting will address pollutants and/or stressors that contribute to the highest priority water quality conditions identified in the Water Quality Improvement Plan;
- (b) Candidates for retrofitting projects may be utilized to reduce pollutants that may be discharged in storm water from areas of existing development, and/or address storm water runoff flows and durations from areas of existing development that cause or contribute to hydromodification in receiving waters;
- (c) Each Copermittee must develop a strategy to facilitate the implementation of retrofitting projects in areas of existing development identified as candidates;
- (d) Each Copermittee should identify areas of existing development where Priority Development Projects may be allowed or should be encouraged to implement or contribute toward the implementation of alternative compliance retrofitting projects; and
- (e) Where retrofitting projects within specific areas of existing development are determined to be infeasible to address the highest priority water quality conditions in the Water Quality Improvement Plan, the Copermittee should collaborate and cooperate with other Copermittees and/or entities in the Watershed Management Area to identify, develop, and implement regional retrofitting projects (i.e. projects that can receive and/or treat storm water from one or more areas of existing development and will result in a net benefit to water quality and the environment) adjacent to and/or downstream of the areas of existing development.

## (2) Stream, Channel and/or Habitat Rehabilitation in Areas of Existing Development

Each Copermittee must describe in its jurisdictional runoff management program document, a program to rehabilitate streams, channels, and/or habitats in areas of existing development within its jurisdiction to address the highest priority water quality conditions in the Watershed Management Area. The program must be implemented as follows:

- (a) Each Copermittee must identify streams, channels, and/or habitats in areas of existing development as candidates for rehabilitation, focusing on areas where stream, channel, and/or habitat rehabilitation projects will address the highest priority water quality conditions identified in the Water Quality Improvement Plan;

- (b) Candidates for stream, channel, and/or habitat rehabilitation projects may be utilized to address storm water runoff flows and durations from areas of existing development that cause or contribute to hydromodification in receiving waters, rehabilitate channelized or hydromodified streams, restore wetland and riparian habitat, restore watershed functions, and/or restore beneficial uses of receiving waters;
- (c) Each Copermittee must develop a strategy to facilitate the implementation of stream, channel, and/or habitat rehabilitation projects in areas of existing development identified as candidates;
- (d) Each Copermittee should identify areas of existing development where Priority Development Projects may be allowed or should be encouraged to implement or contribute toward the implementation of alternative compliance stream, channel, and/or habitat rehabilitation projects; and
- (e) Where stream, channel, and/or habitat rehabilitation projects within specific areas of existing development are determined to be infeasible to address the highest priority water quality conditions in the Water Quality Improvement Plan, the Copermittee should collaborate and cooperate with other Copermittees and/or entities in the Watershed Management Area to identify, develop, and implement regional stream, channel, and/or habitat rehabilitation projects (i.e. projects that can receive storm water from one or more areas of existing development and will result in a net benefit to water quality and the environment).

## **6. Enforcement Response Plans**

Each Copermittee must develop and implement an Enforcement Response Plan as part of its jurisdictional runoff management program document. The Enforcement Response Plan must describe the applicable approaches and options to enforce its legal authority established pursuant to Provision E.1, as necessary, to achieve compliance with the requirements of this Order. The Enforcement Response Plan must be in accordance with the strategies in the Water Quality Improvement Plan described pursuant to Provision B.3.b.(1) and include the following:

### **a. ENFORCEMENT RESPONSE PLAN COMPONENTS**

The Enforcement Response Plan must include the following individual components:

- (1) Illicit Discharge Detection and Elimination Enforcement Component;
- (2) Development Planning Enforcement Component;
- (3) Construction Management Enforcement Component; and

PROVISION E: JURISDICTIONAL RUNOFF MANAGEMENT PROGRAMS  
E.5. Existing Development Management  
E.6. Enforcement Response Plans

(4) Existing Development Enforcement Component.

**b. ENFORCEMENT RESPONSE APPROACHES AND OPTIONS**

Each component of the Enforcement Response Plan must describe the enforcement response approaches that the Copermittee will implement to compel compliance with its statutes, ordinances, permits, contracts, orders, or similar means, and the requirements of this Order. The description must include the protocols for implementing progressively stricter enforcement responses. The enforcement response approaches must include appropriate sanctions to compel compliance, including, at a minimum, the following tools or their equivalent:

- (1) Verbal and written notices of violation;
- (2) Cleanup requirements;
- (3) Fines;
- (4) Bonding requirements;
- (5) Administrative and criminal penalties;
- (6) Liens;
- (7) Stop work orders; and
- (8) Permit and occupancy denials.

**c. CORRECTION OF VIOLATIONS**

- (1) Violations must be corrected in a timely manner with the goal of correcting the violations within 30 calendar days after the violations are discovered, or prior to the next predicted rain event, whichever is sooner.
- (2) If more than 30 calendar days are required to achieve compliance, then a rationale must be recorded in the applicable electronic database or tabular system used to track violations.

**d. ESCALATED ENFORCEMENT**

- (1) The Enforcement Response Plan must include a definition of “escalated enforcement.” Escalated enforcement must include any enforcement scenario where a violation or other non-compliance is determined to cause or contribute to the highest priority water quality conditions identified in the Water Quality Improvement Plan. Escalated enforcement may be defined differently for development planning, construction sites, commercial facilities or areas, industrial facilities, municipal facilities, and residential areas.

- (2) Where the Copermittee determines escalated enforcement is not required, a rationale must be recorded in the applicable electronic database or tabular system used to track violations.
- (3) Escalated enforcement actions must continue to increase in severity, as necessary, to compel compliance as soon as possible.

**e. REPORTING OF NON-COMPLIANT SITES**

- (1) Each Copermittee must notify the San Diego Water Board in writing within five (5) calendar days of issuing escalated enforcement (as defined in the Copermittee's Enforcement Response Plan) to a construction site that poses a significant threat to water quality as a result of violations or other non-compliance with its permits and applicable local ordinances, and the requirements of this Order. Written notification may be provided electronically by email to the appropriate San Diego Water Board staff.
- (2) Each Copermittee must notify the San Diego Water Board of any persons required to obtain coverage under the statewide Industrial General Permit and Construction General Permit and failing to do so, within five (5) calendar days from the time the Copermittee become aware of the circumstances. Written notification may be provided electronically by email to [RB9\\_Nonfilers@waterboards.ca.gov](mailto:RB9_Nonfilers@waterboards.ca.gov).

**7. Public Education and Participation**

Each Copermittee must implement, individually or with other Copermittees, a public education and participation program in accordance with the strategies identified in the Water Quality Improvement Plan to promote and encourage the development of programs, management practices, and behaviors that reduce the discharge of pollutants in storm water to the MEP, prevent controllable non-storm water discharges from entering the MS4, and protect water quality standards in receiving waters. The public education and participation program must be implemented in accordance with the strategies in the Water Quality Improvement Plan described pursuant to Provision B.3.b.(1) and include, at a minimum, the following requirements:

**a. PUBLIC EDUCATION**

The public education program component implemented within the Copermittee's jurisdiction must include, at a minimum, the following:

- (1) Educational activities, public information activities, and other appropriate outreach activities intended to reduce pollutants associated with the application of pesticides, herbicides and fertilizer and other pollutants of

- concern in storm water discharges to and from its MS4 to the MEP, as determined and prioritized by the Copermittee(s) by jurisdiction and/or watershed to address the highest priority water quality conditions identified in the Water Quality Improvement Plan;
- (2) Educational activities, public information activities, and other appropriate outreach activities to facilitate the proper management and disposal of used oil and toxic materials; and
  - (3) Appropriate education and training measures for specific target audiences, such as construction site operators, residents, underserved target audiences and school-aged children, as determined and prioritized by the Copermittee(s) by jurisdiction and/or watershed, based on high risk behaviors and pollutants of concern.

**b. PUBLIC PARTICIPATION**

The public participation program component implemented within the Copermittee's jurisdiction must include, at a minimum, the following:

- (1) A process for members of the public to participate in updating the highest priority water quality conditions, numeric goals, and water quality improvement strategies in the Water Quality Improvement Plan;
- (2) Opportunities for members of the public to participate in providing the Copermittee recommendations for improving the effectiveness of the water quality improvement strategies implemented within its jurisdiction; and
- (3) Opportunities for members of the public to participate in programs and/or activities that can result in the prevention or elimination of non-storm water discharges to the MS4, reduction of pollutants in storm water discharges from the MS4, and/or protection of the quality of receiving waters.

**8. Fiscal Analysis**

- a. Each Copermittee must secure the resources necessary to meet all the requirements of this Order.
- b. Each Copermittee must conduct an annual fiscal analysis of its jurisdictional runoff management program in its entirety. The fiscal analysis must include the following:
  - (1) Identification of the various categories of expenditures necessary to implement the requirements of this Order, including a description of the specific capital, operation and maintenance, and other expenditure items to be accounted for in each category of expenditures;

- (2) The staff resources needed and allocated to meet the requirements of this Order, including any development, implementation, and enforcement activities required;
  - (3) The estimated expenditures for Provisions E.8.b.(1) and E.8.b.(2) for the current fiscal year; and
  - (4) The source(s) of funds that are proposed to meet the necessary expenditures described in Provisions E.8.b.(1) and E.8.b.(2), including legal restrictions on the use of such funds, for the current fiscal year and next fiscal year.
- c. Each Copermittee must submit a summary of the annual fiscal analysis with each Water Quality Improvement Plan Annual Report required pursuant to Provision F.3.b.(3).
  - d. Each Copermittee must provide the documentation used to develop the summary of the annual fiscal analysis upon request by the San Diego Water Board.

## **F. REPORTING**

The purpose of this provision is to determine and document compliance with the requirements set forth in this Order. The goal of reporting is to communicate to the San Diego Water Board and the people of the State of California the implementation status of each jurisdictional runoff management program and compliance with the requirements of this Order. This goal is to be accomplished through the submittal of specific deliverables to the San Diego Water Board by the Copermittees.

### **1. Water Quality Improvement Plans**

The Copermittees for each Watershed Management Area must develop and submit the Water Quality Improvement Plan in accordance with the following requirements:

#### **a. WATER QUALITY IMPROVEMENT PLAN DEVELOPMENT**

Each Water Quality Improvement Plan must be developed in accordance with the following process:

##### **(1) Public Participation Process**

The Copermittees must implement a public participation process to solicit data, information, and recommendations to be utilized in the development of the Water Quality Improvement Plan. The public participation process must include the following:

- (a) The Copermittees must develop a publicly available and noticed schedule of the opportunities for the public to participate and provide comments during the development of the Water Quality Improvement Plan. The schedule may be adjusted as necessary by the Copermittees, provided the public is provided timely notification of the changes to the schedule.
- (b) The Copermittees must form a Water Quality Improvement Consultation Panel to provide recommendations during the development of the Water Quality Improvement Plan. The Water Quality Improvement Consultation Panel must consist of at least the following members:
  - (i) A representative of the San Diego Water Board;
  - (ii) A representative of the environmental community familiar with the water quality conditions of concern of the receiving waters in the Watershed Management Area, preferably from an environmental interest group associated with a water body within the Watershed Management Area; and
  - (iii) A representative of the development community familiar with the opportunities and constraints for implementing structural BMPs,

retrofitting projects, and stream, channel or habitat rehabilitation projects in the Watershed Management Area, preferably with relevant engineering, hydrology, and/or geomorphology experience in the Watershed Management Area.

- (c) The Copermittees must coordinate the schedules for the public participation process among the Watershed Management Areas to provide the public time and opportunity to participate during the development of the Water Quality Improvement Plans.

(2) Priority Water Quality Conditions

- (a) The Copermittees must solicit data, information and recommendations from the public to be utilized in the development and identification of the priority water quality conditions and potential water quality improvement strategies for the Watershed Management Area.
- (b) The Copermittees must review the priority water quality conditions the Copermittees plan on including in the Water Quality Improvement Plan with the Water Quality Improvement Consultation Panel to receive recommendations or concurrence.
- (c) The Copermittees must consider revisions to the priority water quality conditions based on recommendations from the Water Quality Improvement Consultation Panel.
- (d) The Copermittees must include all the potential water quality improvement strategies identified by the public and the Water Quality Improvement Consultation Panel with the submittal of the priority water quality conditions to the San Diego Water Board.
- (e) The Copermittees must submit the Water Quality Improvement Plan requirements of Provision B.2 to the San Diego Water Board as early as 6 months and no later than 12 months after the commencement of coverage under this Order. Upon receipt, the San Diego Water Board will issue a public notice and release the proposed priority water quality conditions and potential water quality improvement strategies for public review and comment for a minimum of 30 days.
- (f) The Copermittees must consider revisions to the priority water quality conditions and potential water quality improvement strategies developed pursuant to Provision B.2 based on public comments received by the close of the comment period.

**(3) Water Quality Improvement Goals, Strategies and Schedules**

- (a) The Copermittees must solicit recommendations from the public on potential numeric goals for the highest priority water quality conditions identified for the Watershed Management Area, and recommendations on the strategies that should be implemented to achieve the potential numeric goals.
- (b) The Copermittees must consult with the Water Quality Improvement Consultation Panel and consider revisions to the following items based on the Panel's recommendations:
  - (i) The numeric goals and schedules the Copermittees propose to include in the Water Quality Improvement Plan;
  - (ii) The water quality improvement strategies and schedules the Copermittees propose to implement in the Watershed Management Area and include in the Water Quality Improvement Plan; and
  - (iii) If the Copermittees choose to implement Provision B.3.b.(4), the results of the Watershed Management Area Analysis the Copermittees proposed to incorporate into the Water Quality Improvement Plan.
- (c) The Copermittees must submit the Water Quality Improvement Plan requirements of Provision B.3 to the San Diego Water Board as early as 9 months and no later than 18 months after the commencement of coverage under this Order. Upon receipt, the San Diego Water Board will issue a public notice and release the proposed water quality improvement goals, strategies and schedules for public review and comment for a minimum of 30 days.
- (d) The Copermittees must consider revisions to the water quality improvement goals, strategies and schedules developed pursuant to Provision B.3 based on public comments received by the close of the comment period.

**b. WATER QUALITY IMPROVEMENT PLAN SUBMITTAL AND IMPLEMENTATION**

- (1) Within 24 months after the commencement of coverage under this Order, the Copermittees for each Watershed Management Area must submit a complete Water Quality Improvement Plan in accordance with the requirements of Provision B of this Order to the San Diego Water Board. The San Diego Water Board will issue a public notice and release the Water Quality Improvement Plan for public review and comment for a minimum of 30 days.

- (2) The Copermittees must consider revisions to the Water Quality Improvement Plan based on written comments received by the close of the public comment period.
- (3) The Copermittees must promptly submit any revisions to the Water Quality Improvement Plan to the San Diego Water Board no later than 60 days after the close of the public comment period.
- (4) If issues concerning the Water Quality Improvement Plan are resolved informally through discussions among the Copermittees, the San Diego Water Board and interested parties, the San Diego Water Board Executive Officer may provide written notification of acceptance to the Copermittees that the Water Quality Improvement Plan meets the requirements of Provision B. However, if the Executive Officer determines that significant issues with the Water Quality Improvement Plan remain, the matter will be scheduled for San Diego Water Board consideration at a public meeting.
- (5) The Copermittees must commence with implementation of the Water Quality Improvement Plan, in accordance with the water quality improvement strategies and schedules therein, upon written notification of acceptance with the Water Quality Improvement Plan by the San Diego Water Board Executive Officer.
- (6) During implementation of the Water Quality Improvement Plan the Copermittees must correct any deficiencies in the Plan identified by the San Diego Water Board in the updates submitted with the Water Quality Improvement Plan Annual Report following a request by the Board to do so.
- (7) The Water Quality Improvement Plan must be made available on the Regional Clearinghouse required pursuant to Provision F.4 within 30 days of receiving notification of acceptance with the Water Quality Improvement Plan by the San Diego Water Board Executive Officer.

## **2. Updates**

### **a. JURISDICTIONAL RUNOFF MANAGEMENT PROGRAM DOCUMENT UPDATES**

Each Copermittee must update its jurisdictional runoff management program document in accordance with the following requirements:

- (1) Each Copermittee is encouraged to seek public and key stakeholder participation and comments, as early and often as possible during the process of developing updates to its jurisdictional runoff management program document;

- (2) Each Copermittee must update its jurisdictional runoff management program document to incorporate the requirements of Provision E concurrent with the submittal of the Water Quality Improvement Plan. Each Copermittee must correct any deficiencies in the jurisdictional runoff management program document based on comments received from the San Diego Water Board in the updates submitted with the Water Quality Improvement Plan Annual Report;
- (3) Each Copermittee must submit updates to its jurisdictional runoff management program, with the supporting rationale for the modifications, either in the Water Quality Improvement Plan Annual Report required pursuant to Provision F.3.b.(3), or as part of the Report of Waste Discharge required pursuant to Provision F.5.b;
- (4) The Copermittee must revise proposed modifications to its jurisdictional runoff management program as directed by the San Diego Water Board Executive Officer; and
- (5) Updated jurisdictional runoff management program documents must be made available on the Regional Clearinghouse required pursuant to Provision F.4 within 30 days of submitting the Water Quality Improvement Plan Annual Report.

**b. BMP DESIGN MANUAL UPDATES**

Each Copermittee must update its BMP Design Manual in accordance with the following requirements:

- (1) Each Copermittee must update its BMP Design Manual to incorporate the requirements of Provisions E.3.a-d concurrent with the submittal of the Water Quality Improvement Plan. Each Copermittee must correct any deficiencies in the BMP Design Manual based on comments received from the San Diego Water Board in the updates submitted with the Water Quality Improvement Plan Annual Report;
- (2) Any future updates to the BMP Design Manual made after its update pursuant to Provision F.2.b.(1) is completed must be consistent with the requirements of Provisions E.3.a-d and must be submitted as part of the Water Quality Improvement Plan Annual Reports required pursuant to Provision F.3.b.(3), or as part of the Report of Waste Discharge required pursuant to Provision F.5.b; and
- (3) BMP Design Manuals must be made available on the Regional Clearinghouse required pursuant to Provision F.4 within 30 days of completing the update.
- (4) If the San Diego Water Board amends Provisions E.3.a-d during the permit term but after the Copermittee has completed the update pursuant to Provision F.2.b.(1), the Copermittee must revise its BMP Design Manual to

incorporate the amended Provision E.3.a-d requirements as soon as possible but not later than 90 days after the date the San Diego Water Board adopts the amendments to Provisions E.3.a-d, unless otherwise directed by the San Diego Water Board Executive Officer. Under these circumstances, the effective date of the BMP Design Manual is no later than 90 days after the date the San Diego Water Board adopts the amendments to Provisions E.3.a-d, unless otherwise directed by the San Diego Water Board Executive Officer.

**c. WATER QUALITY IMPROVEMENT PLAN UPDATES**

- (1) The Water Quality Improvement Plans must be updated in accordance with the following process:
  - (a) The Copermittees must develop and implement a public participation process to obtain data, information and recommendations for updating the Water Quality Improvement Plan. The public participation process must provide for a publicly available and noticed schedule of opportunities for the public to participate and provide comments during the development of updates to the Water Quality Improvement Plan;
  - (b) The Copermittees must consult with the Water Quality Improvement Consultation Panel on proposed updates of the Water Quality Improvement Plan, and consider the Water Quality Improvement Consultation Panel's recommendations in finalizing the proposed updates;
  - (c) The Copermittees for each Watershed Management Area must submit 1) proposed updates to the Water Quality Improvement Plan and supporting rationale, and 2) recommendations received from the public and the Water Quality Improvement Consultation Panel and the rationale for the requested updates, either in the Water Quality Improvement Plan Annual Reports required pursuant to Provision F.3.b.(3), or as part of the Report of Waste Discharge required pursuant to Provision F.5.b. The updates submitted will be deemed accepted for inclusion in the Water Quality Improvement Plan ninety (90) days after submission unless otherwise directed in writing by the San Diego Water Board Executive Officer;
  - (d) The Copermittees must revise the requested updates as directed by the San Diego Water Board Executive Officer; and
  - (e) Updated Water Quality Improvement Plans must be made available on the Regional Clearinghouse required pursuant to Provision F.4 within 30 days of acceptance of the requested updates by the San Diego Water Board.
- (2) No later than six months following Office of Administrative Law and USEPA approval of any TMDL Basin Plan amendment with wasteload allocations (WLAs) assigned to the Copermittees during the term of this Order, the

Copermittees must initiate an update to the applicable Water Quality Improvement Plans in accordance with Provision F.1 or Provision F.2.c.(1) to incorporate the requirements of the TMDL WLAs.

### **3. Progress Reporting**

#### **a. PROGRESS REPORT PRESENTATIONS**

The Copermittees for each Watershed Management Area must periodically appear before the San Diego Water Board, as requested by the Board, to provide progress reports on the implementation of the Water Quality Improvement Plan and jurisdictional runoff management programs.

#### **b. ANNUAL REPORTS**

##### (1) Transitional Jurisdictional Runoff Management Program Annual Reports

- (a) Each Copermittee must complete and submit a Jurisdictional Runoff Management Program Annual Report Form (contained in Attachment D to this Order or a revised form accepted by the San Diego Water Board) no later than October 31 of each year for each jurisdictional runoff management program reporting period (i.e. July 1 to June 30) during the transitional period, until the first Water Quality Improvement Plan Annual Reports are required to be submitted.
- (b) Each Copermittee must submit the information on the Jurisdictional Runoff Management Program Annual Report Form (contained in Attachment D to this Order or a revised form accepted by the San Diego Water Board) specific to the area within its jurisdiction in each Watershed Management Area.
- (c) In addition to submitting the Jurisdictional Runoff Management Program Annual Report Form during the transitional reporting period, each Copermittee may continue to utilize and submit the jurisdictional runoff management program annual reporting format of its previous NPDES permit until the first Water Quality Improvement Plan Annual Report is required to be submitted.

##### (2) Transitional Monitoring and Assessment Program Annual Reports

The Copermittees for each Watershed Management Area must submit a Transitional Monitoring and Assessment Program Annual Report no later than January 31 for each complete transitional monitoring and assessment program reporting period (i.e. October 1 to September 30) during the transitional period, until the first Water Quality Improvement Plan Annual Reports are required to be submitted under this Order. The Transitional

Monitoring and Assessment Program Annual Reports must include:

- (a) The receiving water and MS4 outfall discharge monitoring data collected pursuant to Provisions D.1.a and D.2.a, summarized and presented in tabular and graphical form; and
- (b) The findings from the assessments required pursuant to Provisions D.4.a.(1)(a), D.4.b.(1)(a)(i), D.4.b.(2)(a)(i).

(3) Water Quality Improvement Plan Annual Reports

The Copermittees for each Watershed Management Area must submit a Water Quality Improvement Plan Annual Report for each reporting period no later than January 31 of the following year. The annual reporting period consists of two different periods: 1) July 1 to June 30 of the following year for the jurisdictional runoff management programs, 2) October 1 to September 30 of the following year for the monitoring and assessment programs. The Water Quality Improvement Plan Annual Reports must be made available on the Regional Clearinghouse required pursuant to Provision F.4. Each Annual Report must include the following:

- (a) The receiving water and MS4 outfall discharge monitoring data collected pursuant to Provisions D.1 and D.2, summarized and presented in tabular and graphical form;
- (b) The progress of the special studies required pursuant to Provision D.3, and the findings, interpretations and conclusions of a special study, or each phase of a special study, upon its completion;
- (c) The findings, interpretations and conclusions from the assessments required pursuant to Provision D.4;
- (d) The progress of implementing the Water Quality Improvement Plan, including, but not limited to, the following:
  - (i) The progress toward achieving the interim and final numeric goals for the highest water quality priorities for the Watershed Management Area;
  - (ii) The water quality improvement strategies that were implemented and/or no longer implemented by each of the Copermittees during the reporting period and previous reporting periods;
  - (iii) The water quality improvement strategies planned for implementation during the next reporting period;
  - (iv) Proposed modifications to the water quality improvement strategies, the public comments received and the supporting rationale for the

proposed modifications;

- (v) Previous modifications or updates incorporated into the Water Quality Improvement Plan and/or each Copermittee's jurisdictional runoff management program document and implemented by the Copermittees in the Watershed Management Area; and
  - (vi) Proposed modifications or updates to the Water Quality Improvement Plan and/or each Copermittee's jurisdictional runoff management program document;
- (e) A completed Jurisdictional Runoff Management Program Annual Report Form (contained in Attachment D to this Order or a revised form accepted by the San Diego Water Board) for each Copermittee in the Watershed Management Area, certified by a Principal Executive Officer, Ranking Elected Official, or Duly Authorized Representative; and
- (f) Each Copermittee must provide any data or documentation utilized in developing the Water Quality Improvement Plan Annual Report upon request by the San Diego Water Board. Any Copermittee monitoring data utilized in developing the Water Quality Improvement Plan Annual Report must be uploaded to the California Environmental Data Exchange Network (CEDEN).<sup>35</sup> Any Copermittee monitoring and assessment data utilized in developing the Water Quality Improvement Plan Annual Report must be available for access on the Regional Clearinghouse required pursuant to Provision F.4.

### **C. REGIONAL MONITORING AND ASSESSMENT REPORT**

- (1) The Copermittees must submit a Regional Monitoring and Assessment Report no later than 180 days prior to the expiration date of this Order. The Regional Monitoring and Assessment Report may be submitted as part of the Report of Waste Discharge required pursuant to Provision F.5.b. In preparing the report the Copermittees must consider the receiving water and MS4 outfall discharge monitoring data collected pursuant to Provisions D.1 and D.2, and the findings, interpretations, and conclusions from the assessments required pursuant to Provision D.4. Based on these considerations the report must assess the following:

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<sup>35</sup> Data must be uploaded to CEDEN Southern California Regional Data Center (<http://www.sccwrp.org/Data/DataSubmission/SouthernCaliforniaRegionalDataCenter.aspx>) using the templates provided on the CEDEN website.

- (a) The beneficial uses of the receiving waters within the San Diego Region that are supported and not adversely affected by the Copermittees' MS4 discharges;
  - (b) The beneficial uses of the receiving waters within the San Diego Region that are adversely impacted by the Copermittees' MS4 discharges;
  - (c) The progress toward protecting the beneficial uses in the receiving waters within the San Diego Region from the Copermittees' discharges; and
  - (d) Pollutants or conditions of emerging concern that may impact beneficial uses in the receiving waters within the San Diego Region.
- (2) The Regional Monitoring and Assessment Report must include recommendations for improving the implementation and assessment of the Water Quality Improvement Plans and jurisdictional runoff management programs.
  - (3) Each Copermittee must provide any data or documentation utilized in developing the Regional Monitoring and Assessment Report upon request by the San Diego Water Board. Any Copermittee monitoring and assessment data utilized in developing the Regional Monitoring and Assessment Report must be available for access on the Regional Clearinghouse required pursuant to Provision F.4.

#### **4. Regional Clearinghouse**

The Copermittees must develop, update, and maintain an internet-based Regional Clearinghouse that is made available to the public no later than 18 months after the effective date of this Order.<sup>36</sup>

- a. The Copermittees, through the Regional Clearinghouse, must make the following documents and data available for access, and organized by Watershed Management Area. The documents and data may be linked to other internet-based data portals and databases where the original documents are stored:
  - (1) Water Quality Improvement Plan for the Watershed Management Area, and all updated versions with date of update;
  - (2) Annual Reports for the Watershed Management Area;
  - (3) Jurisdictional Runoff Management Program document for each Copermittee within the Watershed Management Area, and all updated versions with date of update;

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<sup>36</sup> The Copermittees may develop, update and maintain the clearinghouse(s) of other Copermittees or agencies.

- (4) BMP Design Manual for each Copermittee within the Watershed Management Area, and all updated versions with date of update;
  - (5) Reports from special studies (e.g. source identification, BMP effectiveness assessment) conducted in the Watershed Management Area;
  - (6) Monitoring data collected pursuant to Provision D for each Watershed Management Area must be uploaded to CEDEN,<sup>37</sup> with links to the uploaded data; and
  - (7) Available GIS data, layers, and/or shapefiles used to develop the maps generated and maintained by the Copermittees for the Water Quality Improvement Plans, Annual Reports, and jurisdictional runoff management program documents.
- b.** The Copermittees, through the Regional Clearinghouse, must make the following information and documents available for access:
- (1) Contact information (point of contact, phone number, email address, and mailing address) for each Copermittee;
  - (2) Public hotline number for reporting non-storm water and illicit discharges for each Copermittee;
  - (3) Email address for reporting non-storm water and illicit discharges for each Copermittee;
  - (4) Link to each Copermittee's website, if available, where the public may find additional information about the Copermittee's storm water management program and for requesting records for the implementation of its program;
  - (5) Information about opportunities for the public to participate in programs and/or activities that can result in the prevention or elimination of non-storm water discharges to the MS4, reduction of pollutants in storm water discharges from the MS4, and/or protection of the quality of receiving waters; and
  - (6) Reports from regional monitoring programs in which the Copermittees participate (e.g. Southern California Monitoring Coalition, Southern California Coastal Water Research Project Bight Monitoring);
  - (7) Regional Monitoring and Assessment Reports; and
  - (8) Any other information, data, and documents the Copermittees determine as appropriate for making available to the public.

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<sup>37</sup> Data must be uploaded to CEDEN Southern California Regional Data Center (<http://www.sccwrp.org/Data/DataSubmission/SouthernCaliforniaRegionalDataCenter.aspx>) using the templates provided on the CEDEN website.

## **5. Report of Waste Discharge**

The Copermittees subject to the requirements of this Order must submit to the San Diego Water Board a complete Report of Waste Discharge as an application for the re-issuance of this Order and NPDES permit. The Report of Waste Discharge must be submitted no later than 180 days in advance of the expiration date of this Order. The Report of Waste Discharge must contain the following minimum information:

- a. Names and addresses of the Copermittees;
- b. Names and titles of the primary contacts of the Copermittees;
- c. Proposed changes to the Copermittees' Water Quality Improvement Plans and the supporting justification;
- d. Proposed changes to the Copermittees' jurisdictional runoff management programs and the supporting justification;
- e. Any other information necessary for the re-issuance of this Order;
- f. Any information to be included as part of the Report of Waste Discharge pursuant to the requirements of this Order; and
- g. Any other information required by federal regulations for NPDES permit reissuance.

## **6. Reporting Provisions**

Each Copermittee must comply with all the reporting and recordkeeping provisions of the Standard Permit Provisions and General Provisions contained in Attachment B to this Order.

## **G. PRINCIPAL WATERSHED COPERMITTEE RESPONSIBILITIES**

- 1.** The Copermittees within each Watershed Management Area must designate a Principal Watershed Copermittee and notify the San Diego Water Board of the name of the Principal Watershed Copermittee. An individual Copermittee should not be designated a Principal Watershed Copermittee for more than two Watershed Management Areas. The notification may be submitted with the Water Quality Improvement Plan required pursuant to Provision F.1 of this Order.
- 2.** The Principal Watershed Copermittee is responsible for, at a minimum, the following:
  - a.** Serving as liaison between the Copermittees in the Watershed Management Area and the San Diego Water Board on general permit issues, and when necessary and appropriate, representing the Copermittees in the Watershed Management Area before the San Diego Water Board;
  - b.** Facilitating the development of the Water Quality Improvement Plan in accordance with the requirements of Provision B of this Order;
  - c.** Coordinating the submittal of the deliverables required by Provisions F.1, F.2, F.3.a, and F.3.b of this Order; and
  - d.** Coordinating and developing, with the other Principal Watershed Copermittees, the requirements of Provisions F.3.c, F.4, and F.5.b of this Order.
- 3.** The Principal Watershed Copermittee is not responsible for ensuring that the other Copermittees within the Watershed Management Area are in compliance with the requirements of this Order. Each Copermittee within the Watershed Management Area is responsible for complying with the requirements of this Order.

## **H. MODIFICATION OF ORDER**

- 1.** Modifications of the Order may be initiated by the San Diego Water Board or by the Copermittees. Requests by Copermittees must be made to the San Diego Water Board.
- 2.** Minor modifications to the Order may be made by the San Diego Water Board where the proposed modification complies with all the prohibitions and limitations, and other requirements of this Order.
- 3.** This Order may also be re-opened and modified, revoked and, reissued or terminated in accordance with the provisions of 40 CFR 122.44, 122.62 to 122.64, and 124.5. Causes for taking such actions include, but are not limited to, failure to comply with any condition of this Order and permit, and endangerment to human health or the environment resulting from the permitted activity.
- 4.** This Order may be re-opened for modification for cause including but not limited to the following:
  - a.** Any of the TMDLs in Attachment E to this Order are amended in the Basin Plan by San Diego Water Board, and the amendment is approved by the State Water Board, Office of Administrative Law, and the USEPA;
  - b.** The Basin Plan is amended by the San Diego Water Board to incorporate a new TMDL, and the amendment is approved by the State Water Board, Office of Administrative Law, and the USEPA; or
  - c.** Updating or revising the monitoring and reporting requirements is determined to be necessary, at the discretion of the San Diego Water Board. Such modification(s) may include, but is (are) not limited to, revision(s) to: (i) implement recommendations from Southern California Coastal Water Research Project (SCCWRP), (ii) develop, refine, implement, and/or coordinate a regional monitoring program, (iii) develop and implement improved monitoring and assessment programs in keeping with San Diego Water Board Resolution No. R9-2012-0069, Resolution in Support of a Regional Monitoring Framework, and/or (iv) add provisions to require the Copermittees to evaluate and provide information on cost and values of the monitoring and reporting program.

## **I. STANDARD PERMIT PROVISIONS AND GENERAL PROVISIONS**

Each Copermittee must comply with all the Standard Permit Provisions and General Provisions contained in Attachment B to this Order.

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## ATTACHMENT A

### DISCHARGE PROHIBITIONS AND SPECIAL PROTECTIONS

#### 1. Basin Plan Waste Discharge Prohibitions

California Water Code Section 13243 provides that a Regional Water Board, in a water quality control plan, may specify certain conditions or areas where the discharge of waste or certain types of waste is not permitted. The following waste discharge prohibitions in the Water Quality Control Plan for the San Diego Basin (Basin Plan) are applicable to any person, as defined by Section 13050(c) of the California Water Code, who is a citizen, domiciliary, or political agency or entity of California whose activities in California could affect the quality of waters of the state within the boundaries of the San Diego Region.

1. The discharge of waste to waters of the state in a manner causing, or threatening to cause a condition of pollution, contamination or nuisance as defined in California Water Code Section 13050, is prohibited.
2. The discharge of waste to land, except as authorized by waste discharge requirements or the terms described in California Water Code Section 13264 is prohibited.
3. The discharge of pollutants or dredged or fill material to waters of the United States except as authorized by a National Pollutant Discharge Elimination System (NPDES) permit or a dredged or fill material permit (subject to the exemption described in California Water Code Section 13376) is prohibited.
4. Discharges of recycled water to lakes or reservoirs used for municipal water supply or to inland surface water tributaries thereto are prohibited, unless this San Diego Water Board issues a NPDES permit authorizing such a discharge; the proposed discharge has been approved by the State Department of Health Services (DHS) and the operating agency of the impacted reservoir; and the discharger has an approved fail-safe long-term disposal alternative.
5. The discharge of waste to inland surface waters, except in cases where the quality of the discharge complies with applicable receiving water quality objectives, is prohibited. Allowances for dilution may be made at the discretion of the San Diego Water Board. Consideration would include streamflow data, the degree of treatment provided and safety measures to ensure reliability of facility performance. As an example, discharge of secondary effluent would probably be permitted if streamflow provided 100:1 dilution capability.
6. The discharge of waste in a manner causing flow, ponding, or surfacing on lands not owned or under the control of the discharger is prohibited, unless the discharge is authorized by the San Diego Water Board.

7. The dumping, deposition, or discharge of waste directly into waters of the state, or adjacent to such waters in any manner which may permit its being transported into the waters, is prohibited unless authorized by the San Diego Water Board.
8. Any discharge to a storm water conveyance system that is not composed entirely of "*storm water*" is prohibited unless authorized by the San Diego Water Board. [The federal regulations, 40 CFR 122.26(b)(13), define storm water as storm water runoff, snow melt runoff, and surface runoff and drainage. 40 CFR 122.26(b)(2) defines an illicit discharge as any discharge to a storm water conveyance system that is not composed entirely of storm water except discharges pursuant to a NPDES permit and discharges resulting from firefighting activities.] [§122.26 amended at 56 FR 56553, November 5, 1991; 57 FR 11412, April 2, 1992].
9. The unauthorized discharge of treated or untreated sewage to waters of the state or to a storm water conveyance system is prohibited.
10. The discharge of industrial wastes to conventional septic tank/subsurface disposal systems, except as authorized by the terms described in California Water Code Section 13264, is prohibited.
11. The discharge of radioactive wastes amenable to alternative methods of disposal into the waters of the state is prohibited.
12. The discharge of any radiological, chemical, or biological warfare agent into waters of the state is prohibited.
13. The discharge of waste into a natural or excavated site below historic water levels is prohibited unless the discharge is authorized by the San Diego Water Board.
14. The discharge of sand, silt, clay, or other earthen materials from any activity, including land grading and construction, in quantities which cause deleterious bottom deposits, turbidity or discoloration in waters of the state or which unreasonably affect, or threaten to affect, beneficial uses of such waters is prohibited.
15. The discharge of treated or untreated sewage from vessels to Mission Bay, Oceanside Harbor, Dana Point Harbor, or other small boat harbors is prohibited.
16. The discharge of untreated sewage from vessels to San Diego Bay is prohibited.
17. The discharge of treated sewage from vessels to portions of San Diego Bay that are less than 30 feet deep at mean lower low water (MLLW) is prohibited.
18. The discharge of treated sewage from vessels, which do not have a properly functioning US Coast Guard certified Type I or Type II marine sanitation device, to portions of San Diego Bay that are greater than 30 feet deep at mean lower low water (MLLW) is prohibited.

## **2. Attachment B to State Water Board Resolution 2012-0012, as amended by State Water Board Resolution No. 2012-0031.**

### **Special Protections for Areas of Special Biological Significance (ASBS), Governing Point Source Discharges of Storm Water and Nonpoint Source Waste Discharges**

#### **I. PROVISIONS FOR POINT SOURCE DISCHARGES OF STORM WATER AND NONPOINT SOURCE WASTE DISCHARGES**

The following terms, prohibitions, and special conditions (hereafter collectively referred to as special conditions) are established as limitations on point source storm water and nonpoint source discharges. These special conditions provide Special Protections for marine aquatic life and natural water quality in Areas of Special Biological Significance (ASBS), as required for State Water Quality Protection Areas pursuant to California Public Resources Code Sections 36700(f) and 36710(f). These Special Protections are adopted by the State Water Board as part of the California Ocean Plan (Ocean Plan) General Exception.

The special conditions are organized by category of discharge. The State Water Resources Control Board (State Water Board) and Regional Water Quality Control Boards (Regional Water Boards) will determine categories and the means of regulation for those categories [e.g., Point Source Storm Water National Pollutant Discharge Elimination System (NPDES) or Nonpoint Source].

#### **A. PERMITTED POINT SOURCE DISCHARGES OF STORM WATER**

##### **1. General Provisions for Permitted Point Source Discharges of Storm Water**

- a. Existing storm water discharges into an ASBS are allowed only under the following conditions:
  - (1) The discharges are authorized by an NPDES permit issued by the State Water Board or Regional Water Board;
  - (2) The discharges comply with all of the applicable terms, prohibitions, and special conditions contained in these Special Protections; and
  - (3) The discharges:
    - (i) Are essential for flood control or slope stability, including roof, landscape, road, and parking lot drainage;
    - (ii) Are designed to prevent soil erosion;
    - (iii) Occur only during wet weather;
    - (iv) Are composed of only storm water runoff.
- b. Discharges composed of storm water runoff shall not alter natural ocean water quality in an ASBS.
- c. The discharge of trash is prohibited.

- d. Only discharges from existing storm water outfalls are allowed. Any proposed or new storm water runoff discharge shall be routed to existing storm water discharge outfalls and shall not result in any new contribution of waste to an ASBS (i.e., no additional pollutant loading). "Existing storm water outfalls" are those that were constructed or under construction prior to January 1, 2005. "New contribution of waste" is defined as any addition of waste beyond what would have occurred as of January 1, 2005. A change to an existing storm water outfall, in terms of re-location or alteration, in order to comply with these special conditions, is allowed and does not constitute a new discharge.
- e. Non-storm water discharges are prohibited except as provided below:
- (1) The term "non-storm water discharges" means any waste discharges from a municipal separate storm sewer system (MS4) or other NPDES permitted storm drain system to an ASBS that are not composed entirely of storm water.
  - (2) (i) The following non-storm water discharges are allowed, provided that the discharges are essential for emergency response purposes, structural stability, slope stability or occur naturally:
    - (a) Discharges associated with emergency fire fighting operations.
    - (b) Foundation and footing drains.
    - (c) Water from crawl space or basement pumps.
    - (d) Hillside dewatering.
    - (e) Naturally occurring groundwater seepage via a storm drain.
    - (f) Non-anthropogenic flows from a naturally occurring stream via a culvert or storm drain, as long as there are no contributions of anthropogenic runoff.
  - (ii) An NPDES permitting authority may authorize non-storm water discharges to an MS4 with a direct discharge to an ASBS only to the extent the NPDES permitting authority finds that the discharge does not alter natural ocean water quality in the ASBS.
  - (3) Authorized non-storm water discharges shall not cause or contribute to a violation of the water quality objectives in Chapter II of the Ocean Plan nor alter natural ocean water quality in an ASBS.
2. Compliance Plans for Inclusion in Storm Water Management Plans (SWMP) and Storm Water Pollution Prevention Plans (SWPPP).

The discharger shall specifically address the prohibition of non-storm water runoff and the requirement to maintain natural water quality for storm water discharges to an ASBS in an ASBS Compliance Plan to be included in its SWMP or a SWPPP, as appropriate to permit type. If a statewide permit includes a SWMP, then the discharger shall prepare a stand-alone compliance plan for ASBS discharges. The ASBS Compliance Plan is subject to approval by the Executive Director of the State Water Board (statewide permits) or Executive Officer of the Regional Water Board (for permits issued by Regional Water Boards).

- a. The Compliance Plan shall include a map of surface drainage of storm water runoff, showing areas of sheet runoff, prioritize discharges, and describe any structural Best Management Practices (BMPs) already employed and/or BMPs to be employed in the future. Priority discharges are those that pose the greatest water quality threat and which are identified to require installation of structural BMPs. The map shall also show the storm water conveyances in relation to other features such as service areas, sewage conveyances and treatment facilities, landslides, areas prone to erosion, and waste and hazardous material storage areas, if applicable. The SWMP or SWPPP shall also include a procedure for updating the map and plan when changes are made to the storm water conveyance facilities.
- b. The ASBS Compliance Plan shall describe the measures by which all non-authorized non-storm water runoff (e.g., dry weather flows) has been eliminated, how these measures will be maintained over time, and how these measures are monitored and documented.
- c. For Municipal Separate Storm Sewer System (MS4s), the ASBS Compliance Plan shall require minimum inspection frequencies as follows:
  - (1) The minimum inspection frequency for construction sites shall be weekly during rainy season;
  - (2) The minimum inspection frequency for industrial facilities shall be monthly during the rainy season;
  - (3) The minimum inspection frequency for commercial facilities (e.g., restaurants) shall be twice during the rainy season; and
  - (4) Storm water outfall drains equal to or greater than 18 inches (457 mm) in diameter or width shall be inspected once prior to the beginning of the rainy season and once during the rainy season and maintained to remove trash and other anthropogenic debris.
- d. The ASBS Compliance Plan shall address storm water discharges (wet weather flows) and, in particular, describe how pollutant reductions in storm water runoff, that are necessary to comply with these special conditions, will be achieved through BMPs. Structural BMPs need not be installed if the discharger can document to the satisfaction of the State Water Board Executive Director (statewide permits) or Regional Water Board Executive Officer (Regional Water Board permits) that such installation would pose a threat to health or safety. BMPs to control storm water runoff discharges (at the end-of-pipe) during a design storm shall be designed to achieve on average the following target levels:
  - (1) Table B Instantaneous Maximum Water Quality Objectives in Chapter II of the Ocean Plan; or
  - (2) A 90% reduction in pollutant loading during storm events, for the applicant's total discharges.

The baseline for these determinations is the effective date of the Exception, except for those structural BMPs installed between January 1, 2005 and adoption of these Special Protections, and the reductions must be achieved and documented within six (6) years of the effective date.

- e. The ASBS Compliance Plan shall address erosion control and the prevention of anthropogenic sedimentation in ASBS. The natural habitat conditions in the ASBS shall not be altered as a result of anthropogenic sedimentation.
- f. The ASBS Compliance Plan shall describe the non-structural BMPs currently employed and planned in the future (including those for construction activities), and include an implementation schedule. The ASBS Compliance Plan shall include non-structural BMPs that address public education and outreach. Education and outreach efforts must adequately inform the public that direct discharges of pollutants from private property not entering an MS4 are prohibited. The ASBS Compliance Plan shall also describe the structural BMPs, including any low impact development (LID) measures, currently employed and planned for higher threat discharges and include an implementation schedule. To control storm water runoff discharges (at the end-of-pipe) during a design storm, permittees must first consider, and use where feasible, LID practices to infiltrate, use, or evapotranspire storm water runoff on-site, if LID practices would be the most effective at reducing pollutants from entering the ASBS.
- g. The BMPs and implementation schedule shall be designed to ensure that natural water quality conditions in the receiving water are achieved and maintained by either reducing flows from impervious surfaces or reducing pollutant loading, or some combination thereof.
- h. If the results of the receiving water monitoring described in IV.B. of these special conditions indicate that the storm water runoff is causing or contributing to an alteration of natural ocean water quality in the ASBS, the discharger shall submit a report to the State Water Board and Regional Water Board within 30 days of receiving the results.
  - (1) The report shall identify the constituents in storm water runoff that alter natural ocean water quality and the sources of these constituents.
  - (2) The report shall describe BMPs that are currently being implemented, BMPs that are identified in the SWMP or SWPPP for future implementation, and any additional BMPs that may be added to the SWMP or SWPPP to address the alteration of natural water quality. The report shall include a new or modified implementation schedule for the BMPs.
  - (3) Within 30 days of the approval of the report by the State Water Board Executive Director (statewide permits) or Regional Water Board Executive Officer (Regional Water Board permits), the discharger shall revise its ASBS Compliance Plan to incorporate any new or modified BMPs that have been or will be implemented, the implementation schedule, and any additional monitoring required.
  - (4) As long as the discharger has complied with the procedures described above and is implementing the revised SWMP or SWPPP, the discharger does not have to repeat the same procedure for continuing or recurring exceedances of natural ocean water quality conditions due to the same constituent.

(5) The requirements of this section are in addition to the terms, prohibitions, and conditions contained in these Special Protections.

### 3. Compliance Schedule

- a. On the effective date of the Exception, all non-authorized non-storm water discharges (e.g., dry weather flow) are effectively prohibited.
- b. Within eighteen (18) months from the effective date of the Exception, the discharger shall submit a draft written ASBS Compliance Plan to the State Water Board Executive Director (statewide permits) or Regional Water Board Executive Officer (Regional Water Board permits) that describes its strategy to comply with these special conditions, including the requirement to maintain natural water quality in the affected ASBS. The ASBS Compliance Plan shall include a description of appropriate non-structural controls and a time schedule to implement structural controls (implementation schedule) to comply with these special conditions for inclusion in the discharger's SWMP or SWPPP, as appropriate to permit type. The final ASBS Compliance Plan, including a description and final schedule for structural controls based on the results of runoff and receiving water monitoring, must be submitted within thirty (30) months from the effective date of the Exception.
- c. Within 18 months of the effective date of the Exception, any non-structural controls that are necessary to comply with these special conditions shall be implemented.
- d. Within six (6) years of the effective date of the Exception, any structural controls identified in the ASBS Compliance Plan that are necessary to comply with these special conditions shall be operational.
- e. Within six (6) years of the effective date of the Exception, all dischargers must comply with the requirement that their discharges into the affected ASBS maintain natural ocean water quality. If the initial results of post-storm receiving water quality testing indicate levels higher than the 85<sup>th</sup> percentile threshold of reference water quality data and the pre-storm receiving water levels, then the discharger must re-sample the receiving water, pre- and post-storm. If after re-sampling the post-storm levels are still higher than the 85<sup>th</sup> percentile threshold of reference water quality data, and the pre-storm receiving water levels, for any constituent, then natural ocean water quality is exceeded. See attached Flowchart.
- f. The Executive Director of the State Water Board (statewide permits) or Executive Officer of the Regional Water Board (Regional Water Board permits) may only authorize additional time to comply with the special conditions d. and e., above if good cause exists to do so. Good cause means a physical impossibility or lack of funding.

If a discharger claims physical impossibility, it shall notify the Board in writing within thirty (30) days of the date that the discharger first knew of the event or circumstance that caused or would cause it to fail to meet the deadline in d. or e. The notice shall describe the reason for the noncompliance or anticipated noncompliance and specifically refer to this Section of this Exception. It shall describe the anticipated length of time the delay in compliance may persist, the cause or causes of the delay as well as measures to minimize the impact of the delay on water quality, the measures taken or to be taken by

the discharger to prevent or minimize the delay, the schedule by which the measures will be implemented, and the anticipated date of compliance. The discharger shall adopt all reasonable measures to avoid and minimize such delays and their impact on water quality.

The discharger may request an extension of time for compliance based on lack of funding. The request for an extension shall require:

1. for municipalities, a demonstration of significant hardship to discharger ratepayers, by showing the relationship of storm water fees to annual household income for residents within the discharger's jurisdictional area, and the discharger has made timely and complete applications for all available bond and grant funding, and either no bond or grant funding is available, or bond and/or grant funding is inadequate; or
2. for other governmental agencies, a demonstration and documentation of a good faith effort to acquire funding through that agency's budgetary process, and a demonstration that funding was unavailable or inadequate.

## **B. NONPOINT SOURCE DISCHARGES**

### 1. General Provisions for Nonpoint Sources

a. Existing nonpoint source waste discharges are allowed into an ASBS only under the following conditions:

- (1) The discharges are authorized under waste discharge requirements, a conditional waiver of waste discharge requirements, or a conditional prohibition issued by the State Water Board or a Regional Water Board.
- (2) The discharges are in compliance with the applicable terms, prohibitions, and special conditions contained in these Special Protections.
- (3) The discharges:
  - (i) Are essential for flood control or slope stability, including roof, landscape, road, and parking lot drainage;
  - (ii) Are designed to prevent soil erosion;
  - (iii) Occur only during wet weather;
  - (iv) Are composed of only storm water runoff.

b. Discharges composed of storm water runoff shall not alter natural ocean water quality in an ASBS.

c. The discharge of trash is prohibited.

d. Only existing nonpoint source waste discharges are allowed. "Existing nonpoint source waste discharges" are discharges that were ongoing prior to January 1, 2005. "New nonpoint source discharges" are defined as those that commenced on or after January 1,

2005. A change to an existing nonpoint source discharge, in terms of relocation or alteration, in order to comply with these special conditions, is allowed and does not constitute a new discharge.

- e. Non-storm water discharges from nonpoint sources (those not subject to an NPDES Permit) are prohibited except as provided below:
- (1) The term “non-storm water discharges” means any waste discharges that are not composed entirely of storm water.
  - (2) The following non-storm water discharges are allowed, provided that the discharges are essential for emergency response purposes, structural stability, slope stability, or occur naturally:
    - (i) Discharges associated with emergency fire fighting operations.
    - (ii) Foundation and footing drains.
    - (iii) Water from crawl space or basement pumps.
    - (iv) Hillside dewatering.
    - (v) Naturally occurring groundwater seepage via a storm drain.
    - (vi) Non-anthropogenic flows from a naturally occurring stream via a culvert or storm drain, as long as there are no contributions of anthropogenic runoff.
  - (3) Authorized non-storm water discharges shall not cause or contribute to a violation of the water quality objectives in Chapter II of the Ocean Plan nor alter natural ocean water quality in an ASBS.
- f. At the San Clemente Island ASBS, discharges incidental to military training and research, development, test, and evaluation operations are allowed. Discharges incidental to underwater demolition and other in-water explosions are not allowed in the two military closure areas in the vicinity of Wilson Cove and Castle Rock. Discharges must not result in a violation of the water quality objectives, including the protection of the marine aquatic life beneficial use, anywhere in the ASBS.
- g. At the San Nicolas Island and Begg Rock ASBS, discharges incidental to military research, development, testing, and evaluation of, and training with, guided missile and other weapons systems, fleet training exercises, small-scale amphibious warfare training, and special warfare training are allowed. Discharges incidental to underwater demolition and other in-water explosions are not allowed. Discharges must not result in a violation of the water quality objectives, including the protection of the marine aquatic life beneficial use, anywhere in the ASBS.
- h. All other nonpoint source discharges not specifically authorized above are prohibited.

## 2. Planning and Reporting

- a. The nonpoint source discharger shall develop an ASBS Pollution Prevention Plan, including an implementation schedule, to address storm water runoff and any other nonpoint source discharges from its facilities. The ASBS Pollution Prevention Plan must be equivalent in contents to an ASBS Compliance Plan as described in I (A)(2) in this document. The ASBS Pollution Prevention Plan is subject to approval by the Executive Director of the State Water Board (statewide waivers or waste discharge requirements) or Executive Officer of the Regional Water Board (Regional Water Board waivers or waste discharge requirements).
- b. The ASBS Pollution Prevention Plan shall address storm water discharges (wet weather flows) and, in particular, describe how pollutant reductions in storm water runoff that are necessary to comply with these special conditions, will be achieved through Management Measures and associated Management Practices (Management Measures/Practices). Structural BMPs need not be installed if the discharger can document to the satisfaction of the State Water Board Executive Director or Regional Water Board Executive Officer that such installation would pose a threat to health or safety. Management Measures to control storm water runoff during a design storm shall achieve on average the following target levels:
- (1) Table B Instantaneous Maximum Water Quality Objectives in Chapter II of the Ocean Plan; or
  - (2) A 90% reduction in pollutant loading during storm events, for the applicant's total discharges.

The baseline for these determinations is the effective date of the Exception, except for those structural BMPs installed between January 1, 2005 and adoption of these Special Protections, and the reductions must be achieved and documented within six (6) years of the effective date.

- c. If the results of the receiving water monitoring described in IV.B. of these special conditions indicate that the storm water runoff or other nonpoint source pollution is causing or contributing to an alteration of natural ocean water quality in the ASBS, the discharger shall submit a report to the State Water Board and the Regional Water Board within 30 days of receiving the results.
- (1) The report shall identify the constituents that alter natural water quality and the sources of these constituents.
  - (2) The report shall describe Management Measures/Practices that are currently being implemented, Management Measures/Practices that are identified in the ASBS Pollution Prevention Plan for future implementation, and any additional Management Measures/Practices that may be added to the Pollution Prevention Plan to address the alteration of natural water quality. The report shall include a new or modified implementation schedule for the Management Measures/Practices.
  - (3) Within 30 days of the approval of the report by the State Water Board Executive Director (statewide waivers or waste discharge requirements) or Executive Officer of the Regional Water Board (Regional Water Board waivers or waste discharge requirements), the discharger shall revise its ASBS Pollution Prevention Plan to incorporate any new or modified Management Measures/Practices that have been or

will be implemented, the implementation schedule, and any additional monitoring required.

(4) As long as the discharger has complied with the procedures described above and is implementing the revised ASBS Pollution Prevention Plan, the discharger does not have to repeat the same procedure for continuing or recurring exceedances of natural water quality conditions due to the same constituent.

(5) The requirements of this section are in addition to the terms, prohibitions, and conditions contained in these Special Protections.

### 3. Compliance Schedule

- a. On the effective date of the Exception, all non-authorized non-storm water discharges (e.g., dry weather flow) are effectively prohibited.
- b. Within eighteen (18) months from the effective date of the Exception, the dischargers shall submit a draft written ASBS Pollution Prevention Plan to the State Water Board Executive Director (statewide waivers or waste discharge requirements) or Executive Officer of the Regional Water Board (Regional Water Board waivers or waste discharge requirements) that describes its strategy to comply with these special conditions, including the requirement to maintain natural ocean water quality in the affected ASBS. The Pollution Prevention Plan shall include a description of appropriate non-structural controls and a time schedule to implement structural controls to comply with these special conditions for inclusion in the discharger's Pollution Prevention Plan. The final ASBS Pollution Prevention Plan, including a description and final schedule for structural controls based on the results of runoff and receiving water monitoring, must be submitted within thirty (30) months from the effective date of the Exception.
- c. Within 18 months of the effective date of the Exception, any non-structural controls that are necessary to comply with these Special Protections shall be implemented.
- d. Within six (6) years of the effective date of the Exception, any structural controls identified in the ASBS Pollution Prevention Plan that are necessary to comply with these special conditions shall be operational.
- e. Within six (6) years of the effective date of the Exception, all dischargers must comply with the requirement that their discharges into the affected ASBS maintain natural ocean water quality. If the initial results of post-storm receiving water quality testing indicate levels higher than the 85<sup>th</sup> percentile threshold of reference water quality data and the pre-storm receiving water levels, then the discharger must re-sample the receiving water pre- and post-storm. If after re-sampling the post-storm levels are still higher than the 85<sup>th</sup> percentile threshold of reference water quality data and the pre-storm receiving water levels, for any constituent, then natural ocean water quality is exceeded. See attached Flowchart.
- f. The Executive Director of the State Water Board (statewide waivers or waste discharge requirements) or Executive Officer of the Regional Water Board (Regional Water Board waivers or waste discharge requirements) may only authorize additional time to comply with the special conditions d. and e., above if good cause exists to do so. Good cause means a physical impossibility or lack of funding.

If a discharger claims physical impossibility, it shall notify the Board in writing within thirty (30) days of the date that the discharger first knew of the event or circumstance that caused or would cause it to fail to meet the deadline in (d.) or (e.). The notice shall describe the reason for the noncompliance or anticipated noncompliance and specifically refer to this Section of this Exception. It shall describe the anticipated length of time the delay in compliance may persist, the cause or causes of the delay as well as measures to minimize the impact of the delay on water quality, the measures taken or to be taken by the discharger to prevent or minimize the delay, the schedule by which the measures will be implemented, and the anticipated date of compliance. The discharger shall adopt all reasonable measures to avoid and minimize such delays and their impact on water quality.

The discharger may request an extension of time for compliance based on lack of funding. The request for an extension shall require:

1. a demonstration that the discharger has made timely and complete applications for all available bond and grant funding, and either no bond or grant funding is available, or bond and/or grant funding is inadequate; or
2. for governmental agencies, a demonstration and documentation of a good faith effort to acquire funding through that agency's budgetary process, and a demonstration that funding was unavailable or inadequate.

## II. ADDITIONAL REQUIREMENTS FOR PARKS AND RECREATION FACILITIES

In addition to the provisions in Section I (A) or I (B), respectively, a discharger with parks and recreation facilities shall comply with the following:

- A. The discharger shall include a section in an ASBS Compliance Plan (for NPDES dischargers) or an ASBS Pollution Prevention Plan (for nonpoint source dischargers) to address storm water runoff from parks and recreation facilities.
  1. The plan shall identify all pollutant sources, including sediment sources, which may result in waste entering storm water runoff. Pollutant sources include, but are not limited to, roadside rest areas and vistas, picnic areas, campgrounds, trash receptacles, maintenance facilities, park personnel housing, portable toilets, leach fields, fuel tanks, roads, piers, and boat launch facilities.
  2. The plan shall describe BMPs or Management Measures/Practices that will be implemented to control soil erosion (both temporary and permanent erosion controls) and reduce or eliminate pollutants in storm water runoff in order to achieve and maintain natural water quality conditions in the affected ASBS. The plan shall include BMPs or Management Measures/Practices to ensure that trails and culverts are maintained to prevent erosion and minimize waste discharges to ASBS.
  3. The plan shall include BMPs or Management Measures/Practices to prevent the discharge of pesticides or other chemicals, including agricultural chemicals, in storm water runoff to the affected ASBS.

4. The plan shall include BMPs or Management Measures/Practices that address public education and outreach. The goal of these BMPs or Management Measures/Practices is to ensure that the public is adequately informed that waste discharges to the affected ASBS are prohibited or limited by special conditions in these Special Protections. The BMPs or Management Measures/Practices shall include signage at camping, picnicking, beach and roadside parking areas, and visitor centers, or other appropriate measures, which notify the public of any applicable requirements of these Special Protections and identify the ASBS boundaries.
  5. The plan shall include BMPs or Management Measures/Practices that address the prohibition against the discharge of trash to ASBS. The BMPs or Management Measures/Practices shall include measures to ensure that adequate trash receptacles are available for public use at visitor facilities, including parking areas, and that the receptacles are adequately maintained to prevent trash discharges into the ASBS. Appropriate measures include covering trash receptacles to prevent trash from being wind blown and periodically emptying the receptacles to prevent overflows.
  6. The plan shall include BMPs or Management Measures/Practices to address runoff from parking areas and other developed features to ensure that the runoff does not alter natural water quality in the affected ASBS. BMPs or Management Measures/Practices shall include measures to reduce pollutant loading in runoff to the ASBS through installation of natural area buffers (LID), treatment, or other appropriate measures.
- B. Maintenance and repair of park and recreation facilities must not result in waste discharges to the ASBS. The practice of road oiling must be minimized or eliminated, and must not result in waste discharges to the ASBS.

### III. ADDITIONAL REQUIREMENTS – WATERFRONT AND MARINE OPERATIONS

In addition to the provisions in Section I (A) or I (B), respectively, a discharger with waterfront and marine operations shall comply with the following:

- A. For discharges related to waterfront and marine operations, the discharger shall develop a Waterfront and Marine Operations Management Plan (Waterfront Plan). This plan shall contain appropriate Management Measures/Practices to address nonpoint source pollutant discharges to the affected ASBS.
  1. The Waterfront Plan shall contain appropriate Management Measures/Practices for any waste discharges associated with the operation and maintenance of vessels, moorings, piers, launch ramps, and cleaning stations in order to ensure that beneficial uses are protected and natural water quality is maintained in the affected ASBS.
  2. For discharges from marinas and recreational boating activities, the Waterfront Plan shall include appropriate Management Measures, described in The Plan for California's Nonpoint Source Pollution Control Program, for marinas and recreational boating, or equivalent practices, to ensure that nonpoint source pollutant discharges do not alter natural water quality in the affected ASBS.
  3. The Waterfront Plan shall include Management Practices to address public education and outreach to ensure that the public is adequately informed that waste discharges to the affected ASBS are prohibited or limited by special conditions in these Special

Protections. The management practices shall include appropriate signage, or similar measures, to inform the public of the ASBS restrictions and to identify the ASBS boundaries.

4. The Waterfront Plan shall include Management Practices to address the prohibition against trash discharges to ASBS. The Management Practices shall include the provision of adequate trash receptacles for marine recreation areas, including parking areas, launch ramps, and docks. The plan shall also include appropriate Management Practices to ensure that the receptacles are adequately maintained and secured in order to prevent trash discharges into the ASBS. Appropriate Management Practices include covering the trash receptacles to prevent trash from being windblown, staking or securing the trash receptacles so they don't tip over, and periodically emptying the receptacles to prevent overflow.
  5. The discharger shall submit its Waterfront Plan to the by the State Water Board Executive Director (statewide waivers or waste discharge requirements) or Executive Officer of the Regional Water Board (Regional Water Board waivers or waste discharge requirements) within six months of the effective date of these special conditions. The Waterfront Plan is subject to approval by the State Water Board Executive Director or the Regional Water Board Executive Officer, as appropriate. The plan must be fully implemented within 18 months of the effective date of the Exception.
- B. The discharge of chlorine, soaps, petroleum, other chemical contaminants, trash, fish offal, or human sewage to ASBS is prohibited. Sinks and fish cleaning stations are point source discharges of wastes and are prohibited from discharging into ASBS. Anthropogenic accumulations of discarded fouling organisms on the sea floor must be minimized.
- C. Limited-term activities, such as the repair, renovation, or maintenance of waterfront facilities, including, but not limited to, piers, docks, moorings, and breakwaters, are authorized only in accordance with Chapter III.E.2 of the Ocean Plan.
- D. If the discharger anticipates that the discharger will fail to fully implement the approved Waterfront Plan within the 18 month deadline, the discharger shall submit a technical report as soon as practicable to the State Water Board Executive Director or the Regional Water Board Executive Officer, as appropriate. The technical report shall contain reasons for failing to meet the deadline and propose a revised schedule to fully implement the plan.
- E. The State Water Board or the Regional Water Board may, for good cause, authorize additional time to comply with the Waterfront Plan. Good cause means a physical impossibility or lack of funding.

If a discharger claims physical impossibility, it shall notify the Board in writing within thirty (30) days of the date that the discharger first knew of the event or circumstance that caused or would cause it to fail to meet the deadline in Section III.A.5. The notice shall describe the reason for the noncompliance or anticipated noncompliance and specifically refer to this Section of this Exception. It shall describe the anticipated length of time the delay in compliance may persist, the cause or causes of the delay as well as measures to minimize the impact of the delay on water quality, the measures taken or to be taken by the

discharger to prevent or minimize the delay, the schedule by which the measures will be implemented, and the anticipated date of compliance. The discharger shall adopt all reasonable measures to avoid and minimize such delays and their impact on water quality. The discharger may request an extension of time for compliance based on lack of funding. The request for an extension shall require:

1. a demonstration of significant hardship by showing that the discharger has made timely and complete applications for all available bond and grant funding, and either no bond or grant funding is available, or bond and/or grant funding is inadequate.
2. for governmental agencies, a demonstration and documentation of a good faith effort to acquire funding through that agency's budgetary process, and a demonstration that funding was unavailable or inadequate.

#### IV. MONITORING REQUIREMENTS

Monitoring is mandatory for all dischargers to assure compliance with the Ocean Plan. Monitoring requirements include both: (A) core discharge monitoring, and (B) ocean receiving water monitoring. The State and Regional Water Boards must approve sampling site locations and any adjustments to the monitoring programs. All ocean receiving water and reference area monitoring must be comparable with the Water Boards' Surface Water Ambient Monitoring Program (SWAMP).

Safety concerns: Sample locations and sampling periods must be determined considering safety issues. Sampling may be postponed upon notification to the State and Regional Water Boards if hazardous conditions prevail.

Analytical Chemistry Methods: All constituents must be analyzed using the lowest minimum detection limits comparable to the Ocean Plan water quality objectives. For metal analysis, all samples, including storm water effluent, reference samples, and ocean receiving water samples, must be analyzed by the approved analytical method with the lowest minimum detection limits (currently Inductively Coupled Plasma/Mass Spectrometry) described in the Ocean Plan.

##### **A. CORE DISCHARGE MONITORING PROGRAM**

1. General sampling requirements for timing and storm size:

Runoff must be collected during a storm event that is greater than 0.1 inch and generates runoff, and at least 72 hours from the previously measurable storm event. Runoff samples shall be collected during the same storm and at approximately the same time when post-storm receiving water is sampled, and analyzed for the same constituents as receiving water and reference site samples (see section IV B) as described below.

2. Runoff flow measurements
  - a. For municipal/industrial storm water outfalls in existence as of December 31, 2007, 18 inches (457mm) or greater in diameter/width (including multiple outfall pipes in combination having a width of 18 inches, runoff flows must be measured or calculated, using a method acceptable to and approved by the State and Regional Water Boards.

b. This will be reported annually for each precipitation season to the State and Regional Water Boards.

3. Runoff samples – storm events

a. For outfalls equal to or greater than 18 inches (0.46m) in diameter or width:

- (1) samples of storm water runoff shall be collected during the same storm as receiving water samples and analyzed for oil and grease, total suspended solids, and, within the range of the southern sea otter indicator bacteria or some other measure of fecal contamination; and
- (2) samples of storm water runoff shall be collected and analyzed for critical life stage chronic toxicity (one invertebrate or algal species) at least once during each storm season when receiving water is sampled in the ASBS.
- (3) If an applicant has no outfall greater than 36 inches, then storm water runoff from the applicant's largest outfall shall be further collected during the same storm as receiving water samples and analyzed for Ocean Plan Table B metals for protection of marine life, Ocean Plan polynuclear aromatic hydrocarbons (PAHs), current use pesticides (pyrethroids and OP pesticides), and nutrients (ammonia, nitrate and phosphates).

b. For outfalls equal to or greater than 36 inches (0.91m) in diameter or width:

- (1) samples of storm water runoff shall be collected during the same storm as receiving water samples and analyzed for oil and grease, total suspended solids, and, within the range of the southern sea otter indicator bacteria or some other measure of fecal contamination; and
- (2) samples of storm water runoff shall be further collected during the same storm as receiving water samples and analyzed for Ocean Plan Table B metals for protection of marine life, Ocean Plan polynuclear aromatic hydrocarbons (PAHs), current use pesticides (pyrethroids and OP pesticides), and nutrients (ammonia, nitrate and phosphates); and
- (3) samples of storm water runoff shall be collected and analyzed for critical life stage chronic toxicity (one invertebrate or algal species) at least once during each storm season when receiving water is sampled in the ASBS.

c. For an applicant not participating in a regional monitoring program [see below in Section IV (B)] in addition to (a.) and (b.) above, a minimum of the two largest outfalls or 20 percent of the larger outfalls, whichever is greater, shall be sampled (flow weighted composite samples) at least three times annually during wet weather (storm event) and analyzed for all Ocean Plan Table A constituents, Table B constituents for marine aquatic life protection (except for toxicity, only chronic toxicity for three species shall be required), DDT, PCBs, Ocean Plan PAHs, OP pesticides, pyrethroids, nitrates, phosphates, and Ocean Plan indicator bacteria. For parties discharging to ASBS in

more than one Regional Water Board region, at a minimum, one (the largest) such discharge shall be sampled annually in each Region.

4. The Executive Director of the State Water Board (statewide permits) or Executive Officer of the Regional Water Board (Regional Water Board permits) may reduce or suspend core monitoring once the storm runoff is fully characterized. This determination may be made at any point after the discharge is fully characterized, but is best made after the monitoring results from the first permit cycle are assessed.

## **B. Ocean Receiving Water and Reference Area Monitoring Program**

In addition to performing the Core Discharge Monitoring Program in Section II.A above, all applicants having authorized discharges must perform ocean receiving water monitoring. In order to fulfill the requirements for monitoring the physical, chemical, and biological characteristics of the ocean receiving waters within their ASBS, dischargers may choose either (1) an individual monitoring program, or (2) participation in a regional integrated monitoring program.

1. Individual Monitoring Program: The requirements listed below are for those dischargers who elect to perform an individual monitoring program to fulfill the requirements for monitoring the physical, chemical, and biological characteristics of the ocean receiving waters within the affected ASBS. In addition to Core Discharge Monitoring, the following additional monitoring requirements shall be met:
  - a. Three times annually, during wet weather (storm events), the receiving water at the point of discharge from the outfalls described in section (IV)(A)(3)(c) above shall be sampled and analyzed for Ocean Plan Table A constituents, Table B constituents for marine aquatic life, DDT, PCBs, Ocean Plan PAHs, OP pesticides, pyrethroids, nitrates, phosphates, salinity, chronic toxicity (three species), and Ocean Plan indicator bacteria.
 

The sample location for the ocean receiving water shall be in the surf zone at the point of discharges; this must be at the same location where storm water runoff is sampled. Receiving water shall be sampled prior to (pre-storm) and during (or immediately after) the same storm (post storm). Post storm sampling shall be during the same storm and at approximately the same time as when the runoff is sampled. Reference water quality shall also be sampled three times annually and analyzed for the same constituents pre-storm and post-storm, during the same storm seasons when receiving water is sampled. Reference stations will be determined by the State Water Board's Division of Water Quality and the applicable Regional Water Board(s).
  - b. Sediment sampling shall occur at least three times during every five (5) year period. The subtidal sediment (sand or finer, if present) at the discharge shall be sampled and analyzed for Ocean Plan Table B constituents for marine aquatic life, DDT, PCBs, PAHs, pyrethroids, and OP pesticides. For sediment toxicity testing, only an acute toxicity test using the amphipod *Eohaustorius estuarius* must be performed.
  - c. A quantitative survey of intertidal benthic marine life shall be performed at the discharge and at a reference site. The survey shall be performed at least once every five (5) year period. The survey design is subject to approval by the Regional Water Board and the State Water Board's Division of Water Quality. The results of the survey shall be

completed and submitted to the State Water Board and Regional Water Board at least six months prior to the end of the permit cycle.

- d. Once during each five (5) year period, a bioaccumulation study shall be conducted to determine the concentrations of metals and synthetic organic pollutants at representative discharge sites and at representative reference sites. The study design is subject to approval by the Regional Water Board and the State Water Board's Division of Water Quality. The bioaccumulation study may include California mussels (*Mytilus californianus*) and/or sand crabs (*Emerita analoga* or *Blepharipoda occidentalis*). Based on the study results, the Regional Water Board and the State Water Board's Division of Water Quality, may adjust the study design in subsequent permits, or add or modify additional test organisms (such as shore crabs or fish), or modify the study design appropriate for the area and best available sensitive measures of contaminant exposure.
  - e. Marine Debris: Representative quantitative observations for trash by type and source shall be performed along the coast of the ASBS within the influence of the discharger's outfalls. The design, including locations and frequency, of the marine debris observations is subject to approval by the Regional Water Board and State Water Board's Division of Water Quality.
  - f. The monitoring requirements of the Individual Monitoring Program in this section are minimum requirements. After a minimum of one (1) year of continuous water quality monitoring of the discharges and ocean receiving waters, the Executive Director of the State Water Board (statewide permits) or Executive Officer of the Regional Water Board (Regional Water Board permits) may require additional monitoring, or adjust, reduce or suspend receiving water and reference station monitoring. This determination may be made at any point after the discharge and receiving water is fully characterized, but is best made after the monitoring results from the first permit cycle are assessed.
2. Regional Integrated Monitoring Program: Dischargers may elect to participate in a regional integrated monitoring program, in lieu of an individual monitoring program, to fulfill the requirements for monitoring the physical, chemical, and biological characteristics of the ocean receiving waters within their ASBS. This regional approach shall characterize natural water quality, pre- and post-storm, in ocean reference areas near the mouths of identified open space watersheds and the effects of the discharges on natural water quality (physical, chemical, and toxicity) in the ASBS receiving waters, and should include benthic marine aquatic life and bioaccumulation components. The design of the ASBS stratum of a regional integrated monitoring program may deviate from the otherwise prescribed individual monitoring approach (in Section IV.B.1) if approved by the State Water Board's Division of Water Quality and the Regional Water Boards.
    - a. Ocean reference areas shall be located at the drainages of flowing watersheds with minimal development (in no instance more than 10% development), and shall not be located in CWA Section 303(d) listed waterbodies or have tributaries that are 303(d) listed. Reference areas shall be free of wastewater discharges and anthropogenic non- storm water runoff. A minimum of low threat storm runoff discharges (e.g. stream highway overpasses and campgrounds) may be allowed on a case-by-case basis. Reference areas shall be located in the same region as the ASBS receiving water monitoring occurs. The reference areas for each Region are subject to approval by the participants in the regional monitoring program and the State Water

Board's Division of Water Quality and the applicable Regional Water Board(s). A minimum of three ocean reference water samples must be collected from each station, each from a separate storm during the same storm season that receiving water is sampled. A minimum of one reference location shall be sampled for each ASBS receiving water site sampled per responsible party. For parties discharging to ASBS in more than one Regional Water Board region, at a minimum, one reference station and one receiving water station shall be sampled in each region.

- b. ASBS ocean receiving water must be sampled in the surf zone at the location where the runoff makes contact with ocean water (i.e. at "point zero"). Ocean receiving water stations must be representative of worst-case discharge conditions (i.e. co-located at a large drain greater than 36 inches, or if drains greater than 36 inches are not present in the ASBS then the largest drain greater than 18 inches.) Ocean receiving water stations are subject to approval by the participants in the regional monitoring program and the State Water Board's Division of Water Quality and the applicable Regional Water Board(s). A minimum of three ocean receiving water samples must be collected during each storm season from each station, each from a separate storm. A minimum of one receiving water location shall be sampled in each ASBS per responsible party in that ASBS. For parties discharging to ASBS in more than one Regional Water Board region, at a minimum, one reference station and one receiving water station shall be sampled in each region.
  - c. Reference and receiving water sampling shall commence during the first full storm season following the adoption of these special conditions, and post-storm samples shall be collected during the same storm event when storm water runoff is sampled. Sampling shall occur in a minimum of two storm seasons. For those ASBS dischargers that have already participated in the Southern California Bight 2008 ASBS regional monitoring effort, sampling may be limited to only one storm season.
  - d. Receiving water and reference samples shall be analyzed for the same constituents as storm water runoff samples. At a minimum, constituents to be sampled and analyzed in reference and discharge receiving waters must include oil and grease, total suspended solids, Ocean Plan Table B metals for protection of marine life, Ocean Plan PAHs, pyrethroids, OP pesticides, ammonia, nitrate, phosphates, and critical life stage chronic toxicity for three species. In addition, within the range of the southern sea otter, indicator bacteria or some other measure of fecal contamination shall be analyzed.
3. Waterfront and Marine Operations: In addition to the above requirements for ocean receiving water monitoring, additional monitoring must be performed for marinas and boat launch and pier facilities:
- a. For all marina or mooring field operators, in mooring fields with 10 or more occupied moorings, the ocean receiving water must be sampled for Ocean Plan indicator bacteria, residual chlorine, copper, zinc, grease and oil, methylene blue active substances (MBAS), and ammonia nitrogen.
    - (1) For mooring field operators opting for an individual monitoring program (Section IV.B.1 above), this sampling must occur weekly (on the weekend) from May through October.

- (2) For mooring field operators opting to participate in a regional integrated monitoring program (Section IV.B.2 above), this sampling must occur monthly from May through October on a high use weekend in each month. The Water Boards may allow a reduction in the frequency of sampling, through the regional monitoring program, after the first year of monitoring.
- b. For all mooring field operators, the subtidal sediment (sand or finer, if present) within mooring fields and below piers shall be sampled and analyzed for Ocean Plan Table B metals (for marine aquatic life beneficial use), acute toxicity, PAHs, and tributyltin. For sediment toxicity testing, only an acute toxicity test using the amphipod *Eohaustorius estuarius* must be performed. This sampling shall occur at least three times during a five (5) year period. For mooring field operators opting to participate in a regional integrated monitoring program, the Water Boards may allow a reduction in the frequency of sampling after the first sampling effort's results are assessed.

## Glossary

At the point of discharge(s) – Means in the surf zone immediately where runoff from an outfall meets the ocean water (a.k.a., at point zero).

Areas of Special Biological Significance (ASBS) – Those areas designated by the State Water Board as ocean areas requiring protection of species or biological communities to the extent that alteration of natural water quality is undesirable. All Areas of Special Biological Significance are also classified as a subset of State Water Quality Protection Areas.

Design storm – For purposes of these Special Protections, a design storm is defined as the volume of runoff produced from one inch of precipitation per day or, if this definition is inconsistent with the discharger's applicable storm water permit, then the design storm shall be the definition included in the discharger's applicable storm water permit.

Development – Relevant to reference monitoring sites, means urban, industrial, agricultural, grazing, mining, and timber harvesting land uses.

Higher threat discharges - Permitted storm drains discharging equal to or greater than 18 inches, industrial storm drains, agricultural runoff discharged through an MS4, discharges associated with waterfront and marina operations (e.g., piers, launch ramps, mooring fields, and associated vessel support activities, except for passive discharges defined below), and direct discharges associated with commercial or industrial activities to ASBS.

Low Impact Development (LID) – A sustainable practice that benefits water supply and contributes to water quality protection. Unlike traditional storm water management, which entails collecting and conveying storm water runoff through storm drains, pipes, or other conveyances to a centralized storm water facility, LID focuses on using site design and storm water management to maintain the site's pre-development runoff rates and volumes. The goal of LID is to mimic a site's predevelopment hydrology by using design techniques that infiltrate, filter, store, evaporate, and detain runoff close to the source of rainfall.

Marine Operations – Marinas or mooring fields that contain slips or mooring locations for 10 or more vessels.

Management Measure (MM) - Economically achievable measures for the control of the addition of pollutants from various classes of nonpoint sources of pollution, which reflect the greatest degree of pollutant reduction achievable through the application of the best available nonpoint pollution control practices, technologies, processes, siting criteria, operating methods, or other alternatives. For example, in the "marinas and recreational boating" land- use category specified in the Plan for California's Nonpoint Source Pollution Control Program (NPS Program Plan) (SWRCB, 1999), "boat cleaning and maintenance" is considered a MM or the source of a specific class or type of NPS pollution.

Management Practice (MP) - The practices (e.g., structural, non-structural, operational, or other alternatives) that can be used either individually or in combination to address a specific MM class or classes of NPS pollution. For example, for the “boat cleaning and maintenance” MM, specific MPs can include, but are not limited to, methods for the selection of environmentally sensitive hull paints or methods for cleaning/removal of hull copper anti-fouling paints.

Municipal Separate Storm Sewer System (MS4) – A municipally-owned storm sewer system regulated under the Phase I or Phase II storm water program implemented in compliance with Clean Water Act section 402(p). Note that an MS4 program’s boundaries are not necessarily congruent with the permittee’s political boundaries.

Natural Ocean Water Quality - The water quality (based on selected physical, chemical and biological characteristics) that is required to sustain marine ecosystems, and which is without apparent human influence, *i.e.*, an absence of significant amounts of: (a) man-made constituents (e.g., DDT); (b) other chemical (e.g., trace metals), physical (temperature/thermal pollution, sediment burial), and biological (e.g., bacteria) constituents at concentrations that have been elevated due to man’s activities above those resulting from the naturally occurring processes that affect the area in question; and (c) non-indigenous biota (e.g., invasive algal bloom species) that have been introduced either deliberately or accidentally by man. Discharges “*shall not alter natural ocean water quality*” as determined by a comparison to the range of constituent concentrations in reference areas agreed upon via the regional monitoring program(s). If monitoring information indicates that *natural ocean water quality* is not maintained, but there is sufficient evidence that a discharge is not contributing to the alteration of natural water quality, then the Regional Water Board may make that determination. In this case, sufficient information must include runoff sample data that has equal or lower concentrations for the range of constituents at the applicable reference area(s).

Nonpoint source – Nonpoint pollution sources generally are sources that do not meet the definition of a point source. Nonpoint source pollution typically results from land runoff, precipitation, atmospheric deposition, agricultural drainage, marine/boating operations or hydrologic modification. Nonpoint sources, for purposes of these Special Protections, include discharges that are not required to be regulated under an NPDES permit.

Non-storm water discharge – Any runoff that is not the result of a precipitation event. This is often referred to as “dry weather flow.”

Non-structural control – A Best Management Practice that involves operational, maintenance, regulatory (e.g., ordinances) or educational activities designed to reduce or eliminate pollutants in runoff, and that are not structural controls (*i.e.* there are no physical structures involved).

Physical impossibility - Means any act of God, war, fire, earthquake, windstorm, flood or natural catastrophe; unexpected and unintended accidents not caused by discharger or its employees’ negligence; civil disturbance, vandalism, sabotage or terrorism; restraint by court order or public authority or agency; or action or non-action by, or inability to

obtain the necessary authorizations or approvals from any governmental agency other than the permittee.

Representative sites and monitoring procedures – Are to be proposed by the discharger, with appropriate rationale, and subject to approval by Water Board staff.

Sheet-flow – Runoff that flows across land surfaces at a shallow depth relative to the cross-sectional width of the flow. These types of flow may or may not enter a storm drain system before discharge to receiving waters.

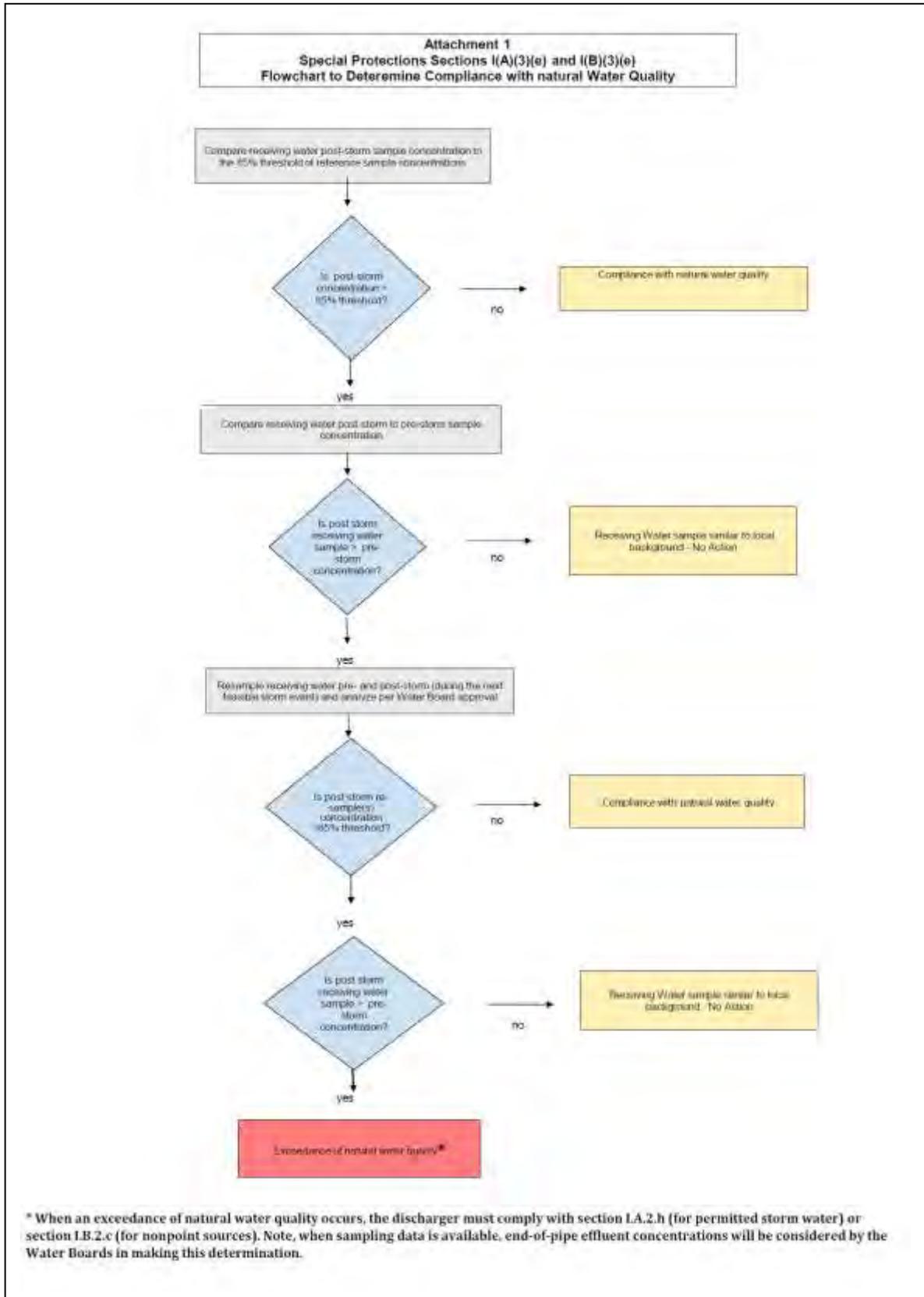
Storm Season – Also referred to as rainy season, means the months of the year from the onset of rainfall during autumn until the cessation of rainfall in the spring.

Structural control – A Best Management Practice that involves the installation of engineering solutions to the physical treatment or infiltration of runoff.

Surf Zone - The surf zone is defined as the submerged area between the breaking waves and the shoreline at any one time.

Surface Water Ambient Monitoring Program (SWAMP) comparable – Means that the monitoring program must 1) meet or exceed 2008 SWAMP Quality Assurance Program Management Plan (QAPP) Measurement Quality Objectives, or 2) have a Quality Assurance Project Plan that has been approved by SWAMP; in addition data must be formatted to match the database requirements of the SWAMP Information Management System. Adherence to the measurement quality objectives in the Southern California Bight 2008 ASBS Regional Monitoring Program QAPP and data base management comprises being SWAMP comparable.

Waterfront Operations - Piers, launch ramps, and cleaning stations in the water or on the adjacent shoreline.



## ATTACHMENT B

### STANDARD PERMIT PROVISIONS AND GENERAL PROVISIONS

#### 1. Standard Permit Provisions

Code of Federal Regulations Title 40 Section 122.41 (40 CFR 122.41) includes conditions, or provisions, that apply to all National Pollutant Discharge Elimination System (NPDES) permits. Additional provisions applicable to NPDES permits are in 40 CFR 122.42. All applicable provisions in 40 CFR 122.41 and 40 CFR 122.42 must be incorporated into this Order and NPDES permit. The applicable 40 CFR 122.41 and 40 CFR 122.42 provisions are as follows:

**a. DUTY TO COMPLY** [40 CFR 122.41(a)]

The Copermittee must comply with all of the provisions of this permit. Any permit noncompliance constitutes a violation of the Clean Water Act (CWA) and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application.

- (1) The Copermittee must comply with effluent standards or prohibitions established under Section 307(a) of the CWA for toxic pollutants and with standards for sewage sludge use or disposal established under Section 405(d) of the CWA within the time provided in the regulations that establish these standards or prohibitions or standards for sewage sludge use or disposal, even if the permit has not yet been modified to incorporate the requirement. [40 CFR 122.41(a)(1)]
- (2) The CWA provides that any person who violates Section 301, 302, 306, 307, 308, 318 or 405 of the CWA, or any permit condition or limitation implementing any such sections in a permit issued under Section 402, or any requirement imposed in a pretreatment program approved under Section 402(a)(3) or 402(b)(8) of the CWA, is subject to a civil penalty not to exceed \$25,000 per day for each violation. The CWA provides that any person who *negligently* violates Section 301, 302, 306, 307, 308, 318, or 405 of the CWA, or any condition or limitation implementing any of such sections in a permit issued under Section 402 of the CWA, or any requirement imposed in a pretreatment program approved under Section 402(a)(3) or 402(b)(8) of the CWA, is subject to criminal penalties of \$2,500 to \$25,000 per day of violation, or imprisonment of not more than 1 year, or both. In the case of a second or subsequent conviction for a negligent violation, a person shall be subject to criminal penalties of not more than \$50,000 per day of violation, or by imprisonment of not more than 2 years, or both. Any person who *knowingly* violates such sections, or such conditions or limitations is subject to criminal penalties of \$5,000 to \$50,000 per day of violation, or imprisonment for not more than 3 years, or both. In the case of a second or subsequent conviction for a knowing violation, a person shall be subject to criminal penalties of not more than \$100,000 per day of violation, or imprisonment of not more than 6 years, or both. Any person who knowingly violates Section 301, 302, 303, 306, 307, 308, 318 or 405 of the CWA, or any permit condition or limitation implementing any of such sections in a permit issued under Section 402 of the CWA, and who knows at that time that he thereby places another person in imminent

danger of death or serious bodily injury, shall, upon conviction, be subject to a fine of not more than \$250,000 or imprisonment of not more than 15 years, or both. In the case of a second or subsequent conviction for a knowing endangerment violation, a person shall be subject to a fine of not more than \$500,000 or by imprisonment of not more than 30 years, or both. An organization, as defined in Section 309(c)(3)(B)(iii) of the CWA, shall, upon conviction of violating the imminent danger provision, be subject to a fine of not more than \$1,000,000 and can be fined up to \$2,000,000 for second or subsequent convictions.

[40 CFR 122.41(a)(2)]

- (3) Any person may be assessed an administrative penalty by the San Diego Regional Water Quality Control Board (San Diego Water Board), State Water Resources Control Board (State Water Board), or United States Environmental Protection Agency (USEPA) for violating Section 301, 302, 306, 307, 308, 318 or 405 of the CWA, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of this Act. Administrative penalties for Class I violations are not to exceed \$10,000 per violation, with the maximum amount of any Class I penalty assessed not to exceed \$25,000. Penalties for Class II violations are not to exceed \$10,000 per day for each day during which the violation continues, with the maximum amount of any Class II penalty not to exceed \$125,000.

[40 CFR 122.41(a)(3)]

**b. DUTY TO REAPPLY** [40 CFR 122.41(b)]

If a Copermittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the Copermittee must apply for and obtain a new permit.

**c. NEED TO HALT OR REDUCE ACTIVITY NOT A DEFENSE** [40 CFR 122.41(c)]

It shall not be a defense for a Copermittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

**d. DUTY TO MITIGATE** [40 CFR 122.41(d)]

The Copermittee must take all reasonable steps to minimize or prevent any discharge or prevent any discharge or sludge use or disposal in violation of this permit that has a reasonable likelihood of adversely affecting human health or the environment.

**e. PROPER OPERATION AND MAINTENANCE** [40 CFR 122.41(e)]

The Copermittee must at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Copermittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems that are installed by a Copermittee only when the operation is necessary to achieve compliance with the conditions of this permit.

**f. PERMIT ACTIONS** [40 CFR 122.41(f)]

This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the Copermittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

**g. PROPERTY RIGHTS** [40 CFR 122.41(g)]

This permit does not convey any property rights of any sort, or any exclusive privilege.

**h. DUTY TO PROVIDE INFORMATION** [40 CFR 122.41(h)]

The Copermittee must furnish to the San Diego Water Board, State Water Board, or USEPA within a reasonable time, any information which the San Diego Water Board, State Water Board, or USPEA may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The Copermittee must also furnish to the San Diego Water Board, State Water Board, or USPEA upon request, copies of records required to be kept by this permit.

**i. INSPECTION AND ENTRY** [40 CFR 122.41(i)]

The Copermittee must allow the San Diego Water Board, State Water Board, USEPA, and/or their authorized representative (including an authorized contractor acting as their representative), upon presentation of credentials and other documents as may be required by law, to:

- (1) Enter upon the Copermittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit; [40 CFR 122.41(i)(1)]
- (2) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit; [40 CFR 122.41(i)(2)]
- (3) Inspect and photograph at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; [40 CFR 122.41(i)(3)] and
- (4) Sample or monitor at reasonable times, for the purpose of assuring permit compliance or as otherwise authorized by the CWA, any substances or parameters at any location. [40 CFR 122.41(i)(4)]

**j. MONITORING AND RECORDS** [40 CFR 122.41(j)]

- (1) Samples and measurements taken for the purpose of monitoring must be representative of the monitored activity. [40 CFR 122.41(j)(1)]
- (2) Except for records of monitoring information required by this permit related to the Copermittee's sewage sludge use and disposal activities, which shall be retained for

a period of at least five (5) years (or longer as required by 40 CFR Part 503), the Copermittee must retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least three (3) years from the date of the sample, measurement, report or application. This period may be extended by request of the San Diego Water Board at any time. [40 CFR 122.41(j)(2)]

(3) Records for monitoring information must include: [40 CFR 122.41(j)(3)]

- (a) The date, exact place, and time of sampling or measurements; [40 CFR 122.41(j)(3)(i)]
- (b) The individual(s) who performed the sampling or measurements; [40 CFR 122.41(j)(3)(ii)]
- (c) The date(s) analyses were performed; [40 CFR 122.41(j)(3)(iii)]
- (d) The individual(s) who performed the analyses; [40 CFR 122.41(j)(3)(iv)]
- (e) The analytical techniques or methods used; [40 CFR 122.41(j)(3)(v)] and
- (f) The results of such analyses. [40 CFR 122.41(j)(3)(vi)]

(4) Monitoring must be conducted according to test procedures under 40 CFR Part 136 unless another method is required under 40 CFR Subchapters N or O. [40 CFR 122.41(j)(4)]

In the case of pollutants for which there are no approved methods under 40 CFR Part 136 or otherwise required under 40 CFR Subchapters N and O, monitoring must be conducted according to a test procedure specified in the permit for such pollutants. [40 CFR 122.44(i)(1)(iv)]

(5) 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 permit shall, upon conviction, be punished by a fine of not more than \$10,000, or by imprisonment for not more than 2 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 4 years, or both. [40 CFR 122.41(j)(5)]

**k. SIGNATORY REQUIREMENT** [40 CFR 122.41(k)]

(1) All applications, reports, or information submitted to the San Diego Water Board, State Water Board, or USEPA must be signed and certified. (See 40 CFR 122.22) [40 CFR 122.41(k)(1)]

- (a) *For a municipality, State, Federal, or other public agency.* [All applications must be signed] by either a principal executive officer or ranking elected official. [40 CFR 122.22(a)(3)]
- (b) All reports required by permits, and other information requested by the San Diego Water Board, State Water Board, or USEPA must be signed by a person described in paragraph (a) of this section, or by a duly authorized

representative of that person. A person is a duly authorized representative only if: [40 CFR 122.22(b)]

- (i) The authorization is made in writing by a person described in paragraph (a) of this section; [40 CFR 122.22(b)(1)]
- (ii) The authorization specifies 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.) [40 CFR 122.22(b)(2)] and,
- (iii) The written authorization is submitted to the San Diego Water Board and State Water Board. [40 CFR 122.22(b)(3)]

(c) *Changes to authorization.* If an authorization under paragraph (b) of this section is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of paragraph (b) of this section must be submitted to the San Diego Water Board prior to or together with any reports, information, or applications to be signed by an authorized representative. [40 CFR 122.22(c)]

(d) *Certification.* Any person signing a document under paragraph (a) or (b) of this section shall 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." [40 CFR 122.22(d)]

(2) The CWA 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 6 months per violation, or by both. [40 CFR 122.41(k)(2)]

#### **I. REPORTING REQUIREMENTS** [40 CFR 122.41(l)]

(1) *Planned changes.* The Copermittee must give notice to the San Diego Water Board as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when: [40 CFR 122.41(l)(1)]

- (a) The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 CFR 122.29(b); [40 CFR 122.41(l)(1)(i)] or

- (b) The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, nor to notification requirements under 40 CFR 122.42(a)(1).  
[40 CFR 122.41(l)(1)(ii)]
  - (c) The alteration or addition results in a significant change in the Copermitttee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan. [40 CFR 122.41(l)(1)(iii)]
- (2) *Anticipated noncompliance.* The Copermitttee must give advance notice to the San Diego Water Board or State Water Board of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.  
[40 CFR 122.41(l)(2)]
- (3) *Transfers.* This permit is not transferable to any person except after notice to the San Diego Water Board. The San Diego Water Board may require modification or revocation and reissuance of the permit to change the name of the Copermitttee and incorporate such other requirements as may be necessary under the CWA.  
[40 CFR 122.41(l)(3)]
- (4) *Monitoring reports.* Monitoring results must be reported at the intervals specified elsewhere in this permit. [40 CFR 122.41(l)(4)]
- (a) Monitoring results must be reported on a Discharge Monitoring Report (DMR) form or forms provided or specified by the San Diego Water Board or State Water Board for reporting results of monitoring of sludge use or disposal practices. [40 CFR 122.41(l)(4)(i)]
  - (b) If the Copermitttee monitors any pollutant more frequently than required by the permit using test procedures approved under 40 CFR Part 136 or another method required for an industry-specific waste stream under 40 CFR Subchapters N or O, the results of this monitoring must be included in the calculation and reporting of the data submitted in the DMR or sludge reporting form specified by the San Diego Water Board or State Water Board.  
[40 CFR 122.41(l)(4)(ii)]
  - (c) Calculations for all limitations which require averaging of measurements must utilize an arithmetic mean unless otherwise specified in the permit.  
[40 CFR 122.41(l)(4)(iii)]
- (5) *Compliance schedules.* Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit must be submitted no later than 14 days following each schedule date. [40 CFR 122.41(l)(5)]

(6) *Twenty-four hour reporting.*

- (a) The Copermittee must report any noncompliance that may endanger health or the environment. Any information must be provided orally within 24 hours from the time the Copermittee becomes aware of the circumstances. A written submission must also be provided within five (5) days of the time the Copermittee becomes aware of the circumstances. The written submission must contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance. [40 CFR 122.41(l)(6)(i)]
- (b) The following must be included as information which must be reported within 24 hours under this paragraph: [40 CFR 122.41(l)(6)(ii)]
  - (i) Any unanticipated bypass that exceeds any effluent limitation in the permit (See 40 CFR 122.41(g)). [40 CFR 122.41(l)(6)(ii)(A)]
  - (ii) Any upset which exceeds any effluent limitation in the permit. [40 CFR 122.41(l)(6)(ii)(B)] and,
  - (iii) Violation of a maximum daily discharge limitation for any of the pollutants listed by the San Diego Water Board in the permit to be reported within 24 hours. (See 40 CFR 122.44(g)) [40 CFR 122.41(l)(6)(ii)(C)]
- (c) The San Diego Water Board may waive the above-required written report on a case-by-case basis if the oral report has been received within 24 hours. [40 CFR 122.41(l)(6)(iii)]

(7) *Other noncompliance.* The Copermittee must report all instances of noncompliance not reported in accordance with the standard provisions required under 40 CFR 122.41(l)(4), (5), and (6), at the time monitoring reports are submitted. The reports must contain the information listed in the standard provisions required under 40 CFR 122.41(l)(6). [40 CFR 122.41(l)(7)]

(8) *Other information.* When the Copermittee becomes 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 San Diego Water Board, State Water Board, or USEPA, the Copermittee must promptly submit such facts or information. [40 CFR 122.41(l)(8)]

**m. BYPASS** [40 CFR 122.41(m)]

(1) *Definitions.*

- (a) "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility. [40 CFR 122.41(m)(1)(i)] or
- (b) "Severe property damage" means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or

substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

[40 CFR 122.41(m)(1)(ii)]

- (2) *Bypass not exceeding limitations.* The Copermittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the standard provisions required under 40 CFR 122.41(m)(3) and (4).

[40 CFR 122.41(m)(2)]

- (3) *Notice.*

- (a) *Anticipated bypass.* If the Copermittee knows in advance of the need for a bypass, it must submit a notice, if possible at least ten days before the date of the bypass. [40 CFR 122.41(m)(3)(i)] or

- (b) *Unanticipated bypass.* The Copermittee must submit notice of an unanticipated bypass in accordance with the standard provisions required under 40 CFR 122.41(l)(6) (24-hour notice).

[40 CFR 122.41(m)(3)(ii)]

- (4) *Prohibition of Bypass.*

- (a) Bypass is prohibited, and the San Diego Water Board may take enforcement action against a Copermittee for bypass, unless:

[40 CFR 122.41(m)(4)(i)]

- (i) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage; [40 CFR 122.41(m)(4)(i)(A)]

- (ii) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance;

[40 CFR 122.41(m)(4)(i)(B)] and,

- (iii) The Copermittee submitted notice in accordance with the standard provisions required under 40 CFR 122.41(m)(3).

[40 CFR 122.41(m)(4)(i)(C)]

- (b) The San Diego Water Board may approve an anticipated bypass, after considering its adverse effects, if the San Diego Water Board determines that it will meet the three conditions listed above.

[40 CFR 122.41(m)(4)(ii)]

**n. UPSET** [40 CFR 122.41(n)]

- (1) *Definition.* "Upset" means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because

of factors beyond the reasonable control of the Copermittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation. [40 CFR 122.41(n)(1)]

- (2) *Effect of an upset.* An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the standard provisions required under 40 CFR 122.41(n)(3) are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review. [40 CFR 122.41(n)(2)]
- (3) *Conditions necessary for a demonstration of upset.* A Copermittee who wishes to establish the affirmative defense of upset must demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:  
[40 CFR 122.41(n)(3)]
- (a) An upset occurred and that the Copermittee can identify the cause(s) of the upset; [40 CFR 122.41(n)(3)(i)]
  - (b) The permitted facility was at the time being properly operated;  
[40 CFR 122.41(n)(3)(ii)] and
  - (c) The Copermittee submitted notice of the upset in accordance with the standard provisions required under 40 CFR 122.41(l)(6)(ii)(B) (24-hour notice).  
[40 CFR 122.41(n)(3)(iii)]
  - (d) The Copermittee complied with any remedial measures pursuant to the standard provisions required under 40 CFR 122.41(d).  
[40 CFR 122.41(n)(3)(iii)]
- (4) *Burden of proof.* In any enforcement proceeding, the Copermittee seeking to establish the occurrence of an upset has the burden of proof.  
[40 CFR 122.41(n)(4)]

**o. STANDARD PERMIT PROVISIONS FOR MUNICIPAL SEPARATE STORM SEWER SYSTEMS**  
[40 CFR 122.42(c)]

The operator of a large or medium municipal separate storm sewer system or a municipal separate storm sewer that has been designated by the San Diego Water Board or State Water Board under 40 CFR 122.26(a)(1)(v) must submit an annual report by the anniversary of the date of the issuance of the permit for such system. The report must include:

- (1) The status of implementing the components of the storm water management program that are established as permit conditions; [40 CFR 122.42(c)(1)]
- (2) Proposed changes to the storm water management programs that are established as permit conditions. Such proposed changes must be consistent with 40 CFR 122.26(d)(2)(iii); [40 CFR 122.42(c)(2)] and
- (3) Revisions, if necessary, to the assessment of controls and the fiscal analysis reported in the permit application under 40 CFR 122.26(d)(2)(iv) and (v);  
[40 CFR 122.42(c)(3)]

- (4) A summary of data, including monitoring data, that is accumulated throughout the reporting year; [40 CFR 122.42(c)(4)]
- (5) Annual expenditures and budget for year following each annual report; [40 CFR 122.42(c)(5)]
- (6) A summary describing the number and nature of enforcement actions, inspections, and public education programs; [40 CFR 122.42(c)(6)]
- (7) Identification of water quality improvements or degradation. [40 CFR 122.42(c)(7)]

**p. STANDARD PERMIT PROVISIONS FOR STORM WATER DISCHARGES** [40 CFR 122.42(d)]

The initial permits for discharges composed entirely of storm water issued pursuant to 40 CFR 122.26(e)(7) must require compliance with the conditions of the permit as expeditiously as practicable, but in no event later than three years after the date of issuance of the permit.

## 2. General Provisions

In addition to the standard provisions required to be incorporated into the Order and NPDES permit pursuant to 40 CFR 122.41 and 40 CFR 122.42, several other general provisions apply to this Order. The general provisions applicable to this Order and NPDES permit are as follows:

**a. DISCHARGE OF WASTE IS A PRIVILEGE**

No discharge of waste into the waters of the State, whether or not such discharge is made pursuant to waste discharge requirements, shall create a vested right to continue such discharge. All discharges of waste into waters of the State are privileges, not rights. [CWC Section 13263(g)]

**b. DURATION OF ORDER AND NPDES PERMIT**

- (1) *Effective date.* This Order supersedes Order No. R9-2007-0001 for the San Diego County Copermittees listed in Table 1a and became effective on June 27, 2013. This Order as amended by Order R9-2015-0001 supersedes Order No. R9-2009-0002 for the Orange County Copermittees listed in Table 1b and its amendments through Order No. R9-2015-0001 became effective April 1, 2015. This Order as amended by Order Nos. R9-2015-0001 and R9-2015-0100 supersedes Order No. R9-2010-0016 for the Riverside County Copermittees listed in Table 1c and its amendments through Order No. R9-2015-0100 became effective January 7, 2016.
- (2) *Expiration.* This Order and NPDES permit expires five years after June 27, 2013, its initial effective date. [40 CFR 122.46(a)]
- (3) *Continuation of expired order.* After this Order and NPDES permit expires, the terms and conditions of this Order and NPDES permit are automatically continued pending issuance of a new permit if all requirements of the federal NPDES regulations on the continuation of expired permits (40 CFR 122.6) are complied with.

ATTACHMENT B: STANDARD PERMIT PROVISIONS AND GENERAL PROVISIONS

- 1. Standard Permit Provisions
- 2. General Provisions

**c. AVAILABILITY**

A copy of this Order must be kept at a readily accessible location and must be available to on-site personnel at all times.

**d. CONFIDENTIALITY OF INFORMATION**

Except as provided for in 40 CFR 122.7, no information or documents submitted in accordance with or in application for this Order will be considered confidential, and all such information and documents shall be available for review by the public at the San Diego Water Board office.

Claims of confidentiality for the following information will be denied:  
[40 CFR 122.7(b)]

- (1) The name and address of any permit applicant or Copermittee;  
[40 CFR 122.7(b)(1)] and
- (2) Permit applications and attachments, permits, and effluent data.  
[40 CFR 122.7(b)(2)]

**e. EFFLUENT LIMITATIONS**

- (1) *Interim effluent limitations.* The Copermittee must comply with any interim effluent limitations as established by addendum, enforcement action, or revised waste discharge requirements which have been, or may be, adopted by the San Diego Water Board.
- (2) *Other effluent limitations and standards.* If any applicable toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is promulgated under Section 307(a) of the CWA for a toxic pollutant and that standard or prohibition is more stringent than any limitation on the pollutant in the permit, the San Diego Water Board shall institute proceedings under these regulations to modify or revoke and reissue the permit to conform to the toxic effluent standard or prohibition. [40 CFR 122.44(b)(1)]

**f. DUTY TO MINIMIZE OR CORRECT ADVERSE IMPACTS**

The Copermittee must take all reasonable steps to minimize or correct any adverse impact on the environment resulting from noncompliance with this Order, including such accelerated or additional monitoring as may be necessary to determine the nature and impact of the noncompliance.

**g. PERMIT ACTIONS**

The filing of a request by the Copermittee for modification, revocation and reissuance, or termination of this Order, or a notification of planned change in or anticipated noncompliance with this Order does not stay any condition of this Order. (See 40 CFR 122.41(f)) In addition, the following provisions apply to this Order:

- (1) Upon application by any affected person, or on its own motion, the San Diego Water Board may review and revise the requirements in this Order. All requirements must be reviewed periodically. [CWC Section 13263(e)]
- (2) This Order may be terminated or modified for cause, including, but not limited to, all of the following: [CWC Section 13381]
  - (a) Violation of any condition contained in the requirements of this Order. [CWC Section 13381(a)]
  - (b) Obtaining the requirements in this Order by misrepresentation, or failure to disclose fully all relevant facts. [CWC Section 13381(b)]
  - (c) A change in any condition that requires either a temporary or permanent reduction or elimination of the permitted discharge. [CWC Section 13381(c)]
- (3) When this Order is transferred to a new owner or operator, such requirements as may be necessary under the CWC may be incorporated into this Order.

#### **h. NPDES PERMITTED NON-STORM WATER DISCHARGES**

The San Diego Water Board has, in prior years, issued a limited number of individual NPDES permits for non-storm water discharges to MS4s. The San Diego Water Board or State Water Board may in the future, upon prior notice to the Copermittee(s), issue an NPDES permit for any non-storm water discharge (or class of non-storm water discharges) to an MS4.

#### **i. MONITORING**

In addition to the standard provisions required under 40 CFR 122.41(j) and (l)(4), the following general monitoring provisions apply to this Order:

- (1) Where procedures are not otherwise specified in Order, sampling, analysis and quality assurance/quality control must be conducted in accordance with the Quality Assurance Management Plan (QAMP) for the State of California's Surface Water Ambient Monitoring Program (SWAMP), adopted by the State Water Resources Control Board (State Water Board).
- (2) Pursuant to 40 CFR 122.41(j)(2) and CWC Section 13383(a), each Copermittee must retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least five (5) years from the date of the sample, measurement, report or application. This period may be extended by request of the San Diego Water Board at any time.
- (3) All chemical, bacteriological, and toxicity analyses must be conducted at a laboratory certified for such analyses by the California Department of Public Health or a laboratory approved by the San Diego Water Board.

- (4) For priority toxic pollutants that are identified in the California Toxics Rule (CTR) (65 Fed. Reg. 31682), the Copermittees must instruct their laboratories to establish calibration standards that are equivalent to or lower than 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). If a Copermittee can demonstrate that a particular ML is not attainable, in accordance with procedures set forth in 40 CFR Part 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 Copermittee must submit documentation from the laboratory to the San Diego Water Board for approval prior to raising the ML for any priority toxic pollutant.

**j. ENFORCEMENT**

- (1) The San Diego Water Board is authorized to enforce the terms of this Order under several provisions of the CWC, including, but not limited to, CWC Sections 13385, 13386, and 13387.
- (2) Nothing in this Order shall be construed to protect the Copermittee from its liabilities under federal, state, or local laws.
- (3) The CWC provides for civil and criminal penalties comparable to, and in some cases greater than, those provided for under the CWA.
- (4) Except as provided in the standard conditions required under 40 CFR 122.41(m) and (n), nothing in this Order shall be construed to relieve the Copermittee from civil or criminal penalties for noncompliance.
- (5) Nothing in this Order shall be construed to preclude the institution of any legal action or relieve the Copermittee from any responsibilities, liabilities, or penalties to which the Copermittee is or may be subject to under Section 311 of the CWA.
- (6) Nothing in this Order shall be construed to preclude institution of any legal action or relieve the Copermittee from any responsibilities, liabilities, or penalties established pursuant to any applicable state law or regulation under authoring preserved by Section 510 of the CWA.

**k. SEVERABILITY**

The provisions of this Order are severable, and if any provision of this Order, or the application of any provisions of this Order to any circumstance, is held invalid, the application of such provision to other circumstances and the remainder of this Order shall not be affected thereby.

**l. APPLICATIONS**

Any application submitted by a Copermittee for reissuance or modification of this Order must satisfy all applicable requirements specified in federal regulations as well as any additional requirements for submittal of a Report of Waste Discharge specified in the CWC and the California Code of Regulations.

**m. IMPLEMENTATION**

All plans, reports and subsequent amendments submitted in compliance with this Order must be implemented immediately (or as otherwise specified). All submittals by Copermittees must be adequate to implement the requirements of this Order.

**n. REPORT SUBMITTALS**

- (1) All report submittals must include an executive summary, introduction, conclusion, recommendations, and signed certified statement.
- (2) Each Copermittee must submit a signed certified statement covering its responsibilities for each applicable submittal.
- (3) The Principal Watershed Copermittee(s) must submit a signed certified statement covering its responsibilities for each applicable submittal and the sections of the submittals for which it is responsible.
- (4) Unless otherwise directed, the Copermittees must submit one electronic copy of each report required under this Order to the San Diego Water Board at [SanDiego@waterboards.ca.gov](mailto:SanDiego@waterboards.ca.gov).
- (5) When hard copies are requested or required, the Copermittees must submit reports and provide notifications as required by this Order to:

EXECUTIVE OFFICER  
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
SAN DIEGO REGION  
2375 NORTHSIDE DRIVE, SUITE 100  
SAN DIEGO CA 92108  
Telephone: (619) 516-1990 Fax: (619) 516-1994

## ATTACHMENT C

### ACRONYMS AND ABBREVIATIONS

AMAL	Average Monthly Action Level
ASBS	Area(s) of Special Biological Significance
BMP	Best Management Practice
Basin Plan	Water Quality Control Plan for the San Diego Basin
CEQA	California Environmental Quality Act
CCR	California Code of Regulations
CFR	Code of Federal Regulations
CWA	Clean Water Act
CWC	California Water Code
CZARA	Coastal Zone Act Reauthorization Amendments of 1990
ESAs	Environmentally Sensitive Areas
GIS	Geographic Information System
IBI	Index of Biological Integrity
LID	Low Impact Development
MDAL	Maximum Daily Action Level
MEP	Maximum Extent Practicable
MS4	Municipal Separate Storm Sewer System
NAL	Non-Storm Water Action Level
NAICS	North American Industry Classification System
NOI	Notice of Intent
NPDES	National Pollutant Discharge Elimination System
ROWD	Report of Waste Discharge (application for NPDES reissuance)
SAL	Storm Water Action Level
San Diego Water Board	California Regional Water Quality Control Board, San Diego Region
SIC	Standard Industrial Classification Code
State Water Board	State Water Resources Control Board
TMDL	Total Maximum Daily Load
USEPA	United States Environmental Protection Agency
WDID	Waste Discharge Identification Number
WLA	Waste Load Allocation
WQBEL	Water Quality Based Effluent Limitation

## DEFINITIONS

**Active/Passive Sediment Treatment** - Using mechanical, electrical or chemical means to flocculate or coagulate suspended sediment for removal from runoff from construction sites prior to discharge.

**Anthropogenic Litter** – Trash generated from human activities, not including sediment.

**Average Monthly Action Level** – The highest allowable average of daily discharges over a calendar month.

**Beneficial Uses** - The uses of water necessary for the survival or wellbeing of man, plants, and wildlife. These uses of water serve to promote tangible and intangible economic, social, and environmental goals. “Beneficial Uses” of the waters of the State 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 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 Management Practices (BMPs)** - 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.

**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. biotic integrity) of a water body.

**Biofiltration** - Practices that use vegetation and amended soils to detain and treat runoff from impervious areas. Treatment is through filtration, infiltration, adsorption, ion exchange, and biological uptake of pollutants.

**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 Design Manual** – A plan developed to eliminate, reduce, or mitigate the impacts of runoff from development projects, including Priority Development Projects.

**Chronic Toxicity** – A measurement of sublethal effect (e.g. reduced growth, reproduction) to experimental test organisms exposed to an effluent or receiving waters compared to that of the control organisms.

**Clean Water Act Section 303(d) Water Body** - 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 runoff to these water bodies by the Copermittees is significant because these discharges can cause or contribute to violations of applicable water quality standards.

**Construction Activities** – Actions implemented during construction of development or redevelopment projects during the Preliminary Task (including rough grading and/or disking, clearing and grubbing operations, or any soil disturbance prior to mass grading), Grading or Land Development (including topography and slope reconfiguration, alluvium removals, canyon cleanouts, rock undercuts, keyway excavations, land form grading, and stockpiling of select material for capping operations), Streets and Utility Installation (including excavation and street paving, lot grading, curbs, gutters and sidewalks, public utilities, public water facilities including fire hydrants, public sanitary sewer systems, storm sewer systems and/or other drainage improvements), or Vertical Construction (including the build out of structures from foundations to roofing, including rough landscaping).

**Construction Site** – Any project, including projects requiring coverage under the Construction General 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 State are affected.”

**Copermittee** – A permittee to a NPDES permit that is only responsible for permit conditions relating to the discharge for which it is operator [40 CFR 122.26(b)(1)]. For the purposes of this Order, a Copermittee is one of the individual permittees identified in Tables 1a-1c of this Order.

**Copermittees** – All of the individual Copermittees, collectively.

**Critical Channel Flow (Qc)** – The channel flow that produces the critical shear stress that initiates bed movement or that erodes the toe of channel banks. When measuring Qc, it should be based on the weakest boundary material – either bed or bank.

**Daily Discharge** – Defined as either: (1) the total mass of the constituent discharged over the calendar day or any 24 hour period that reasonably represents a calendar day for purposes of sampling (as specified in the permit), for a constituent with limitations expressed in units of mass or; (2) the unweighted arithmetic mean measurement of the constituent over the day for a constituent with limitations expressed in other units of measurement (e.g. concentration.)

The Daily Discharge may be determined by the analytical results of a composite sample taken over the course of one day (a calendar day, or other 24 hour period other than a day), or by the arithmetic mean of analytical results from one or more grab samples taken over the course of a day.

**Development Projects** - Construction, rehabilitation, redevelopment, or reconstruction of any public or private projects.

**Dry Season** – May 1 to September 30.

**Dry Weather** – Weather is considered dry if the preceding 72 hours has been without measurable precipitation (>0.1 inch).

**Enclosed Bays** – Enclosed bays are indentations along the coast that enclose an area of oceanic water within distinct headlands or harbor works. Enclosed bays include all bays where the narrowest distance between the headlands or outermost bay works is less than 75 percent of the greatest dimension of the enclosed portion of the bay. Enclosed bays do not include inland surface waters or ocean waters.

**Erosion** – When land is diminished or worn away due to 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.

**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 Board and San Diego Water Board; State Water Quality Protected Areas; water bodies designated with the RARE beneficial use by the State Water Board and San Diego Water Board; areas designated as preserves or their equivalent under the Natural Communities Conservation Program within the Cities and County of Orange; and any other equivalent environmentally sensitive areas which have been identified by the Copermitees.

**Estuaries** – Waters, including coastal lagoons, located at the mouth of streams that serve as areas of mixing fresh and ocean waters. Coastal lagoons and mouths of streams that are temporarily separated from the ocean by sandbars shall be considered estuaries. Estuarine waters shall be considered to extend from a bay or the open ocean to a point upstream where there is no significant mixing of fresh water and ocean water. Estuaries do not include inland surface waters or ocean waters.

**Existing Development** – Any area that has been developed and exists for municipal, commercial, industrial, or residential purposes, uses, or activities. May include areas that are not actively used for its originally developed purpose, but may be re-purposed or redeveloped for another use or activity.

**Flow Duration** – The long-term period of time that flows occur above a threshold that causes significant sediment transport and may cause excessive erosion damage to creeks and streams (not a single storm event duration). The simplest way to visualize this is to consider a histogram of pre- and post-project flows using long-term records of hourly data. To maintain pre-development flow duration means that the total number of hours (counts) within each range of flows in a flow-duration histogram cannot increase between the pre- and post-development condition. Flow duration within the range of geomorphologically significant flows is important for managing erosion.

**Grading** - The cutting and/or filling of the land surface to a desired slope or elevation.

**Groundwater** – Subsurface water that occurs beneath the water table in soils and geologic formations that are fully saturated.

**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 in 40 CFR 116 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** - Hazardous waste is 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, Article 1].

**Household Hazardous Waste** – Paints, cleaning products, and other hazardous wastes generated during home improvement or maintenance activities.

**Hydromodification** – The change in the natural watershed hydrologic processes and runoff characteristics (i.e., interception, infiltration, overland flow, and groundwater flow) caused by urbanization or other land use changes that result in increased stream flows and sediment transport. In addition, alteration of stream and river channels, such as stream channelization, concrete lining, installation of dams and water impoundments, and excessive streambank and shoreline erosion are also considered hydromodification, due to their disruption of natural watershed hydrologic processes.

**Illicit Connection** – Any man-made conveyance or drainage system through which a non-storm water discharge to the storm water drainage system occurs or may occur. Any connection to the MS4 that conveys an illicit discharge.

**Illicit Discharge** - Any discharge to the MS4 that is not composed entirely of storm water except discharges pursuant to a NPDES permit and discharges resulting from firefighting activities [40 CFR 122.26(b)(2)].

**Inactive Areas** – Areas of construction activity that are not active and those that have been active and are not scheduled to be re-disturbed for at least 14 days.

**Infiltration** – In the context of low impact development, infiltration is defined as the percolation of water into the ground. Infiltration is often expressed as a rate (inches per hour), which is determined through an infiltration test. In the context of non-storm water, infiltration is water other than wastewater that enters a sewer system (including sewer service connections and foundation drains) from the ground through such means as defective pipes, pipe joints, connections, or manholes. Infiltration does not include, and is distinguished from, inflow [40 CFR 35.2005(20)].

**Inland Surface Waters** – Includes all surface waters of the State that do not include the ocean, enclosed bays, or estuaries.

**Jurisdictional Runoff Management Program Document** – A written description of the specific jurisdictional runoff management measures and programs that each Copermittee will implement to comply with this Order and ensure that storm water pollutant discharges in runoff are reduced to the MEP and do not cause or contribute to a violation of water quality standards.

**Low Impact Development (LID)** – A storm water management and land development strategy that emphasizes conservation and the use of on-site natural features integrated with engineered, small-scale hydrologic controls to more closely reflect pre-development hydrologic functions.

**Low Impact Development Best Management Practices (LID BMPs)** – LID BMPs include schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the United States through storm water management and land development strategies that emphasize conservation and the use of on-site natural features integrated with engineered, small-scale hydrologic controls to more closely reflect pre-development hydrologic functions. LID BMPs include retention practices that do not allow runoff, such as infiltration, rain water harvesting and reuse, and evapotranspiration. LID BMPs also include flow-through practices such as biofiltration that may have some discharge of storm water following pollutant reduction.

**Major Outfall** – As defined in the Code of Federal Regulations, a major outfall is a MS4 outfall that discharges from a single pipe with an inside diameter of 36 inches or more or its equivalent (i.e. discharge from a single conveyance other than a circular pipe which is associated with a drainage area of more than 50 acres); or, for MS4s that receive storm water from lands zoned for industrial activity (based on comprehensive zoning plans or equivalent), a MS4 outfall that discharges from a single pipe with an inside diameter of 12 inches or more or from its equivalent (i.e. discharge from other than a circular pipe associated with a drainage area of 2 acres or more).

**Maximum Daily Action Level (MDAL)** –The highest allowable daily discharge of a pollutant, over a calendar day (or 24 hour period). For pollutants with action levels expressed in units of mass, the daily discharge is calculated as the total mass of the pollutant discharged over the day. For pollutants with action levels expressed in other units of measurement, the daily discharge is calculated as the arithmetic mean measurement of the pollutant over the day.

**Maximum Extent Practicable (MEP)** – The technology-based standard established by Congress in CWA section 402(p)(3)(B)(iii) for storm water 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 runoff management programs. Their total collective and individual activities conducted pursuant to the 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 San Diego Water Board, the San Diego Water 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 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 based 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.”*

**Monitoring Year** – October 1 to September 30

**Municipal Separate Storm Sewer System (MS4)** – A conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains): (i) Owned or operated by a State, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State law) 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 or 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 122.26.

**National Pollutant Discharge Elimination System (NPDES)** - The national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits, and imposing and enforcing pretreatment requirements, under Sections 307, 318, 402, and 405 of the CWA.

**Non-Storm Water** - All discharges to and from a MS4 that do not originate from precipitation events (i.e., all discharges from a MS4 other than storm water). Non-storm water includes illicit discharges and NPDES permitted discharges.

**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.”

**Ocean Waters** – The territorial marine waters of the State as defined by California law to the extent these waters are outside of enclosed bays, estuaries, and coastal lagoons. Discharges to ocean waters are regulated in accordance with the State Board’s California Ocean Plan.

**Order** – Unless otherwise specified, refers to this Order, Order No. R9-2013-0001 (NPDES No. CAS0109266)

**Outfall** - Outfall means a point source as defined by 40 CFR 122.2 at the point where a municipal separate storm sewer discharges to waters of the US 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 US and are used to convey waters of the US.

**Persistent Flow** - Persistent flow is defined as the presence of flowing, pooled, or ponded water more than 72 hours after a measureable rainfall event of 0.1 inch or greater during three consecutive monitoring and/or inspection events. All other flowing, pooled, or ponded water is considered transient.

**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. 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.

**Pollution** - As defined in the Porter-Cologne Water Quality Control Act, pollution is “the alteration of the quality of the waters of the State by waste, to a degree which 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 BMPs, treatment control BMPs, or disposal.

**Pre-Development Runoff Conditions** – Approximate flow rates and durations that exist or existed onsite before land development occurs. For new development projects, this equates to runoff conditions immediately before project construction. For redevelopment projects, this equates to runoff conditions from the project footprint assuming infiltration characteristics of the underlying soil, and existing grade. Runoff coefficients of concrete or asphalt must not be used. A redevelopment Priority Development Project must use available information pertaining to existing underlying soil type and onsite existing grade to estimate pre-development runoff conditions.

**Priority Development Projects** - New development and redevelopment projects defined under Provision E.3.b of Order No. R9-2013-0001, as amended by Order Nos. R9-2015-0001 and R9-2015-0100.

**Rainy Season (aka Wet Season)** –October 1 to April 30

**Receiving Waters** – Waters of the United States.

**Receiving Water Limitations** - Waste discharge requirements issued by the San Diego Water Board 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 requirements of CWA section 402(p)(3)(B).

**Redevelopment** - The creation 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. Replacement of impervious surfaces includes any activity where impervious material(s) are removed, exposing underlying soil during construction. Redevelopment does not include routine maintenance activities, such as trenching and resurfacing associated with utility work; pavement grinding; resurfacing existing roadways, sidewalks, pedestrian ramps, or bike lanes on existing roads; and routine replacement of damaged pavement, such as pothole repair.

**Regional Clearinghouse** – A central location for the collection and distribution of information developed and maintained by the Copermittees including, but not limited to, plans, reports, manuals, data, contact information, and/or links to such documents and information.

**Rehabilitation** - Remedial measures or activities for the purpose of improving or restoring the beneficial uses of streams, channels or river systems. Techniques may vary from in-stream restoration techniques to off-line storm water management practices installed in the system corridor or upland areas, or a combination of in-stream and out of stream techniques. Rehabilitation techniques may include, but are not limited to the following: riparian zone restoration, constructed wetlands, channel modifications that improve habitat and stability, and daylighting of drainage systems.

**Reporting Period** – The period of information that is reported in the Water Quality Improvement Plan Annual Report. The reporting period consists of two components: 1) July 1 to June 30, consistent with the fiscal year, for the implementation of the jurisdictional runoff management programs, and 2) October 1 to September 30, consistent with the monitoring year for the monitoring and assessment programs. Together, these two time periods constitute the reporting year for the Water Quality Improvement Plan Annual Report due January 31 following the end of the monitoring year.

**Retain** – Keep or hold in a particular place, condition, or position without discharge to surface waters.

**Retrofitting** – Storm water management practice put into place after development has occurred in watersheds where the practices previously did not exist or are ineffective. Retrofitting of developed areas is intended to improve water quality, protect downstream channels, reduce flooding, or meet other specific objectives. Retrofitting developed areas may include, but is not limited to replacing roofs with green roofs, disconnecting downspouts or impervious surfaces to drain to pervious surfaces, replacing impervious surfaces with pervious surfaces, installing rain barrels, installing rain gardens, and trash area enclosures.

**Runoff** - All flows in a storm water conveyance system that consists of the following components: (1) storm water (wet weather flows) and (2) non-storm water including dry weather flows.

**San Diego Water Board** – As used in this document the term "San Diego Water Board" is synonymous with the term "Regional Board" as defined in Water Code section 13050(b) and is intended to refer to the California Regional Water Quality Control Board for the San Diego Region as specified in Water Code Section 13200.

**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.

**Source Control BMP** – Land use or site planning practices, or structural or nonstructural measures that aim to prevent runoff pollution by reducing the potential for contamination at the source of pollution. Source control BMPs minimize the contact between pollutants and runoff.

**Storm Water** – Per 40 CFR 122.26(b)(13), means storm water runoff, snowmelt runoff and surface runoff and drainage. Surface runoff and drainage pertains to runoff and drainage resulting from precipitation events.

**Structural BMPs** - A subset of BMPs which detains, retains, filters, removes, or prevents the release of pollutants to surface waters from development projects in perpetuity, after construction of a project is completed.

**Test of Significant Toxicity (TST)** - A statistical approach used to analyze toxicity test data. The TST incorporates a restated null hypothesis, Welch's t-test, and biological effect thresholds for chronic and acute toxicity.

**Total Maximum Daily Load (TMDL)** - 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. The water quality objectives for toxicity provided in the Basin Plan, state in part...“All waters shall be

free of toxic substances in concentrations that are toxic to, or that produce detrimental physiological responses in human, plant, animal, or aquatic life....The survival of aquatic life in surface waters subjected to a waste discharge or other controllable water quality factors, shall not be less than that for the same water body in areas unaffected by the waste discharge.”

**Toxicity Identification Evaluation (TIE)** - A set of procedures for identifying the specific chemical(s) responsible for toxicity. These procedures are performed in three phases (characterization, identification, and confirmation) using aquatic organism toxicity tests.

**Toxicity Reduction Evaluation (TRE)** - A study conducted in a step-wise process designed to identify the causative agents of effluent or ambient toxicity, isolate the sources of toxicity, evaluate the effectiveness of toxicity control options, and then confirm the reduction in toxicity. The first steps of the TRE consist of the collection of data relevant to the toxicity, including additional toxicity testing, and an evaluation of facility operations and maintenance practices, and best management practices. A Toxicity Identification Evaluation (TIE) may be required as part of the TRE, if appropriate.

**Treatment Control BMP** – Any engineered system designed to remove pollutants by simple gravity settling of particulate pollutants, filtration, biological uptake, media absorption or any other physical, biological, or chemical process.

**Unpaved Road** – Any long, narrow stretch without pavement used for traveling by motor passenger vehicles between two or more points. Unpaved roads are generally constructed of dirt, gravel, aggregate or macadam and may be improved or unimproved.

**Waste** - As defined in CWC 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, 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, non-hazardous 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 and Regional Water Boards in the Water Quality Control Plans. 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 CWA.)

**Water Quality Standards** - Water quality standards, as defined in Clean Water Act section 303(c) consist of the beneficial uses (e.g., swimming, fishing, municipal drinking water supply, etc.,) of a water body and criteria (referred to as water quality objectives in the California Water Code) necessary to protect those uses. Under the Water Code, the water boards establish beneficial uses and water quality objectives in water quality control or basin plans. Together with an anti-degradation policy, these beneficial uses and water quality objectives serve as water quality standards under the Clean Water Act. In Clean Water Act parlance, state beneficial uses are called “designated uses” and state water quality objectives are called “criteria.” Throughout this Order, the relevant term is used depending on the statutory scheme.

**Waters of the State** - Any water, surface or underground, including saline waters within the boundaries of the State [CWC section 13050 (e)]. The definition of the Waters of the State is broader than that for the Waters of the United States in that all water in the State is considered to be a Waters of the State regardless of circumstances or condition.

**Waters of the United States** - As defined in the 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).

**Wet Season (aka Rainy Season)** – October 1 to April 30

**Wet Weather** – Weather is considered wet up to 72 hours after a storm event of 0.1 inches and greater, unless otherwise defined by another regulatory mechanism (e.g. a TMDL).

Order No. R9-2013-0001  
As amended by Order No. R9-2015-0001  
and Order No. R9-2015-0100

RB9 001652  
D-1

Amended February 11, 2015  
Amended November 18, 2015

**ATTACHMENT D**  
**JURISDICTIONAL RUNOFF MANAGEMENT PROGRAM**  
**ANNUAL REPORT FORM**

Order No. R9-2013-0001  
As amended by Order No. R9-2015-0001  
and Order No. R9-2015-0100

RB9 001653  
D-2

Amended February 11, 2015  
Amended November 18, 2015

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**JURISDICTIONAL RUNOFF MANAGEMENT PROGRAM  
 ANNUAL REPORT FORM  
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<b>I. COPERMITTEE INFORMATION</b>	
Copermittee Name:	
Copermittee Primary Contact Name:	
Copermittee Primary Contact Information:	
Address:	
City:	County:
State:	Zip:
Telephone:	Fax:
Email:	
<b>II. LEGAL AUTHORITY</b>	
Has the Copermittee established adequate legal authority within its jurisdiction to control pollutant discharges into and from its MS4 that complies with Order No. R9-2013-0001?	YES <input type="checkbox"/> NO <input type="checkbox"/>
A Principal Executive Officer, Ranking Elected Official, or Duly Authorized Representative has certified that the Copermittee obtained and maintains adequate legal authority?	YES <input type="checkbox"/> NO <input type="checkbox"/>
<b>III. JURISDICTIONAL RUNOFF MANAGEMENT PROGRAM DOCUMENT UPDATE</b>	
Was an update of the jurisdictional runoff management program document required or recommended by the San Diego Water Board?	YES <input type="checkbox"/> NO <input type="checkbox"/>
If YES to the question above, did the Copermittee update its jurisdictional runoff management program document and make it available on the Regional Clearinghouse?	YES <input type="checkbox"/> NO <input type="checkbox"/>
<b>IV. ILLICIT DISCHARGE DETECTION AND ELIMINATION PROGRAM</b>	
Has the Copermittee implemented a program to actively detect and eliminate illicit discharges and connections to its MS4 that complies with Order No. R9-2013-0001?	YES <input type="checkbox"/> NO <input type="checkbox"/>
Number of non-storm water discharges reported by the public	
Number of non-storm water discharges detected by Copermittee staff or contractors	
Number of non-storm water discharges investigated by the Copermittee	
Number of sources of non-storm water discharges identified	
Number of non-storm water discharges eliminated	
Number of sources of illicit discharges or connections identified	
Number of illicit discharges or connections eliminated	
Number of enforcement actions issued	
Number of escalated enforcement actions issued	
<b>V. DEVELOPMENT PLANNING PROGRAM</b>	
Has the Copermittee implemented a development planning program that complies with Order No. R9-2013-0001?	YES <input type="checkbox"/> NO <input type="checkbox"/>
Was an update to the BMP Design Manual required or recommended by the San Diego Water Board?	YES <input type="checkbox"/> NO <input type="checkbox"/>
If YES to the question above, did the Copermittee update its BMP Design Manual and make it available on the Regional Clearinghouse?	YES <input type="checkbox"/> NO <input type="checkbox"/>
Number of proposed development projects in review	
Number of Priority Development Projects in review	
Number of Priority Development Projects approved	
Number of approved Priority Development Projects exempt from any BMP requirements	
Number of approved Priority Development Projects allowed alternative compliance	
Number of Priority Development Projects granted occupancy	
Number of completed Priority Development Projects in inventory	
Number of high priority Priority Development Project structural BMP inspections	
Number of Priority Development Project structural BMP violations	
Number of enforcement actions issued	
Number of escalated enforcement actions issued	

**JURISDICTIONAL RUNOFF MANAGEMENT PROGRAM  
 ANNUAL REPORT FORM**

FY \_\_\_\_\_

**VI. CONSTRUCTION MANAGEMENT PROGRAM**

Has the Copermittee implemented a construction management program that complies with Order No. R9-2013-0001?	YES <input type="checkbox"/>	NO <input type="checkbox"/>
Number of construction sites in inventory		
Number of active construction sites in inventory		
Number of inactive construction sites in inventory		
Number of construction sites closed/completed during reporting period		
Number of construction site inspections		
Number of construction site violations		
Number of enforcement actions issued		
Number of escalated enforcement actions issued		

**VII. EXISTING DEVELOPMENT MANAGEMENT PROGRAM**

Has the Copermittee implemented an existing development management program that complies with Order No. R9-2013-0001?	YES <input type="checkbox"/>	NO <input type="checkbox"/>		
	<b>Municipal</b>	<b>Commercial</b>	<b>Industrial</b>	<b>Residential</b>
Number of facilities or areas in inventory				
Number of existing development inspections				
Number of follow-up inspections				
Number of violations				
Number of enforcement actions issued				
Number of escalated enforcement actions issued				

**VIII. PUBLIC EDUCATION AND PARTICIPATION**

Has the Copermittee implemented a public education program component that complies with Order No. R9-2013-0001?	YES <input type="checkbox"/>	NO <input type="checkbox"/>
Has the Copermittee implemented a public participation program component that complies with Order No. R9-2013-0001?	YES <input type="checkbox"/>	NO <input type="checkbox"/>

**IX. FISCAL ANALYSIS**

Has the Copermittee attached to this form a summary of its fiscal analysis that complies with Order No. R9-2013-0001?	YES <input type="checkbox"/>	NO <input type="checkbox"/>
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**X. CERTIFICATION**

I  Principal Executive Officer  Ranking Elected Official  Duly Authorized Representative] certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that 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.

_____ Signature	_____ Date
_____ Print Name	_____ Title
_____ Telephone Number	_____ Email

## **ATTACHMENT E**

### **SPECIFIC PROVISIONS FOR TOTAL MAXIMUM DAILY LOADS APPLICABLE TO ORDER NO. R9-2013-0001, AS AMENDED BY ORDER NOS. R9-2015-0001 AND R9-2015-0100**

These provisions implement load allocations (LAs) and wasteload allocations (WLAs) of the Total Maximum Daily Loads (TMDLs) established by the San Diego Water Board or USEPA under Clean Water Act section 303(c), applicable to discharges regulated under this Order. The provisions and schedules for implementation of the TMDLs described below must be incorporated into the Water Quality Improvement Plans, required pursuant to Provision B of this Order, for the specified Watershed Management Areas.

1. Total Maximum Daily Load for Diazinon in Chollas Creek Watershed
2. Total Maximum Daily Loads for Dissolved Copper in Shelter Island Yacht Basin
3. Total Maximum Daily Loads for Total Nitrogen and Total Phosphorus in Rainbow Creek Watershed
4. Total Maximum Daily Loads for Dissolved Copper, Lead, and Zinc in Chollas Creek
5. Total Maximum Daily Loads for Indicator Bacteria, Baby Beach in Dana Point Harbor and Shelter Island Shoreline Park in San Diego Bay
6. Revised Total Maximum Daily Loads for Indicator Bacteria, Project I – Twenty Beaches and Creeks in the San Diego Region (Including Tecolote Creek)
7. Total Maximum Daily Load for Sediment in Los Peñasquitos Lagoon

Order No. R9-2013-0001  
As amended by Order No. R9-2015-0001  
and Order No. R9-2015-0100

RB9 001657  
E-2

Amended February 11, 2015  
Amended November 18, 2015

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**1. Total Maximum Daily Load for Diazinon in Chollas Creek Watershed****a. APPLICABILITY**(1) TMDL Basin Plan Amendment: Resolution No. R9-2002-0123(2) TMDL Adoption and Approval Dates:

San Diego Water Board Adoption Date:	August 14, 2002
State Water Board Approval Date:	July 16, 2003
Office of Administrative Law Approval Date:	September 11, 2003
US EPA Approval Date:	November 3, 2003

(3) TMDL Effective Date: September 11, 2003(4) Watershed Management Area: San Diego Bay(5) Water Body: Chollas Creek(6) Responsible Copermittees: City of La Mesa, City of Lemon Grove, City of San Diego, County of San Diego, San Diego Unified Port District**b. FINAL TMDL COMPLIANCE REQUIREMENTS**

The final diazinon TMDL compliance requirements for Chollas Creek consist of the following:

(1) Final TMDL Compliance Date

The Responsible Copermittees must be in compliance with the final TMDL compliance requirements as of December 31, 2010.

(2) Final Water Quality Based Effluent Limitations

(a) Final Receiving Water Limitations

Discharges from the MS4s must not cause or contribute to the exceedance of the following receiving water limitations:

**Table 1.1***Final Receiving Water Limitations Expressed as Concentrations in Chollas Creek*

Constituent	Exposure Duration	Receiving Water Limitation	Averaging Period
Diazinon	Acute	0.08 µg/L	1 hour
	Chronic	0.05 µg/L	4 days

### (b) Final Effluent Limitations

Discharges from the MS4s containing concentrations that do not exceed the following effluent limitations will not cause or contribute to exceedances of the receiving water limitations under Specific Provision 1.b.(2)(a):

**Table 1.2**

*Final Effluent Limitations Expressed as Concentrations in MS4 Discharges to Chollas Creek*

Constituent	Exposure Duration	Effluent Limitation	Averaging Period
Diazinon	Acute	0.072 µg/L	1 hour
	Chronic	0.045 µg/L	4 days

### (c) Best Management Practices

The following BMPs for Chollas Creek must be incorporated into the Water Quality Improvement Plan for the San Diego Bay Watershed Management Area and implemented by the Responsible Copermittees:

- (i) The Responsible Copermittees must implement BMPs to achieve the receiving water limitations under Specific Provision 1.b.(2)(a) and/or the effluent limitations under Specific Provision 1.b.(2)(b) for Chollas Creek.
- (ii) The Responsible Copermittees must implement the Diazinon Toxicity Control Plan and Diazinon Public Outreach/Education Program as described in the report titled, *Technical Report for Total Maximum Daily Load for Diazinon in Chollas Creek Watershed, San Diego County*, dated August 14, 2002, including subsequent modifications, in order to achieve the receiving water limitations under Specific Provision 1.b.(2)(a) and/or the effluent limitations under Specific Provision 1.b.(2)(b).
- (iii) The Responsible Copermittees should coordinate any BMPs implemented to address this TMDL with Caltrans as possible.

### (3) Final TMDL Compliance Determination

Compliance with the final WQBELs, on or after the final TMDL compliance date, may be demonstrated via one of the following methods:

- (a) There is no direct or indirect discharge from the Responsible Copermittee's MS4s to the receiving water; OR
- (b) There are no exceedances of the final receiving water limitations under Specific Provision 1.b.(2)(a) in the receiving water at, or downstream of the Responsible Copermittee's MS4 outfalls; OR

- (c) There are no exceedances of the final effluent limitations under Specific Provision 1.b.(2)(b) at the Responsible Copermittee's MS4 outfalls; OR
- (d) The Responsible Copermittees develop and implement the Water Quality Improvement Plan as follows:
  - (i) Incorporate the BMPs required under Specific Provision 1.b.(2)(c) as part of the Water Quality Improvement Plan,
  - (ii) Include an analysis in the Water Quality Improvement Plan, utilizing a watershed model or other watershed analytical tools, to demonstrate that the implementation of the BMPs required under Provision 1.b.(2)(c) achieves compliance with Specific Provisions 1.b.(3)(a), 1.b.(3)(b) and/or 1.b.(3)(c),
  - (iii) The results of the analysis must be accepted by the San Diego Water Board as part of the Water Quality Improvement Plan,
  - (iv) The Responsible Copermittees continue to implement the BMPs required under Specific Provision 1.b.(2)(c), AND
  - (v) The Responsible Copermittees continue to perform the specific monitoring and assessments specified in Specific Provision 1.d, to demonstrate compliance with Specific Provisions 1.b.(3)(a), 1.b.(3)(b) and/or 1.b.(3)(c).

#### **c. INTERIM TMDL COMPLIANCE REQUIREMENTS**

The Responsible Copermittees must be in compliance with the final diazinon TMDL compliance requirements as of December 31, 2010.

#### **d. SPECIFIC MONITORING AND ASSESSMENT REQUIREMENTS**

- (1) The Responsible Copermittees must implement the monitoring and assessment requirements issued under Investigation Order No. R9-2004-0277, *California Department of Transportation and San Diego Municipal Separate Storm Sewer System Copermittees Responsible for the Discharge of Diazinon into the Chollas Creek Watershed*. The monitoring reports required under Investigation Order No. R9-2004-0277 must be submitted as part of the Transitional Monitoring and Assessment Program and Water Quality Improvement Plan Annual Reports required under Provision F.3.b of this Order.
- (2) The Responsible Copermittees must monitor the effluent of the MS4 outfalls for diazinon within the Chollas Creek watershed, and calculate or estimate the annual diazinon loads, in accordance with the requirements of Provisions D.2, D.4.b.(1), and D.4.b.(2) of this Order. The monitoring and assessment results must be submitted as part of the Transitional Monitoring and Assessment

Program and Water Quality Improvement Plan Annual Reports required under Provision F.3.b of this Order.

- (3) For assessing and determining compliance with the concentration-based effluent limitations under Specific Provision 1.b.(2)(b), dry and wet weather discharge concentrations may be calculated based on a flow-weighted average across all major MS4 outfalls along a water body segment or within a jurisdiction if samples are collected within a similar time period.

**2. Total Maximum Daily Loads for Dissolved Copper in Shelter Island Yacht Basin**

**a. APPLICABILITY**

(1) TMDL Basin Plan Amendment: Resolution No. R9-2005-0019

(2) TMDL Adoption and Approval Dates:

San Diego Water Board Adoption Date:	February 9, 2005
State Water Board Approval Date:	September 22, 2005
Office of Administrative Law Approval Date:	December 2, 2005
US EPA Approval Date:	February 8, 2006

(3) TMDL Effective Date: December 2, 2005

(4) Watershed Management Area: San Diego Bay

(5) Water Body: Shelter Island Yacht Basin

(6) Responsible Copermittee: City of San Diego

**b. FINAL TMDL COMPLIANCE REQUIREMENTS**

The final dissolved copper TMDL compliance requirements for Shelter Island Yacht Basin consist of the following:

(1) Final TMDL Compliance Date

The Responsible Copermittee must be in compliance with the final TMDL compliance requirements as of December 2, 2005.

(2) Final Water Quality Based Effluent Water Limitations

(a) Final Receiving Water Limitations

Discharges from the MS4s must not cause or contribute to the exceedance of the following receiving water limitations:

**Table 2.1**

*Final Receiving Water Limitations Expressed as Concentrations in Shelter Island Yacht Basin*

Constituent	Exposure Duration	Receiving Water Limitation	Averaging Period
Dissolved Copper	Acute	4.8 µg/L x WER*	1 hour
	Chronic	3.1 µg/L x WER*	4 days

Notes:

\* The Water Effect Ratio (WER) is assumed to be 1.0 unless there is a site-specific and chemical-specific WER provided in the Basin Plan.

**(b) Final Effluent Limitations**

Discharges from the MS4s containing pollutant loads that do not exceed the following effluent limitations will not cause or contribute to exceedances of the receiving water limitations under Specific Provision 2.b.(2)(a):

**Table 2.2**

*Final Effluent Limitations as Expressed as Annual Loads in MS4 Discharges to Shelter Island Yacht Basin*

Constituent	Effluent Limitation
Dissolved Copper	30 kg/yr*

\* If the water quality objectives for dissolved copper in Shelter Island Yacht Basin are changed in the future, then the margin of safety (MOS), TMDL and allocations will be recalculated using the *Method for Recalculation of the Total Maximum Daily Load for Dissolved Copper in the Shelter Island Yacht Basin, San Diego Bay* in the Basin Plan (p. 7-14).

**(c) Best Management Practices**

The Responsible Copermittee must implement BMPs to achieve the receiving water limitations under Specific Provision 2.b.(2)(a) and/or the effluent limitations under Specific Provision 2.b.(2)(b) for Shelter Island Yacht Basin. The BMPs must be incorporated into the Water Quality Improvement Plan for the San Diego Bay Watershed Management Area.

**(3) Final TMDL Compliance Determination**

Compliance with the final WQBELs, on or after the final TMDL compliance date, may be demonstrated via one of the following methods:

- (a) There is no direct or indirect discharge from the Responsible Copermittee's MS4s to the receiving water; OR
- (b) There are no exceedances of the final receiving water limitations under Specific Provision 2.b.(2)(a) in the receiving water at, or downstream of the Responsible Copermittee's MS4 outfalls; OR
- (c) There are no exceedances of the final effluent limitations under Specific Provision 2.b.(2)(b) at the Responsible Copermittee's MS4 outfalls; OR
- (d) The Responsible Copermittee develops and implements the Water Quality Improvement Plan as follows:
  - (i) Incorporate the BMPs required under Specific Provision 2.b.(2)(c) as part of the Water Quality Improvement Plan,

- (ii) Include an analysis in the Water Quality Improvement Plan, utilizing a watershed model or other watershed analytical tools, to demonstrate that the implementation of the BMPs required under Provision 2.b.(2)(c) achieves compliance with Specific Provisions 2.b.(3)(a), 2.b.(3)(b) and/or 2.b.(3)(c),
- (iii) The results of the analysis must be accepted by the San Diego Water Board as part of the Water Quality Improvement Plan,
- (iv) The Responsible Copermittees continue to implement the BMPs required under Specific Provision 2.b.(2)(c), AND
- (v) The Responsible Copermittees continue to perform the specific monitoring and assessments specified in Specific Provision 2.d, to demonstrate compliance with Specific Provisions 2.b.(3)(a), 2.b.(3)(b) and/or 2.b.(3)(c).

**c. INTERIM TMDL COMPLIANCE REQUIREMENTS**

The Responsible Copermittees must be in compliance with the final dissolved copper TMDL compliance requirements as of December 2, 2005.

**d. SPECIFIC MONITORING AND ASSESSMENT REQUIREMENTS**

The Responsible Copermittee must monitor the effluent of its MS4 outfalls for dissolved copper, and calculate or estimate the monthly and annual dissolved copper loads, in accordance with the requirements of Provisions D.2, D.4.b.(1), and D.4.(b)(2) of this Order. The monitoring and assessment results must be submitted as part of the Transitional Monitoring and Assessment Program and Water Quality Improvement Plan Annual Reports required under Provision F.3.b of this Order.

### 3. Total Maximum Daily Loads for Total Nitrogen and Total Phosphorus in Rainbow Creek Watershed

#### a. APPLICABILITY

(1) TMDL Basin Plan Amendment: Resolution No. R9-2005-0036

(2) TMDL Adoption and Approval Dates:

San Diego Water Board Adoption Date:	February 9, 2005
State Water Board Approval Date:	November 16, 2005
Office of Administrative Law Approval Date:	February 1, 2006
US EPA Approval Date:	March 22, 2006

(3) TMDL Effective Date: February 1, 2006

(4) Watershed Management Area: Santa Margarita River

(5) Water Body: Rainbow Creek

(6) Responsible Copermittee: County of San Diego

#### b. FINAL TMDL COMPLIANCE REQUIREMENTS

The final total nitrogen and total phosphorus TMDL compliance requirements for Rainbow Creek consist of the following

(1) Final TMDL Compliance Date

The Responsible Copermittee must comply with final TMDL compliance requirements by December 31, 2021.

(2) Final Water Quality Based Effluent Water Limitations

(a) Final Receiving Water Limitations

Discharges from the MS4s must not cause or contribute to the exceedance of the following receiving water limitations by the compliance date under Specific Provision 3.b.(1):

**Table 3.1**

*Final Receiving Water Limitations Expressed as Concentrations in Rainbow Creek*

Constituent	Receiving Water Limitation
Nitrate (as N)	10 mg/L
Total Nitrogen	1 mg/L
Total Phosphorus	0.1 mg/L

## (b) Final Effluent Limitations

- (i) Discharges from the MS4s containing concentrations that do not exceed the following effluent limitations by the compliance date under Specific Provision 3.b.(1) will not cause or contribute to exceedances of the receiving water limitations under Specific Provision 3.b.(2)(a):

**Table 3.2**

*Final Effluent Limitations Expressed as Concentrations in MS4 Discharges to Rainbow Creek*

Constituent	Effluent Limitation
Nitrate (as N)	10 mg/L
Total Nitrogen	1 mg/L
Total Phosphorus	0.1 mg/L

- (ii) Annual pollutant loads from given land uses discharging to and from the MS4s that do not exceed the following annual loads by the compliance date under Specific Provision 3.b.(1) will not cause or contribute to exceedances of the receiving water limitations under Specific Provision 3.b.(2)(a):

**Table 3.3**

*Final Effluent Limitations Expressed as Annual Loads in MS4 Discharges to Rainbow Creek*

Land Use	Total N	Total P
Commercial nurseries	116 kg/yr	3 kg/yr
Park	3 kg/yr	0.1 kg/yr
Residential areas	149 kg/yr	12 kg/yr
Urban areas	27 kg/yr	6 kg/yr

## (c) Best Management Practices

- (i) The Responsible Copermitttee must implement BMPs to achieve the receiving water limitations under Specific Provision 3.b.(2)(a) and/or the effluent limitations under Specific Provision 3.b.(2)(b) for Rainbow Creek.
- (ii) The Responsible Copermitttee should coordinate any BMPs implemented to address this TMDL with Caltrans and other sources as possible.

(3) Final TMDL Compliance Determination

Compliance with the final WQBELs, on or after the final TMDL compliance date, may be demonstrated via one of the following methods:

- (a) There is no direct or indirect discharge from the Responsible Copermitttee's MS4s to the receiving water; OR

- (b) There are no exceedances of the final receiving water limitations under Specific Provision 3.b.(2)(a) in the receiving water at, or downstream of the Responsible Copermittee's MS4 outfalls; OR
- (c) There are no exceedances of the final effluent limitations under Specific Provision 3.b.(2)(b)(i) at the Responsible Copermittee's MS4 outfalls; OR
- (d) The annual pollutant loads from given land uses discharging to and from the MS4s do not exceed the final effluent limitations under Specific Provision 3.b.(2)(b)(ii); OR
- (e) The Responsible Copermittee develops and implements the Water Quality Improvement Plan as follows:
  - (i) Incorporate the BMPs required under Specific Provision 3.b.(2)(c) as part of the Water Quality Improvement Plan,
  - (ii) Include an analysis in the Water Quality Improvement Plan, utilizing a watershed model or other watershed analytical tools, to demonstrate that the implementation of the BMPs required under Specific Provision 3.b.(2)(c) achieves compliance with Specific Provisions 3.b.(3)(a), 3.b.(3)(b), 3.b.(3)(c) and/or 3.b.(3)(d),
  - (iii) The results of the analysis must be accepted by the San Diego Water Board as part of the Water Quality Improvement Plan,
  - (iv) The Responsible Copermittees continue to implement the BMPs required under Specific Provision 3.b.(2)(c), AND
  - (v) The Responsible Copermittees continue to perform the specific monitoring and assessments specified in Specific Provision 3.d, to demonstrate compliance with Specific Provisions 3.b.(3)(a), 3.b.(3)(b), 3.b.(3)(c) and/or 3.b.(3)(d).

### **C. INTERIM TMDL COMPLIANCE REQUIREMENTS**

The interim total nitrogen and total phosphorus TMDL compliance requirements for Rainbow Creek consist of the following:

#### **(1) Interim Compliance Dates and WQBELs**

The Responsible Copermittee must comply with the interim WQBELs, expressed as annual loads, by December 31 of the interim compliance year given in Table 3.4.

**Table 3.4***Interim Water Quality Based Effluent Limitations Expressed as Annual Loads in MS4 Discharges from Specific Land Uses to Rainbow Creek*

Land Use	Total N Interim Effluent Limitations (kg/yr)			Total P Interim Effluent Limitations (kg/yr)		
	Interim Compliance Date			Interim Compliance Date		
	2009	2013	2017	2009	2013	2017
Commercial nurseries	390	299	196	20	16	10
Park	5	3	3	0.15	0.10	0.10
Residential areas	507	390	260	99	74	47
Urban areas	40	27	27	9	6	6

**(2) Interim TMDL Compliance Determination**

Compliance with interim WQBELs, on or after the interim TMDL compliance dates, may be demonstrated via one of the following methods:

- (a) There is no direct or indirect discharge from the Responsible Copermittee's MS4s to the receiving water; OR
- (b) There are no exceedances of the final receiving water limitations under Specific Provision 3.b.(2)(a) in the receiving water at, or downstream of the Responsible Copermittee's MS4 outfalls; OR
- (c) There are no exceedances of the final effluent limitations under Specific Provision 3.b.(2)(b)(i) at the Responsible Copermittee's MS4 outfalls; OR
- (d) The annual pollutant loads from given land uses discharging to and from the MS4s do not exceed the final effluent limitations under Specific Provision 3.b.(2)(b)(ii); OR
- (e) The annual pollutant loads from given land uses discharging to and from the MS4s do not exceed the interim effluent limitations under Specific Provision 3.c.(1); OR
- (f) The Responsible Copermittee has submitted and is fully implementing a Water Quality Improvement Plan, accepted by the San Diego Water Board, which provides reasonable assurance that the interim TMDL compliance requirements will be achieved by the interim compliance dates.

**d. SPECIFIC MONITORING AND ASSESSMENT REQUIREMENTS**

- (1) The Responsible Copermittee must incorporate into the Water Quality Improvement Plan and implement the Sampling and Analysis Plan for Rainbow Creek Nutrient Reduction TMDL Implementation Water Quality Monitoring, dated January 2010.

- (2) The results of any monitoring conducted during the reporting period, and assessment of whether the interim and final TMDL compliance requirements have been achieved must be submitted as part of the Transitional Monitoring and Assessment Program and Water Quality Improvement Plan Annual Reports required under Provision F.3.b of this Order.
- (3) For assessing and determining compliance with the concentration-based effluent limitations under Specific Provision 3.b.(2)(b)(i), dry and wet weather discharge concentrations may be calculated based on a flow-weighted average across all major MS4 outfalls along a water body segment or within a jurisdiction if samples are collected within a similar time period.

#### 4. Total Maximum Daily Loads for Dissolved Copper, Lead, and Zinc in Chollas Creek

##### a. APPLICABILITY

- (1) TMDL Basin Plan Amendment: Resolution No. R9-2007-0043
- (2) TMDL Adoption and Approval Dates:

San Diego Water Board Adoption Date:	June 13, 2007
State Water Board Approval Date:	July 15, 2008
Office of Administrative Law Approval Date:	October 22, 2008
US EPA Approval Date:	December 18, 2008
- (3) TMDL Effective Date: October 22, 2008
- (4) Watershed Management Area: San Diego Bay
- (5) Water Body: Chollas Creek
- (6) Responsible Copermittees: City of La Mesa, City of Lemon Grove, City of San Diego, County of San Diego, San Diego Unified Port District

##### b. FINAL TMDL COMPLIANCE REQUIREMENTS

The final dissolved copper, lead, and zinc TMDL compliance requirements for Chollas Creek consist of the following:

- (1) Final TMDL Compliance Date

The Responsible Copermittees must comply with the final TMDL compliance requirements by October 22, 2028.

- (2) Final Water Quality Based Effluent Limitations

- (a) Final Receiving Water Limitations

Discharges from the MS4s must not cause or contribute to the exceedance of the following receiving water limitations by the compliance date under Specific Provision 4.b.(1):

**Table 4.1**  
*Final Receiving Water Limitations Expressed as Concentrations in Chollas Creek*

Constituent	Exposure Duration	Receiving Water Limitation (µg/L)	Averaging Period
Dissolved Copper	Acute	$(0.96) \times e^{[0.9422 \times \ln(\text{hardness}) - 1.700]} \times \text{WER}^*$	1 hour
	Chronic	$(0.96) \times e^{[0.8545 \times \ln(\text{hardness}) - 1.702]} \times \text{WER}^*$	4 days
Dissolved Lead	Acute	$[1.46203 - 0.145712 \times \ln(\text{hardness})] \times e^{[1.273 \times \ln(\text{hardness}) - 1.460]} \times \text{WER}^*$	1 hour
	Chronic	$[1.46203 - 0.145712 \times \ln(\text{hardness})] \times e^{[1.273 \times \ln(\text{hardness}) - 4.705]} \times \text{WER}^*$	4 days
Dissolved Zinc	Acute	$(0.978) \times e^{[0.8473 \times \ln(\text{hardness}) + 0.884]} \times \text{WER}^*$	1 hour
	Chronic	$(0.986) \times e^{[0.8473 \times \ln(\text{hardness}) + 0.884]} \times \text{WER}^*$	4 days

Notes:

\* The Water Effect Ratio (WER) is assumed to be 1.0 unless there is a site-specific and chemical-specific WER provided in the Basin Plan.

**(b) Final Effluent Limitations**

Discharges from the MS4s containing pollutant loads that do not exceed the following effluent limitations by the compliance date under Specific Provision 4.b.(1) will not cause or contribute to exceedances of the receiving water limitations under Specific Provision 4.b.(2)(a):

**Table 4.2**  
*Final Effluent Limitations as Expressed Concentrations in MS4 Discharges to Chollas Creek*

Constituent	Exposure Duration	Effluent Limitation (µg/L)	Averaging Period
Dissolved Copper	Acute	$90\% \times (0.96) \times e^{[0.9422 \times \ln(\text{hardness}) - 1.700]} \times \text{WER}^*$	1 hour
	Chronic	$90\% \times (0.96) \times e^{[0.8545 \times \ln(\text{hardness}) - 1.702]} \times \text{WER}^*$	4 days
Dissolved Lead	Acute	$90\% \times [1.46203 - 0.145712 \times \ln(\text{hardness})] \times e^{[1.273 \times \ln(\text{hardness}) - 1.460]} \times \text{WER}^*$	1 hour
	Chronic	$90\% \times [1.46203 - 0.145712 \times \ln(\text{hardness})] \times e^{[1.273 \times \ln(\text{hardness}) - 4.705]} \times \text{WER}^*$	4 days
Dissolved Zinc	Acute	$90\% \times (0.978) \times e^{[0.8473 \times \ln(\text{hardness}) + 0.884]} \times \text{WER}^*$	1 hour
	Chronic	$90\% \times (0.986) \times e^{[0.8473 \times \ln(\text{hardness}) + 0.884]} \times \text{WER}^*$	4 days

Notes:

\* The Water Effect Ratio (WER) is assumed to be 1.0 unless there is a site-specific and chemical-specific WER provided in the Basin Plan.

(c) Best Management Practices

- (i) The Responsible Copermittees must implement BMPs to achieve the receiving water limitations under Specific Provision 4.b.(2)(a) and/or the effluent limitations under Specific Provision 4.b.(2)(b) for Chollas Creek.
- (ii) The Responsible Copermittees should coordinate any BMPs implemented to address this TMDL with Caltrans and the U.S. Navy as possible.

(3) Final TMDL Compliance Determination

Compliance with the final WQBELs, on or after the final TMDL compliance date, may be demonstrated via one of the following methods:

- (a) There is no direct or indirect discharge from the Responsible Copermittee's MS4s to the receiving water; OR
- (b) There are no exceedances of the final receiving water limitations under Specific Provision 4.b.(2)(a) in the receiving water at, or downstream of the Responsible Copermittee's MS4 outfalls; OR
- (c) There are no exceedances of the final effluent limitations under Specific Provision 4.b.(2)(b) at the Responsible Copermittee's MS4 outfalls; OR
- (d) The Responsible Copermittees develop and implement the Water Quality Improvement Plan as follows:
  - (i) Incorporate the BMPs required under Specific Provision 4.b.(2)(c) as part of the Water Quality Improvement Plan,
  - (ii) Include an analysis in the Water Quality Improvement Plan, utilizing a watershed model or other watershed analytical tools, to demonstrate that the implementation of the BMPs required under Provision 4.b.(2)(c) achieves compliance with Specific Provisions 4.b.(3)(a), 4.b.(3)(b) and/or 4.b.(3)(c),
  - (iii) The results of the analysis must be accepted by the San Diego Water Board as part of the Water Quality Improvement Plan,
  - (iv) The Responsible Copermittees continue to implement the BMPs required under Specific Provision 4.b.(2)(c), AND
  - (v) The Responsible Copermittees continue to perform the specific monitoring and assessments specified in Specific Provision 4.d, to demonstrate compliance with Specific Provisions 4.b.(3)(a), 4.b.(3)(b) and/or 4.b.(3)(c).

**c. INTERIM TMDL COMPLIANCE REQUIREMENTS**

The interim dissolved copper, lead, and zinc TMDL compliance requirements for Chollas Creek consist of the following:

**(1) Interim Compliance Date and WQBELs**

The Responsible Copermittee must comply with the interim WQBELs, expressed as concentrations, by the interim compliance date given in Table 4.3:

**Table 4.3**

*Interim Water Quality Based Effluent Limitations Expressed as Concentrations in MS4 Discharges to Chollas Creek*

Interim Compliance Date	Constituent	Exposure Duration	Effluent Limitation (µg/L)	Averaging Period
October 22, 2018	Dissolved Copper	Acute	$1.2 \times 90\% \times (0.96) \times e^{[0.9422 \times \ln(\text{hardness}) - 1.700]} \times \text{WER}^*$	1 hour
		Chronic	$1.2 \times 90\% \times (0.96) \times e^{[0.8545 \times \ln(\text{hardness}) - 1.702]} \times \text{WER}^*$	4 days
	Dissolved Lead	Acute	$1.2 \times 90\% \times [1.46203 - 0.145712 \times \ln(\text{hardness})] \times e^{[1.273 \times \ln(\text{hardness}) - 1.460]} \times \text{WER}^*$	1 hour
		Chronic	$1.2 \times 90\% \times [1.46203 - 0.145712 \times \ln(\text{hardness})] \times e^{[1.273 \times \ln(\text{hardness}) - 4.705]} \times \text{WER}^*$	4 days
	Dissolved Zinc	Acute	$1.2 \times 90\% \times (0.978) \times e^{[0.8473 \times \ln(\text{hardness}) + 0.884]} \times \text{WER}^*$	1 hour
		Chronic	$1.2 \times 90\% \times (0.986) \times e^{[0.8473 \times \ln(\text{hardness}) + 0.884]} \times \text{WER}^*$	4 days

Notes:

\* The Water Effect Ratio (WER) is assumed to be 1.0 unless there is a site-specific and chemical-specific WER provided in the Basin Plan.

**(2) Interim TMDL Compliance Determination**

Compliance with interim WQBELs, on or after the interim TMDL compliance date, may be demonstrated via one of the following methods:

- (a) There is no direct or indirect discharge from the Responsible Copermittee’s MS4s to the receiving water; OR
- (b) There are no exceedances of the applicable receiving water limitations under Specific Provision 4.b.(2)(a) in the receiving water at, or downstream of the Responsible Copermittee’s MS4 outfalls; OR
- (c) There are no exceedances of the final effluent limitations under Specific Provision 4.b.(2)(b) at the Responsible Copermittee’s MS4 outfalls; OR
- (d) There are no exceedances of the interim effluent limitations under Specific Provision 4.c.(1) at the Responsible Copermittee’s MS4 outfalls; OR

- (e) The Responsible Copermittees have submitted and is fully implementing a Water Quality Improvement Plan, accepted by the San Diego Water Board, which provides reasonable assurance that the interim TMDL compliance requirements will be achieved by the interim compliance date.

**d. SPECIFIC MONITORING AND ASSESSMENT REQUIREMENTS**

- (1) The Responsible Copermittees must implement the monitoring and assessment requirements issued under Investigation Order No. R9-2004-0277, *California Department of Transportation and San Diego Municipal Separate Storm Sewer System Copermittees Responsible for the Discharge of Diazinon into the Chollas Creek Watershed*, when it is amended to include monitoring requirements for the Total Maximum Daily Loads for Dissolved Copper, Lead, and Zinc in Chollas Creek. The monitoring reports required under Investigation Order No. R9-2004-0277 must be submitted as part of the Transitional Monitoring and Assessment Program and Water Quality Improvement Plan Annual Reports required under Provision F.3.b of this Order.
- (2) The Responsible Copermittees must monitor the effluent of the MS4 outfalls discharging to Chollas Creek for dissolved copper, lead, and zinc, and calculate or estimate the monthly and annual dissolved copper, lead, and zinc loads, in accordance with the requirements of Provisions D.2, D.4.b.(1), and D.4.b.(2) of this Order. The monitoring and assessment results must be submitted as part of the Transitional Monitoring and Assessment Program and Water Quality Improvement Plan Annual Reports required under Provision F.3.b of this Order.
- (3) For assessing and determining compliance with the concentration-based effluent limitations under Specific Provision 4.b.(2)(b) or 4.c.(1), dry and wet weather discharge concentrations may be calculated based on a flow-weighted average across all major MS4 outfalls along a water body segment or within a jurisdiction if samples are collected within a similar time period.

**5. Total Maximum Daily Loads for Indicator Bacteria, Baby Beach in Dana Point Harbor and Shelter Island Shoreline Park in San Diego Bay**

**a. APPLICABILITY**

(1) TMDL Basin Plan Amendment: Resolution No. R9-2008-0027

(2) TMDL Adoption and Approval Dates:

San Diego Water Board Adoption Date:	June 11, 2008
State Water Board Approval Date:	June 16, 2009
Office of Administrative Law Approval Date:	September 15, 2009
US EPA Approval Date:	October 26, 2009

(3) TMDL Effective Date: September 15, 2009

(4) Watershed Management Areas: See Table 5.0

(5) Water Bodies: See Table 5.0

(6) Responsible Copermittees: See Table 5.0

**Table 5.0**

*Applicability of Total Maximum Daily Loads for Indicator Bacteria  
 Baby Beach in Dana Point Harbor and Shelter Island Shoreline Park in San Diego Bay*

<b>Watershed Management Area</b>	<b>Water Body</b>	<b>Segment or Area</b>	<b>Responsible Copermittees</b>
South Orange County	Dana Point Harbor	Baby Beach	-City of Dana Point -County of Orange
San Diego Bay	San Diego Bay	Shelter Island Shoreline Park	- San Diego Unified Port District

**b. FINAL TMDL COMPLIANCE REQUIREMENTS**

The final indicator bacteria TMDL compliance requirements for segments or areas of the water bodies listed in Table 5.0 consist of the following:

(1) Final TMDL Compliance Dates

(a) Baby Beach in Dana Point Harbor

The Responsible Copermittees for MS4 discharges to Baby Beach must be in compliance with the final TMDL compliance requirements according to the following compliance dates:

**Table 5.1**

*Compliance Dates to Achieve Final TMDL Compliance Requirements  
 For Baby Beach in Dana Point Harbor*

<b>Constituent</b>	<b>Dry Weather WLA Compliance Date</b>	<b>Wet Weather WLA Compliance Date</b>
Total Coliform	September 15, 2014	September 15, 2009
Fecal Coliform		September 15, 2009
<i>Enterococcus</i>		September 15, 2019

(b) Shelter Island Shoreline Park in San Diego Bay

The Responsible Copermittee for MS4 discharges to Shelter Island Shoreline Park must be in compliance with the final TMDL compliance requirements as of December 31, 2012.

(2) Final Water Quality Based Effluent Water Limitations

(a) Final Receiving Water Limitations

Discharges from the MS4s must not cause or contribute to the exceedance of the following receiving water limitations by the compliance dates under Specific Provision 5.b.(1):

**Table 5.2**

*Final Receiving Water Limitations Expressed as Bacteria Densities in  
 the Water Body*

<b>Receiving Water Limitations</b>		
<b>Constituent</b>	<b>Single Sample Maximum<sup>1,2</sup></b>	<b>30-Day Geometric Mean<sup>2</sup></b>
Total Coliform	10,000 MPN/100mL	1,000 MPN/100mL
Fecal Coliform	400 MPN/100mL	200 MPN/100mL
<i>Enterococcus</i>	104 MPN/100mL	35 MPN/100mL

Notes:

1. During wet weather days, only the single sample maximum receiving water limitations are required to be achieved.
2. During dry weather days, the single sample maximum and 30-day geometric mean receiving water limitations are required to be achieved.

## (b) Final Effluent Limitations

- (i) Discharges from the MS4s containing indicator bacteria densities that do not exceed the following effluent limitations by the compliance dates under Specific Provision 5.b.(1) will not cause or contribute to exceedances of the receiving water limitations under Specific Provision 5.b.(2)(a):

**Table 5.3a**

*Final Effluent Limitations as Expressed as Bacteria Densities in MS4 Discharges to the Water Body*

Effluent Limitations		
Constituent	Single Sample Maximum <sup>1,2</sup>	30-Day Geometric Mean <sup>2</sup>
Total Coliform	10,000 MPN/100mL	1,000 MPN/100mL
Fecal Coliform	400 MPN/100mL	200 MPN/100mL
<i>Enterococcus</i>	104 MPN/100mL	35 MPN/100mL

Notes:

1. During wet weather days, only the single sample maximum effluent limitations are required to be achieved.
2. During dry weather days, the single sample maximum and 30-day geometric mean effluent limitations are required to be achieved.

- (ii) Discharges from the MS4s containing indicator bacteria loads that do not exceed the following effluent limitations by the compliance dates under Specific Provision 5.b.(1) will not cause or contribute to exceedances of the receiving water limitations under Specific Provision 5.b.(2)(a):

**Table 5.4a**

*Final Effluent Limitations Expressed as Bacteria Loads in MS4 Discharges to the Baby Beach in Dana Point Harbor*

Constituent	Dry Weather	Wet Weather
	Final Effluent Limitation	Final Effluent Limitation
Total Coliform	$0.86 \times 10^9$ MPN/day	$3,254 \times 10^9$ MPN/30days
Fecal Coliform	$0.17 \times 10^9$ MPN/day	$112 \times 10^9$ MPN/30days
<i>Enterococcus</i>	$0.03 \times 10^9$ MPN/day	$114 \times 10^9$ MPN/30days

**Table 5.4b**

*Final Effluent Limitations Expressed as Bacteria Loads in MS4 Discharges to the Shelter Island Shoreline Park in San Diego Bay*

Constituent	Dry Weather	Wet Weather
	Final Effluent Limitation	Final Effluent Limitation
Total Coliform	0 MPN/day	$198 \times 10^9$ MPN/30days
Fecal Coliform	0 MPN/day	$8 \times 10^9$ MPN/30days
<i>Enterococcus</i>	0 MPN/day	$26 \times 10^9$ MPN/30days

- (iii) Indicator bacteria percent load reductions from the Responsible Copermittes' MS4s that are greater than or equal to the following effluent limitations by the compliance dates under Specific Provision 5.b.(1) will not cause or contribute to exceedances of the receiving water limitations under Specific Provision 5.b.(2)(a):

**Table 5.5a**

*Final Effluent Limitations Expressed as Percent Load Reductions\* in MS4 Discharges to Baby Beach in Dana Point Harbor*

Constituent	Dry Weather	Wet Weather
	Final Effluent Limitation	Final Effluent Limitation
Total Coliform	90.4%	0%
Fecal Coliform	82.7%	0%
<i>Enterococcus</i>	96.2%	62.2%

Notes:

\* The percent load reductions are relative to data collected between 1996-2002. For pollutant load reductions of 0%, pollutant loads discharged from the Responsible Copermittes' MS4s must not exceed the loads in Table 5.4a, unless an updated model or analysis, accepted by the San Diego Water Board, identifies a different allowable pollutant load that can be discharged from the Responsible Copermittes' MS4s to the water body.

**Table 5.5b**

*Final Effluent Limitations Expressed as Percent Load Reductions\*\* in MS4 Discharges to Shelter Island Shoreline Park in San Diego Bay*

Constituent	Dry Weather	Wet Weather
	Final Effluent Limitation	Final Effluent Limitation
Total Coliform	0%	0%
Fecal Coliform	0%	0%
<i>Enterococcus</i>	0%	0%

Notes:

\* The percent load reductions are relative to data collected between 1999-2004. For pollutant load reductions of 0%, pollutant loads discharged from the Responsible Copermittes' MS4s must not exceed the loads in Table 5.4b, unless an updated model or analysis, accepted by the San Diego Water Board, identifies a different allowable pollutant load that can be discharged from the Responsible Copermittes' MS4s to the water body.

(c) Best Management Practices

- (i) The Water Quality Improvement Plans for the applicable Watershed Management Areas in Table 5.0 must incorporate the Bacteria Load Reduction Plan (BLRP) required to be developed pursuant to Resolution No. R9-2008-0027.
- (ii) The Responsible Copermittes must implement BMPs to achieve the receiving water limitations under Specific Provision 5.b.(2)(a) and/or the effluent limitations under Specific Provision 5.b.(2)(b) for the segments or areas of the water bodies listed in Table 5.0

### (3) Final TMDL Compliance Determination

Compliance with the final WQBELs, on or after the final TMDL compliance dates, may be demonstrated via one of the following methods:

- (a) There is no direct or indirect discharge from the Responsible Copermittee's MS4s to the receiving water; OR
- (b) There are no exceedances of the final receiving water limitations under Specific Provision 5.b.(2)(a) in the receiving water at, or downstream of the Responsible Copermittee's MS4 outfalls; OR
- (c) There are no exceedances of the final effluent limitations under Specific Provision 5.b.(2)(b)(i) at the Responsible Copermittee's MS4 outfalls; OR
- (d) The pollutant loads discharging from the Responsible Copermittees' MS4 outfalls do not exceed the final effluent limitations under Specific Provision 5.b.(2)(b)(ii); OR
- (e) The pollutant load reductions for discharges from the Responsible Copermittees' MS4 outfalls are greater than or equal to the final effluent limitations under Specific Provision 5.b.(2)(b)(iii); OR
- (f) The Responsible Copermittees can demonstrate that exceedances of the final receiving water limitations under Specific Provision 5.b.(2)(a) in the receiving water are due to loads from natural sources, AND pollutant loads from the Copermittees' MS4s are not causing or contributing to the exceedances; OR
- (g) The Responsible Copermittees develop and implement the Water Quality Improvement Plan as follows:
  - (i) Incorporate the BMPs required under Specific Provision 5.b.(2)(c) as part of the Water Quality Improvement Plan,
  - (ii) Include an analysis in the Water Quality Improvement Plan, utilizing a watershed model or other watershed analytical tools, to demonstrate that the implementation of the BMPs required under Provision 5.b.(2)(c) achieves compliance with Specific Provisions 5.b.(3)(a), 5.b.(3)(b), 5.b.(3)(c), 5.b.(3)(d), 5.b.(3)(e) and/or 5.b.(3)(f),
  - (iii) The results of the analysis must be accepted by the San Diego Water Board as part of the Water Quality Improvement Plan,
  - (iv) The Responsible Copermittees continue to implement the BMPs required under Specific Provision 5.b.(2)(c), AND

- (v) The Responsible Copermittees continue to perform the specific monitoring and assessments specified in Specific Provision 5.d, to demonstrate compliance with Specific Provisions 5.b.(3)(a), 5.b.(3)(b), 5.b.(3)(c), 5.b.(3)(d), 5.b.(3)(e) and/or 5.b.(3)(f).

### C. INTERIM TMDL COMPLIANCE REQUIREMENTS

The interim indicator bacteria TMDL compliance requirements for segments or areas of the water bodies listed in Table 5.0 consist of the following:

#### (1) Baby Beach in Dana Point Harbor

##### (a) Interim TMDL Compliance Dates and WQBELS

The Responsible Copermittees for MS4 discharges to Baby Beach must comply with the following interim WQBELS by the interim compliance dates given in Tables 5.6a and/or 5.6b:

**Table 5.6a**

*Interim Water Quality Based Effluent Limitations Expressed as Bacteria Loads in MS4 Discharges to Baby Beach in Dana Point Harbor*

Constituent	Interim Compliance Dates	Dry Weather	Wet Weather
		Interim Effluent Limitation	Interim Effluent Limitation
Total Coliform	September 15, 2012	4.93x10 <sup>9</sup> MPN/day	3,254x10 <sup>9</sup> MPN/30days*
Fecal Coliform	September 15, 2012	0.59x10 <sup>9</sup> MPN/day	112x10 <sup>9</sup> MPN/30days*
Enterococcus	September 15, 2012	0.42x10 <sup>9</sup> MPN/day	301x10 <sup>9</sup> MPN/30days
	September 15, 2016	0.03x10 <sup>9</sup> MPN/day *	207x10 <sup>9</sup> MPN/30days

Notes:

\* Same as the final effluent limitations in Table 5.4a.

**Table 5.6b**

*Interim Water Quality Based Effluent Limitations Expressed as Percent Load Reductions\* in MS4 Discharges to Baby Beach in Dana Point Harbor*

Constituent	Interim Compliance Dates	Dry Weather	Wet Weather
		Interim Effluent Limitation	Interim Effluent Limitation
Total Coliform	September 15, 2012	45.2%	0%**
Fecal Coliform	September 15, 2012	41.4%	0%**
Enterococcus	September 15, 2012	48.1%	0%
	September 15, 2016	96.2%**	31.1%

Notes:

\* The percent load reductions are relative to data collected between 1996-2002. For pollutant load reductions of 0%, pollutant loads discharged from the Responsible Copermittees' MS4s must not exceed the loads in Table 5.6a, unless an updated model or analysis, accepted by the San Diego Water Board, identifies a different allowable pollutant load that can be discharged from the Responsible Copermittee's MS4s to the waterbody.

\*\* Same as the final effluent limitations in Table 5.5a.

**(b) Interim Compliance Determination**

Compliance with interim WQBELs, on or after the interim TMDL compliance dates, may be demonstrated via one of the following methods:

- (i) There is no direct or indirect discharge from the Responsible Copermittee's MS4s to the receiving water; OR
- (ii) There are no exceedances of the final receiving water limitations under Specific Provision 5.b.(2)(a) in the receiving water at, or downstream of the Responsible Copermittee's MS4 outfalls; OR
- (iii) There are no exceedances of the final effluent limitations under Specific Provision 5.b.(2)(b)(i) at the Responsible Copermittee's MS4 outfalls; OR
- (iv) The pollutant loads discharging from the Responsible Copermittees' MS4 outfalls do not exceed the final effluent limitations under Specific Provision 5.b(2)(b)(ii); OR
- (v) The Responsible Copermittees can demonstrate that exceedances of the applicable receiving water limitations under Specific Provision 5.b.(2)(a) in the receiving water are due to loads from natural sources, AND pollutant loads from the Copermittees' MS4s are not causing or contributing to the exceedances; OR
- (vi) The pollutant loads discharging from the Responsible Copermittees' MS4 outfalls do not exceed the interim effluent limitations under Table 5.6a of Specific Provision 5.c.(1)(a); OR
- (vii) The pollutant load reductions for discharges from the Responsible Copermittees' MS4 outfalls are greater than or equal to the interim effluent limitations under Table 5.6b of Specific Provision 5.c.(1)(a); OR
- (viii) The Responsible Copermittees have submitted and are fully implementing a Water Quality Improvement Plan, accepted by the San Diego Water Board, which provides reasonable assurance that the interim TMDL compliance requirements will be achieved by the interim compliance dates.

**(2) Shelter Island Shoreline Park in San Diego Bay**

The Responsible Copermittee for MS4 discharges to Shelter Island Shoreline Park must be in compliance with the final indicator bacteria TMDL requirements as of December 31, 2012.

#### **d. SPECIFIC MONITORING AND ASSESSMENT REQUIREMENTS**

##### **(1) Monitoring Stations**

Monitoring locations should consist of, at a minimum, the same locations used to collect data required pursuant to Order Nos. R9-2007-0001 and R9-2009-0002, and beach monitoring for Health and Safety Code section 115880.<sup>38</sup> If discharges of bacteria from the MS4 exceed the applicable interim or final WQBELs, additional monitoring locations and/or other source identification methods must be implemented to identify the sources causing the exceedances. The additional monitoring locations must also be used to demonstrate that the bacteria loads from the identified anthropogenic sources have been addressed and are no longer causing exceedances in the receiving waters.

##### **(2) Monitoring Procedures**

- (a) The Responsible Copermittees must collect dry weather monitoring samples from the receiving water monitoring stations at least monthly. Dry weather samples collected from additional monitoring stations established to identify sources must be collected at an appropriate frequency to demonstrate bacteria loads from the identified anthropogenic sources have been addressed and are no longer causing exceedances in the receiving waters.
- (b) The Responsible Copermittees must collect wet weather monitoring samples within the first 24 hours of a storm event<sup>39</sup> of the rainy season (i.e. October 1 through April 30). Wet weather samples collected from receiving water stations and any additional monitoring stations established to identify sources must be collected at an appropriate frequency to demonstrate bacteria loads from the identified sources have been addressed and are no longer causing exceedances in the receiving waters.
- (c) Samples must be analyzed for total coliform, fecal coliform, and *Enterococcus* indicator bacteria.

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<sup>38</sup> Commonly referred to as AB 411 monitoring

<sup>39</sup> Wet weather days are defined by the TMDL as storm events of 0.2 inches or greater and the following 72 hours. The Responsible Copermittees may choose to limit their wet weather sampling requirements to storm events of 0.2 inches or greater, or also include storm events of 0.1 inches or greater as defined by the federal regulations [40CFR122.26(d)(2)(iii)(A)(2)].

### (3) Assessment and Reporting Requirements

- (a) The Responsible Copermittees must analyze the dry weather and wet weather monitoring data to assess whether the interim and final WQBELs have been achieved.
- (b) For assessing and determining compliance with the concentration-based effluent limitations under Specific Provision 5.b.(2)(b)(i), dry and wet weather discharge bacteria densities may be calculated based on a flow-weighted average across all major MS4 outfalls along a water body segment or within a jurisdiction if samples are collected within a similar time period.
- (c) The Responsible Copermittees must analyze the dry weather and wet weather monitoring data to correlate elevated bacteria levels with known or suspected sewage spills from wastewater collection systems and treatment plants or boats.
- (d) The monitoring and assessment results must be submitted as part of the Transitional Monitoring and Assessment Program and Water Quality Improvement Plan Annual Reports required under Provision F.3.b of this Order.

**6. Revised Total Maximum Daily Loads for Indicator Bacteria, Project I – Twenty Beaches and Creeks in the San Diego Region (Including Tecolote Creek)**

**a. APPLICABILITY**

(1) TMDL Basin Plan Amendment: Resolution No. R9-2010-0001

(2) TMDL Adoption and Approval Dates:

San Diego Water Board Adoption Date:	February 10, 2010
State Water Board Approval Date:	December 14, 2010
Office of Administrative Law Approval Date:	April 4, 2011
US EPA Approval Date:	June 22, 2011

(3) TMDL Effective Date: April 4, 2011

(4) Watershed Management Areas: See Table 6.0

(5) Water Bodies: See Table 6.0

(6) Responsible Copermittees: See Table 6.0

**Table 6.0**

*Applicability of Total Maximum Daily Loads for Indicator Bacteria*

*Project I - Twenty Beaches and Creeks in the San Diego Region (including Tecolote Creek)*

<b>Watershed Management Area and Watershed</b>	<b>Water Body</b>	<b>Segment or Area</b>	<b>Responsible Copermittees</b>
<b>South Orange County</b>  San Joaquin Hills HSA (901.11) and Laguna Beach HSA (901.12)	Pacific Ocean Shoreline	Cameo Cove at Irvine Cove Drive – Riviera Way at Heisler Park - North	-City of Laguna Beach -County of Orange -Orange County Flood Control District
		at Main Laguna Beach	
	Pacific Ocean Shoreline	Laguna Beach at Ocean Avenue	-City of Aliso Viejo -City of Laguna Beach -City of Laguna Woods -County of Orange -Orange County Flood Control District
		Laguna Beach at Cleo Street	
		Arch Cove at Bluebird Canyon Road Laguna Beach at Dumond Drive	
<b>South Orange County</b>  Aliso HSA (901.13)	Pacific Ocean Shoreline	Laguna Beach at Lagunita Place / Blue Lagoon Place at Aliso Beach	-City of Aliso Viejo -City of Laguna Beach -City of Laguna Hills -City of Laguna Niguel -City of Laguna Woods -City of Lake Forest -City of Mission Viejo -County of Orange -Orange County Flood Control District
	Aliso Creek	Entire reach (7.2 miles) and associated tributaries: - Aliso Hills Channel - English Canyon Creek - Dairy Fork Creek - Sulfur Creek - Wood Canyon Creek	
		Aliso Creek Mouth	

ATTACHMENT E: SPECIFIC PROVISIONS FOR TOTAL MAXIMUM DAILY LOADS

6. Revised Total Maximum Daily Loads for Indicator Bacteria, Project I –  
 Twenty Beaches and Creeks in the San Diego Region (Including Tecolote Creek)

**Table 6.0** (Cont'd)  
*Applicability of Total Maximum Daily Loads for Indicator Bacteria*  
*Project I - Twenty Beaches and Creeks in the San Diego Region (including Tecolote Creek)*

<b>Watershed Management Area and Watershed</b>	<b>Water Body</b>	<b>Segment or Area</b>	<b>Responsible Copermittees</b>
<b>South Orange County</b>  Dana Point HSA (901.14)	Pacific Ocean Shoreline	Aliso Beach at West Street	-City of Dana Point -City of Laguna Beach -City of Laguna Niguel -County of Orange -Orange County Flood Control District
		Aliso Beach at Table Rock Drive	
		100 Steps Beach at Pacific Coast Hwy at hospital (9 <sup>th</sup> Avenue)	
		at Salt Creek (large outlet)	
		Salt Creek Beach at Salt Creek service road	
		Salt Creek Beach at Strand Road	
<b>South Orange County</b>  Lower San Juan HSA (901.27)	Pacific Ocean Shoreline	at San Juan Creek	-City of Dana Point -City of Laguna Hills -City of Laguna Niguel -City of Mission Viejo -City of Rancho Santa Margarita -City of San Juan Capistrano -County of Orange -Orange County Flood Control District
	San Juan Creek	lower 1 mile	
	San Juan Creek Mouth	at mouth	
<b>South Orange County</b>  San Clemente HA (901.30)	Pacific Ocean Shoreline	at Poche Beach	-City of Dana Point -City of San Clemente -County of Orange -Orange County Flood Control District
		Ole Hanson Beach Club Beach at Pico Drain	
		San Clemente City Beach at El Portal Street Stairs	
		San Clemente City Beach at Mariposa Street	
		San Clemente City Beach at Linda Lane	
		San Clemente City Beach at South Linda Lane	
		San Clemente City Beach at Lifeguard Headquarters	
		under San Clemente Municipal Pier	
		San Clemente City Beach at Trafalgar Canyon (Trafalgar Lane)	
		San Clemente State Beach at Riviera Beach	
		San Clemente State Beach at Cypress Shores	

**Table 6.0** (Cont'd)  
*Applicability of Total Maximum Daily Loads for Indicator Bacteria*  
*Project I - Twenty Beaches and Creeks in the San Diego Region (including Tecolote Creek)*

<b>Watershed Management Area and Watershed</b>	<b>Water Body</b>	<b>Segment or Area</b>	<b>Responsible Copermittees</b>
<b>San Luis Rey River</b>  San Luis Rey HU (903.00)	Pacific Ocean Shoreline	at San Luis Rey River mouth	-City of Oceanside -City of Vista -County of San Diego
<b>Carlsbad</b>  San Marcos HA (904.50)	Pacific Ocean Shoreline	at Moonlight State Beach	-City of Carlsbad -City of Encinitas -City of Escondido -City of San Marcos -County of San Diego
<b>San Dieguito River</b>  San Dieguito HU (905.00)	Pacific Ocean Shoreline	at San Dieguito Lagoon mouth	-City of Del Mar -City of Escondido -City of Poway -City of San Diego -City of Solana Beach -County of San Diego
<b>Penasquitos</b>  Miramar Reservoir HA (906.10)	Pacific Ocean Shoreline	Torrey Pines State Beach at Del Mar (Anderson Canyon)	-City of Del Mar -City of Poway -City of San Diego -County of San Diego
<b>Mission Bay</b>  Scripps HA (906.30)	Pacific Ocean Shoreline	La Jolla Shores Beach at El Paseo Grande	-City of San Diego
		La Jolla Shores Beach at Caminito del Oro	
		La Jolla Shores Beach at Vallecitos	
		La Jolla Shores Beach at Avenida de la Playa	
		at Casa Beach, Children's Pool	
		South Casa Beach at Coast Boulevard	
		Whispering Sands Beach at Ravina Street	
		Windansea Beach at Vista de la Playa	
		Windansea Beach at Bonair Street	
		Windansea Beach at Playa del Norte	
		Windansea Beach at Palomar Avenue	
		at Tourmaline Surf Park	
Pacific Beach at Grand Avenue			
<b>Mission Bay</b>  Tecolote HA (906.50)	Tecolote Creek	Entire reach and tributaries	

**Table 6.0** (Cont'd)

*Applicability of Total Maximum Daily Loads for Indicator Bacteria  
 Project I- Twenty Beaches and Creeks in the San Diego Region (including Tecolote Creek)*

<b>Watershed Management Area and Watershed</b>	<b>Water Body</b>	<b>Segment or Area</b>	<b>Responsible Copermittees</b>
<b>San Diego River</b>	Forrester Creek	lower 1 mile	-City of El Cajon -City of Santee -County of San Diego
Mission San Diego HSA (907.11) and Santee HSA (907.12)	San Diego River	lower 6 miles	-City of El Cajon -City of La Mesa
	Pacific Ocean Shoreline	at San Diego River mouth at Dog Beach	-City of San Diego -City of Santee -County of San Diego
<b>San Diego Bay</b>  Chollas HSA (908.22)	Chollas Creek	lower 1.2 miles	-City of La Mesa -City of Lemon Grove -City of San Diego -County of San Diego - San Diego Unified Port District

**b. FINAL TMDL COMPLIANCE REQUIREMENTS**

The final indicator bacteria TMDL compliance requirements for the water bodies listed in Table 6.0 consist of the following:

(1) Final TMDL Compliance Dates

The Responsible Copermittees for MS4 discharges to the water bodies listed in Table 6.0 must be in compliance with the final TMDL compliance requirements according to the following compliance dates:

**Table 6.1**

*Compliance Dates to Achieve Final TMDL Compliance Requirements*

<b>Constituent</b>	<b>Dry Weather TMDL Compliance Date</b>	<b>Wet Weather TMDL Compliance Date*</b>
Total Coliform	April 4, 2021	April 4, 2031 (April 4, 2021)
Fecal Coliform		
<i>Enterococcus</i>		

\* The Wet Weather TMDL Compliance Date in parenthesis applies if the applicable Water Quality Improvement Plan does not include load reduction programs for other constituents (e.g. metals, pesticides, trash, nutrients, sediment, etc.) together with bacteria load reduction requirements of these TMDLs.

**(2) Final Water Quality Based Effluent Limitations**

**(a) Final Receiving Water Limitations**

Discharges from the MS4s must not cause or contribute to the exceedance of the following receiving water limitations by the compliance dates under Specific Provision 6.b.(1):

**Table 6.2a**

*Final Receiving Water Limitations Expressed as Bacteria Densities and Allowable Exceedance Frequencies for Beaches*

Constituent	Wet Weather Days		Dry Weather Days	
	Single Sample Maximum <sup>a,b</sup> (MPN/100mL)	Single Sample Maximum Allowable Exceedance Frequency <sup>c</sup>	30-Day Geometric Mean <sup>b</sup> (MPN/100mL)	30-Day Geometric Mean Allowable Exceedance Frequency
Total Coliform	10,000	22%	1,000	0%
Fecal Coliform	400	22%	200	0%
<i>Enterococcus</i>	104	22%	35	0%

Notes:

- a. During wet weather days, only the single sample maximum receiving water limitations are required to be achieved.
- b. During dry weather days, the single sample maximum and 30-day geometric mean receiving water limitations are required to be achieved.
- c. The 22% single sample maximum allowable exceedance frequency only applies to wet weather days. For dry weather days, the dry weather bacteria densities must be consistent with the single sample maximum REC-1 water quality objectives in the Ocean Plan.

**Table 6.2b**

*Final Receiving Water Limitations Expressed as Bacteria Densities and Allowable Exceedance Frequencies for Creeks*

Constituent	Wet Weather Days		Dry Weather Days	
	Single Sample Maximum <sup>a,b</sup> (MPN/100mL)	Single Sample Maximum Allowable Exceedance Frequency <sup>c</sup>	30-Day Geometric Mean <sup>b</sup> (MPN/100mL)	30-Day Geometric Mean Allowable Exceedance Frequency
Fecal Coliform	400	22%	200	0%
<i>Enterococcus</i>	61 (104)	22%	33	0%

Notes:

- a. During wet weather days, only the single sample maximum receiving water limitations are required to be achieved.
- b. During dry weather days, the single sample maximum and 30-day geometric mean receiving water limitations are required to be achieved.
- c. The 22% single sample maximum allowable exceedance frequency only applies to wet weather days. For dry weather days, the dry weather bacteria densities must be consistent with the single sample maximum REC-1 water quality objectives in the Basin Plan.
- d. A single sample maximum of 104 MPN/100ml for *Enterococcus* may be applied as a receiving water limitation for creeks, instead of 61 MPN/100mL, if one or more of the creeks addressed by these TMDLs (San Juan Creek, Aliso Creek, Tecolote Creek, Forrester Creek, San Diego River, and/or Chollas Creek) is designated with a “moderately to lightly used area” or less frequent usage frequency in the Basin Plan. Otherwise, the single sample maximum of 61 MPN/100mL for *Enterococcus* must be used to assess compliance with the allowable exceedance frequency.

## (b) Final Effluent Limitations

- (i) Discharges from the MS4s containing indicator bacteria densities that do not exceed the following effluent limitations by the compliance dates under Specific Provision 6.c.(1) will not cause or contribute to exceedances of the receiving water limitations under Specific Provision 6.b.(2)(a):

**Table 6.2c**

*Final Effluent Limitations Expressed as Bacteria Densities and Allowable Exceedance Frequencies in MS4 Discharges to the Water Body*

Constituent	Concentration-Based Effluent Limitations			
	Single Sample Maximum <sup>a,b</sup> (MPN/100mL)	Single Sample Maximum Allowable Exceedance Frequency <sup>c</sup>	30-Day Geometric Mean <sup>b</sup> (MPN/100mL)	30-Day Geometric Mean Allowable Exceedance Frequency
Total Coliform <sup>d</sup>	10,000	22%	1,000	0%
Fecal Coliform	400	22%	200	0%
<i>Enterococcus</i>	104 <sup>e</sup> / 61 <sup>f</sup>	22%	35 <sup>e</sup> / 33 <sup>f</sup>	0%

## Notes:

- During wet weather days, only the single sample maximum effluent limitations are required to be achieved.
- During dry weather days, the single sample maximum and 30-day geometric mean effluent limitations are required to be achieved.
- The 22% single sample maximum allowable exceedance frequency only applies to wet weather days. For dry weather days, the dry weather bacteria densities must be consistent with the single sample maximum REC-1 water quality objectives in the Ocean Plan for discharges to beaches, and the Basin Plan for discharges to creeks and creek mouths.
- Total coliform effluent limitations only apply to MS4 outfalls that discharge to the Pacific Ocean Shorelines and creek mouths listed in Table 6.0.
- This *Enterococcus* effluent limitation applies to MS4 discharges to segments of areas of Pacific Ocean Shoreline listed in Table 6.0.
- This *Enterococcus* effluent limitation applies to MS4 discharges to segments or areas of creeks or creek mouths listed in Table 6.0.

- (ii) Indicator bacteria percent load reductions from the Responsible Copermittees' MS4s that are greater than or equal to the following effluent limitations by the compliance dates under Specific Provision 6.b.(1) will not cause or contribute to exceedances of the receiving water limitations under Specific Provision 6.b.(2)(a):

**Table 6.3**

*Final Effluent Limitations Expressed as Percent Load Reductions\* in MS4 Discharges to the Water Body*

Watershed Management Areas	Watershed and Water Bodies	Load-Based Effluent Limitations					
		Dry Weather			Wet Weather		
		Total Coliform	Fecal Coliform	Enterococcus	Total Coliform	Fecal Coliform	Enterococcus
South Orange County	San Joaquin Hills HSA (901.11) and Laguna Hills HSA (901.12) - Pacific Ocean Shoreline	91.78%	91.72%	98.28%	46.85%	52.07%	51.26%
	Aliso HSA (901.13) - Pacific Ocean Shoreline - Aliso Creek - Aliso Creek mouth	95.47%	95.58%	99.13%	25.29%	26.62%	27.52% (27.37%)**
	Dana Point HSA (901.14) - Pacific Ocean Shoreline	95.04%	95.03%	98.98%	13.15%	14.86%	15.16%
	Lower San Juan HSA (901.27) - Pacific Ocean Shoreline - San Juan Creek - San Juan Creek mouth	72.96%	74.21%	94.94%	19.21%	12.82%	27.12% (26.90%)**
	San Clemente HA (901.30) - Pacific Ocean Shoreline	94.28%	94.23%	98.83%	23.85%	24.58%	25.26%
San Luis Rey River	San Luis Rey HU (903.00) - Pacific Ocean Shoreline	38.13%	39.09%	87.38%	5.62%	3.12%	11.69%

**Table 6.3 (Cont'd)***Final Effluent Limitations Expressed as Percent Load Reductions\* in  
MS4 Discharges to the Water Body*

Watershed Management Areas	Watershed and Water Bodies	Load-Based Effluent Limitations					
		Dry Weather			Wet Weather		
		Total Coliform	Fecal Coliform	Enterococcus	Total Coliform	Fecal Coliform	Enterococcus
Carlsbad	San Marcos HA (904.50)	82.82%	82.55%	96.03%	18.47%	18.98%	20.19%
	- Pacific Ocean Shoreline						
San Dieguito River	San Dieguito HU (905.00)	14.39%	20.72%	83.48%	4.29%	1.46%	7.72%
	- Pacific Ocean Shoreline						
Penasquitos	Miramar Reservoir HA (906.10)	96.50%	96.59%	99.42%	1.61%	1.99%	1.93%
	- Pacific Ocean Shoreline						
Mission Bay	Scripps HA (906.30)	96.44%	96.42%	99.25%	16.32%	21.14%	18.82%
	- Pacific Ocean Shoreline						
	Tecolote HA (906.50)	94.51%	94.59%	98.94%	16.51%	20.47%	18.15% (18.08%)**
	- Tecolote Creek						
San Diego River	Mission San Diego HSA (907.11) and Santee HSA (907.12)	74.03%	69.44%	93.96%	38.14%	53.22%	42.74% (42.47%)**
	- Pacific Ocean Shoreline						
	- Forrester Creek (lower 1 mile) - San Diego River (lower 6 miles)						
San Diego Bay	Chollas HSA (908.22)	92.06%	92.15%	98.46%	17.82%	24.84%	21.46% (21.36%)**
	- Chollas Creek						

## Notes:

\* The percent load reductions are based on reducing loads compared to pollutant loads from 2001 to 2002.

\*\* The alternative *Enterococcus* percent load reduction was calculated based on a numeric target of 104 MPN/100mL instead of 61 MPN/100mL, protective of the REC-1 "moderately to lightly used area" usage frequency that is protective of freshwater creeks and downstream beaches. Acceptable evidence that impaired freshwater creeks can be considered "moderately to lightly used areas" must be provided before these alternative pollutant load reductions can be utilized.

(c) Best Management Practices

- (i) The Water Quality Improvement Plans for the applicable Watershed Management Areas in Table 6.0 must incorporate the Bacteria Load Reduction Plans (BLRPs) or Comprehensive Load Reduction Plans (CLRPs) required to be developed pursuant to Resolution No. R9-2010-0001.
- (ii) The Responsible Copermittee must implement BMPs to achieve the receiving water limitations under Specific Provision 6.b.(2)(a) and/or the effluent limitations under Specific Provision 6.b.(2)(b) for the segments or areas of the water bodies listed in Table 6.0.
- (iii) The Responsible Copermittees should coordinate any BMPs implemented to address this TMDL with Caltrans, owners/operators of small MS4s, and agricultural dischargers as possible.

(3) Final TMDL Compliance Determination

Compliance with the final WQBELs, on or after the final TMDL compliance dates, may be demonstrated via one of the following methods:

- (a) There is no direct or indirect discharge from the Responsible Copermittee's MS4s to the receiving water; OR
- (b) There are no exceedances of the final receiving water limitations under Specific Provision 6.b.(2)(a) in the receiving water at, or downstream of the Responsible Copermittee's MS4 outfalls; OR
- (c) There are no exceedances of the final effluent limitations under Specific Provision 6.b.(2)(b)(i) at the Responsible Copermittee's MS4 outfalls; OR
- (d) The pollutant load reductions for discharges from the Responsible Copermittees' MS4 outfalls are greater than or equal to the final effluent limitations under Specific Provision 6.b.(2)(b)(ii); OR
- (e) The Responsible Copermittees can demonstrate that exceedances of the final receiving water limitations under Specific Provision 6.b.(2)(a) in the receiving water are due to loads from natural sources, AND pollutant loads from the Copermittees' MS4s are not causing or contributing to the exceedances; OR
- (f) The Responsible Copermittees develop and implement the Water Quality Improvement Plan as follows:
  - (i) Incorporate the BMPs required under Specific Provision 6.b.(2)(c) as part of the Water Quality Improvement Plan,

- (ii) Include an analysis in the Water Quality Improvement Plan, utilizing a watershed model or other watershed analytical tools, to demonstrate that the implementation of the BMPs required under Provision 6.b.(2)(c) achieves compliance with Specific Provisions 6.b.(3)(a), 6.b.(3)(b), 6.b.(3)(c), 6.b.(3)(d), and/or 6.b.(3)(e),
- (iii) The results of the analysis must be accepted by the San Diego Water Board as part of the Water Quality Improvement Plan,
- (iv) The Responsible Copermittees continue to implement the BMPs required under Specific Provision 6.b.(2)(c), AND
- (v) The Responsible Copermittees continue to perform the specific monitoring and assessments specified in Specific Provision 6.d, to demonstrate compliance with Specific Provisions 6.b.(3)(a), 6.b.(3)(b), 6.b.(3)(c), 6.b.(3)(d), 6.b.(3)(e) and/or 6.b.(3)(f).

#### **c. INTERIM TMDL COMPLIANCE REQUIREMENTS**

The interim indicator bacteria TMDL compliance requirements for the water bodies listed in Table 6.0 consist of the following:

##### (1) Interim TMDL Compliance Dates

The Responsible Copermittees must achieve compliance with the interim TMDL compliance requirements, as determined in accordance with Specific Provision 6.c.(3), by the interim compliance dates given in Table 6.4, unless alternative interim compliance dates are accepted by the San Diego Water Board Executive Officer as part of the Water Quality Improvement Plan.

**Table 6.4**  
*Interim Compliance Dates to Achieve Interim TMDL Compliance Requirements*

Watershed Management Area and Watershed	Water Body	Segment or Area	Interim Compliance Dates	
			Interim Dry Weather WQBELs	Interim Wet Weather WQBELs*
South Orange County  San Joaquin Hills HSA (901.11) and Laguna Beach HSA (901.12)	Pacific Ocean Shoreline	Cameo Cove at Irvine Cove Drive – Riviera Way	April 4, 2016	April 4, 2021 (April 4, 2016)
		at Heisler Park - North		
	Pacific Ocean Shoreline	at Main Laguna Beach	April 4, 2016	April 4, 2021 (April 4, 2016)
		Laguna Beach at Ocean Avenue		
		Laguna Beach at Cleo Street		
	Arch Cove at Bluebird Canyon Road			
	Laguna Beach at Dumond Drive			
South Orange County  Aliso HSA (901.13)	Pacific Ocean Shoreline	Laguna Beach at Lagunita Place / Blue Lagoon Place at Aliso Beach	April 4, 2016	April 4, 2021 (April 4, 2016)
	Aliso Creek	Entire reach (7.2 miles) and associated tributaries: - Aliso Hills Channel - English Canyon Creek - Dairy Fork Creek - Sulfur Creek - Wood Canyon Creek	April 4, 2018	April 4, 2021 (April 4, 2018)
	Aliso Creek Mouth	at mouth	April 4, 2018	April 4, 2021 (April 4, 2018)
South Orange County  Dana Point HSA (901.14)	Pacific Ocean Shoreline	Aliso Beach at West Street	April 4, 2016	April 4, 2021 (April 4, 2016)
		Aliso Beach at Table Rock Drive		
		100 Steps Beach at Pacific Coast Hwy at hospital (9 <sup>th</sup> Avenue)		
		at Salt Creek (large outlet)		
		Salt Creek Beach at Salt Creek service road	April 4, 2017	April 4, 2021 (April 4, 2017)
		Salt Creek Beach at Strand Road	April 4, 2017	April 4, 2021 (April 4, 2017)

**Table 6.4 (Cont'd)**  
*Interim Compliance Dates to Achieve Interim WQBELs*

Watershed Management Area and Watershed	Water Body	Segment or Area	Interim Compliance Dates	
			Interim Dry Weather WQBELs	Interim Wet Weather WQBELs*
<b>South Orange County</b> Lower San Juan HSA (901.27)	Pacific Ocean Shoreline	at San Juan Creek	April 4, 2016	April 4, 2021 (April 4, 2016)
	San Juan Creek	lower 1 mile	April 4, 2018	April 4, 2021 (April 4, 2018)
	San Juan Creek Mouth	at mouth	April 4, 2016	April 4, 2021 (April 4, 2016)
<b>South Orange County</b> San Clemente HA (901.30)	Pacific Ocean Shoreline	at Poche Beach	April 4, 2016	April 4, 2021 (April 4, 2016)
		Ole Hanson Beach Club Beach at Pico Drain	April 4, 2016	April 4, 2021 (April 4, 2016)
		San Clemente City Beach at El Portal Street Stairs	April 4, 2017	April 4, 2021 (April 4, 2017)
		San Clemente City Beach at Mariposa Street		
		San Clemente City Beach at Linda Lane	April 4, 2016	April 4, 2021 (April 4, 2016)
		San Clemente City Beach at South Linda Lane	April 4, 2018	April 4, 2021 (April 4, 2018)
		San Clemente City Beach at Lifeguard Headquarters	April 4, 2017	April 4, 2021 (April 4, 2017)
		under San Clemente Municipal Pier		
		San Clemente City Beach at Trafalgar Canyon (Trafalgar Lane)	April 4, 2018	April 4, 2021 (April 4, 2018)
		San Clemente State Beach at Riviera Beach	April 4, 2016	April 4, 2021 (April 4, 2016)
San Clemente State Beach at Cypress Shores	April 4, 2017	April 4, 2021 (April 4, 2017)		
<b>San Luis Rey River</b> San Luis Rey HU (903.00)	Pacific Ocean Shoreline	at San Luis Rey River mouth	April 4, 2017	April 4, 2021 (April 4, 2017)
<b>Carlsbad</b> San Marcos HA (904.50)	Pacific Ocean Shoreline	at Moonlight State Beach	April 4, 2016	April 4, 2021 (April 4, 2016)
<b>San Dieguito River</b> San Dieguito HU (905.00)	Pacific Ocean Shoreline	at San Dieguito Lagoon mouth	April 4, 2016	April 4, 2021 (April 4, 2016)

**Table 6.4 (Cont'd)**  
*Interim Compliance Dates to Achieve Interim WQBELs*

Watershed Management Area and Watershed			Interim Compliance Dates	
Water Body	Segment or Area	Interim Dry Weather WQBELs	Interim Wet Weather WQBELs*	
<b>Penasquitos</b> Miramar Reservoir HA (906.10)	Pacific Ocean Shoreline Torrey Pines State Beach at Del Mar (Anderson Canyon)	April 4, 2016	April 4, 2021 (April 4, 2016)	
<b>Mission Bay</b> Scripps HA (906.30)	La Jolla Shores Beach at El Paseo Grande	April 4, 2016	April 4, 2021 (April 4, 2016)	
	La Jolla Shores Beach at Caminito del Oro			
	La Jolla Shores Beach at Vallecitos			
	La Jolla Shores Beach at Avenida de la Playa			
	at Casa Beach, Children's Pool			
	South Casa Beach at Coast Boulevard			
	Whispering Sands Beach at Ravina Street			
	Windansea Beach at Vista de la Playa			
	Windansea Beach at Bonair Street			
	Windansea Beach at Playa del Norte			
	Windansea Beach at Palomar Avenue			
	at Tourmaline Surf Park			
at Pacific Beach at Grand Avenue				
<b>Mission Bay</b> Tecolote HA (906.50)	Tecolote Creek Entire reach and tributaries			
<b>San Diego River</b> Mission San Diego HSA (907.11) and Santee HSA (907.12)	Forrester Creek lower 1 mile	April 4, 2018	April 4, 2021 (April 4, 2018)	
	San Diego River lower 6 miles			
	Pacific Ocean Shoreline at San Diego River mouth at Dog Beach			
<b>San Diego Bay</b> Chollas HSA (908.22)	Chollas Creek lower 1.2 miles	April 4, 2018	April 4, 2021 (April 4, 2018)	

\* The Interim Compliance Dates to achieve the Interim Wet Weather WQBELs in parenthesis apply if the applicable Water Quality Improvement Plan does not include load reduction programs for other constituents (e.g. metals, pesticides, trash, nutrients, sediment, etc.) together with bacteria load reduction requirements of these TMDLs.

## (2) Interim Water Quality Based Effluent Limitations

The Responsible Copermittees for discharges to the water bodies in Table 6.0 must comply with the following interim WQBELs by the interim compliance dates given in Specific Provision 6.c.(1):

### (a) Interim Receiving Water Limitations

#### (i) *Interim Dry Weather Receiving Water Limitations*

The Responsible Copermittee must calculate the “existing” exceedance frequencies of the 30-day geometric mean water quality objectives for each of the indicator bacteria by analyzing the available monitoring data collected between January 1, 1996 and December 31, 2002. “Existing” exceedance frequencies may be calculated by water body and/or by Watershed Management Area listed in Table 6.0. Separate “existing” exceedance frequencies must be calculated for beaches and creeks/creek mouths.

The Responsible Copermittees must achieve a 50 percent reduction in the “existing” exceedance frequency of the 30-day geometric mean WQBELs for the water bodies listed in Table 6.0 by the interim compliance dates given in Table 6.4. A 50 percent reduction in the “existing” exceedance frequency is equivalent to half of the “existing” exceedance frequency of the 30-day geometric mean WQBELs.

The “existing” exceedance frequencies and the interim dry weather allowable exceedance frequencies (i.e. interim dry weather receiving water limitations) calculated by the Responsible Copermittees must be included in the Water Quality Improvement Plans for the applicable Watershed Management Areas.

(ii) *Interim Wet Weather Receiving Water Limitations*

The Responsible Copermitees must achieve the interim wet weather receiving water limitations in Table 6.5, expressed as interim wet weather allowable exceedance frequencies, by the interim compliance dates given in Table 6.4.

**Table 6.5**  
*Interim Wet Weather Receiving Water Limitations Expressed as Interim Wet Weather Allowable Exceedance Frequencies*

Watershed Management Area and Watershed		Interim Wet Weather Allowable Exceedance Frequencies			
Water Body	Segment or Area	Total Coliform	Fecal Coliform	Enterococcus	
<b>South Orange County</b>  San Joaquin Hills HSA (901.11) and Laguna Beach HSA (901.12)	Pacific Ocean Shoreline	38%	37%	39%	
	Cameo Cove at Irvine Cove Drive – Riviera Way				
	at Heisler Park - North				
	at Main Laguna Beach				
	Laguna Beach at Ocean Avenue				
	Laguna Beach at Cleo Street				
<b>South Orange County</b>  Aliso HSA (901.13)	Pacific Ocean Shoreline	41%	41%	42%	
	Laguna Beach at Lagunita Place / Blue Lagoon Place at Aliso Beach				
	Entire reach (7.2 miles) and associated tributaries: - Aliso Hills Channel - English Canyon Creek - Dairy Fork Creek - Sulfur Creek - Wood Canyon Creek				
Aliso Creek Mouth	at mouth	41%	41%	42%	
<b>South Orange County</b>  Dana Point HSA (901.14)	Pacific Ocean Shoreline	36%	36%	36%	
					Aliso Beach at West Street
					Aliso Beach at Table Rock Drive
					100 Steps Beach at Pacific Coast Hwy at hospital (9 <sup>th</sup> Avenue)
					at Salt Creek (large outlet)
					Salt Creek Beach at Salt Creek service road
Salt Creek Beach at Strand Road					

**Table 6.5 (Cont'd)**  
*Interim Wet Weather Receiving Water Limitations Expressed as  
 Interim Wet Weather Allowable Exceedance Frequencies*

Watershed Management Area and Watershed	Water Body	Segment or Area	Interim Wet Weather Allowable Exceedance Frequencies		
			Total Coliform	Fecal Coliform	Enterococcus
<b>South Orange County</b>  Lower San Juan HSA (901.27)	Pacific Ocean Shoreline	at San Juan Creek	44%	44%	48%
	San Juan Creek	lower 1 mile	44%	44%	47%
	San Juan Creek Mouth	at mouth	44%	44%	47%
<b>South Orange County</b>  San Clemente HA (901.30)	Pacific Ocean Shoreline	at Poche Beach	35%	35%	36%
		Ole Hanson Beach Club Beach at Pico Drain			
		San Clemente City Beach at El Portal Street Stairs			
		San Clemente City Beach at Mariposa Street			
		San Clemente City Beach at Linda Lane			
		San Clemente City Beach at South Linda Lane			
		San Clemente City Beach at Lifeguard Headquarters			
		under San Clemente Municipal Pier			
		San Clemente City Beach at Trafalgar Canyon (Trafalgar Lane)			
		San Clemente State Beach at Riviera Beach			
		San Clemente State Beach at Cypress Shores			
<b>San Luis Rey River</b>  San Luis Rey HU (903.00)	Pacific Ocean Shoreline	at San Luis Rey River mouth	45%	44%	47%
<b>Carlsbad</b>  San Marcos HA (904.50)	Pacific Ocean Shoreline	at Moonlight State Beach	40%	40%	41%
<b>San Dieguito River</b>  San Dieguito HU (905.00)	Pacific Ocean Shoreline	at San Dieguito Lagoon mouth	33%	33%	36%

**Table 6.5** (Cont'd)  
*Interim Wet Weather Receiving Water Limitations Expressed as  
Interim Wet Weather Allowable Exceedance Frequencies*

Watershed Management Area and Watershed		Water Body	Segment or Area	Interim Wet Weather Allowable Exceedance Frequencies		
				Total Coliform	Fecal Coliform	Enterococcus
<b>Penasquitos</b>						
Miramar Reservoir HA (906.10)	Pacific Ocean Shoreline	Torrey Pines State Beach at Del Mar (Anderson Canyon)	26%	26%	26%	
<b>Mission Bay</b>		Pacific Ocean Shoreline	La Jolla Shores Beach at El Paseo Grande	37%	37%	37%
Scripps HA (906.30)	La Jolla Shores Beach at Caminito del Oro					
	La Jolla Shores Beach at Vallecitos					
	La Jolla Shores Beach at Avenida de la Playa					
	at Casa Beach, Children's Pool					
	South Casa Beach at Coast Boulevard					
	Whispering Sands Beach at Ravina Street					
	Windansea Beach at Vista de la Playa					
	Windansea Beach at Bonair Street					
	Windansea Beach at Playa del Norte					
	Windansea Beach at Palomar Avenue					
	at Tourmaline Surf Park					
	Pacific Beach at Grand Avenue					
<b>Mission Bay</b>						
Tecolote HA (906.50)	Tecolote Creek	Entire reach and tributaries	49%	49%	51%	
<b>San Diego River</b>						
	Forrester Creek	lower 1 mile	46%	43%	49%	
	San Diego River	lower 6 miles	46%	43%	49%	
Mission San Diego HSA (907.11) and Santee HSA (907.12)	Pacific Ocean Shoreline	at San Diego River mouth at Dog Beach	46%	43%	51%	
<b>San Diego Bay</b>						
Chollas HSA (908.22)	Chollas Creek	lower 1.2 miles	41%	41%	43%	

(b) Interim Effluent Limitations

Indicator bacteria percent load reductions from the Responsible Copermittees' MS4s that are greater than or equal to the following effluent limitations by the interim compliance dates under Specific Provision 6.c.(1) will not cause or contribute to exceedances of the receiving water limitations under Specific Provision 6.c.(2)(a):

**Table 6.6**  
*Interim Effluent Limitations Expressed as Percent Load Reductions\* in MS4 Discharges to the Water Body*

Watershed Management Areas	Watersheds and Water Bodies	Load-Based Effluent Limitations					
		Dry Weather			Wet Weather		
		Total Coliform	Fecal Coliform	Enterococcus	Total Coliform	Fecal Coliform	Enterococcus
South Orange County	San Joaquin Hills HSA (901.11) and Laguna Hills HSA (901.12) - Pacific Ocean Shoreline	45.89%	45.86%	49.14%	23.43%	26.04%	25.63%
	Aliso HSA (901.13) - Pacific Ocean Shoreline - Aliso Creek - Aliso Creek mouth	47.74%	47.79%	49.57%	12.65%	13.31%	13.76% (13.69%)**
	Dana Point HSA (901.14) - Pacific Ocean Shoreline	47.52%	47.52%	49.49%	6.58%	7.43%	7.58%
	Lower San Juan HSA (901.27) - Pacific Ocean Shoreline - San Juan Creek - San Juan Creek mouth	36.48%	37.11%	47.47%	9.61%	6.41%	13.56% (13.45%)**
	San Clemente HA (901.30) - Pacific Ocean Shoreline	47.14%	47.12%	49.42%	11.93%	12.29%	12.63%
San Luis Rey River	San Luis Rey HU (903.00) - Pacific Ocean Shoreline	19.07%	19.55%	43.69%	2.81%	1.56%	5.85%
Carlsbad	San Marcos HA (904.50) - Pacific Ocean Shoreline	41.41%	41.28%	48.02%	9.24%	9.49%	10.10%

**Table 6.6 (Cont'd)**  
*Interim Effluent Limitations Expressed as Percent Load Reductions\* in MS4 Discharges to the Water Body*

Watershed Management Areas	Watersheds and Water Bodies	Load-Based Effluent Limitations					
		Dry Weather			Wet Weather		
		Total Coliform	Fecal Coliform	Enterococcus	Total Coliform	Fecal Coliform	Enterococcus
San Dieguito River	San Dieguito HU (905.00)	7.20%	10.36%	41.74%	2.15%	0.73%	3.86%
	- Pacific Ocean Shoreline						
Penasquitos	Miramar Reservoir HA (906.10)	48.25%	48.30%	49.71%	0.81%	1.00%	0.97%
	- Pacific Ocean Shoreline						
Mission Bay	Scripps HA (906.30)	48.22%	48.21%	49.63%	8.16%	10.57%	9.41%
	- Pacific Ocean Shoreline						
	Tecolote HA (906.50)	47.26%	47.30%	49.47%	8.26%	10.24%	9.08% (9.04%)**
	- Tecolote Creek						
San Diego River	Mission San Diego HSA (907.11) and Santee HSA (907.12)	37.02%	34.72%	46.98%	19.07%	26.61%	21.37% (21.24%)**
	- Pacific Ocean Shoreline - Forrester Creek (lower 1 mile) - San Diego River (lower 6 miles)						
San Diego Bay	Chollas HSA (908.22)	46.03%	46.08%	49.23%	8.91%	12.42%	10.73% (10.68%)**
	- Chollas Creek						

## Notes:

\* The percent load reductions are based on reducing loads compared to pollutant loads from 2001 to 2002.

\*\* The alternative *Enterococcus* percent load reduction was calculated based on a numeric target of 104 MPN/100mL instead of 61 MPN/100mL, protective of the REC-1 "moderately to lightly used area" usage frequency that is protective of freshwater creeks and downstream beaches. Acceptable evidence that impaired freshwater creeks can be considered "moderately to lightly used areas" must be provided before these alternative pollutant load reductions can be utilized.

### (3) Interim TMDL Compliance Determination

Compliance with the interim WQBELs, on or after the interim TMDL compliance dates, may be demonstrated via one of the following methods:

- (a) There is no direct or indirect discharge from the Responsible Copermitee's MS4s to the receiving water; OR

- (b) There are no exceedances of the final receiving water limitations under Specific Provision 6.b.(2)(a) in the receiving water at, or downstream of the Responsible Copermittee's MS4 outfalls; OR
- (c) There are no exceedances of the final effluent limitations under Specific Provision 6.b.(2)(b)(i) at the Responsible Copermittee's MS4 outfalls; OR
- (d) The pollutant load reductions for discharges from the Responsible Copermittees' MS4 outfalls are greater than or equal to the final effluent limitations under Specific Provision 6.b.(2)(b)(ii); OR
- (e) The Responsible Copermittees can demonstrate that exceedances of the final receiving water limitations under Specific Provision 6.b.(2)(a) in the receiving water are due to loads from natural sources, AND pollutant loads from the Copermittees' MS4s are not causing or contributing to the exceedances; OR
- (f) There are no exceedances of the interim receiving water limitations under Specific Provision 6.c.(2)(a) in the receiving water at, or downstream of the Responsible Copermittees' MS4 outfalls; OR
- (g) The pollutant load reductions for discharges from the Responsible Copermittees' MS4 outfalls are greater than or equal to the interim effluent limitations under Specific Provision 6.c.(2)(b); OR
- (h) The Responsible Copermittees have submitted and are fully implementing a Water Quality Improvement Plan, accepted by the San Diego Water Board, which provides reasonable assurance that the interim TMDL compliance requirements will be achieved by the interim compliance dates.

#### **d. SPECIFIC MONITORING AND ASSESSMENT REQUIREMENTS**

##### **(1) Monitoring and Assessment Requirements for Beaches**

###### **(a) Monitoring Stations**

For beaches addressed by the TMDL, monitoring locations should consist of, at a minimum, the same locations used to collect data required pursuant to Order Nos. R9-2007-0001 and R9-2009-0002, and beach monitoring for Health and Safety Code section 115880.<sup>40</sup> If exceedances of the applicable interim or final receiving water limitations are observed in the monitoring data, additional monitoring locations and/or other source

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<sup>40</sup> Commonly referred to as AB 411 monitoring

identification methods must be implemented to identify the sources causing the exceedances. The additional monitoring locations must also be used to demonstrate that the bacteria loads from the identified anthropogenic sources have been addressed and are no longer causing exceedances in the receiving waters.

(b) Monitoring Procedures

- (i) The Responsible Copermittees must collect dry weather monitoring samples from the receiving water monitoring stations at least monthly. Dry weather samples collected from additional monitoring stations established to identify sources must be collected at an appropriate frequency to demonstrate bacteria loads from the identified sources have been addressed and are no longer causing exceedances in the receiving waters.
- (ii) The Responsible Copermittees must collect wet weather monitoring samples from the receiving water monitoring stations at least once within the first 24 hours of the end of a storm event<sup>41</sup> during the rainy season (i.e. October 1 through April 30). Wet weather samples collected from receiving water stations and any additional monitoring stations established to identify sources must be collected at an appropriate frequency to demonstrate bacteria loads from the identified sources have been addressed and are no longer in exceedance of the allowable exceedance frequencies in the receiving waters.
- (iii) Samples must be analyzed for total coliform, fecal coliform, and *Enterococcus* indicator bacteria.
- (iv) For Pacific Ocean Shoreline segments or areas listed in Table 6.0 that have been de-listed from the Clean Water Act Section 303(d) List, the Responsible Copermittees may propose alternative monitoring procedures to demonstrate that the water bodies continue to remain in compliance with water quality standards under wet weather and dry weather conditions. The alternative monitoring procedures must be submitted as a part of the Water Quality Improvement Plans or any updates required under Provisions F.1 and F.2.c of the Order.

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<sup>41</sup> Wet weather days are defined by the TMDL as storm events of 0.2 inches or greater and the following 72 hours. The Responsible Copermittees may choose to limit their wet weather sampling requirements to storm events of 0.2 inches or greater, or also include storm events of 0.1 inches or greater as defined by the federal regulations [40CFR122.26(d)(2)(iii)(A)(2)].

(c) Assessment and Reporting Requirements

- (i) The Responsible Copermittees must analyze the dry weather and wet weather monitoring data to assess whether the interim and final WQBELs for the Pacific Ocean Shoreline segments or areas listed in Table 6.0 have been achieved.
- (ii) Dry weather exceedance frequencies must be calculated as follows:
  - [a] 30-day geometric means must be calculated from the results of any dry weather samples collected from the segments or areas for each water body listed in Table 6.0;
  - [b] The method and number of samples need for calculating the 30-day geometric means must be consistent with the number of samples required by the Ocean Plan;
  - [c] Where there are multiple segments or areas associated with a water body listed in Table 6.0, the Copermittees may calculate geometric means for each segment or area, or combine the dry weather monitoring data from all the segments or areas to calculate geometric means for the water body;
  - [d] The exceedance frequency must be calculated by dividing the number of geometric means that exceed the geometric mean receiving water limitations in Table 6.2 by the total number of geometric means calculated from samples collected during the dry season.
- (iii) Wet weather exceedance frequencies must be calculated as follows:
  - [a] If only one sample is collected for a storm event, the bacteria density for every wet weather day associated with that storm event must be assumed to be equal to the results from the one sample collected;
  - [b] If more than one sample is collected for a storm event, but not on a daily basis, the bacteria density for all wet weather days of the storm event not sampled must be assumed to be equal to the highest bacteria density result reported from the samples collected;
  - [c] If there are any storm events not sampled, the bacteria density for every wet weather day of those storm events must be assumed to be equal to the average of the highest bacteria densities reported from each storm event sampled; and
  - [d] The single sample maximum exceedance frequency must be calculated by dividing the number of wet weather days that exceed the single sample maximum receiving water limitations in Table 6.2 by the total number of wet weather days during the rainy season.
  - [e] The data collected for dry weather must be used in addition to the data collected for wet weather to calculate the wet weather 30-

day geometric means. The exceedance frequency of the wet weather 30-day geometric means must be calculated by dividing the number of geometric means that exceed the geometric mean receiving water limitations in Table 6.2 by the total number of geometric means calculated from samples collected during the wet season.

- (iv) For assessing and determining compliance with the concentration-based effluent limitations under Specific Provision 6.b.(2)(b)(i), dry and wet weather discharge bacteria densities may be calculated based on a flow-weighted average across all major MS4 outfalls along a water body segment or within a jurisdiction if samples are collected within a similar time period.
- (v) The monitoring and assessment results must be submitted as part of the Transitional Monitoring and Assessment Program and Water Quality Improvement Plan Annual Reports required under Provision F.3.b of this Order.

## (2) Monitoring and Assessment Requirements for Creeks and Creek Mouths

### (a) Monitoring Stations

For creeks addressed by the TMDL, monitoring locations should consist of, at a minimum, a location at or near the mouth of the creek (e.g. Mass Loading Station or Mass Emission Station) and one or more locations upstream of the mouth (e.g. Watershed Assessment Station). If exceedances of the applicable interim or final receiving water limitations are observed in the monitoring data, additional monitoring locations and/or other source identification methods must be implemented to identify the sources causing the exceedances. The additional monitoring locations must also be used to demonstrate that the bacteria loads from the identified sources have been addressed and are no longer causing exceedances in the receiving waters.

### (b) Monitoring Procedures

- (i) The Responsible Copermittees must collect dry weather monitoring samples from the receiving water monitoring stations in accordance with the requirements of Provision D.
- (ii) The Responsible Copermittees must collect wet weather monitoring samples from the receiving water monitoring stations within the first 24 hours of the end of a storm event<sup>42</sup> during the rainy season (i.e. October 1 through April 30).

<sup>42</sup> Wet weather days are defined by the TMDL as storm events of 0.2 inches or greater and the following 72 hours. The Responsible Copermittees may choose to limit their wet weather sampling requirements to

- (iii) Samples collected from receiving water monitoring stations must be analyzed for fecal coliform and *Enterococcus* indicator bacteria.
- (iv) For creeks or creek mouths listed in Table 6.0 that have been de-listed from the Clean Water Act Section 303(d) List, the Responsible Copermittees may propose alternative monitoring procedures to demonstrate that the water bodies continue to remain in compliance with water quality standards under wet weather and dry weather conditions. The alternative monitoring procedures must be submitted as a part of the Water Quality Improvement Plans or any updates required under Provisions F.1 and F.2.c of the Order.

(c) Assessment and Reporting Requirements

- (i) The Responsible Copermittees must analyze the receiving water monitoring data to assess whether the interim and final receiving water WQBELs for the creeks and creek mouths listed in Table 6.0 have been achieved.
- (ii) Dry weather exceedance frequencies must be calculated as follows:
  - [a] 30-day geometric means must be calculated from the results of any dry weather samples collected from the segment or area for each water body listed in Table 6.0;
  - [b] The method and number of samples need for calculating the 30-day geometric means must be consistent with the number of samples required by the Basin Plan;
  - [c] The exceedance frequency must be calculated by dividing the number of 30-day geometric means that exceed the 30-day geometric mean receiving water limitations in Table 6.2 by the total number of 30-day geometric means calculated from samples collected during the dry season.
- (iii) Wet weather exceedance frequencies must be calculated as follows:
  - [a] If only one sample is collected for a storm event, the bacteria density for every wet weather day associated with that storm event must be assumed to be equal to the results from the one sample collected;
  - [b] If more than one sample is collected for a storm event, but not on a daily basis, the bacteria density for all wet weather days of the storm event not sampled must be assumed to be equal to the highest bacteria density result reported from the samples collected;

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storm events of 0.2 inches or greater, or also include storm events of 0.1 inches or greater as defined by the federal regulations [40CFR122.26(d)(2)(iii)(A)(2)].

- [c] If there are any storm events not sampled, the bacteria density for every wet weather day of those storm events must be assumed to be equal to the average of the highest bacteria densities reported from each of the storm events sampled; and
  - [d] The exceedance frequency must be calculated by dividing the number of wet weather days that exceed the single sample maximum receiving water limitations in Table 6.2 by the total number of wet weather days during the rainy season.
  - [e] The data collected for dry weather must be used in addition to the data collected for wet weather to calculate the wet weather 30-day geometric means. The exceedance frequency of the wet weather 30-day geometric means must be calculated by dividing the number of geometric means that exceed the geometric mean receiving water limitations in Table 6.2 by the total number of geometric means calculated from samples collected during the wet season.
- (iv) The Responsible Copermittee must identify and incorporate additional MS4 outfall and receiving water monitoring stations and/or adjust monitoring frequencies to identify sources causing exceedances of the receiving water WQBELs.
  - (v) For assessing and determining compliance with the concentration-based effluent limitations under Specific Provision 6.b.(2)(b)(i), dry and wet weather discharge bacteria densities may be calculated based on a flow-weighted average across all major MS4 outfalls along a water body segment or within a jurisdiction if samples are collected within a similar time period.
  - (vi) The monitoring and assessment results must be submitted as part of the Transitional Monitoring and Assessment Program and Water Quality Improvement Plan Annual Reports required under Provision F.3.b of this Order.

## 7. Total Maximum Daily Loads for Sediment in Los Peñasquitos Lagoon

### a. APPLICABILITY

- (1) TMDL Basin Plan Amendment: Resolution No. R9-2012-0033
- (2) TMDL Adoption and Approval Dates:
 

San Diego Water Board Adoption Date:	June 13, 2012
State Water Board Approval Date:	January 21, 2014
Office of Administrative Law Approval Date:	July 14, 2014
US EPA Approval Date:	October 30, 2014
- (3) TMDL Effective Date: July 14, 2014
- (4) Watershed Management Area: Peñasquitos
- (5) Water Body: Los Peñasquitos Lagoon
- (6) Responsible Copermittees: County of San Diego, City of San Diego, City of Del Mar, and City of Poway

### b. FINAL TMDL COMPLIANCE REQUIREMENTS

The final sediment TMDL compliance requirements for Los Peñasquitos Lagoon consist of the following:

#### (1) Final TMDL Compliance Date

The Responsible Copermittees must be in compliance with the final TMDL compliance requirements by December 31, 2034.

#### (2) Final Water Quality Based Effluent Limitations

##### (a) Final Receiving Water Limitations

Discharges from the MS4s must not prohibit the sustainable restoration of tidal and non-tidal saltmarsh vegetation of at least 346 acres.

##### (b) Final Effluent Limitations

Discharges from the MS4s containing pollutant loads that do not exceed the following effluent limitations by the compliance date under Provision 7.b(1) will not cause or contribute to a failure of the receiving water condition specified under Specific Provision 7.b.(2)(a):

**Table 7.1**

*Final Effluent Limitations as Expressed as Wet Season Loads in MS4 Discharges to Los Peñasquitos Lagoon\**

Constituent	Effluent Limitation
Sediment	2,580 tons/wet season

\* Final effluent limitations are to be achieved by the following Responsible Parties: County of San Diego, City of San Diego, City of Del Mar, City of Poway, Phase II MS4 permittees, Caltrans, general construction storm water NPDES permittees, and general industrial storm water NPDES permittees.

(c) **Best Management Practices**

- (i) The Water Quality Improvement Plan for the Los Peñasquitos Watershed Management Area must incorporate the Sediment Load Reduction Plan required to be developed pursuant to Resolution No. R9-2012-0033.
- (ii) The Responsible Copermittees must implement BMPs to achieve the receiving water limitations under Specific Provision 7.b.(2)(a) and/or the Copermittee's portion of the effluent limitations under Specific Provision 7.b.(2)(b) for Los Peñasquitos Lagoon.

(3) Final TMDL Compliance Determination

Compliance determination with the final WQBELs, on or after the final TMDL compliance date, may be demonstrated via one of the following methods:

- (a) Successful restoration of 80 percent of the 1973 acreage of tidal and non-tidal lagoon salt marsh (346 acres) as described in Attachment A of Resolution No. R9-2010-0033; OR
- (b) The Responsible Copermittees develop and implement the Water Quality Improvement Plan as follows:
  - (i) Incorporate the BMPs required under Specific Provision 7.b.(2)(c)(ii) and/or other implementation actions to achieve compliance with Specific Provision 7.b.(3)(a) as part of the Water Quality Improvement Plan,
  - (ii) Include an analysis in the Water Quality Improvement Plan, utilizing a watershed model or other watershed analytical tools, to demonstrate that the implementation of the BMPs required under Provision 7.b.(2)(c)(ii) or other implementation actions to achieve compliance with Specific Provision 7.b.(3)(a),
  - (iii) The results of the analysis must be accepted by the San Diego Water Board as part of the Water Quality Improvement Plan,

- (iv) The Responsible Copermittees continue to implement the BMPs required under Specific Provision 7.b.(2)(c)(ii) or other implementation actions, AND
- (v) The Responsible Copermittees continue to perform the specific monitoring and assessments specified in Specific Provision 7.d to demonstrate compliance with Specific Provision 7.b.(3)(a).

### c. INTERIM TMDL COMPLIANCE REQUIREMENTS

The interim sediment TMDL compliance requirements for Los Peñasquitos Lagoon consist of the following:

#### (1) Interim Compliance Dates and WQBELs

The Responsible Copermittees must comply with the interim WQBELs, expressed as wet season loads, by December 31 of the interim compliance year set forth in Table 7.2.

**Table 7.2**

*Interim Water Quality Based Effluent Limitations Expressed as Wet Season Loads in MS4 Discharges\**

Interim Compliance Date	Interim Effluent Limitations (tons/wet season)
December 31, 2019	6,691
December 31, 2023	5,663
December 31, 2027	4,636
December 31, 2029	3,608

\* Interim effluent limitations are to be achieved by the following Responsible Parties: County of San Diego, City of San Diego, City of Del Mar, City of Poway, Phase II MS4 permittees, Caltrans, general construction storm water NPDES permittees, and general industrial storm water NPDES permittees.

#### (2) Interim TMDL Compliance Determination

Compliance with interim WQBELs, on or after the interim TMDL compliance dates, may be demonstrated via one of the following methods:

- (a) There is no direct or indirect discharge from the Responsible Copermittee's MS4s to the receiving water; OR
- (b) The final receiving water limitation under Specific Provision 7.b.(2)(a) is met; OR
- (c) There are no exceedances of the Copermittee's portion of interim effluent limitations under Table 7.2 at the Responsible Copermittee's MS4 outfalls; OR

- (d) The Responsible Copermittees have submitted and is fully implementing a Water Quality Improvement Plan, accepted by the San Diego Water Board, which provides reasonable assurance that the Copermittee's portion of the interim TMDL compliance requirements described in Attachment A of Resolution No. R9-2010-0033 will be achieved by the interim compliance date.

**d. SPECIFIC MONITORING AND ASSESSMENT REQUIREMENTS**

(1) Watershed Monitoring

The Responsible Copermittees must conduct suspended sediment, bed load, and flow monitoring to calculate total sediment loading to the Los Peñasquitos Lagoon for each wet season (October 1 thru April 30) as set forth below:

- (a) The Responsible Copermittees must monitor enough storm events throughout the season to quantify sediment loading over each wet season, and
- (b) The Responsible Copermittees must monitor at least 3 stations to quantify cumulative sediment loading into Los Peñasquitos Lagoon. Stations must be located within the Los Peñasquitos, Carroll Canyon, and Carmel Creek tributaries prior to discharging into Los Peñasquitos Lagoon.

(2) Lagoon Monitoring

The Responsible Copermittees must monitor Los Peñasquitos Lagoon each Fall for changes in the extent of the vegetation types as set forth below:

- (a) The Responsible Copermittees must acquire aerial photos of Los Peñasquitos Lagoon and digitize them at an approximate scale of 1:2,500,
- (b) The Responsible Copermittees must appropriately interpret the vegetation and classify the various types as saltmarsh, non-tidal saltmarsh, freshwater marsh, non-tidal saltmarsh –*Lolium perrene* infested, southern willow scrub/mulefat scrub, herbaceous wetland, or upland land cover.

(3) Assessment and Reporting Requirements

- (a) The Responsible Copermittees must analyze the monitoring data collected under Specific Provision 7.d(1) and 7.d(2) to assess whether the interim and final WQBELs have been achieved.
- (b) For assessing and determining compliance with the final receiving water limitations under Specific Provision 7.b.(2)(a), the Responsible Copermittees must use the data acquired under Specific Provision 7.d.(2) to estimate the acreage of tidal and non-tidal saltmarsh actually restored.

- (c) For assessing and determining compliance with the final effluent limitations under Specific Provision 7.b.(2)(b), the Responsible Copermittees must use the data acquired under Specific Provision 7.d.(1) to estimate sediment loading into Los Peñasquitos Lagoon. Sediment loading must be evaluated using a 3-year, weighted rolling average. The first reported average shall be calculated using data collected in the year, 2015-2016, 2016-2017, and 2017-2018 wet seasons.
- (d) The monitoring and assessment results must be submitted as part of the Water Quality Improvement Plan Annual Reports required under Provision F.3.b of this Order.

**ATTACHMENT F**

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
SAN DIEGO REGION**

**FACT SHEET / TECHNICAL REPORT**

**FOR**

**ORDER NO. R9-2013-0001  
AS AMENDED BY ORDER NOS. R9-2015-0001 AND R9-2015-0100  
NPDES NO. CAS0109266**

**NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT  
AND WASTE DISCHARGE REQUIREMENTS FOR  
DISCHARGES FROM THE MUNICIPAL SEPARATE STORM SEWER SYSTEMS (MS4s)  
DRAINING THE WATERSHEDS WITHIN THE SAN DIEGO REGION**

**May 8, 2013  
Amended February 11, 2015  
and November 18, 2015**

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## I. FACT SHEET FORMAT

This Fact Sheet briefly sets forth the principal facts and the significant factual, legal, methodological, and policy questions that the California Regional Water Quality Control Board, San Diego Region (San Diego Water Board) considered in preparing Order No. R9-2013-0001 (Order), as amended by Order Nos. R9-2015-0001 and R9-2015-0100. In accordance with the Code of Federal Regulations (CFR) Title 40 Parts 124.8 and 124.56 (40 CFR 124.8 and 40 CFR 124.56), this Fact Sheet includes, but is not limited to, the following information:

1. Contact information
2. Public process and notification procedures
3. Background of municipal storm water permits
4. Regional MS4 Permit approach
5. Economic considerations
6. Applicable statutes, regulations, plans and policies
7. Discussion of the provisions in the Order

Tentative Order No. R9-2013-0001 was distributed for public review on October 31, 2012. The San Diego Water Board accepted written comments on Tentative Order No. R9-2013-0001 until January 11, 2013. A public hearing was subsequently held on April 10 and 11, 2013, that was continued to May 8, 2013 to receive oral comments from interested persons. The San Diego Water Board adopted Order No. R9-2013-0001 on May 8, 2013.

Tentative Order No. R9-2015-0001, an Order amending Order No. R9-2013-0001, was distributed for public review on September 19, 2014. The San Diego Water Board accepted written comments on Tentative Order No. R9-2015-0001 until November 19, 2014. A public hearing was held on February 11, 2015, to receive oral comments from Copermittees and interested persons. The San Diego Water Board adopted Order No. R9-2015-0001 amending Order No. R9-2013-0001 on February 11, 2015. Order No. R9-2015-0001 amended the findings and provisions of Order No. R9-2013-0001 to:

- a. Enroll the County of Orange, the Orange County Flood Control District and the south Orange County Cities of Aliso Viejo, Dana Point, Laguna Beach, Laguna Hills, Laguna Niguel, Laguna Woods, Mission Viejo, Rancho Santa Margarita, San Clemente, and San Juan Capistrano as Copermittees responsible for compliance with the terms and conditions of Order No. R9-2013-0001, as amended by Order No. R9-2015-0001;
- b. Designate the San Diego Water Board to regulate all Phase I MS4 discharges within the jurisdiction of the Cities of Laguna Woods and Laguna Hills and agree to the designation of the Santa Ana Water Board to regulate all Phase I MS4 discharges within the jurisdiction of the City of Lake Forest, subject to the

terms of the February 10, 2015 agreement between San Diego Water Board and the Santa Ana Water Board described in Finding 29 of this Order, upon the later effective date of Order No. R9-2015-0001 or Order No. R8-2015-0001 (superseding Order No. R8-2009-0030);

- c. Establish interim exceptions to land development requirements for those priority development projects that discharge to engineered channels and large river reaches as described in Provision E.3.c.(2)(e) of this Order;
- d. Incorporate the amended requirements of the State Water Resources Control Board's (State Water Board) General Exception to require that pollutant reductions be achieved within 6 years for storm water and nonpoint source discharges to ASBS within the Region;
- e. Incorporate applicable requirements of the Los Peñasquitos Lagoon Sediment TMDL; and
- f. Require the Orange County Copermittees to implement the "*Workgroup Recommendation for a Unified Beach Water Quality Monitoring and Assessment Program in South Orange County*," dated October 2014, made effective in the Monitoring and Reporting Program/Order issued pursuant to California Water Code section 13383 in the December 5, 2014 San Diego Water Board Letter Directive and subject to future revisions by the Executive Officer after appropriate public input.

Tentative Order No. R9-2015-0100, an Order amending Order No. R9-2013-0001 as amended by Order No. R9-2015-0001, was distributed for public review on July 31, 2015. The San Diego Water Board accepted written comments on Tentative Order No. R9-2015-0100 until September 14, 2015. A public hearing was held on November 18, 2015, to receive oral comments from Copermittees and interested persons. The San Diego Water Board adopted Order No. R9-2015-0100 amending Order No. R9-2013-0001 as amended by Order No. R9-2015-0001, on November 18, 2015. Order No. R9-2015-0100 amended the findings and provisions of Order No. R9-2013-0001 as amended by Order No. R9-2015-0001 to:

- a. Enroll the County of Riverside, the Cities of Murrieta, Temecula, and Wildomar, and the Riverside County Flood Control and Water Conservation District as Copermittees responsible for compliance with the terms and conditions of Order No. R9-2013-0001, as amended by Order Nos. R9-2015-0001 and R9-2015-0100;
- b. Continue designation of the San Diego Water Board to regulate Phase I MS4 discharges within the jurisdictions of the Cities of Murrieta and Wildomar, including areas within the Santa Ana Region; and, agree to continue designation of the Santa Ana Water Board to regulate all Phase I MS4 discharges within the jurisdiction of the City of Menifee, including areas within

the San Diego Region, subject to the terms of the October 26, 2015 agreement between San Diego Water Board and the Santa Ana Water Board described in Finding 29 of this Order;

- d. Incorporate Provision B.3.c, which provides an option that allows a Copermittee to utilize the watershed-based Water Quality Improvement Plan to be deemed in compliance with the prohibitions and limitations of Provisions A.1.a, A.1.c, A.1.d, A.2, and A.3.b;
- e. Incorporate minor revisions to Provisions E.2.a.(1) and E.2.a.(2) to include San Diego Water Board Order No. R9-2015-0013 and State Water Board Order 2014-0194-DWQ into the requirements for addressing non-storm water discharges to a Copermittee's MS4;
- e. Incorporate minor revisions to Provision E.3.b.(1) to correct inconsistencies in the definition of a Priority Development Project as compared to the definitions in Order No. R9-2009-0002 (Fourth Term Orange County MS4 Permit) and Order No. R9-2010-0016 (Fourth Term Riverside County MS4 Permit), and requirements for incorporating the corrected definitions into the BMP Design Manual;
- f. Incorporate revisions to Provision E.3.e.(1)(a) to provide additional clarity on when the structural BMP performance requirements of Provision E.3.c are applicable to Priority Development Projects;
- e. Incorporate minor revisions to the Revised TMDLs for Indicator Bacteria, Project I – Twenty Beaches and Creeks in the San Diego Region and the TMDLs for Sediment in Los Peñasquitos Lagoon in Attachment E to the Order to make the requirements consistent with the Basin Plan amendments adopted by the San Diego Water Board; and
- f. Remove provisions related to allowing the Riverside County Copermittees to apply for early coverage under the Regional MS4 Permit.

The San Diego Water Board files applicable to the issuance of Order No. R9-2013-0001 and amendments thereto are incorporated into the administrative record in support of the findings and requirements of the Order.

## II. CONTACT INFORMATION

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The Order and other related documents can be downloaded from the San Diego Water Board website at

[http://www.waterboards.ca.gov/sandiego/water\\_issues/programs/stormwater/index.shtml](http://www.waterboards.ca.gov/sandiego/water_issues/programs/stormwater/index.shtml)

The documents referenced in this Fact Sheet and in Order No. R9-2013-0001 and amendments thereto are available for public review at the San Diego Water Board office, located at the address listed above. Public records are available for inspection during regular business hours, from 8:00 am to 5:00 pm Monday through Friday. To schedule an appointment to inspect public records, contact the San Diego Water Board Records Management Officer at 619-516-1990.

## COPERMITTEES

### Orange County Copermittees

- County of Orange
  - City of Aliso Viejo
  - City of Dana Point
  - City of Laguna Beach
  - City of Laguna Hills
  - City of Laguna Niguel
  - City of Laguna Woods
- City of Lake Forest \*
- City of Mission Viejo
- City of Ranch Santa Margarita
- City of San Clemente
- City of San Juan Capistrano
- Orange County Flood Control District

\* While not listed in the above table, the City of Lake Forest remains a Copermittee under this Order until the later effective date of this Order or Santa Ana Water Board Tentative Order No. R8-2015-0001. Thereafter, the City of Lake Forest will no longer be considered a Copermittee under this Order because its Phase I MS4 discharges will be regulated by the Santa Ana Water Board pursuant to Water Code section 13328 designation. The requirements of this Order that apply to the City of Lake Forest for the duration of this Order, consistent with the Water Code section 13228 agreement dated February 10, 2015, are described in Finding 29 and Footnote 2 to Table B-1.

### Riverside County Copermittees

- County of Riverside
  - City of Menifee\*\*
  - City of Murrieta
  - City of Temecula
- City of Wildomar
- Riverside County Flood Control and Water Conservation District

\*\* The City of Menifee is not regulated as a Copermittee under this Order because its Phase I MS4 discharges are regulated by Santa Ana Water Board Order No. R8-2010-0033 as it may be amended or issued pursuant to Water Code section 13228 designation. The requirements of this Order that apply to the City of Menifee for the duration of this Order, consistent with the Water Code section 13228 written agreement dated October 26, 2015, are described in Finding 29 and Footnote 3 to Table B-1.

### San Diego County Copermittees

- County of San Diego
  - City of Carlsbad
  - City of Chula Vista
  - City of Coronado
  - City of Del Mar
  - City of El Cajon
  - City of Encinitas
  - City of Escondido
  - City of Imperial Beach
  - City of La Mesa
  - City of Lemon Grove
- City of National City
- City of Oceanside
- City of Poway
- City of San Diego
- City of San Marcos
- City of Santee
- City of Solana Beach
- City of Vista
- San Diego County Regional Airport Authority
- San Diego Unified Port District

### III. PUBLIC PROCESS AND NOTIFICATION PROCEDURES

The San Diego Water Board followed the schedule listed below for the preparation of Order No. R9-2013-0001 and amendments thereto:

#### **San Diego County Copermittee Permit Reissuance Process**

1. On February 8, 2011, the San Diego Water Board met with the San Diego County Copermittees to discuss the Report of Waste Discharge required pursuant to Order No. R9-2007-0001.
2. Between February and May 2011, the San Diego Water Board met with select San Diego County, Orange County, and Riverside County Copermittees, as well as representatives of the environmental community to discuss concepts and receive recommendations for elements to be incorporated in a Regional Municipal Separate Storm Sewer System Permit (Regional MS4 Permit).
3. On June 27, 2011 the San Diego Water Board received the Report of Waste Discharge from the San Diego County Copermittees for the renewal of their NPDES permit, Order No. R9-2007-0001.
4. On April 9, 2012, the San Diego Water Board released an administrative draft of Tentative Order No. R9-2013-0001 for preliminary informal comments and feedback.
5. On April 25, 2012, the San Diego Water Board held an informal public workshop to present the administrative draft of Tentative Order No. R9-2013-0001 and receive verbal comments.
6. Between June and August 2012, the San Diego Water Board held four (4) focused meetings with representatives of the principal stakeholders (the Copermittees, the environmental community, the development/business community, and USEPA) to discuss and receive preliminary comments and feedback about specific elements in the administrative draft of Tentative Order No. R9-2013-0001.
7. On September 5, 2012, the San Diego Water Board held an informal public workshop to present the modifications that were expected to be incorporated into the Tentative Order based on the preliminary comments and feedback received during the focused meetings held between June and August 2012.
8. Informal written comments on the administrative draft of Tentative Order No. R9-2013-0001 were accepted until September 14, 2012.
9. On October 12, 2012, the San Diego Water Board released a revised administrative draft of Tentative Order No. R9-2013-0001.

10. On October 24, 2012, the San Diego Water Board held a focused meeting with representatives of the principal stakeholders (the Copermittees, the environmental community, the development/business community, and USEPA) to discuss modifications incorporated into the administrative draft of Tentative Order No. R9-2013-0001.
11. On October 31, 2012, the San Diego Water Board released Tentative Order No. R9-2013-0001 for formal public review and comment.
12. On November 13, 2012 and December 12, 2012, the San Diego Water Board held a formal public Board workshop to present the public draft of Tentative Order No. R9-2013-0001 and receive verbal comments.
13. Formal written comments on the public draft of Tentative Order No. R9-2013-0001 were accepted until January 11, 2013.
14. A public hearing of Tentative Order No. R9-2013-0001 was conducted on April 10 and 11, 2013, that was continued to May 8, 2013.

#### **Orange County Copermittee Permit Reissuance Process**

15. On May 20, 2014 the San Diego Water Board received the Report of Waste Discharge from the Orange County Copermittees for the renewal of their MS4 NPDES permit, Order No. R9-2009-0002.
16. On June 24, 2014, the San Diego Water Board met with the Orange County Copermittees to discuss the Report of Waste Discharge required pursuant to Order No. R9-2009-0002 and the process for enrollment as Copermittees under Regional MS4 Permit Order No. R9-2013-0001.
17. On July 1, 2014, the San Diego Water Board held a public meeting to discuss the Orange County Report of Waste Discharge and receive comments on potential modifications to Order No. R9-2013-0001. Based on comments received from the Orange County Copermittees and other interested persons at this meeting, the San Diego Water Board determined that additional public meetings were not needed prior to release of Tentative Order No. R9-2015-0001, amending Order No. R9-2013-0001 in redlined – strikeout format for public review and comment.
18. On September 19, 2014, the San Diego Water Board released Tentative Order No. R9-2015-0001 for a 60 day public review and comment period.
19. On October 8, 2014, the San Diego Water Board held a formal public workshop at a regular board meeting to receive information and discuss the proposed amendments to Order No. R9-2013-0001 described in Tentative Order No. R9-2015-0001.

20. In accordance with State and federal laws and regulations, the San Diego Water Board notified San Diego County, Orange County and Riverside County Copermittees, and all known interested agencies and persons of its intent to adopt Tentative Order No. R9-2015-0001 and provided them with an opportunity to submit their written comments and recommendations. Written comments and recommendations on Tentative Order No. R9-2015-0001 were accepted until November 19, 2014.
21. The San Diego Water Board held a public workshop on October 8, 2014, and a public hearing on February 11, 2015, and heard and considered all comments pertaining to the adoption of Tentative Order No. R9-2015-0001 on February 11, 2015.

### **Riverside County Copermittee Permit Reissuance Process**

22. Between April and June 2015, the San Diego Water Board held three (3) public workshops with representatives of the principal stakeholders (the Copermittees, the environmental community, the development/business community) to discuss and receive comments and feedback about amending Order No. R9-2013-0001 to incorporate a definition of prior lawful approval for Priority Development Projects, and an alternative compliance pathway for prohibitions and limitations in Provision A of the Order. A San Diego Water Board member attended the April and May 2015 public workshops, but no actions or voting took place.
23. On April 15, 2015, the San Diego Water Board met with the Riverside County Copermittees to discuss the Report of Waste Discharge required pursuant to Order No. R9-2010-0016 and the process for enrollment as Copermittees under Order No. R9-2013-0001 (Regional MS4 Permit).
24. On May 8, 2015 the San Diego Water Board received a Report of Waste Discharge from the Riverside County Copermittees for the renewal of their MS4 NPDES permit, Order No. R9-2010-0016.
25. On July 31, 2015, the San Diego Water Board released Tentative Order No. R9-2015-0100 for a formal public review and comment period.
26. Formal written comments on the public draft of Tentative Order No. R9-2015-0100 were accepted until September 14, 2015, a formal public written comment period of 46 days.
27. A public hearing to receive oral comments on Tentative Order No. R9-2015-0100 was conducted on November 18, 2015.

#### **IV. BACKGROUND OF THE SAN DIEGO REGION MUNICIPAL STORM WATER PERMITS**

In developed and developing areas, storm water runoff is commonly transported through municipal separate storm sewer systems (MS4s) and discharged into local receiving water bodies. As the storm water runs off and flows over the land or impervious surfaces (e.g., paved streets, parking lots, and building rooftops), it accumulates debris, chemicals, sediment, and other pollutants that can adversely affect receiving water quality if discharged untreated. The United States Environmental Protection Agency (USEPA) recognizes wet weather flows from urban areas as the number one source of estuarine pollution in coastal communities,<sup>1</sup> such as those within the San Diego Region.

The federal Clean Water Act (CWA) was amended in 1987 to address and regulate discharges of storm water associated with industrial activities and from municipal storm sewers. With the amendments, many municipalities throughout the United States were obligated for the first time to obtain National Pollutant Discharge Elimination System (NPDES) permits for discharges of storm water from their MS4s.

In response to the CWA 1987 amendment, as well as the pending federal NPDES regulations which would implement the amendment, the San Diego Water Board issued “early” MS4 permits. The San Diego Water Board adopted and issued Order Nos. 90-38, 90-42, and 90-46 to regulate storm water discharges from the MS4s in Orange County, San Diego County, and Riverside County, respectively, within the San Diego Region on July 16, 1990.

The “early” MS4 permits, or First Term Permits, were issued prior to the November 1990 promulgation of the final federal NPDES storm water regulations. By issuing these First Term Permits before the federal regulations took effect, the San Diego Water Board was able to provide the Copermittees additional flexibility in addressing and managing storm water discharges. The First Term Permits contained the essentials of the 1990 regulations, and required the Copermittees to develop and implement runoff management programs, but provided little specificity about what was required to be included in or actually achieved by those programs.

The flexibility provided in the First Term Permits was generally continued through the Second Term Permits. The combination of the lack of specificity in the First and Second Term Permits, a general lack of meaningful action by the Copermittees and a general lack of corresponding reaction (i.e. enforcement) by the San Diego Water Board during the first ten years of the storm water program, resulted in few substantive steps towards achieving improvements in the quality of receiving waters or storm water discharges from the MS4s.

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<sup>1</sup> US EPA. 1999. 40 CFR Parts 9, 122, 123, and 124. National Pollutant Discharge Elimination System – Regulations for Revision of the Water Pollution Control Program Addressing Storm Water Discharges; Final Rule. 64 FR 68727.

From 2001, the regulatory approach incorporated into Third Term Permits was a significant departure from the regulatory approach of the First and Second Term Permits. The Third Term Permits issued by the San Diego Water Board included more detailed requirements that outlined the minimum level of implementation required for the Copermittees' programs to meet the maximum extent practicable (MEP) standard for storm water. The Third Term Permits included more detail to emphasize and enhance the jurisdictional runoff management programs developed by the Copermittees and introduced requirements for developing and implementing watershed-based programs.

The Third Term Permits also incorporated two precedent setting decisions by the State Water Board. In Order WQ 99-05, the State Water Board established receiving water limitation language to be included in all MS4 permits. The State Water Board's precedential language clarified that municipal storm water permits must include provisions requiring discharges to be controlled to attain water quality standards in receiving waters. Unlike previously adopted versions of the receiving water limitation language in the First and Second Term Permits, the language no longer stated that "*violations of water quality standards are not violations of the municipal storm water permit under certain conditions.*" In addition, the receiving water limitation language no longer indicated that the "*implementation of best management practices is the 'functional equivalent' of meeting water quality standards.*" State Water Board Order WQ 99-05 specifically requires language in MS4 permits for the Copermittees to comply with water quality standards based discharge prohibitions and receiving water limitations through timely implementation of control measures and other actions to reduce pollutants in discharges. (See State Water Board Order WQ 99-05 (*Environmental Health Coalition*)).

In Order WQ 2000-11, also a precedential decision, the State Water Board addressed design standards for structural post-construction best management practices (BMPs) for new development and significant redevelopment. The State Water Board found that the design standards, which require that runoff generated by 85 percent of storm events from specific development categories be infiltrated or treated, reflect the MEP standard. State Water Board Order WQ 2000-11 also found that the post-construction BMP provisions, or Standard Storm Water Mitigation Plan (SSMP) provisions, constitute MEP for addressing storm water pollutant discharges resulting from specific development categories.

The Third Term San Diego County and Orange County Permits (Order Nos. 2001-01 and R9-2002-0001, respectively) were appealed to the State Water Board. Minor modifications were made by the State Water Board, but the requirements were largely upheld. In State Water Board Order WQ 2001-15, the State Water Board upheld the Third Term San Diego County Permit requirements with certain modifications. The State Water Board removed the prohibition of storm water discharges *into* the MS4 that cause or contribute to exceedances of water quality objectives. The revision allows for treatment of pollutants in storm water runoff after the pollutants have entered the MS4.

State Water Board Order WQ 2001-15 otherwise upheld all the other requirements of the permit.

In addition to the modification to the discharge prohibition in Order WQ 2001-15, the State Water Board refined Order WQ 99-05 by making clear that the Copermitees may use an iterative approach to achieving compliance with water quality standards that involves ongoing assessments and revisions. Thus, the language for the discharge prohibitions and receiving water limitations was revised to explicitly require the Copermitees to implement an iterative process of assessments and revisions to comply with the discharge prohibitions and receiving water limitations. The San Diego Water Board retained the authority to enforce receiving water limitations and discharge prohibitions even if the Copermitee is engaged in the iterative process.

The Third Term San Diego County Permit was subsequently challenged in the Superior Court of the State of California and the Court of Appeal, Fourth Appellate District. The Court of Appeal, Fourth Appellate District, found that the approach of the Third Term San Diego County Permit to regulating discharges into the MS4 was appropriate (*Building Industry Ass'n. v. State Water Resources Control Bd., et al.*, 124 Cal.App.4<sup>th</sup> 866 (2004)). The State of California Supreme Court denied review sought by the Building Industry Association in March 2005.

The Fourth Term Permits began with the adoption of Order No. R9-2007-0001 issued to the Copermitees of San Diego County in January 2007. Order Nos. R9-2009-0002 and R9-2010-0016 were subsequently issued to the Copermitees of Orange County and Riverside County. The Fourth Term Permits continued to include more detailed requirements to be implemented by each Copermitee's jurisdictional runoff management program. The Fourth Term Permits also included requirements to further emphasize a watershed management approach and for more coordination among jurisdictional runoff management programs. In addition, the Fourth Term Permits included more requirements for assessing the effectiveness of the runoff management programs being implemented by the Copermitees. The intent of the inclusion of additional requirements was to enhance and better define elements of the permit that were expected to be incorporated into the iterative process for managing runoff from each Copermitee's jurisdiction and within the watersheds of the San Diego Region.

The Fourth Term Permits included several new and emerging approaches for managing storm water runoff and discharges. Low impact development (LID) requirements are included for development and significant redevelopment to reduce pollutants in storm water runoff from sites through more natural processes such as infiltration and biofiltration closer to the source, rather than utilizing conventional mechanical end-of-pipe treatment systems. Hydrograph modification (hydromodification) management requirements also are included to mitigate the potential for increased erosion in receiving waters due to increased runoff rates and durations often caused by development and increased impervious surfaces. The Fourth Term Orange County and Riverside County Permits introduced requirements to identify areas of existing

development where retrofitting with LID projects would be feasible and could be implemented to reduce storm water runoff and pollutants in storm water discharges.

The Fourth Term Orange County and Riverside County Permits included a clearer distinction between storm water and non-storm water discharges. The term “urban runoff” was completely removed, and a distinction between storm water (wet weather) runoff and non-storm water (dry weather) runoff was emphasized. This clarification was made to prevent any potential misunderstanding that regulation under the MS4 permits is limited only to urbanized areas, and to prevent non-storm water runoff from being managed in the same manner as storm water runoff. The term “urban runoff” is not defined in the Code of Federal Regulations (CFR) or Federal Register (FR) in the regulation of MS4 discharges. According to the CWA 402(p)(3)(B)(ii), MS4 permits must include a requirement to effectively prohibit non-storm water discharges into the MS4s.

Finally, for the Fourth Term Orange County and Riverside County Permits the San Diego Water Board found that non-storm water discharges to the MS4 from over application of irrigation water are sources of pollutants. The San Diego Water Board found that non-storm water discharges resulting from over-irrigation must be prohibited from entering the MS4 in accordance with the requirements of the CWA and pursuant to 40 CFR 122.26(d)(2)(iv)(B)(1).

The requirements of the Fourth Term Permits issued to the Copermittees in each county within the San Diego Region now have substantively the same core requirements such as discharge prohibitions, receiving water limitations, jurisdictional runoff management program components, and monitoring program requirements. There are, however, several inconsistencies that exist among the three Fourth Term Permits which complicate oversight and implementation of the permits by the San Diego Water Board.

The Fourth Term San Diego County Permit expired in January 2012. The Fourth Term Orange County permit expired in December 2014 and the Fourth Term Riverside County Permit expired in November 2015. Issuing the Fifth Term Permits within five years for three counties under three different permits would have required the San Diego Water Board to expend significant time and resources for the issuance of the permits through three separate public proceedings, thereby greatly reducing the time and resources available to oversee implementation and compliance. Multiple permits also create confusion for determining compliance among regulated entities, especially for the land development community.

The San Diego Water Board acknowledged that issuing a single MS4 permit for all the Copermittees in the San Diego Region can and is expected to result in more consistent implementation, improve communication among agencies within watersheds crossing multiple jurisdictions, and minimize resources spent with each permit renewal process. Within the findings of the Fourth Term Riverside County Permit issued in November 2010, the San Diego Water Board notified the public of its intent to develop and issue a single Regional MS4 Permit.

## **V. REGIONAL MS4 PERMIT APPROACH**

The Fifth Term Permit, or Regional MS4 Permit, shifts the focus of the permit requirements from a minimum level of actions to be implemented by the Copermitees to identifying outcomes to be achieved by those actions. Order No. R9-2013-0001 represents an important paradigm shift in the approach for MS4 permits within the San Diego Region.

### **Historical Permitting Approach**

The First and Second Term Permits were very broad and provided little specificity about what was required to be developed and implemented by the Copermitees. The Third Term Permits began to become more specific about the minimum level of implementation required by the Copermitees. The Fourth Term Permits subsequently increased in specificity. The MS4 permits have progressively become more detailed and focused on specifying the minimum level of actions expected to be implemented by the Copermitees. As detailed and specific as the MS4 permits have become, however, they include very little detail about what the desired outcomes of the required actions are expected to achieve. Compliance with the permit requirements has essentially been tracking numbers of actions and reporting, not tracking progress or actual improvements in the quality of receiving waters or discharges from the MS4s. The result has been an increase in actions being implemented by the Copermitees with little or no ability or expectations to determine whether or not improvements in water quality are being achieved.

The Fourth Term Permits result in significant resource expenditure by the Copermitees to report permit compliance information to the San Diego Water Board in the form of annual jurisdictional runoff management program, watershed program, and monitoring program reports. The San Diego Water Board was required to expend much of its limited resources on reviewing more than 50 voluminous reports submitted annually by the Copermitees. The information reported by the Copermitees was of limited value when trying to measure progress toward achieving improvements in the quality of receiving waters or discharges from the MS4s. Oversight of the MS4 permits was further complicated by the inconsistencies among the requirements issued to the Orange County, San Diego County, and Riverside County Copermitees under three separate MS4 permits.

Under the Fourth Term Permits, the Copermitees were required to expend a significant portion of their limited resources collecting data of limited value, and putting together reports to submit that information to the San Diego Water Board. Likewise, the San Diego Water Board was required to expend most of its limited resources reviewing reports, and developing permits instead of working directly with the Copermitees to identify solutions to problems causing impacts to water quality. This was an unsustainable course that would have continued to demand more resources

from the Copermittees and the San Diego Water Board, and would have continued to result in unknown water quality benefits.

### **New Permitting Approach**

The goal of the Regional MS4 Permit is twofold: 1) bring a consistent set of MS4 permit requirements to all of the Copermittees within the San Diego Region; and, 2) provide an MS4 permit with requirements that will allow the Copermittees to focus their efforts and resources on achieving goals and desired outcomes toward the improvement of water quality rather than completing specific actions.

The overall approach included in the Regional MS4 Permit with respect to the jurisdictional runoff management programs will not differ significantly from the current permits. The general requirements for the jurisdictional runoff management program components and compliance with those requirements will remain and be applied consistently throughout the San Diego Region under the Regional MS4 Permit.

The most significant difference in the new permitting approach is the specific manner of implementation for those jurisdictional runoff management programs. Implementation will be based on decisions made by the Copermittees in accordance with what they have identified as their highest priority water quality conditions. In other words, the Copermittees will have significant control in how to implement the jurisdictional runoff management programs to best utilize their available resources in addressing a specific set of priorities effectively, instead of trying to address all the water quality priorities ineffectively.

The Copermittees are given the responsibility of identifying their highest priority water quality conditions that they intend to address. The Copermittees will develop goals that can be used to measure and demonstrate progress or improvements toward addressing those priorities. In addition to the goals, the Copermittees will provide a schedule for achieving the goals for those highest priorities. The measurement of progress toward achieving the goals for those highest priorities requires a better defined and more focused program of monitoring and assessment than under the Fourth Term Permits.

The monitoring and assessment program must be designed to inform the Copermittees of their progress, and the need for modifications in their jurisdictional runoff management programs and schedules to achieve their goals to improve water quality. The monitoring and assessment program requirements will have a more central role in the Regional MS4 Permit than in earlier permits. The monitoring and assessment requirements must also be designed to enable the Copermittees to focus and direct their efforts in implementing their jurisdictional runoff management programs toward their stated desired outcomes to improve the quality of receiving waters and/or discharges from the MS4s.

By providing an MS4 permit that allows the Copermittees to make more decisions about how to utilize and focus their resources, along with a better defined monitoring and assessment program to inform their water quality management decisions, the Copermittees have the opportunity to:

- 1) *Plan strategically.* The Copermittees must have the ability to identify their available resources and develop and implement long term plans that can organize, collect, and use those resources in the most strategically advantageous and efficient manner possible. This ability to develop long term plans will allow the Copermittees to focus and utilize their resources in a more concerted way over the short term and long term to address specific water quality priorities through stated desired outcomes.
- 2) *Manage adaptively.* The Copermittees must be given the ability to modify their plans as additional information and data are collected from the monitoring and assessment programs. The Copermittees' plans may require modifications to the programs, priorities, goals, strategies, and/or schedules in order for the Copermittees to achieve a stated desired outcome.
- 3) *Identify synergies.* The Copermittees must be given more flexibility to identify efficiencies within and among their jurisdictional runoff management programs as the strategies are developed and implemented to increase the Copermittees' collective effectiveness. The Copermittees must also be able to identify and utilize resources available from other agencies and entities to further augment and enhance their jurisdictional runoff management programs and/or to collectively work with those other agencies and entities toward achieving a stated desired outcome.

The Regional MS4 Permit requirements provide the Copermittees the flexibility and responsibility to decide what actions will be necessary to achieve an outcome that is tailored and designed by the Copermittees to improve specific prioritized water quality conditions. The San Diego Water Board expects the approach of the Regional MS4 Permit to give the Copermittees a greater sense of ownership for restoring the quality of receiving waters in the San Diego Region by becoming an integral part of the decision making process in identifying water quality conditions to be addressed, as well as determining the best use of their resources.

## VI. ECONOMIC CONSIDERATIONS

### Statutory Considerations

California Water Code (CWC) section 13241 requires the San Diego Water Board to consider certain factors, including economic considerations, in the adoption of water quality objectives. CWC section 13263 requires the San Diego Water Board to take into consideration the provisions of CWC section 13241 in adopting waste discharge requirements.

In *City of Burbank v. State Water Resources Control Bd.* (2005) 35 Cal.4<sup>th</sup> 613, the California Supreme Court considered whether Regional Water Boards must comply with CWC section 13241 when issuing waste discharge requirements under CWC section 13263(a) by taking into account the costs a permittee will incur in complying with the permit requirements. The Court concluded that whether it is necessary to consider such cost information “*depends on whether those restrictions meet or exceed the requirements of the federal Clean Water Act.*” (*Id.* at p. 627.) The Court ruled that Regional Water Boards may not consider the factors in CWC section 13241, including economics, to justify imposing pollutant restrictions that are less stringent than applicable federal law requires. (*Id.* At pp. 618, 626-627 [“*[Water Code section 13377 specifies that [ ] discharge permits issued by California’s regional boards must meet the federal standards set by federal law. In effect, section 13377 forbids a regional board’s consideration of any economic hardship on the part of the permit holder if doing so would result in the dilution of the requirements set by Congress in the Clean Water Act...Because CWC section 13263 cannot authorize what federal law forbids, it cannot authorize a regional board, when issuing a [ ] discharge permit, to use compliance costs to justify pollutant restrictions that do not comply with federal clean water standards.*”]). However, when pollutant restrictions in an NPDES permit are more stringent than federal law requires, CWC section 13263 requires that the Regional Water Boards consider the factors described in CWC section 13241 as they apply to those specific restrictions.

As discussed in Section VII.F, Unfunded State Mandates, the San Diego Water Board finds that the requirements in this Order are not more stringent than the minimum federal requirements. Among other requirements, federal law requires MS4 permits to include requirements to effectively prohibit non-storm water discharges into the MS4s, in addition to requiring controls to reduce the discharge of pollutants in storm water to the MEP, and other provisions as USEPA or the State determines are appropriate for the control of pollutants in MS4 discharges.

The requirements in this Order may be more specific or detailed than those enumerated in federal regulations under 40 CFR 122.26 or in the USEPA guidance. However, the requirements have been designed to be consistent with and within the federal statutory mandates described in CWA section 402(p)(3)(B)(ii) and (iii) and the related federal regulations and guidance. Consistent with federal law, all of the

conditions in this Order could have been included in a permit adopted by USEPA in the absence of the in lieu authority of California to issue NPDES permits.

Moreover, the inclusion of numeric WQBELs in this Order does not cause this Order to be more stringent than federal law. Federal law authorizes both narrative and numeric effluent limitations to meet state water quality standards. The inclusion of WQBELs as discharge specifications in an NPDES permit in order to achieve compliance with water quality standards is not a more stringent requirement than the inclusion of BMP based permit limitations to achieve water quality standards (State Water Board Order No. WQ 2006-0012 (*Boeing*)). Therefore, consideration of the factors set forth in CWC section 13241 is not required for permit requirements to implement the effective prohibition on the discharge of non-storm water discharges into the MS4 or for controls to reduce the discharge of pollutants in storm water to the MEP, or other provisions that the San Diego Water Board has determine appropriate to control such pollutants, as those requirements are mandated by federal law.

Included in the provisions of the Order are monitoring and reporting requirements that are designed to demonstrate that the Copermittees are implementing programs to comply with the CWA municipal storm water requirements. CWA section 308(a) and 40 CFR 122.41(h), (j)-(l), 122.44(i) and 122.48 require that all NPDES permits specify monitoring and reporting requirements. Federal regulations applicable to large and medium MS4s (40 CFR 122.26(d)(1)(iv)(D), 122.26(d)(1)(v)(B), 122.26(d)(2)(i)(F), 122.26(d)(2)(iii)(D), 122.26(d)(2)(iv)(B)(2) and 122.42(c)) also specify additional monitoring and reporting requirements. In addition to the federal requirements of the CWA, the San Diego Water Board also has the authority in CWC 13383 to establish monitoring, reporting, and recordkeeping requirements that implement federal and state laws and regulations through NPDES permits.

The monitoring and assessment information that will be reported to the San Diego Water Board is necessary to determine if the Copermittees are making progress toward achieving compliance with the discharge prohibitions, receiving water limitations, and effluent limitations under Provision A of the Order. The monitoring and assessment information that will be reported is also expected to be key to the iterative approach and adaptive management process that is required to be implemented by the Copermittees if they cannot meet the discharge prohibitions and receiving water limitations under the present conditions, which is also part of the requirements under Provision A of the Order.

Notwithstanding the above, the San Diego Water Board has considered cost information in issuing this Order, as discussed below. The San Diego Water Board has also considered all of the evidence that has been presented to the San Diego Water Board regarding the CWC section 13241 factors in adopting this Order. The San Diego Water Board finds that the requirements in this Order are reasonably necessary to protect beneficial uses identified in the Basin Plan and the economic information related to costs of compliance and other CWC section 13241 factors are not sufficient to justify failing to protect those beneficial uses. Where appropriate, the

San Diego Water Board has provided or will consider providing the Copermittees with additional time to implement control measures to achieve final WQBELs and/or water quality standards.

### **Cost Information**

Discussions of the financial and economic ramifications of municipal storm water management programs tend to focus on the significant costs incurred by municipalities in developing and implementing the programs. When considering the cost of implementing the programs, however, it is also important to consider the alternative costs that are incurred when programs are not fully implemented, as well as the economic benefits which result from effective program implementation.

The recent financial and economic conditions have amplified the concerns about the costs incurred by the municipalities in developing and implementing their programs. The reduction in resources resulting from the recent financial and economic conditions has been cited by many of the Copermittees as a justification for reducing the requirements that must be met by their programs. While the recent conditions are a cause for concern in the short term, these programs also have an opportunity to identify and implement improvements and efficiencies before the next period of growth and development, resulting in more effective and sustainable programs over the long term.

In addition, it is very difficult to ascertain the true cost of implementation of the Copermittees' management programs because of inconsistencies in reporting by the Copermittees. Reported costs of compliance for the same program element can vary widely from city to city, often by a very wide margin that is not easily explained.<sup>2</sup> Despite these problems, efforts have been made to identify management program costs, which can be helpful in understanding the costs of program implementation.

The San Diego Water Board recognizes that the Copermittees will incur costs in implementing this Order, potentially above and beyond the costs from the Copermittees' prior permits. The San Diego Water Board also recognizes that, due to California's current economic condition, many Copermittees currently have limited staff and resources to implement actions to address its MS4 discharges. Based on the economic considerations below, the San Diego Water Board has provided the Copermittees a significant amount of flexibility to choose how to implement the requirements of the Order.

The Order also allows the Copermittees to customize their plans, programs, and monitoring requirements. In the end, it is up to the Copermittees to determine the effective BMPs and measures necessary to comply with this Order. The Copermittees can choose to implement the least expensive measures that are effective in meeting

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<sup>2</sup> Los Angeles Water Board, 2003. Review and Analysis of Budget Data Submitted by the Permittees for Fiscal Years 2000-2003. P. 2.

the requirements of this Order. This Order also does not require the Copermittees to fully implement all requirements within a single permit term. Where appropriate, the Board has provided the Copermittees with additional time outside of the permit term to implement control measures to achieve final WQBELs and/or water quality standards.

The San Diego Water Board has considered available cost information associated with compliance with this Order. It is not possible to predict accurately the cost impact of the requirements that involve an unknown level of implementation or that depend on environmental variables that are as yet undefined. Only general conclusions can be drawn from this information.

### **Estimated Municipal Storm Water Program Implementation Costs**

The USEPA, the State Water Board, and the California Regional Water Quality Control Boards (Regional Water Boards) have attempted to evaluate the costs of implementing municipal storm water programs. The assessments have demonstrated that the true costs are difficult to ascertain and reported costs vary widely. In addition, reported fiscal analyses tend to neglect the costs incurred to municipalities when storm water and non-storm water runoff is not effectively managed, which are incurred as a result of pollution, contamination, nuisance, and damage to ecosystems, property, and human health. Nonetheless, they provide a useful context for considering the costs of requirements within Order No. R9-2013-0001.

In 1999, the USEPA reported on multiple studies it conducted to determine the cost of management programs. A study of Phase II municipalities determined that the annual cost of the Phase II program was expected to be \$9.16 per household. The USEPA also studied 35 Phase I municipalities, finding costs to be \$9.08 per household annually, similar to those anticipated for Phase II municipalities.<sup>3</sup>

The State Water Board commissioned a study by the California State University, Sacramento to assess costs of the Phase I MS4 program. This study includes an assessment of costs incurred by Phase I MS4s throughout the state to implement their programs. Annual cost per household in the study ranged from \$18 to \$46, with the Fresno-Clovis Metropolitan Area representing the lower end of the range, and the City of Encinitas (in San Diego County) representing the upper end of the range.<sup>4</sup>

A study on Phase I MS4 program costs was also conducted by the California Regional Water Quality Control Board, Los Angeles Region (Los Angeles Water Board), where program costs reported in the municipalities' annual reports were assessed. The Los

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<sup>3</sup> Federal Register / Vol. 64, No. 235 / Wednesday, December 8, 1999 / Rules and Regulations. P. 68791-68792.

<sup>4</sup> State Water Board, 2005. NPDES Stormwater Cost Survey. P. ii.

Angeles Water Board estimated that average per household cost to implement the MS4 program in Los Angeles County was \$12.50.<sup>5</sup>

It is important to note that reported program costs are not all attributable to solely complying with MS4 permits. Many program components, and their associated costs, existed before any MS4 permits were ever issued. For example, street sweeping and trash collection costs cannot be solely or even principally attributable to MS4 permit compliance, since these practices have long been expected from and implemented by municipalities.

Therefore, true program cost resulting from MS4 permit requirements is some fraction of reported costs. The California State University, Sacramento study found that only 38 percent of program costs are new costs fully attributable to MS4 permits. The remainder of the program costs was either pre-existing or resulted from enhancement of pre-existing programs.<sup>6</sup> In 2000, the County of Orange found that even lower amounts of program costs are solely attributable to MS4 permit compliance, reporting that the amount attributable to implement the County of Orange Drainage Area Management Plan (DAMP), was less than 20 percent of the total budget. The remaining 80 percent was attributable to pre-existing programs.<sup>7</sup> More current data from the County of Orange is not used in this discussion because the County of Orange no longer reports such information.

### **Estimated Value of Healthy Water Quality**

Economic considerations of municipal storm water management programs cannot be limited only to program costs. Evaluation of programs must also consider information on the benefits derived from environmental protection and improvement.<sup>8</sup> Attention is often focused on municipal storm water management program costs, but the programs must also be viewed in terms of their value to the public.

Placing a value on healthy receiving waters is very difficult. Often the value of receiving waters with good water quality manifests in other forms, such as tourism, recreational opportunities, and/or increased property values. When surface water bodies are degraded, thereby degrading the habitat within and adjacent to the water bodies, the public loses the value and benefits associated with being able to use the area in and around the water bodies. Surface waters that are able to support the beneficial uses designated in the Basin Plan can sustain plants and wildlife that can attract visitors and residents, providing aesthetic, recreational, as well as monetary value to the public. At this time, however, there have been no studies for the San

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<sup>5</sup> Los Angeles Water Board, 2003. Review and Analysis of Budget Data Submitted by the Permittees for Fiscal Years 2000-2003. P. 2.

<sup>6</sup> State Water Board, 2005. NPDES Stormwater Cost Survey. P. 58.

<sup>7</sup> County of Orange, 2000. A NPDES Annual Progress Report. P. 60.

<sup>8</sup> Ribaudo M.O. and D. Heelerstein. 1992, *Estimating Water Quality Benefits: Theoretical and Methodological Issues*. U.S. Department of Agriculture. Technical Bulletin No. 1808.

Diego Region to quantify the added value that surface waters with healthy water quality can provide.

USEPA has estimated that household willingness to pay for improvements in fresh water quality for fishing and boating is approximately \$158-\$210.<sup>9</sup> This estimate can be considered conservative, since it does not include important considerations such as marine waters benefits, wildlife benefits, or flood control benefits. Another study conducted by California State University, Sacramento reported that the annual household willingness to pay for statewide clean water is approximately \$180.<sup>10</sup>

A study conducted by the University of Southern California and University of California, Los Angeles assessed the costs and benefits of implementing various approaches for achieving compliance with the MS4 permits in the Los Angeles region. The study found that non-structural systems would cost \$2.8 billion but provide \$5.6 billion in benefit. If structural systems were determined to be needed, the study found that total costs would be \$5.7 to \$7.4 billion, while benefits could reach \$18 billion.<sup>11</sup> Costs are anticipated to be borne over many years, probably at least ten years.

As can be seen, the benefits of the municipal storm water management programs are expected to considerably exceed their costs. Such findings are corroborated by USEPA, which found that the benefits of implementation of its Phase II storm water rule would also outweigh the costs.<sup>12</sup>

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<sup>9</sup> Federal Register / Vol. 64, No. 235 / Wednesday, December 8, 1999 / Rules and Regulations. P. 68793.

<sup>10</sup> State Water Board, 2005. NPDES Stormwater Cost Survey. P. iv.

<sup>11</sup> Los Angeles Water Board, 2004. Alternative Approaches to Stormwater Control.

<sup>12</sup> Federal Register / Vol. 64, No. 235 / Wednesday, December 8, 1999 / Rules and Regulations. P. 68791.

## VII. APPLICABLE STATUTES, REGULATIONS, PLANS AND POLICIES

### A. Legal Authorities – Federal Clean Water Act and California Water Code

This Order is issued pursuant to section 402 of the CWA and implementing regulations adopted by the USEPA and chapter 5.5, division 7 of the CWC (commencing with section 13370). This Order serves as an NPDES permit for point source discharges to surface waters. This Order also serves as waste discharge requirements pursuant to article 4, chapter 4, division 7 of the CWC (commencing with section 13260).

The objective of the CWA is “*to restore and maintain the chemical, physical, and biological integrity of the Nation’s waters.*” To carry out this objective, the CWA requires the implementation of permit programs to regulate the discharge of pollutants and dredged or fill material to the navigable waters of the U.S. and to regulate the use and disposal of sewage sludge. CWA section 402 provides the legal authority to issue a permit for the discharge of pollutants to waters of the U.S. under the NPDES. The CWA provides that NPDES permits may be issued by states which are authorized to implement the provisions of that act. California became authorized to implement the NPDES permit program on May 14, 1973.

The Porter-Cologne Water Quality Control Act (Division 7, commencing with CWC section 13000) established the State Water Resources Control Board (State Water Board) and nine Regional Water Quality Control Boards (Regional Water Boards) as the principal state agencies with primary responsibility for the coordination and control of water quality. CWC section 13200(f) established the San Diego Water Board, which has the primary responsibility for the coordination and control of water quality in the San Diego Region, which includes all the basins draining into the Pacific Ocean between the southern boundary of the Santa Ana Region and the California-Mexico boundary. The San Diego Water Board implements the CWA through Chapter 5.5 of the CWC, commencing with section 13370. CWC section 13377 provides the San Diego Water Board the legal authority to issue waste discharge requirements to ensure compliance with all applicable provisions of the CWA and acts amendatory thereof or supplementary, thereto, to implement water quality control plans, or for the protection of beneficial uses, or to prevent nuisance.

CWA section 402(p) requires the USEPA or authorized state to issue NPDES permits for storm water discharges from MS4s to waters of the U.S. CWA section 402(p)(3)(B)(ii) requires that NPDES permits for storm water discharges from MS4s “*effectively prohibit non-storm water discharges*” into the MS4s. CWA section 402(p)(3)(B)(iii) requires that NPDES permits for storm water discharges from MS4s to “*require controls to reduce the discharge of pollutants [in storm water] to the maximum extent practicable [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.*”

The USEPA published implementing regulations (Code of Federal Regulations [CFR] Title 40, Part 122 [40 CFR 122]), which prescribe permit application requirements for storm water discharges from MS4s pursuant to CWA 402(p), on November 16, 1990. The USEPA published an Interpretive Policy Memorandum on Reapplication Requirements for Municipal Separate Storm Sewer Systems, which provided guidance on permit application requirements for regulated MS4s, on May 17, 1996. The federal regulations in 40 CFR 122 and guidance issued by USEPA serve as the foundation for the provisions of Order No. R9-2013-0001. The legal authorities provided by the above statutes and regulations are included as part of the discussions in Section VIII of this Fact Sheet.

## **B. Legal Authority for the Permit Issued on a Region-wide Basis**

CWA section 402(p)(3)(B) provides the San Diego Water Board the legal authority to issue an NPDES permit for the San Diego Region as compared to separate MS4 permits based upon County- and partial County-wide boundaries as they existed within the San Diego Region. CWA section 402(p)(3)(B) states that “*Permits for discharges from municipal storm sewers- (i) may be issued on a system- or jurisdiction-wide basis ...*” The federal regulations in 40 CFR 122.26(a)(1)(v) also state that the San Diego Water Board “*may designate dischargers from municipal separate storm sewers on a system-wide or jurisdiction-wide basis. In making this determination, the [San Diego Water Board] may consider the following factors: (A) the location of the discharge with respect to waters of the United States; (B) the size of the discharge; (C) the quantity and nature of the pollutants discharged to waters of the United States; and (D) other relevant factors.*”

More specifically, the federal regulations provide that for large and medium MS4 systems, the San Diego Water Board may issue a regional permit. Specifically, the federal regulation in 40 CFR 122.26(a)(3) provide:

- "(ii) The Director may either issue one system-wide permit covering all discharges from municipal separate storm sewers within a large or medium municipal storm sewer system or issue distinct permits for appropriate categories of discharges within a large or municipal separate storm sewer system including, but not limited to: all discharges owned or operated by the same municipality; located within the same jurisdiction; all discharges within a system that discharge to the same watershed; discharges within a system that are similar in nature; or for individual discharges from municipal separate storm sewers within the system.*
- (iii) The operator of a discharge from a municipal separate storm sewer which is part of a large or medium municipal separate storm sewer system must either: (A) Participate in a permit application (to be a permittee or a co-permittee) with one or more other operator of discharges from the large or medium municipal storm sewer system which covers all, or a portion of all, discharges from the municipal separate storm sewer system; (B) Submit a distinct permit application which only covers discharges from the municipal separate storm sewers for*

*which the operator is responsible; or (C) A regional authority may be responsible for submitting a permit application under the following guidelines...*

- (iv) One permit application may be submitted for all or a portion of all municipal separate storm sewers within adjacent or interconnected large or medium municipal separate storm sewer systems. The Director may issue one systemwide permit covering all, or a portion of all municipal separate storm sewers in adjacent or interconnected large or medium municipal separate storm sewer systems.*
- (v) Permits for all or a portion of all discharges from large or medium municipal separate storm sewer systems that are issued on a system-wide, jurisdiction-wide, watershed or other basis may specify different conditions relating to different discharges covered by the permit, including different management programs for different drainage areas which contribute storm water to the system."*

Based on these regulations, the San Diego Water Board may issue a region-wide MS4 permit. The regulations also clarify that the permit may include different conditions for separate discharges covered by the permit. This allows the San Diego Water Board to ensure that suitable water quality conditions and provisions are identified for each watershed.

The USEPA's responses to comments in the Final Rule for the above-mentioned regulations also make it clear that the permitting authority, in this case the San Diego Water Board, has the flexibility to establish system- or region-wide, permits. In the Final Rule published in the Federal Register and containing the responses to comments, USEPA notes that 40 CFR 122.26(a)(3)(iv) would allow an entire system in a geographical region under the purview of a State agency to be designated under a permit.<sup>13</sup> USEPA also states that many commenters wanted to allow the permitting authority broad discretion to establish system-wide permits, and that EPA believes that paragraphs 40 CFR 122.26 (a)(1)(v) and (a)(3)(ii) allow for such broad discretion.<sup>14</sup>

This Order creates watershed requirements that apply to multiple counties. The regional nature of this Order will ensure consistency of regulation within watersheds and is expected to result in overall cost savings for the Copermittees. Managing storm water on a regional and watershed basis is expected to result in improved water quality, as the Order focuses on monitoring and management practices necessary to improve each watershed rather than political boundaries. A single permit also allows the San Diego Water Board staff to expend fewer resources developing successive multiple permits and allows more resources to be devoted to working cooperatively with all three current groups of Copermittees to ensure implementation of this Order results in improved water quality.

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<sup>13</sup> 55 Federal Register 47990-01, 48042.

<sup>14</sup> Ibid.

### **C. Federal and California Endangered Species Acts**

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 2115.5) or the Federal Endangered Species Act (16 United States Code [USC] sections 1531 to 1544). This Order requires compliance with requirements to protect the beneficial uses of waters of the U.S. The Copermittees are responsible for meeting all requirements of the applicable Endangered Species Act.

### **D. California Environmental Quality Act**

The action to adopt an NPDES Permit is exempt from the provisions of Chapter 3 of the California Environmental Quality Act (CEQA) (Public Resources Code section 21100, et seq.) pursuant to CWC section 13389. (*County of Los Angeles v. Cal. Water Boards* (2006) 143 Cal.App.4th 985.)

### **E. State and Federal Regulations, Plans and Policies**

The legal authority provided by the following regulations, plans, and policies are also included as part of the discussions in Section VIII of this Fact Sheet.

#### Water Quality Control Plan for the San Diego Basin

The CWA requires the San Diego Water Board to establish water quality standards for each water body in its region. Water quality standards include beneficial uses, water quality objectives and criteria that are established at levels sufficient to protect beneficial uses, and an antidegradation policy to prevent degrading of waters. On September 8, 1994, the San Diego Water Board adopted the *Water Quality Control Plan for the San Diego Basin* (Basin Plan). 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 San Diego Region. The San Diego Water Board has amended the Basin Plan on multiple occasions since 1994. In addition, the Basin Plan implements 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 supply. Beneficial uses applicable to the surface water bodies that receive discharges from the MS4s within the San Diego Region generally include those listed below:

The Basin Plan identifies the following existing and potential beneficial uses for inland surface waters in the San Diego Region:

- Municipal and Domestic Supply (MUN)
- Agricultural Supply (AGR)
- Industrial Process Supply (PROC)

- Industrial Service Supply (IND)
- Ground Water Recharge (GWR)
- Contact Water Recreation (REC1)
- Non-contact Water Recreation (REC2)
- Warm Freshwater Habitat (WARM)
- Cold Freshwater Habitat (COLD)
- Wildlife Habitat (WILD)
- Rare, Threatened, or Endangered Species (RARE)
- Freshwater Replenishment (FRSH)
- Hydropower Generation (POW)
- Preservation of Biological Habitats of Special Significance (BIOL)

The following additional existing and potential beneficial uses are identified for coastal waters of the San Diego Region:

- Navigation (NAV)
- Commercial and Sport Fishing (COMM)
- Estuarine Habitat (EST)
- Marine Habitat (MAR)
- Aquaculture (AQUA)
- Migration of Aquatic Organisms (MIGR)
- Spawning, Reproduction, and/or Early Development (SPWN)
- Shellfish Harvesting (SHELL)

Pursuant to Water Code sections 13263 and 13377, the requirements of this Order implement the Basin Plan.

#### Water Quality Control Plan for Ocean Waters of California, California Ocean Plan

In 1972, the State Water Board adopted the Water Quality Control Plan for Ocean Waters of California, California Ocean Plan (Ocean Plan). The State Water Board adopted the most recent amended Ocean Plan on October 16, 2012. The Office of Administrative Law approved it on July 3, 2013. The amended Ocean Plan became effective on August 19, 2013. The Ocean Plan is applicable, in its entirety, to ocean waters of the State. In order to protect beneficial uses, the Ocean Plan establishes water quality objectives and a program of implementation. Pursuant to Water Code sections 13263 and 13377, the requirements of this Order implement the Ocean Plan. The Ocean Plan identifies the beneficial uses of ocean waters of the State to be protected as summarized below:

- Industrial water supply
- Water contact and non-contact recreation, including aesthetic enjoyment; navigation
- Commercial and sport fishing

- Mariculture
- Preservation and enhancement of designated Areas of Special Biological Significance
- Rare and endangered species
- Marine habitat
- Fish spawning and shellfish harvesting

On March 20, 2012, the State Water Board approved Resolution No. 2012-0012 approving an exception to the Ocean Plan prohibition against discharges to Areas of Special Biological Significance (ASBS) for certain nonpoint source discharges and NPDES permitted municipal storm water discharges. On June 19, 2012, the State Water Board adopted Order No. 2012-0031, amending Order No. 2012-0012 to require pollutant load reductions to be achieved within six years for the ASBS Compliance Plans, section A.2.d(2) and ASBS Pollution Prevention Plans, section B.2.b(2). The State Water Board Resolution No. 2012-0012, as amended requires monitoring and testing of marine aquatic life and water quality in several ASBS to protect California's coastline during storms when rain water overflows into coastal waters. Specific terms, prohibitions, and special conditions were adopted to provide special protections for marine aquatic life and natural water quality in ASBS. The City of San Diego's municipal storm water discharges to the San Diego Marine Life Refuge in La Jolla, and the City of Laguna Beach's municipal storm water discharges to the Heisler Park ASBS are subject terms and conditions of State Water Board Resolution No. 2012-0012, as amended. The Special Protections contained in Attachment B to State Water Board Resolution No. 2012-0012, as amended, applicable to these discharges, are incorporated in Attachment A of this Order. Requirements of this Order implement the Ocean Plan.

#### Water Quality Control Plan for Enclosed Bays and Estuaries – Part 1 Sediment Quality

On September 16, 2008, the State Water Board adopted the Water Quality Control Plan for Enclosed Bays and Estuaries – Part 1 Sediment Quality (Sediment Quality Control Plan). The Sediment Quality Control Plan became effective on August 25, 2009. The Sediment Quality Control Plan establishes 1) narrative sediment quality objectives for benthic community protection from exposure to contaminants in sediment and to protect human health, and 2) a program of implementation using a multiple lines of evidence approach to interpret the narrative sediment quality objectives. Requirements of this Order implement the Sediment Quality Control Plan.

#### Antidegradation Policy

Federal regulations (40 CFR 131.12) require that the state water quality standards include an antidegradation policy consistent with the federal antidegradation policy. The State Water Board established California's antidegradation policy in State Water Board Resolution No. 68-16 ("Statement of Policy with Respect to Maintaining the Quality of the Waters of the State"). State Water Board Resolution No. 68-16 incorporates the

federal antidegradation policy where the federal policy applies under federal law.

The San Diego Water Board's Basin Plan implements and incorporates by reference both the State and federal antidegradation policies. State Water Board Resolution No. 68-16 and 40 CFR 131.12 require the San Diego Water Board to maintain high quality waters of the State unless degradation is justified based on specific findings. First, the Board must ensure that "existing instream uses and the level of water quality necessary to protect the existing uses" are maintained and protected. Second, if the baseline quality of a water body for a given constituent exceeds levels necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water, that quality shall be maintained and protected through the requirements of the Order unless the Board makes findings that (1) any lowering of the water quality is necessary to accommodate important economic or social development in the area in which the waters are located; (2) water quality adequate to protect existing uses fully is assured; and (3) the highest statutory and regulatory requirements for all new and existing point sources and all cost-effective and reasonable best management practices for nonpoint source control are achieved. The San Diego Water Board must also comply with any requirements of State Water Board Resolution No. 68-16 beyond those imposed through incorporation of the federal antidegradation policy. In particular, the Board must find that not only present, but also anticipated future uses of water are protected, and must ensure best practicable treatment or control of the discharges. The baseline quality considered in making the appropriate findings is the best quality of the water since 1968, the year of the adoption of Resolution No. 68-16, or a lower level if that lower level was allowed through a permitting action that was consistent with the federal and state antidegradation policies.

The discharges permitted in this Order are consistent with the antidegradation provisions of 40 CFR 131.12 and State Water Board Resolution No. 68-16 as set forth below:

1. Many of the waters within the area covered by this Order are impaired for multiple pollutants discharged through MS4s and are not high quality waters with regard to these pollutants. In most cases, there is insufficient data to determine whether these water bodies were impaired as early as 1968, but the limited available data shows impairment dating back for more than two decades. Many such water bodies are listed on the State's CWA Section 303(d) List and the San Diego Water Board has established TMDLs to address the impairments. This Order ensures that existing instream (beneficial) water uses and the level of water quality necessary to protect the existing uses is maintained and protected. This Order requires the Copermitttees to comply with permit provisions to implement the WLAs set forth in the TMDLs in order to restore the beneficial uses of the impaired water bodies consistent with the assumptions and requirements of the TMDLs. This Order further requires compliance with receiving water limitations to meet water quality standards in the receiving water either by demonstrating compliance pursuant to Provision A and the Copermitttees' monitoring and assessment program pursuant to Provision D of this Order, or by implementing Provision B.3.c with a schedule to achieve compliance

with receiving water limitations. This Order includes requirements to develop and implement storm water management programs, achieve WQBELs, and effectively prohibit non-storm water discharges into the MS4. The issuance of this Order does not authorize an increase in the amount of discharge of waste.

2. To the extent that water bodies within the area covered by this Order are high quality waters with regard to some constituents, this Order finds as follows:
  - a. Allowing limited degradation of high quality water bodies through MS4 discharges is necessary to accommodate important economic or social development in the area and is consistent with the maximum benefit to the people of the state. The discharge of storm water in certain circumstances is to the maximum benefit to the people of the state because it can assist with maintaining instream flows that support beneficial uses, may spur the development of multiple-benefit projects, and may be necessary for flood control, and public safety as well as to accommodate development in the area. The alternative – capturing all storm water from all storm events – would be an enormous opportunity cost that would preclude MS4 permittees from spending substantial funds on other important social needs. The Order ensures that any limited degradation does not affect existing and anticipated future uses of the water and does not result in water quality less than established standards. The Order requires compliance with receiving water limitations that act as a floor to any limited degradation.
  - b. The Order requires the highest statutory and regulatory requirements and requires that the Copermitees meet best practicable treatment or control. The Order prohibits all non-storm water discharges, with a few enumerated exceptions, through the MS4 to the receiving waters. As required by 40 CFR section 122.44(a), the Copermitees must comply with the “maximum extent practicable” technology-based standard set forth in CWA section 402(p), and implement extensive minimum control measures in a storm water management program. Recognizing that best practicable treatment or control may evolve over time, the Order includes new and more specific requirements as compared to the prior Phase I MS4 permits for the San Diego County, Orange County and Riverside County Copermitees. The Order incorporates options to implement Water Quality Improvement Plans that must specify detailed structural and non-structural storm water controls that must be implemented in accordance with an accepted proposed time schedule. The Order contains provisions to encourage, wherever feasible, retention of the storm water from the 85th percentile 24-hour storm event.

### Anti-Backsliding Requirements

CWA sections 402(o) and 303(d)(4) and federal regulations at 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 or conditions may be relaxed. While this Order

allows implementation of an alternative compliance pathway option in Provision B.3.c to constitute compliance with receiving water limitations under certain circumstances, the availability of that alternative and the corresponding availability of additional time to come into compliance with receiving water limitations does not violate the anti-backsliding provisions. The receiving water limitations provisions of this Order are imposed under section 402(p)(3)(B) of the Clean Water Act rather than based on best professional judgment, or based on section 301(b)(1)(C) or sections 303(d) or (e), and are accordingly not subject to the anti-backsliding requirements of section 402(o). Although the non-applicability is less clear with respect to the regulatory anti-backsliding provisions in 40 CFR 122.44(l), the regulatory history suggests that USEPA's intent was to establish the anti-backsliding regulations with respect to evolving technology standards for traditional point sources. (See, e.g., 44 Fed.Reg. 32854, 32864 (Jun. 7, 1979)). It is unnecessary, however, to resolve the ultimate applicability of the regulatory anti-backsliding provisions, because the alternative compliance pathway option in Provision B.3.c qualifies for an exception to backsliding as based on new information.

The alternative compliance pathway option in Provision B.3.c of this Order was informed by new information available to the Board from experience and knowledge gained through storm water permitting at the Regional Water Boards in the last ten years. There has been a statewide paradigm shift in storm water management. State Water Board Order WQ 2015-0075 directed all of the Regional Water Boards to consider the Los Angeles Water Board's alternative compliance path to receiving water limitations in all Phase I MS4 permits going forward (State Water Board Order WQ 2015-0075 at page 51), and the Los Angeles Water Board's process of developing over 30 watershed-based TMDLs and implementing several TMDLs since the adoption of the previous permits. In particular, the Los Angeles Water Board recognized the significance of allowing time to plan, design, fund, operate and maintain watershed-based BMPs necessary to attain water quality improvements and additionally recognized the potential for municipal storm water to benefit water supply. Similarly, the San Diego Water Board's experience developing and implementing the Fourth Term MS4 Permits and TMDLs that apply on a region-wide scale (e.g. TMDLs for Indicator Bacteria, Project I – Twenty Beaches and Creeks in the San Diego Region) has resulted in a similar recognition of the need for a watershed-based approach that allows time to plan, design, fund, operate and maintain BMPs to address impaired waters that have been impacted by MS4 discharges. Thus, even if the receiving water limitations are subject to anti-backsliding requirements, they were revised based on new information that would support an exception to the anti-backsliding provisions. (33 U.S.C. § 1342(o)(2)(B)(i); 40 C.F.R. § 122.44(l)(1); 40 C.F.R. §122.44(l)(2)(i)(B)(1)).

#### Clean Water Act Section 303(d) List

CWA section 303(d)(1) requires each State to identify specific water bodies within its boundaries where water quality standards are not being met or are not expected to be met after implementation of technology-based effluent limitations on point sources. Water bodies that do not meet water quality standards are considered impaired and are placed on the state's "303(d) List." Periodically, USEPA approves the State's 303(d) List.

Most recently, USEPA approved the State's 2010 303(d) List of impaired water bodies on October 11, 2011, which includes certain receiving waters in the San Diego Region. For each listed water body, the state or USEPA is required to establish a TMDL of each pollutant impairing the water quality standards in that water body. A TMDL is a tool for implementing water quality standards and is based on the relationship between pollution sources and in-stream water quality conditions. The TMDL establishes the allowable pollutant loadings for a water body and thereby provides the basis to establish water quality-based controls. These controls should provide the pollution reduction necessary for a water body to meet water quality standards.

A TMDL is the sum of the allowable pollutant loads of a single pollutant from all contributing point sources (the waste load allocations or WLAs) and non-point sources (load allocations of LAs) plus the contribution from background sources and a margin of safety (40 CFR 130.2(i)). MS4 discharges are considered point source discharges. For 303(d)-listed water bodies and pollutants in the San Diego Region, the San Diego Water Board or USEPA develops and adopts TMDLs that specify these requirements.

Since 2002, the San Diego Water Board has established seven (7) TMDLs to remedy water quality impairments in various water bodies within the San Diego Region (see Attachment E to the Order). These TMDLs identify MS4 discharges as a source of pollutants to these water bodies, and, as required, establish WLAs for MS4 discharges to reduce the amount of pollutant discharged to receiving waters. CWA section 402(p)(3)(B)(iii) requires the San Diego Water Board to impose permit conditions, including: "management practices, control techniques and system, design and engineering methods, and *such other provisions as the Administrator or the State determines appropriate for the control of such pollutants.*" (Emphasis added.) CWA section 402(a)(1) also requires states to issue permits with conditions necessary to carry out the provisions of the CWA. Federal regulations also require that NPDES permits contain WQBELs consistent with the assumptions and requirements of all available WLAs (40 CFR 122.44(d)(1)(vii)(B)). CWC section 13377 also requires that NPDES permits include limitations necessary to implement water quality control plans. Therefore, this Order includes WQBELs and other provisions to implement the TMDL WLAs assigned to Copermitttees regulated by this Order.

### Other Regulations, Plans and Policies

This Order implements all other applicable federal regulations and State regulations, plans and policies, including the California Toxics Rule at 40 CFR 131.38 (Water Quality Standards; Establishment of Numeric Criteria for Priority Toxic Pollutants for the State of California Rule [California Toxics Rule or CTR]), and State Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (State Implementation Policy or SIP).

## F. Unfunded State Mandates

Article XIII B, Section 6(a) of the California Constitution provides that whenever “*any state agency mandates a new program or higher level of service on any local government, the state shall provide a subvention of funds to reimburse that local government for the costs of the program or increased level of service.*” The requirements of this Order do not constitute state mandates that are subject to a subvention of funds for several reasons, including, but not limited to, the following.

First, the requirements of this Order do not constitute a new program or a higher level of service as compared to the requirements contained in the previous Fourth Term Permits. The overarching requirement to impose controls to reduce the pollutants in discharges from MS4s is dictated by the CWA and is not new to this permit cycle (33 USC section 1342(p)(3)(B)). The inclusion of new and advanced measures as the MS4 programs evolve and mature over time is anticipated under the CWA (55 FR 47990, 48052 (Nov. 16, 1990)), and to the extent requirements in this Order are interpreted as new advanced measures, they do not constitute a new program or higher level of service.

Second, and more broadly, mandates imposed by federal law, rather than by a state agency, are exempt from the requirement that the local agency’s expenditures be reimbursed (Cal. Const., art. XIII B, section 9, subd. (b)). This Order implements federally mandated requirements under the CWA and its requirements are therefore not subject to subvention of funds. This includes federal requirements to effectively prohibit non-storm water discharges, to reduce the discharge of pollutants in storm water to the MEP, and to include such other provisions as the Administrator or the State determines appropriate for the control of such pollutants (33 USC section 1342(p)(3)(B)). 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. USEPA* (9<sup>th</sup> Cir. 1992) 966 F.2d 1292, 1308, fn. 17.)

The authority exercised under this Order is not reserved state authority under the CWA’s savings clause (cf. *Burbank v. State Water Resources Control Bd.* (2005) 35 Cal.4<sup>th</sup> 613, 627-628 [relying on 33 USC section 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 Board, Santa Ana Region* (2006) 135 Cal.App.4<sup>th</sup> 1377, 1389; *Building Industry Ass’n of San Diego Co. v. State Water Resources Control Bd.* (2004) 124 Cal.App.4<sup>th</sup> 866, 882-883.)

The MEP standard is a flexible standard that balances a number of considerations, including technical feasibility, cost, public acceptance, regulatory compliance, and effectiveness. (*Building Ind. Ass’n., supra*, 124 Cal.App.4<sup>th</sup> at pp. 873-874, 889.) Such considerations change over time with advances in technology and with experience

gained in storm water management (55 FR 47990, 48052 (Nov. 16, 1990)). Accordingly, a determination of whether the conditions contained in this Order exceed the requirements of federal law cannot be based on a point by point comparison of the permit conditions and the minimum control measures that are required “at a minimum” to reduce pollutants to the maximum extent practicable and to protect water quality (40 CFR 122.34). Rather, the appropriate focus is whether the permit conditions, as a whole, exceed the MEP standard.

In recent months, the County of Los Angeles and County of Sacramento Superior Courts have granted writs setting aside decisions of the Commission on State Mandates that held certain requirements in Phase I permits constituted unfunded mandates. In both cases, the courts have found that the correct analysis in determining whether an MS4 permit constituted a state mandate was to evaluate whether the permit as a whole exceeds the MEP standard. (*State of Cal. v. Comm. on State Mandates* (Super. Ct. Sacramento County, 2012, No. 34-2010-80000604), *State of California v. County of Los Angeles* (Super. Ct. Los Angeles County, 2011, No. BS130730.) Both cases are currently pending appeal.

The requirements of the Order, taken as a whole rather than individually, are necessary to reduce the discharge of pollutants to the MEP and to protect water quality. The San Diego Water Board finds that the requirements of the Order are practicable, do not exceed federal law, and thus do not constitute an unfunded mandate. These findings are the expert conclusions of the principal state agency charged with implementing the NPDES program in California (CWC sections 13001, 13370).

It should also be noted that the provisions in this Order to effectively prohibit non-storm water discharges are also mandated by the CWA (33 USC section 1342(p)(3)(B)(ii)). Likewise, the provisions of this Order to implement TMDLs are federal mandates. The CWA requires TMDLs to be developed for water bodies that do not meet federal water quality standards (33 USC section 1313(d)). Once the USEPA or a state establishes or adopts a TMDL, federal law requires that permits must contain effluent limitations consistent with the assumptions and requirements of any applicable waste load allocation in a TMDL (40 CFR 122.44(d)(1)(vii)(B)).

Third, the local agency Copermittees’ 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 CWA regulates the discharge of pollutants from point sources (33 USC section 1342) and the Porter-Cologne Act regulates the discharge of waste (CWC section 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 non-governmental 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 CWA and the Porter-Cologne 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. Generally, the CWA requires point source dischargers, including dischargers of storm water associated with industrial or construction activity, to comply strictly with water quality standards (33 USC section 1311(b)(1)(C); *Defenders of Wildlife v. Browner* (9<sup>th</sup> Cir. 1999) 191 F.3d 1159, 1164-1165 [noting that industrial discharges must strictly comply with water quality standards]). As discussed in prior State Water Board decisions, certain provisions of this Order do not require strict compliance with water quality standards (State Water Board Order No. WQ 2001-0015, p. 7). Those provisions of this Order regulate the discharge of waste in municipal storm water under the CWA's MEP standard, not the BAT/BCT standard that applies to other types of discharges. These provisions, therefore, regulate the discharge of waste in municipal storm water more leniently than the discharge of waste from non-governmental sources.

Fourth, the Copermittees have requested permit coverage in lieu of compliance with the complete prohibition against the discharge of pollutants contained in CWA section 301(a) (33 USC section 1311(a)). To the extent that the local agency Copermittees 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.4<sup>th</sup> 68, 107-108.)

Fifth, the local agency Copermittees' 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 XIII B, Section (6) of the California Constitution.

Finally, even if any of the permit provisions could be considered unfunded mandates, under Government Code section 17556, subdivision (d), a state mandate is not subject to reimbursement if the local agency has the authority to charge a fee. The local agency Copermittees have the authority to levy service charges, fees, or assessments sufficient to pay for compliance with this Order, subject to certain voting requirements contained in the California Constitution. (See Cal. Const., Art. XIII D, section 6, subd. (c); see also *Howard Jarvis Taxpayers Ass'n v. City of Salinas* (2002) 98 Cal.App.4<sup>th</sup> 1351, 1358-1359.) The Fact Sheet demonstrates that numerous activities contribute to the pollutant loading in the MS4. 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.4<sup>th</sup> 830, 842 [upholding inspection fees associated with renting property].) The authority and 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. (*Clovis Unified School Dist. V. Chiang* (2010) 188 Cal.App.4<sup>th</sup> 794, 812, citing *Connell v. Sup. Ct.* (1997) 59 Cal.App.4<sup>th</sup> 382, 401; *County of Fresno v. State of California* (1991) 53 Cal. 3d. 482, 487-488.)

## VIII. PROVISIONS

The provisions (i.e. NPDES permit requirements) of the Order are discussed below.

### A. Prohibitions and Limitations

**Purpose:** Provision A includes the prohibitions and limitations requirements that are the foundation of all the subsequent requirements included in the Order. Compliance with the prohibitions and limitations will restore and protect receiving waters from impacts that may be caused by discharges into and from the Copermittees' MS4s and ultimately achieve the objective of the CWA.

In meeting the requirements set forth in the Order, the Copermittees must be cognizant that the prohibitions and limitations exist and will be the standard by which the San Diego Water Board will be measuring the progress and success of their implementation of the NPDES permit requirements.

**Discussion:** The objective of the CWA is to “*restore and maintain the chemical, physical, and biological integrity of the Nation’s waters.*” The CWA requires the implementation of NPDES permit programs to regulate discharges of pollutants and dredged or fill material to the navigable waters of the U.S. For discharges into and from MS4s, the CWA requires the NPDES permits to “*effectively prohibit non-stormwater discharges into the storm sewers*” and “*require controls to reduce the discharge of pollutants [in storm water] to the maximum extent practicable.*”

Provision A includes limitations, consistent with the requirements of the CWA for discharges from MS4s. Provision A expresses these limitations as discharge prohibitions, receiving water limitations, and effluent limitations. Compliance with the discharge prohibitions and receiving water limitations is also explicitly described, in conformance with precedential State Water Board Orders.

More specific and detailed discussions of the requirements of Provision A are provided below.

Provision A.1 (Discharge Prohibitions) prohibits the discharge of specific types of waste into and/or from the Copermittees' MS4s.

Provision A.1.a restates and reiterates Basin Plan Waste Discharge Prohibition 1, by prohibiting discharges into and from MS4s in a manner causing, or threatening to cause, a condition of pollution, contamination, or nuisance in receiving waters of the

state. The terms pollution,<sup>15</sup> contamination,<sup>16</sup> and nuisance<sup>17</sup> are defined under CWC 13050. Provision A.1.c incorporates all the waste discharge prohibitions of the Basin Plan into the requirements of the Order. The waste discharge prohibitions from the Basin Plan have been reproduced and provided in Attachment A to the Order.

Provision A.1.b requires non-storm water discharges into the MS4s to be effectively prohibited, consistent with the requirements of the CWA for MS4 permits to “*effectively prohibit non-stormwater discharges into the storm sewers.*” The effective prohibition is required to be implemented by each Copermittee within its jurisdiction through the illicit discharge detection and elimination requirements under Provision E.2. The prohibition does not apply to NPDES permitted discharges into the Copermittees’ MS4s.

The CWA employs the strategy of prohibiting the discharge of any pollutant from a point source into waters of the United States unless the discharger of the pollutant(s) obtains an NPDES permit pursuant to CWA Section 402. The 1987 amendment to the CWA includes provision 402(p) that specifically addresses NPDES permitting requirements for storm water discharges from MS4s. CWA section 402(p) prohibits the discharge of pollutants from specified MS4s to waters of the U.S. except as authorized by an NPDES permit and identifies two substantive standards for MS4 storm water permits. MS4 permits (1) “*shall include a requirement to effectively prohibit non-stormwater discharges into the storm sewers*” and (2) “*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 State determines appropriate for the control of such pollutants.*” (CWA section 402(p)(3)(B)(ii)-(iii).)

In November 1990, the USEPA published regulations addressing storm water discharges from MS4s (55 FR 47990 and following (Nov. 16, 1990) (Phase I Final Rule)). The regulations establish minimum requirements for MS4 permits, and generally focus on the requirement that MS4s implement programs to reduce the amount of pollutants found in storm water discharges to the MEP. The CWA’s municipal storm water MEP standard does not require storm water discharges to strictly meet water quality standards, as is required for other NPDES permitted

<sup>15</sup> CWC 13050(l): “(1) ‘Pollution’ means an alteration of the quality of waters of the state by waste to a degree which unreasonably affects either of the following: (A) The water for beneficial uses. (B) Facilities which serve beneficial uses. (2) ‘Pollution’ may include ‘contamination.’

<sup>16</sup> CWC 13050(k): “Contamination’ means an impairment of the quality of waters of the state by waste to a degree which creates a hazard to public health through poisoning or through the spread of disease. ‘Contamination’ includes any equivalent effect resulting from the disposal of waste, whether or not waters of the state are affected.”

<sup>17</sup> CWC 13050(m): ‘Nuisance’ means anything which meets all of the following requirements: (1) Is injurious to health, or is indecent or offensive to the senses, or an obstruction to the free use of property, so as to interfere with the comfortable enjoyment of life or property. (2) Affects at the same time an entire community or neighborhood, or any considerable number of persons, although the extent of the annoyance or damage inflicted upon individuals may be unequal. (3) Occurs during, or as a result of, the treatment or disposal of wastes.”

discharges. Compliance is achieved through an iterative approach of continuous implementation of improved BMPs. This distinction reflects Congress's recognition that variability in flow and intensity of storm events render difficult strict compliance with water quality standards by MS4 permittees. In describing the controls that permits must include to reduce pollutants in storm water discharges to the MEP, the statute (CWA section 402(p)(3)(B)(iii)) states that the controls shall include: "*management practices, control techniques and system, design and engineering methods, and such other provisions as the [permit writer] determines appropriate for the control of such pollutants.*"

In contrast, non-storm water discharges from the MS4 that are not authorized by separate NPDES permits are subject to requirements under the NPDES program, including discharge prohibitions, technology based effluent limitations and water quality-based effluent limitations (40 CFR 122.44). The regulations also require the Copermitee's program to include an element to detect and remove illicit discharges and improper disposal into the storm sewer (40 CFR 122.26(d)(2)(iv)(B)).

While "non-storm water" is not defined in the CWA or federal regulations, the federal regulations (at 40 CFR 122.26(b)(2)) define "*illicit discharge*" as "*any discharge to a municipal separate storm sewer that is not composed entirely of storm water and that is not covered by an NPDES permit (other than the NPDES permit for discharges from the municipal separate storm sewer and discharges resulting from fire fighting activities).*" This definition is the most closely applicable definition of "non-storm water" contained in federal law. As stated in the Phase I Final Rule, USEPA added the illicit discharge program requirement to begin implementation of the 'effective prohibition' requirement to detect and control non-storm water discharges to their municipal system.

Thus, federal law mandates that permits issued to MS4s must require management practices that will result in reducing storm water pollutants to the MEP yet at the same time requires that non-storm water discharges be effectively prohibited from entering the MS4. "Effectively" prohibit does not mean that non-storm water discharges are authorized to be discharged into and from the Copermitees' MS4s. The Phase I Final Rule clarifies what "effectively prohibit" means (55 FR 47995):

*"Section 402(p)(3)(B) requires that permits for discharges from municipal separate storm sewers require the municipality to "effectively prohibit" non-storm water discharges from the municipal separate storm sewer...Ultimately, such non-storm water discharges through a municipal separate storm sewer must either be removed from the system or become subject to an NPDES permit (other than the permit for the discharge from the municipal separate storm sewer)" [Emphasis added].*

Consistent with federal law, unless non-storm water discharges to the MS4 are authorized by a separate NPDES permit, non-storm water discharges are

appropriately subject to the effective prohibition requirement in the CWA and Regional Water Boards are not limited by the iterative MEP approach to storm water regulation in crafting appropriate regulations for non-storm water discharges.

The federal regulations (40CFR122.26(d)(2)(i)(B)) require the Copermitees to establish the legal authority which authorizes or enables the Copermitees to prohibit illicit discharges to the MS4s. The federal regulations (40 CFR 122.26(d)(2)(vi)(B)(1)) require the Copermitees to “*implement and enforce an ordinance, order or similar means*” to prevent non-storm water discharges to their MS4s. Thus, the Copermitees are required to “*effectively*” prohibit non-storm water discharges to their MS4s through enforcing their legal authority established under “*ordinance, order or similar means*” and either remove those discharges to their MS4s, or require those discharges to obtain coverage under a separate NPDES permit. More detail about the program that must be implemented to “*effectively*” prohibit non-storm water discharges to the Copermitees’ MS4s is provided under the discussion for Provision E.2.

Provision A.1.d was included to be consistent with Resolution No. 2012-0012, adopted by the State Water Board on March 20, 2012. Provision A.1.d prohibits discharges from MS4s to Areas of Special Biological Significance (ASBS), except for storm water discharges from the City of San Diego’s MS4 to the San Diego Marine Life Refuge in La Jolla, and the City of Laguna Beach to the Heisler Park ASBS subject to the Special Protections contained in Attachment B to State Water Board Resolution No. 2012-0012. The pertinent Special Protections contained in Attachment B to State Water Board Resolution No. 2012-0012 are provided in Attachment A to the Order.

Provision A.2 (Receiving Water Limitations) specifies the condition of the receiving waters that must be achieved when there are discharges from the Copermitees’ MS4s. Receiving water limitations are included in all NPDES permits issued pursuant to the CWA section 402. CWA section 402(p)(3)(B)(iii) authorizes the inclusion of “*such other provisions as the Administrator or the State determines appropriate for the control of such pollutants.*” This requirement gives USEPA or the State permitting authority, in this case the San Diego Water Board, discretion to determine what permit conditions are necessary to control pollutants.

In its Phase I Final Rule (see 55 FR 47990, 47994 (Nov. 16, 1990)), USEPA elaborated on these requirements, stating that, “*permits for discharges from municipal separate storm sewer systems must require controls to reduce the discharge of pollutants to the maximum extent practicable, and where necessary water quality-based controls.*” USEPA reiterated in its Phase II Final Rule (64 FR 68722, 68737), that MS4 “*permit conditions must provide for attainment of applicable water quality standards (including designated uses), allocations of pollutant loads established by a TMDL, and timing requirements for implementation of a TMDL.*” CWC section 13377 also requires that NPDES permits include limitations necessary to implement water quality control plans. Both the State Water Board and the San Diego Water Board have previously concluded that discharges from the MS4 contain pollutants that have

the reasonable potential to cause or contribute to excursions above water quality standards. As such, inclusion of receiving water limitations is appropriate to control MS4 discharges.

The inclusion of receiving water limitations is also consistent with the Ninth Circuit Court of Appeals' ruling in *Defenders of Wildlife v. Browner* (191 F.3d 1159, 1166 (1999)) that the permitting authority has discretion regarding the nature and timing of requirements that it includes as MS4 permit conditions to attain water quality standards. The Ninth Circuit Court of Appeals recently explained that, "[w]ater quality standards are used as a supplementary basis for effluent limitations [guidelines] so that numerous dischargers, despite their individual compliance with technology based effluent limitations, can be regulated to prevent water quality from falling below acceptable levels." (*Natural Resources Defense Council v. County of Los Angeles* (9<sup>th</sup> Cir. 2011) 673 F.3d 880, 886 (revd. On other grounds and remanded by *Los Angeles County Flood Control District v. Natural Resources Defense Council* (133 S.Ct. 710 (2013)))

The receiving water limitations included in this Order consist of all applicable numeric or narrative water quality objectives or criteria, or limitations to implement the applicable water quality objectives or criteria, for receiving waters as contained in the Basin Plan or in water quality control plans or policies adopted by the State Water Board, including State Water Board Resolution No. 68-16, or in federal regulations, including but not limited to 40 CFR 131.12 and 131.38. The water quality objectives in the Basin Plan and other State Water Board plans and policies have been approved by USEPA and combined with designated beneficial uses constitute the water quality standards required under federal law.

Provision A.2.a requires that discharges from the Copermittees' MS4s must not cause or contribute to the violation of water quality standards in receiving waters. The water quality standards of the receiving waters must be protected from the impacts that may be caused by the Copermittees' MS4 discharges. Water quality standards applicable to the surface waters in the San Diego Region must be achieved through meeting the technology based standard of MEP through an iterative process of improved management actions. Provision A.2.a is also consistent with State Water Board Order WQ 99-05 precedent-setting language requiring discharges from MS4s to attain receiving water quality standards. The water quality control plans and policies with water quality standards applicable to the waters in the San Diego Region are included under Provision A.2.a.

Provisions A.2.b was included to be consistent with the requirements of State Water Board Resolution No. 2012-0012, adopted on March 20, 2012.

Provision A.3 (Effluent Limitations) specifies the condition of the discharges from the Copermittees' MS4s that must be achieved if and when there are discharges.

Consistent with CWA section 301(b)(1)(A) and 40 CFR 122.44(a), Provision A.3.a includes the technology-based effluent limitations that must be included in the Order. The technology-based effluent limits, representing the minimum level of control that must be imposed in a permit under CWA section 402, requires that pollutants in discharges of storm water from the Copermittees' MS4s be reduced to the MEP. This provision applies specifically to storm water discharges. Non-storm water discharges must be effectively prohibited, as required under Provision A.1.b. Non-storm water (dry weather) discharges from the MS4 are not considered storm water (wet weather) discharges and therefore are not subject to the MEP standard.

The technology-based MEP standard is an ever-evolving, flexible, and advancing concept. Neither Congress nor USEPA has specifically defined the term "maximum extent practicable." Congress established this flexible MEP standard so that the administrative bodies would have "*the tools to meet the fundamental goals of the Clean Water Act in the context of storm water pollution.*" (*Building Industry Ass'n of San Diego County v. State Water Resources Control Bd.* (2004) 124 Cal.App.4<sup>th</sup> 866, 884.) As knowledge about controlling storm water runoff and discharges continues to evolve, so does the knowledge which constitutes MEP. Reducing the discharge of pollutants in storm water from the MS4 to the MEP requires the Copermittees to assess each program component and revise activities, control measures, BMPs, and measurable goals, as necessary to meet MEP.

The San Diego Water Board or the State Water Board ultimately define MEP, and may include requirements that provide specific guidance on what is expected to demonstrate MEP. It is the responsibility of the Copermittees to propose actions that implement BMPs to reduce storm water pollution to the MEP. In other words, the Copermittees' runoff management programs developed and implemented under the Order are the Copermittees' proposals for achieving MEP. Their total collective and individual activities conducted pursuant to their runoff management programs become their proposal for achieving MEP as it applies both to their overall effort, as well as to specific activities. Provisions B through E of the Order provides a minimum framework to guide the Copermittees in achieving the MEP standard for discharges of pollutants in storm water.

Provision A.3.b incorporates any water quality based effluent limitations (WQBELs) applicable to the MS4s established for TMDLs adopted and approved for the San Diego Region and requires the Copermittees to comply with those WQBELs. This is consistent with 40 CFR 122.44(d)(1)(vii)(B), which requires that NPDES permits to incorporate WQBELs "*developed to protect a narrative water quality criterion, a numeric water quality criterion, or both...consistent with the assumptions and requirements of any available wasteload allocation for the discharge...*"

Pursuant to CWA section 303(d), for surface water bodies identified as impaired by one or more pollutants, the San Diego Water Board is required to establish TMDLs "*at a level necessary to implement the applicable water quality standards with seasonal variations and a margin of safety which takes into account any lack of knowledge*

*concerning the relationship between effluent limitations and water quality.”* The TMDLs identify sources of the pollutants causing the impairments and assign portions of the TMDL as WLAs to point sources, which include MS4s.

WLAs must be expressed in NPDES permits as WQBELs, which may include one or more numeric components such as numeric effluent limits, and/or receiving water limitations, and/or BMP requirements. Because numeric targets for TMDLs typically include a component that will be protective of water quality standards, a TMDL will likely include one or more numeric receiving water limitations and/or effluent limitations as part of the assumptions or requirements of the TMDL. Any numeric receiving water limitations and/or effluent limitations developed as part of the assumptions or requirements of a TMDL must be incorporated and included as part of WQBELs for the MS4s.

Because the development and approval of new TMDLs, or modification of existing TMDLs, may occur during the term of this Order, the specific provisions of those TMDLs, including effluent limitations applicable to MS4s are provided within Attachment E to the Order. Attachment E will be updated with new TMDLs and modifications to existing TMDLs in a timely manner as they occur.

Provision A.4 (Compliance with Discharge Prohibitions and Receiving Water Limitations) describes the process required to be implemented by the Copermittees if compliance with the discharge prohibitions of Provisions A.1.a and A.1.c and receiving water limitations of Provision A.2.a are not being achieved under current conditions.

In its Phase II Stormwater Regulations, Final Rule, USEPA states that MS4 *“permit conditions must provide for attainment of applicable water quality standards (including designated uses), allocations of pollutant loads established by a TMDL, and timing requirements for implementation of a TMDL.”*<sup>18</sup> In a series of comment letters on MS4 permits issued by various Regional Water Boards, USEPA has also reiterated that MS4 discharges must meet water quality standards.<sup>19</sup> In addition, the Ninth Circuit Court of Appeals explained in a recent ruling that, *“[w]ater quality standards are used as a supplementary basis for effluent limitations [guidelines] so that numerous dischargers, despite their individual compliance with technology based effluent limitations, can be regulated to prevent water quality from falling below acceptable levels.”*<sup>20</sup>

<sup>18</sup> Phase II Stormwater Regulations, Final Rule, 64 Fed. Reg. 68722, 68737.

<sup>19</sup> Letter from Alexis Strauss, Acting Director, Water Division, USEPA Region IX, to Walt Pettit, Executive Director, State Water Board, re: SWRCB/OCC File A-1041 for Orange County, dated January 21, 1998.

<sup>20</sup> NRDC v. County of Los Angeles (9<sup>th</sup> Cir. 2011), 673 F.3d 880, 886 (revd. on other grounds and remanded by *Los Angeles County Flood Control District v. Natural Resources Defense Council* (133 S.Ct. 710 (2013))). See also, *Building Industry Ass’n of San Diego County v. State Water Resources Control Bd.* (2004) 124 Cal.App.4<sup>th</sup> 866, 884-886, citing *Defenders of Wildlife v. Browning*, (9<sup>th</sup> Cir. 1999) 191 F.3d 1159.)

Water quality standards for the San Diego Region are established in the Basin Plan. The water quality standards of the Basin Plan are incorporated into this Order as the discharge prohibitions under Provisions A.1.a and A.1.c and receiving water limitations under Provision A.2.a. The discharge prohibitions and receiving water limitations in this Order consist of all applicable numeric or narrative water quality objectives or criteria, or limitations or prohibitions to implement the applicable water quality objectives or criteria, for receiving waters as contained in the Basin Plan, water quality control plans or policies adopted by the State Water Board, including Resolution No. 68-16, or federal regulations, including but not limited to, 40 CFR 131.12 and 131.38. The waste discharge prohibitions and water quality objectives in the Basin Plan have been approved by USEPA and combined with the designated beneficial uses constitute the water quality standards required under federal law.

Under federal law (CWA section 402(p)(3)(B)(iii)), an MS4 permit must include “*controls to reduce the discharge of pollutants to the maximum extent practicable...and such other provision as...the State determines appropriate for control of such pollutants.*” The State Water Board has previously determined that limitations necessary to meet water quality standards are appropriate for the control of pollutants discharged by MS4s and must be included in MS4 permits. (State Water Board Orders WQ 91-03, 98-01, 99-05, 2001-15; see also *Defenders of Wildlife v. Browner* (9<sup>th</sup> Cir. 1999) 191 F.3d 1159.) This Order prohibits discharges that cause or contribute to violations of water quality standards.

The discharge prohibitions under Provisions A.1.a and A.1.c and receiving water limitations under Provision A.2.a are included in this Order to ensure that discharges from the MS4s do not cause or contribute to exceedances of water quality objectives necessary to protect the beneficial uses of the receiving waters.

Provision A.4 is consistent with the precedent-setting language in State Water Board Order WQ 99-05 required to be included in municipal storm water permits. State Water Board Order WQ 2001-15 refined Order WQ 99-05 by requiring an iterative approach to compliance with water quality standards involving ongoing assessments and revisions, referred to as the “iterative process.” The “iterative process” is a fundamental NPDES requirement for municipal storm water permits to achieve the objectives of the CWA.

The State Water Board and Regional Water Boards have stated that the provisions under Provisions A.1.a, A.1.c, A.2.a, and A.4 are independently applicable, meaning that compliance with one provision does not provide a “safe harbor” where there is non-compliance with another provision (i.e., compliance with the Provision A.4 does not shield a Copermitttee who may have violated Provision A.1.a, A.1.c, or A.2.a from an enforcement action). The intent of Provision A.4 is to ensure that the Copermitttees have the necessary storm water management programs and controls in place, and that they are modified by the Copermitttees in a timely fashion when necessary, so that compliance with Provisions A.1.a, A.1.c, and/or A.2.a is achieved as soon as possible. USEPA expressed the importance of this independent applicability in a series of

comment letters on MS4 permits proposed by various Regional Water Boards. At that time, USEPA expressly objected to certain MS4 permits that included language stating, “*permittees will not be in violation of this [receiving water limitation] provision ... [if certain steps are taken to evaluate and improve the effectiveness of the jurisdictional runoff management programs],*” concluding that this phrase would not comply with the CWA.<sup>21</sup>

The Ninth Circuit held in *Natural Resources Defense Council v. County of Los Angeles* (2011) 673 F3d. 880, 886 (revd. on other grounds and remanded by *Los Angeles County Flood Control District v. Natural Resources Defense Council* (133 S.Ct. 710 (2013))) that engagement in the iterative process does not provide a safe harbor from liability for violations of permit terms prohibiting exceedances of water quality standards. The Ninth Circuit holding is consistent with the position of the State and Regional Water Boards that exceedances of water quality standards in an MS4 permit constitute violations of permit terms subject to enforcement by the Water Boards or through a citizen suit. While the Water Boards have generally directed dischargers to achieve compliance by improving control measures through the iterative process, the San Diego Water Board retains the discretion to take other appropriate enforcement and the iterative process does not shield dischargers from citizen suits under the CWA.

The requirements of Provision A.4, therefore, are required to be implemented until the water quality standards expressed under Provisions A.1.a, A.1.c, and A.2.a are achieved. The CWA requires MS4 permits to “*require controls to reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques and system, design and engineering methods, and such other provisions as the Administrator or the State determines appropriate for the control of such pollutants.*” The requirements of this Order have been deemed or determined to be “appropriate” to achieve water quality standards in receiving waters.

Part of the “controls” required by the Order is the process described in Provision A.4. Provision A.4 includes the process that is ultimately expected to achieve compliance with the requirement that discharges from the MS4 do not cause or contribute to violations of water quality standards in the receiving waters. The implementation of Provision A.4 is required when the Copermittees or the San Diego Water Board have determined that discharges from the MS4 are causing or contributing to violations of water quality standards in the receiving waters.

The Copermittees must effectively prohibit non-storm water discharges into the MS4s, reduce the discharge of pollutants in storm water from the MS4s to the MEP, and ensure that their MS4 discharges do not cause or contribute to violations of water quality standards. If the Copermittees have effectively prohibited non-storm water

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<sup>21</sup> Letter from Alexis Strauss, Acting Director, Water Division, USEPA Region IX, to Walt Pettit, Executive Director, State Water Board, re: SWRCB/OCC File A-1041 for Orange County, dated January 21, 1998.

discharges and reduced storm water pollutant discharges to the MEP, but their discharges are still causing or contributing to violations of water quality standards, Provision A.4 provides a clear “iterative process” for the Copermittees to follow.

Provision A.4 essentially requires the Copermittees to implement additional BMPs until MS4 discharges no longer cause or contribute to a violation of water quality standards.

In assessing compliance and potential enforcement actions, the San Diego Water Board looks at the Copermittees’ efforts in total to meet the requirements of Provisions A.1.a, A.1.c, A.2.a and Provision A.4. The Copermittees need to demonstrate that they are making improvements to their programs and making progress toward achieving the discharge prohibitions and receiving water limitations in Provisions A.1.a, A.1.c, and A.2.a by implementing the requirements of Provision A.4. The San Diego Water Board would consider these efforts prior to strictly enforcing the requirements of Provisions A.1.a, A.1.c, and A.2.a. Causes of exceedances of the receiving water limitations can often be more difficult to identify and attribute solely to the Copermittees’ MS4s. The intent of the Order is to provide the Copermittees more clarity and flexibility in addressing these exceedances through the iterative approach and adaptive management process until the requirements under Provisions A.1.a, A.1.c, and A.2.a are fully achieved.

An exception to the iterative approach and adaptive management process would be in receiving waters subject to adopted and approved TMDLs. For TMDLs that are incorporated into the Order, there is a specific date for compliance to be achieved, after which the iterative approach and adaptive management process required under Provision A.4 no longer provides the flexibility to achieve compliance. Where compliance dates for a TMDL have passed, compliance with the WQBELs incorporated into the Order established by a TMDL in Attachment E to protect water quality standards is required. Thus, after the interim or final compliance dates for a TMDL have passed, if the discharges from the Copermittees’ MS4s are causing or contributing to a violation of WQBELs, exceedances of WQBELs must be strictly enforced by the San Diego Water Board. In the meantime, however, the Copermittees are in compliance with the interim or final TMDL requirements in Attachment E as long as the interim or final WQBELs are being achieved in accordance with the interim or final compliance dates.

In addition, this Order includes an optional pathway that incorporates the requirements of Provision A.4 and would allow a Copermittee to be deemed in compliance with the requirements under Provisions A.1.a, A.1.c, A.1.d, A.2, and A.3.b during implementation of a Water Quality Improvement Plan that incorporates specific additional requirements. This alternative compliance pathway and the additional specific requirements are described below under the discussion for Provision B.3.c.

## **B. Water Quality Improvement Plans**

**Purpose:** Since 1990, the Copermittees have been developing and implementing programs and BMPs intended to effectively prohibit non-storm water discharges to the MS4s and control pollutants in storm water discharges from the MS4s to receiving waters. As a result, several water body / pollutant combinations have been de-listed from the CWA Section 303(d) List, beach closures have been significantly reduced, and public awareness of water quality issues has increased. The Copermittees have been able to achieve improvements in water quality in some respects, but significant improvements to the quality of receiving waters and discharges from the MS4s are still necessary to meet the requirements and objectives of the Clean Water Act.

Provision B includes requirements for the Copermittees to develop and implement Water Quality Improvement Plans to ultimately comply with the prohibitions and limitations under Provision A. The Water Quality Improvement Plans will provide the Copermittees a comprehensive program that can achieve the requirements and further the objectives of the CWA. Implementation of the Water Quality Improvement Plans will also improve the quality of the receiving waters in the San Diego Region.

The Water Quality Improvement Plan is the backbone of the Regional MS4 Permit requirements. Provision B provides the guidance, criteria, and minimum expectations and requirements for the elements of the Water Quality Improvement Plan to be developed and implemented by the Copermittees. The Water Quality Improvement Plans will be implemented in the Watershed Management Area by the Copermittees within their jurisdictions through their jurisdictional runoff management programs.

The Water Quality Improvement Plan also incorporates a program to monitor and assess the progress of the Copermittees' jurisdictional runoff management programs toward improving the quality of discharges from the MS4s, as well as tracking improvements to the quality of receiving waters. A process to adapt and improve the effectiveness of the Water Quality Improvement Plans has also been incorporated into the requirements of Provision B to be consistent with the "iterative approach" required to achieve compliance with discharge prohibitions of Provisions A.1.a and A.1.c and receiving water limitations of Provision A.2.a, pursuant to the requirements of Provision A.4.

The Water Quality Improvement Plans have also been structured to incorporate the requirements of any TMDLs that have been adopted for the San Diego Region. Incorporating the requirements of the TMDLs into the requirements of Provision B allows the Copermittees to develop a single plan, instead of separate plans, to coordinate their non-storm water and storm water runoff management programs. The Water Quality Improvement Plans allow the Copermittees to meet the requirements of this Order, as well as fulfill the requirements of the TMDLs.

As an added benefit, if the Copermitees demonstrate that impaired water bodies within the Watershed Management Area listed on the 303(d) List will be addressed with their Water Quality Improvement Plans in a reasonable period of time, the San Diego Water Board may be able to remove the water bodies from the 303(d) List, which would greatly reduce the need for the San Diego Water Board to develop additional TMDLs that would have to be incorporated into the Order and implemented by the Copermitees.

***Discussion:*** The federal NPDES regulations require the Copermitees to develop a proposed management program (40 CFR 122.26(d)(2)(iv)). The proposed management program must include “*a comprehensive planning process*” and “*where necessary intergovernmental coordination*” for the “*duration of the permit.*” The Water Quality Improvement Plan is the Copermitees’ “*comprehensive planning process*” document for the proposed management program that will be implemented within a Watershed Management Area. Implementation of the Water Quality Improvement Plan requires “*intergovernmental coordination*” among the Copermitees for at least the “*duration of the permit,*” and likely into and beyond the next iteration of the permit.

Developing Water Quality Improvement Plans based upon watersheds is consistent with federal regulations that support the development of permit conditions, as well as implementation of storm water management programs, at a watershed scale (40 CFR 122.26(a)(3)(ii), 122.26(a)(3)(v), and 122.26(d)(2)(iv)). In 2003, USEPA issued a Watershed-Based NPDES Permitting Policy Statement (USEPA, 2003) that defines watershed-based permitting as an approach that produces NPDES permits that are issued to point sources on a geographic or watershed basis. In this policy statement, USEPA explains that “[*t*]he utility of this tool relies heavily on a detailed, integrated, and inclusive watershed planning process.” USEPA identifies a number of important benefits of watershed permitting, including more environmentally effective results, the ability to emphasize measuring the effectiveness of targeted actions on improvements in water quality, reduced cost of improving the quality of the nation’s waters and more effective implementation of watershed plans, including TMDLs, among others.

An emphasis on watersheds is appropriate at this stage in the San Diego Region’s MS4 program to shift the focus to more targeted, water quality driven planning and implementation. Addressing discharges on a watershed scale focuses on water quality results by emphasizing the receiving waters in the watershed. The conditions of the receiving waters drive management actions, which in turn focus measures to address pollutant contributions from MS4 discharges.

The Water Quality Improvement Plan gives the Copermitees the responsibility of developing a comprehensive plan to coordinate the efforts of their jurisdictional runoff management programs for addressing the problems related to MS4 discharges causing impacts to water quality in the Watershed Management Area. The development of the plan provides the Copermitees the opportunity to provide

significant input on how to implement their jurisdictional runoff management programs, and how to best utilize their available resources in addressing a focused set of priorities that they believe will result in measureable improvements to water quality within the Watershed Management Area.

The Copermittees are encouraged to separate the Watershed Management Area into subwatersheds, as appropriate. This allows the Copermittees to identify priorities applicable to a subset of the Copermittees or specific water bodies or areas within the Watershed Management Area.

Included in the requirements for the elements to be included in the Water Quality Improvement Plan are monitoring and assessment requirements that are necessary to implement, as well as ensure the Copermittees are in compliance with, the requirements of the Order. In addition to the federal requirements of the CWA section 308(a) and 40 CFR 122.26(d), the San Diego Water Board has the authority to establish monitoring, reporting, and recordkeeping requirements for NPDES permits under CWC 13383.

More specific and detailed discussions of the requirements of Provision B are provided below.

Provision B.1 (Watershed Management Areas) requires the Copermittees to develop a Water Quality Improvement Plan for each of the Watershed Management Areas defined by the San Diego Water Board.

Pursuant to 40 CFR 122.26(d)(2)(iv), proposed management programs “*may impose controls on a...watershed basis...*” The Water Quality Improvement Plan is the Copermittees’ proposed management program. A Water Quality Improvement Plan must be developed for each Watershed Management Area identified in the Order.

The Watershed Management Areas are identified in Table B-1. Table B-1 establishes ten (10) Watershed Management Areas, and identifies the Copermittees that are responsible for developing and implementing the Water Quality Improvement Plan for each Watershed Management Area.

The Copermittees from each of the three counties within the San Diego Region were phased in as their respective NPDES municipal storm water permits expired. Order No. R9-2007-0001 expired in January 2012, and the San Diego County Copermittees became covered under the Regional MS4 Permit on June 27, 2013, the effective date of the Order. Order No. R9-2009-0002 expired in December 2014, and the Orange County Copermittees became covered under the Regional MS4 Permit on April 1, 2015, the effective date of Order No. R9-2013-0001 as amended by Order No. R9-2015-0001. Order No. R9-2010-0016 expired in November 2015, and the Riverside County Copermittees became covered under the Regional MS4 Permit on January 7, 2016, the effective date of Order No. R9-2013-0001 as amended by Order No. R9-2015-0100.

The Cities of Laguna Woods, Laguna Hills, Murrieta, and Wildomar are located partially within the jurisdictions of both the California Regional Water Quality Control Board, Santa Ana Region (Santa Ana Water Board) and the San Diego Water Board. Written requests for designation of a single Regional Water Board to regulate matters pertaining to permitting of Phase I MS4 discharges were submitted to the San Diego Water Board and the Santa Ana Water Board by the City of Laguna Woods by letter dated September 8, 2014, the City of Laguna Hills by letter dated March 12, 2014, the City of Murrieta by letter dated June 22, 2015, and the City of Wildomar by letter dated June 23, 2015. The Cities of Laguna Woods, Laguna Hills, Murrieta, and Wildomar requested designation of the San Diego Water Board pursuant to CWC section 13228.

The Cities of Laguna Woods, Laguna Hills, Murrieta, and Wildomar reported that management and implementation of municipal programs to comply with two different Phase I MS4 permits creates a significant administrative and financial burden and inhibits their ability to contribute to greater overall water quality improvements in either Region. In an effort to address these concerns, the San Diego Water Board and the Santa Ana Water Board have entered into written agreements, whereby the San Diego Water Board is designated to regulate Phase I MS4 discharges within the jurisdictions of the Cities of Laguna Woods, Laguna Hills, Murrieta, and Wildomar including the portions of the jurisdictions within the Santa Ana Region. The San Diego Water Board and the Santa Ana Water Board entered into an agreement dated February 10, 2015 to designate the San Diego Water Board to regulate Phase I MS4 discharges within the jurisdictions of the Cities of Laguna Woods and Laguna Hills, including the portions of the jurisdictions within the Santa Ana Region, upon the later effective date of Order No. R9-2015-0001 or Santa Ana Water Board Tentative Order No. R8-2015-0001. The San Diego Water Board and the Santa Ana Water Board entered into an agreement dated October 26, 2015 to designate the San Diego Water Board to regulate Phase I MS4 discharges within the jurisdictions of the Cities of Murrieta and Wildomar, including the portions of the jurisdictions within the Santa Ana Region upon the effective date of Order R9-2015-0100.

Under the terms of the agreements, each Regional Water Board retains the authority to enforce provisions of the Phase I MS4 permits issued to each city but compliance will be determined based upon the Phase I MS4 permit in which a particular city is regulated as a Copermittee (Water Code section 13228 (b)). Also under the terms of the agreements, any TMDL and associated MS4 permit requirements issued by the San Diego Water Board or the Santa Ana Water Board which include the Cities of Laguna Woods, Laguna Hills, Murrieta, or Wildomar as a responsible party, will be incorporated into the appropriate Phase I MS4 permit by reference. Enforcement of the applicable TMDL would remain with the Regional Water Board which has jurisdiction over the targeted impaired water body. Applicable TMDLs subject to the terms of the agreement include, but are not limited to, the Santa Ana Water Board's San Diego Creek/Newport Bay TMDL and Lake Elsinore/Canyon Lake Nutrient TMDLs, and the San Diego Water Board's Indicator Bacteria Project I Beaches and Creeks TMDL.

In conformance with the agreements, footnotes to Table B-1 are included to specify coverage under Order No. R9-2013-0001 for those Phase I MS4 discharges within the jurisdictional boundaries of the Cities of Laguna Woods, Laguna Hills, Murrieta, and Wildomar within the Santa Ana Region. Footnote 1 to Table B-1 specifies that the Cities of Laguna Woods and Laguna Hills are identified as responsible Copermitttees in the San Diego Creek/Newport Bay TMDL in the Santa Ana Region and remain obligated to comply with the San Diego Creek/Newport Bay TMDL pursuant to section XVIII of Tentative Order No. R8-2015-0001 (NPDES No. CAS618030) and any reissuance thereof. Footnote 4 to Table B-1 specifies that the Cities of Murrieta and Wildomar are identified as responsible Copermitttees in the Lake Elsinore/Canyon Lake Nutrient TMDLs in the Santa Ana Region and remain obligated to comply with the Lake Elsinore/Canyon Lake Nutrient TMDLs pursuant to section VI.D.2 of Order No. R8-2010-0033 (NPDES No. CAS618030) or corresponding section as it may be amended or reissued.

The Cities of Lake Forest and Menifee are located partially within the jurisdictions of both the Santa Ana Water Board and the San Diego Water Board. Written requests for designation of a single Regional Water Board to regulate matters pertaining to permitting of Phase I MS4 discharges were submitted to the San Diego Water Board and the Santa Ana Water Board by the City of Lake Forest by letters dated January 14, 2013 and April 4, 2014, and the City of Menifee by letter dated June 25, 2015. The Cities of Lake Forest and Menifee requested designation of the San Ana Water Board pursuant to CWC section 13228.

The Cities of Lake Forest and Menifee reported that management and implementation of municipal programs to comply with two different Phase I MS4 permits creates a significant administrative and financial burden and inhibits their ability to contribute to greater overall water quality improvements in either Region. In an effort to address these concerns, the San Diego Water Board and the Santa Ana Water Board have entered into written agreements, whereby the Santa Ana Water Board is designated to regulate Phase I MS4 discharges within the jurisdictions of the Cities of Lake Forest and Menifee including the portions of the jurisdictions within the San Diego Region. The San Diego Water Board and the Santa Ana Water Board entered into an agreement dated February 10, 2015 to designate the San Ana Water Board to regulate Phase I MS4 discharges within the jurisdiction of the City of Lake Forest, including portions of the jurisdiction within the Santa Diego Region, upon the later date of Order No. R9-2015-0001 or Santa Ana Water Board Tentative Order No. R8-2015-0001. The San Diego Water Board and the Santa Ana Water Board entered into an agreement dated October 26, 2015 to designate the San Ana Water Board to regulate Phase I MS4 discharges within the jurisdiction of the City of Menifee, including portions of the jurisdiction within the San Diego Region, under Order No. R8-2010-0033 (NPDES No. CAS618030) as it may be amended or reissued upon the effective date of Order No. R9-2015-0100.

Under the terms of the agreements, each Regional Water Board retains the authority to enforce provisions of the Phase I MS4 permits issued to each city but compliance will be determined based upon the Phase I MS4 permit in which a particular city is regulated as a Copermittee (Water Code section 13228 (b)). Also under the terms of the agreements, any TMDL and associated Phase I MS4 permit requirements issued by the San Diego Water Board or the Santa Ana Water Board which include the Cities of Lake Forest or Menifee as a responsible party, will be incorporated into the appropriate Phase I MS4 permit by reference. Enforcement authority for the applicable TMDL would remain with the Regional Water Board which has the jurisdiction over the targeted impaired water body. Applicable TMDLs subject to the terms of the agreement include, but are not limited to, the Santa Ana Water Board's San Diego Creek/Newport Bay TMDL and Lake Elsinore/Canyon Lake Nutrient TMDLs, and the San Diego Water Board's Indicator Bacteria Project I Beaches and Creeks TMDL.

In conformance with the agreements, Footnote 2 to Table B-1 has been included to specify that Phase I MS4 discharges within the jurisdictional boundaries of the City of Lake Forest located within the San Diego Region will be regulated under Santa Ana Water Board Order No. R8-2015-0001 (NPDES No. CAS618030) and any reissuance thereof. The footnote specifies that the City of Lake Forest is an identified responsible Copermittee in the Indicator Bacteria Project I Beaches and Creeks TMDL (Bacteria TMDL) in the San Diego Region and remains obligated to comply with the Bacteria TMDL pursuant to Attachment E of Order No. R9-2013-0001 and any reissuance thereto. The City of Lake Forest is also identified as a responsible Copermittee in the San Diego Creek/Newport Bay TMDL established by the Santa Ana Water Board. The City remains obligated to comply with the San Diego Creek/New Port Bay TMDL pursuant to the Santa Ana Water Board's Phase I MS4 Permit (Tentative Order No. R8-2015-0001 (NPDES No. CAS618030), as it may be amended or reissued). Under the terms of the agreement, the City of Lake Forest must retain and continue implementation of the over irrigation prohibition in Title 15, Chapter 15, Section 14.030, List (b) of the City Municipal Code throughout its jurisdiction. Also under the terms of the agreement, the City of Lake Forest must actively participate in the development and implementation of the South Orange County Watershed Management Area Water Quality Improvement Plan required pursuant to Order No. R9-2013-0001, and any reissuance thereof.

Footnote 3 to Table B-1 has been included to specify that Phase I MS4 discharges within the jurisdictional boundaries of the City of Menifee located within the San Diego Region will be regulated under Santa Ana Water Board Order No. R8-2010-0033 (NPDES No. CAS618033) and any reissuance thereof. At this time, the City of Menifee is not identified as a responsible Copermittee for any TMDLs established by the San Diego Water Board. Under the terms of the agreement, the City of Menifee must actively participate in the development and implementation of the Santa Margarita River Watershed Management Area Water Quality Improvement Plan required pursuant to Order No. R9-2013-0001, and any reissuance thereof.

The basis supporting the Cities of Laguna Woods, Laguna Hills, Lake Forest, Menifee, Murrieta, and Wildomar requests to designate a specific Regional Water Board for regulatory oversight of Phase I MS4 discharges may change under future conditions and circumstances, therefore the San Diego Water Board will periodically review the effectiveness of the agreements during each MS4 permit reissuance. Based on this periodic review the San Diego Water Board may terminate one or both of the agreements with the Santa Ana Water Board or otherwise modify the agreements subject to the approval of the Santa Ana Water Board.

Provision B.2 (Priority Water Quality Conditions) requires the Copermittees in each Watershed Management Area to identify the highest priority water quality conditions which will be the focus of the Water Quality Improvement Plan implementation.

Provisions B.2.a and B.2.b provide the criteria that must be assessed when characterizing the receiving water quality and potential impacts from MS4 discharges of the receiving waters within the Watershed Management Area. The criteria are based primarily on the requirements in 40 CFR 122.26(d)(1)(iv)(C) and (C)(1)-(9). Characterizing the receiving water quality and identifying the potential impacts caused by MS4 discharges to receiving waters in the Watershed Management Area is necessary to identify the impacts to receiving waters associated with MS4 discharges that are of the most concern to the Copermittees.

Based on the information required to be considered under Provisions B.2.a and B.2.b, Provision B.2.c requires to Copermittees to identify the highest priority water quality conditions related to discharges from the MS4s that will be the primary focus of the Water Quality Improvement Plan in the Watershed Management Area. Addressing and improving these highest priority water quality conditions will become the focus of each Copermittee's jurisdictional runoff management program as the Water Quality Improvement Plan is implemented in the Watershed Management Area. The highest priority water quality conditions are expected to include sources of pollutants and/or stressors, and/or receiving water conditions, that the Copermittees consider the highest threats or most likely to have adverse impacts on the physical, chemical, and biological integrity of receiving waters. Addressing these threats and/or adverse impacts should restore the physical, chemical, and biological integrity of receiving waters, and result in the restoration and protection of the beneficial uses of the receiving waters in the Watershed Management Area.

Provision B.2.d requires the Copermittees to identify known and suspected sources of pollutants and/or stressors contributing to the highest priority water quality conditions. The requirements of Provision B.2.d are based primarily on the requirements in 40 CFR 122.26(d)(1)(iii)(B)(1)-(6). The Copermittees are required to evaluate several factors in the identification of those sources. The Copermittees must consider and evaluate the following: (1) the land uses that may contribute toward impacts to receiving waters, (2) the locations of the Copermittees' MS4s that can convey and discharge runoff and pollutants to receiving waters, (3) other sources that discharge

into the Copermittees' MS4s and receiving waters, and (4) other information and data that can help the Copermittees to evaluate the relative importance of or contribution from those sources toward the highest priority water quality conditions. Identifying the known and suspected sources, and their relative contribution toward the highest priority water quality conditions, will help the Copermittees to focus, direct, and prioritize their resources and implementation efforts within their jurisdictions.

Provision B.2.e requires the Copermittees to identify potential strategies that can result in improvements to water quality in MS4 discharges and/or receiving waters within the Watershed Management Area. Potential water quality improvement strategies will not necessarily be implemented by the Copermittees, but provide a "menu" of options that the Copermittees will consider for implementation. The public participation process that will be implemented during the development of the Water Quality Improvement Plan is where the potential water quality improvement strategies will be identified.

Provision B.3 (Water Quality Improvement Goals, Strategies and Schedules) requires the Copermittees in each Watershed Management Area to identify the goals that the Copermittees' jurisdictional runoff management programs will work toward achieving to address and improve the highest priority water quality conditions identified under Provision B.2.c; the strategies that will be implemented by the Copermittees within their jurisdictions and the Watershed Management Area to achieve the goals; and, the schedules for implementing the strategies and achieving the goals. The element of the Water Quality Improvement Plan required under Provision B.3 is where the "*comprehensive planning*" and "*intergovernmental coordination*" [40 CFR 122.26(d)(2)(iv)] of the Copermittees' actions for the proposed management programs within the Watershed Management Area is required to be described.

Provision B.3.a requires the Copermittees to identify interim and final numeric goals, and schedules to achieve those goals as part of the Water Quality Improvement Plans. Provision B.3.a.(1) requires the Copermittees to identify two types of numeric goals to be achieved:

- (1) Final numeric goals in the receiving waters and/or MS4 discharges that will result in the protection of the water quality standards of the receiving waters for the highest priority water quality conditions identified by the Copermittees for Provision B.2.c. These final numeric goals are the ultimate goals for the Water Quality Improvement Plan, and the achievement and maintenance of these final numeric goals will indicate that one or more beneficial uses have been successfully restored and/or protected from MS4 discharges.
- (2) Interim numeric goals that can be used by the Copermittees to demonstrate progress toward achieving the final numeric goals in the receiving waters and/or MS4 discharges for the highest priority water quality conditions in the Watershed Management Area. Achievement of the interim numeric goals will demonstrate to the San Diego Water Board that the Copermittees' implementation efforts are progressing toward achieving the final numeric goals.

Provision B.3.a.(1) does not specify what the interim and final numeric goals must be based on, but they essentially must be designed to achieve compliance with water quality standards in the receiving waters. To that end, the interim goals must be based on measureable criteria or indicators capable of demonstrating progress toward achieving the numeric goals.

The interim and final numeric goals can be based on the water quality objectives in the Basin Plan. The water quality objectives in the Basin Plan, however, consist of numeric and narrative water quality objectives. Numeric water quality objectives can be directly used as numeric goals. Narrative water quality objectives, on the other hand, will require some interpretation to identify numeric goals. The achievement of multiple numeric goals based on the water quality objectives, used in combination, may be necessary to demonstrate that beneficial uses have been restored and/or protected.

The Copermittees could also propose other numeric goals that are not necessarily water quality objectives from the Basin Plan. For example, the Copermittees could propose a numeric goal that consists of achieving some percent improvement of a measureable indicator, such as acreage of a specific habitat or increase in a specific plant or animal species population. Other examples may include pollutant load reductions, number of impaired waterbodies delisted from the List of Water Quality Impaired Segments, Index of Biological Integrity (IBI) scores, etc.

The Copermittees may choose to develop interim numeric goals based on the final numeric goals they develop, such as incremental steps toward ultimately achieving the final numeric goals. The Copermittees may also choose to develop interim numeric goals that are based on other measureable indicators that can indirectly indicate improvements and progress toward the final numeric goals.

There are no limits to the types of interim numeric goals that could be proposed by the Copermittees, other than the goals must be based on measureable criteria or indicators capable of demonstrating progress toward achieving the numeric goals. Likewise, there are no limits to the types of final numeric goals that could be proposed by the Copermittees, other than the goals must “*restore and protect the water quality standards of the receiving waters.*”

Finally, Provision B.3.a.(2) also requires the Copermittees to develop schedules for measuring progress and achieving the interim and final numeric goals. Several criteria are included for the development of the schedules, but the Copermittees are required to achieve the numeric goals as soon as possible, consistent with federal NPDES regulations (40 CFR 122.47(a)(1)).

The Copermittees are also required to incorporate any compliance schedules for applicable ASBS or TMDL requirements. Applicable ASBS and TMDL compliance schedules are set forth in Attachment A and Attachment E to the Order, respectively.

The information provided by the Copermittees under Provision B.3.a.(2) will be used by the Copermittees and the San Diego Water Board to gauge and track the progress of the Copermittees' efforts in addressing the highest priority water quality conditions identified in the Water Quality Improvement Plan.

Provision B.3.b requires the Copermittees to identify the strategies and schedules to implement those strategies as part of the Water Quality Improvement Plans. Provision B.3.b requires the Copermittees to identify the water quality improvement strategies that will be and may be implemented within the Watershed Management Area to 1) reduce pollutants in storm water discharged from the MS4 to the MEP, 2) effectively prohibit non-storm water discharges from entering the MS4, 3) protect water quality standards in receiving waters by controlling MS4 discharges so that they do not cause or contribute to exceedances of receiving water limitations, and 4) achieve applicable WQBELs that implement TMDLs. The Copermittees will select the strategies to be implemented based on the likely effectiveness and efficiency of the potential water quality improvement strategies identified under Provision B.2.e to effectively prohibit non-storm water discharges to the MS4, reduce pollutants in storm water discharges from the MS4 to the MEP, and/or achieve the interim and final numeric goals identified under Provision B.3.a.

Provision B.3.b.(1) requires each Copermittee to identify the strategies that will be or may be implemented within its jurisdiction. Each Copermittee is required to describe the strategies it is committed to implementing as part of its jurisdictional runoff management requirements under Provisions E.2 through E.7, and the optional jurisdictional strategies that the Copermittee will implement, as necessary, to achieve the numeric goals.

Each Copermittee is expected to implement the optional jurisdictional strategies identified under Provisions B.3.b.(1)(b) when the jurisdictional strategies it has committed to implement under Provision B.3.b.(1)(a) are not making adequate progress toward the interim and final numeric goals in accordance with the schedules established under Provision B.3.a. Provision B.3.b.(1)(b)(v) requires each Copermittee to describe the circumstances necessary to trigger implementation of the optional jurisdictional strategies, in addition to the requirements of Provisions B.3.b.(1)(a).

The San Diego Water Board recognizes that there may be optional jurisdictional strategies that will likely require funding and/or resources for planning, permitting, procurement of labor and materials, and implementation. Thus, Provision B.3.b.(1)(b)(iv) requires each Copermittee to describe the funding and/or resources that are necessary to implement these optional jurisdictional strategies. This information may provide interested groups and members of the public an understanding of the resources that they could provide or assist in obtaining to implement these optional jurisdictional strategies.

Provision B.3.b.(2) requires the Copermittees in the Watershed Management Area to identify the regional or multi-jurisdictional strategies that may be implemented, as necessary, to achieve the numeric goals. Similar to the requirements of Provision B.3.b.(1)(b), these regional or multi-jurisdictional strategies will likely require funding and/or resources for planning, permitting, procurement of labor and materials, and implementation, and San Diego Water Board recognizes that these strategies may be difficult to implement with only Copermittee resources. Thus, Provision B.3.b.(2)(d) requires the Copermittees to describe the funding and/or resources necessary to implement these optional regional or multi-jurisdictional strategies. This information may provide interested groups and members of the public an understanding of the resources that they could provide or assist in obtaining to implement these optional regional or multi-jurisdictional strategies.

Provision B.3.b.(3) requires the Copermittees to develop and include schedules in the Water Quality Improvement Plan for implementing the water quality improvement strategies identified under Provisions B.3.b.(1) and B.3.b.(2). The schedule for implementing the water quality improvement strategies will be used by the Copermittees and San Diego Water Board to measure and demonstrate the progress of the Copermittees' implementation efforts toward reducing pollutants in storm water discharged from the MS4 to the MEP, and eliminating illicit non-storm water discharges from entering the MS4.

Provision B.3.b.(4) provides the Copermittees in each Watershed Management Area the option of implementing watershed-specific structural BMP requirements for Priority Development Projects. Historically, storm water permits have included very specific performance standards for permanent, structural BMPs. These standards describe the expectation for the capture or treatment of pollutants and control of excessive flow before storm water is discharged from a site. The Copermittees were also allowed to develop waiver programs for Priority Development Projects to avoid implementing the structural BMPs; however, the waiver programs were not necessarily tied into any sort of holistic watershed strategy. The result is that implementation of BMP requirements is largely done on a site-by-site basis. This requires proper design on the part of the Priority Development Project and strict oversight on the part of the Copermittee.

Provision B.3.b.(4) promotes the evaluation of multiple strategies for water quality improvement, in addition to the implementation of permanent structural BMPs, on a watershed-scale versus the site-by-site approach. In a report issued by the Southern California Coastal Water Research Project (SCCWRP) and several other research institutions, the report emphasized that a successful hydromodification management program will involve watershed analysis as a first step, and that integrating multiple watershed-based strategies is preferable over a site-by-site approach. Indeed, the report states that the watershed analysis "*...should lead to identification of existing opportunities and constraints that can be used to help prioritize areas of greater concern, areas of restoration potential, infrastructure constraints, and pathways for*

*potential cumulative effects.*<sup>22</sup> Provision B.3.b.(4) promotes the findings and recommendations of the report by providing a pathway for Copermittees to develop an integrated approach to their land development programs.

Under Provision B.3.b.(4), the Copermittees in a Watershed Management Area must first perform an analysis by gathering as much information pertaining to the physical characteristics of the Watershed Management Area as possible. This includes, for example, identifying potential areas of coarse sediment supply, present and anticipated future land uses, and locations of physical structures within receiving streams and upland areas that affect the watershed hydrology (such as bridges, culverts, and flood management basins). Once this information is collected, the Copermittees must produce GIS layers (maps) that include this information.

From there, the Copermittees must use the results of the Watershed Management Area Analysis to identify and compile a list of candidate projects that could potentially be used as alternative compliance options for Priority Development Projects. Such projects include, for example, opportunities for stream or riparian area rehabilitation, opportunities for retrofitting existing infrastructure to incorporate storm water retention or treatment, and opportunities for regional BMPs, among others. Once these candidate projects are identified, Copermittees may allow Priority Development Projects to fund, partially fund, or completely implement these candidate projects. The Copermittees must first find that implementing such a candidate project would provide greater overall benefit to the watershed than requiring implementation of the structural BMPs onsite, and also enter into a voluntary agreement with the Priority Development Project that authorizes this arrangement. The Copermittees may use Provision B.3.b.(4) as both 1) a mechanism to reach their stated goals of the Water Quality Improvement Plan by using Priority Development Projects to either fund or implement projects that will provide water quality benefit, and 2) an alternative to requiring strict adherence to the structural BMP design standards.

Additionally, Provision B.3.b.(4) allows the Copermittees to use the results of the Watershed Management Area Analysis to identify areas within the Watershed Management Area where it is appropriate to allow Priority Development Projects to be exempt from the hydromodification management BMP performance requirements. Provision E.3.c.(2) already allows exemptions for Priority Development Projects that discharge to a conveyance channel whose bed and bank are concrete lined from the point of discharge to an enclosed embayment or the Pacific Ocean. However, there may be cases where further exemptions are warranted. The Copermittees may identify such cases on a watershed basis and include them in the Watershed Management Area Analysis; however, they must provide the supporting rationale to support all claims for exemptions.

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<sup>22</sup> 2012. ED Stein, F Federico, DB Booth, BP Bledsoe, C Bowles, Z Rubin, GM Kondolf, A Sengupta. Technical Report 667. Southern California Coastal Water Research Project. Costa Mesa, CA.

Provision B.3.b.(4) provides an innovative pathway for Copermittees to regulate their land development programs by allowing alternative compliance in lieu of implementing structural BMPs on each and every Priority Development Project. This approach facilitates the integration of watershed-scale solutions for improving overall water quality and assisting Copermittees to achieve their stated goals of the Water Quality Improvement Plan. The San Diego Water Board understands, however, that undertaking this approach, which involves extensive planning, could be resource intensive for the Copermittees. Therefore, the Watershed Management Area Analysis is optional and not a requirement. The Copermittees can choose not to perform the watershed planning and mapping exercise described in Provision B.3.b.(4), and instead choose to require strict implementation of the structural BMPs onsite, pursuant to Provision E.3.c.

Provision B.3.c is included to provide the Copermittees an option that allows the Copermittees to be deemed in compliance with the prohibitions and limitations (receiving water limitations) of Provisions A.1.a, A.1.c, A.1.d, A.2, and A.3.b. One or more Copermittees within a Watershed Management Area can choose to implement this option. This option is only expected to be utilized by a Copermittee that wishes to be deemed in compliance with the requirements of Provisions A.1.a, A.1.c, A.1.d, A.2, and A.3.b.

The alternative compliance pathway option included in Provision B.3.c is consistent with the approach described in Order WQ 2015-0075, *In the Matter of Review of Order No. R4-2012-0175, NPDES Permit No. CAS004001, Waste Discharge Requirements for Municipal Separate Storm Sewer System (MS4) Discharges within the Coastal Watersheds of Los Angeles County, Except Those Discharges Originating from the City of Long Beach MS4*, adopted by the State Water Board on June 16, 2015. State Water Board Order WQ 2015-0075 directs the Regional Water Boards to consider a watershed-based planning and implementation approach to compliance with receiving water limitations when issuing Phase I MS4 permits going forward. Order WQ 2015-0075 included seven principles that the Regional Water Boards are expected to follow when incorporating an alternative compliance pathway into a MS4 permit. The San Diego Water Board incorporated the seven principles stipulated in State Water Board Order WQ 2015-0075 into the Regional MS4 Permit as follows:

1. Provision A of this Order continues to require compliance with water quality standards in the receiving water and does not deem good faith engagement in the iterative process to constitute compliance with receiving water limitations. Provision A of this Order continues to be consistent with the receiving water limitations provisions from State Water Board Order WQ 99-05.
2. Compliance with Provision B.3.c constitutes compliance with the requirements of the Provision A.3.b, which requires compliance with the WQBELs of the TMDLs in Attachment E to the Order, and is considered compliance with receiving water limitations for those TMDL water body-pollutant combinations.

3. Provision B.3.c is an ambitious, rigorous, and transparent alternative compliance pathway that allows a Copermittee appropriate time to come into compliance with receiving water limitations without being in violation of the receiving water limitations during implementation of the compliance alternative.
4. Provision B.3.c requirements are incorporated into a Water Quality Improvement Plan. Water Quality Improvement Plans are a watershed-based planning and implementation approach, which address multiple contaminants, and incorporate TMDL requirements.
5. The strategies required to be included in the Water Quality Improvement Plans promote and incentivize the use of green infrastructure and requires the implementation of low impact development principles.
6. The strategies required to be included in the Water Quality Improvement Plans encourage multi-benefit regional projects that capture, infiltrate, and reuse storm water and support a local sustainable water supply.
7. The alternative compliance pathway of Provision B.3.c includes rigor and accountability. The Copermittee is required, through a transparent public process, to demonstrate that water quality issues in the watershed have been analyzed and prioritized, and that appropriate solutions are proposed. The Copermittee is also required, through a transparent process, to monitor the results and return to their analysis to verify assumptions and update the solutions. The Copermittee is required to conduct this type of adaptive management on its own initiative without waiting for direction from the San Diego Water Board.

In order for a Copermittee to utilize this option, the Copermittee is required to include three components in the Water Quality Improvement Plan. The first component is a comprehensive set of numeric goals and schedules that will demonstrate the requirements of Provisions A.1.a, A.1.c, A.1.d, A.2, and A.3.b will be achieved within a specified period of time. The criteria provided in the Order will require the Copermittee to demonstrate that the discharges from its MS4s will not cause or contribute to exceedances of water quality objectives in the receiving waters, and/or the receiving waters will be adequately protected from adverse impacts attributable to the Copermittee's MS4 discharges. The Copermittee is also required to specify annual milestones to be achieved each year, which adds rigor, accountability, and transparency to the process. The annual milestones may consist of water quality improvement strategy implementation phases, interim numeric goals, and other acceptable metrics, which are expected to build upon previous milestones and lead to the achievement of the final numeric goals.

The second component is an analysis to demonstrate that implementation of the water quality improvement strategies required under Provision B.3.b will achieve the numeric goals within the established schedules required under Provisions B.3.a and B.3.c.(1).

Because the development of the analysis may require significant resources, the Order allows the Copermittees in each Watershed Management Area that choose to implement this option to perform the analysis individually, or pool their resources for the analysis collectively.

The analysis must “reasonably” and “quantitatively” demonstrate that the implementation of the water quality improvement strategies can achieve the numeric goals within the established schedules. However, as more data and information are collected during implementation of the Water Quality Improvement Plan to demonstrate progress toward achieving the numeric goals, the numeric goals, water quality improvement strategies and schedules may need to be modified. If the data and information indicate that modification is needed, the Copermittee must also update the analysis. With the exception of numeric goals and schedules associated with TMDLs from Attachment E to the Order, the modification to the analysis would be allowed as part of the adaptive management process of the Water Quality Improvement Plan. For TMDLs, modification of numeric goals or schedules would likely require an amendment to the Basin Plan and Attachment E to the Order before the analysis and Water Quality Improvement Plan could include such modifications.

Thus, the third component is the key component that allows a Copermittee to demonstrate the implementation of the water quality improvement strategies within its jurisdiction is making progress toward achieving the final numeric goals. Each Copermittee must specify the monitoring and assessments that will be performed to confirm that implementation of the water quality improvement strategies are making progress toward achieving the numeric goals within the established schedules, and whether the interim and final numeric goals have been achieved.

These three components must then be reviewed by the Water Quality Improvement Consultation Panel. The Water Quality Improvement Consultation Panel is required to be formed as part of the public participation process for the development of the Water Quality Improvement Plans. The Water Quality Improvement Consultation Panel is described under Provision F.1.a.(1)(b). Review by the Water Quality Improvement Consultation Panel is included to provide an additional layer of input, support, and accountability for the implementation of this option.

Compliance with the requirements of Provisions A.1.a, A.1.c, A.1.d, A.2, and A.3.b begins when the Water Quality Improvement Plan, incorporating the requirements of Provision B.3.c.(1), is accepted by the San Diego Water Board. Each Copermittee that chooses to implement and continues to implement this option will be deemed in compliance with the requirements of Provisions A.1.a, A.1.c, A.1.d, A.2, and A.3.b as long as the Copermittee continues to implement the strategies, monitoring and assessments as incorporated in the Water Quality Improvement Plan in accordance with Provision B.3.c.(1), and the Copermittee reports the achievement of the annual milestones each year, or provides acceptable rationale and recommends appropriate modifications to the interim numeric goals, and/or water quality improvement

strategies, and/or schedules to improve the rate of progress toward achieving the final numeric goals. The Copermittee continues to be deemed in compliance with the requirements of Provisions A.1.a, A.1.c, A.1.d, A.2, and A.3.b during the time the San Diego Water Board reviews the rationale and recommended modifications to the interim numeric goals, and/or water quality improvement strategies, and/or schedules. If and when the San Diego Water Board determines that it does not accept the rationale or recommendations, the Copermittee will be notified they are no longer deemed in compliance with Provisions A.1.a, A.1.c, A.1.d, A.2, and A.3.b.

Provision B.4 (Water Quality Improvement Monitoring and Assessment) requires the Copermittees to develop an integrated monitoring and assessment program to track the progress of the Water Quality Improvement Plan toward meeting the implementation goals and schedules, and improving the water quality of the Watershed Management Area. Provision B.4 is the part of the Water Quality Improvement Plan where the Copermittees describe the monitoring data that will be collected, which is not only necessary to implement the “iterative approach” required by Provision A.4, but inform the adaptive management and “*comprehensive planning process*” that allows the Copermittees to make adjustments and modifications to the Water Quality Improvement Plans and the jurisdictional runoff management programs.

Provision B.4 requires the Copermittees, at a minimum, to include the requirements of Provision D as part of the water quality improvement monitoring and assessment program for the Water Quality Improvement Plan. The Copermittees, however, are not limited to the requirements of Provision D and may include additional monitoring and assessment methods to track progress toward improving water quality in the Watershed Management Area.

In addition to incorporating the requirements of Provision D, the water quality improvement monitoring and assessment program must incorporate any monitoring and assessment requirements specified for any applicable TMDLs included in Attachment E to the Order, and the monitoring requirements of Attachment B to State Water Board Resolution No. 2012-0012 for Watershed Management Areas with ASBS.

The monitoring and assessments required to be incorporated into the Water Quality Improvement Plan are necessary to implement, as well as ensure the Copermittees are in compliance with, the requirements of the Order.

Provision B.5 (Iterative Approach and Adaptive Management Process) requires the Copermittees to implement the iterative approach pursuant to Provision A.4 to adapt the Water Quality Improvement Plan, monitoring and assessment program, and jurisdictional runoff management programs to become more effective toward achieving compliance with Provisions A.1.a, A.1.c and A.2.a.

Provision B.5 requires the Copermittees in each Watershed Management Area to re-evaluate the highest priority water quality conditions and potential water quality

improvement strategies, the water quality improvement goals, strategies and schedules, and the water quality improvement monitoring and assessment program and provide recommendations for modifying those elements to improve the effectiveness of the Water Quality Improvement Plan. The re-evaluation of the Water Quality Improvement Plan is part of the assessment requirements of Provision D.

Provision B.6 (Water Quality Improvement Plan Submittal, Updates, and Implementation) requires to Copermittees to submit, update, and implement the Water Quality Improvement Plans.

The requirements for the process to develop and submit the Water Quality Improvement Plans is described in more detail under the discussion for Provision F.1. The process will include several opportunities for the public to provide input during the development of the Water Quality Improvement Plans. The process for updating the Water Quality Improvement Plans is described in more detail under the discussion for Provision F.3.c. Upon acceptance of the Water Quality Improvement Plan and updates, the Copermittees are required to immediately begin implementing the Water Quality Improvement Plan and subsequent updates.

The Water Quality Improvement Plan is expected to be a dynamic document that will evolve over time. The Water Quality Improvement Plan is also expected to be a long term plan that focuses the Copermittees' efforts and resources on a limited set of priority water quality conditions, with the ultimate goal of protecting all the beneficial uses of the receiving waters within the Watershed Management Area from impacts that may be caused or contributed to by MS4 discharges. As the Copermittees collect data, implement their jurisdictional runoff management programs, and review the results from their water quality improvement monitoring and assessment program, the Water Quality Improvement Plan is expected to be continually reviewed and updated until compliance with Provisions A.1.a, A.1.b, and A.2.a is achieved.

However, in specific cases supported by robust analytical documentation the implementation of the Water Quality Improvement Plans may demonstrate that TMDLs are not necessary for identified impaired water bodies within the Watershed Management Area if the analytical record demonstrates that technology-based effluent limitations required by the CWA, more stringent effluent limitations required by state, local, or federal authority, and/or other pollution control requirements (e.g., best management practices) required by local, state or federal authority are stringent enough to implement applicable water quality standards within a reasonable period of time.<sup>23</sup>

The San Diego Water Board submits an Integrated Report to USEPA to comply with the reporting requirements of CWA sections 303(d), 305(b) and 314, which lists the attainment status of water quality standards for water bodies in the San Diego Region.

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<sup>23</sup> 40 CFR 130.7(b)(1)

According to USEPA guidance for the Integrated Report,<sup>24</sup> water bodies are placed in one of five categories. Water bodies included in Category 5 in the Integrated Report indicate at least one beneficial use is not being supported or is threatened, and a TMDL is required. Water bodies included in Category 5 are placed on the 303(d) List.

Category 4 in the Integrated Report is for water bodies where available data and/or information indicate that at least one beneficial use is not being supported or is threatened, but a TMDL is not needed.<sup>25</sup> Impaired surface water bodies may be included in Category 4 if a TMDL has been adopted and approved (Category 4a); if other pollution control requirements required by a local, state or federal authority are stringent enough to implement applicable water quality standards within a reasonable period of time (Category 4b); or, if the failure to meet an applicable water quality standard is not caused by a pollutant, but caused by other types of pollution (Category 4c).

Impaired water bodies can be included in Category 4a if a TMDL has been adopted and approved. The TMDLs in Attachment E to the Order implement the requirements of the TMDLs adopted by the San Diego Water Board, and approved by the State Water Board and USEPA. The water bodies in Attachment E will be included in Category 4a in the Integrated Report and removed from the 303(d) List.

Impaired water bodies can be included in Category 4b if there are *acceptable* “pollution control requirements” required by a local, state or federal authority stringent enough to implement applicable water quality standards within a reasonable period of time (e.g., a compliance date is set). When evaluating whether a particular set of pollution controls are “requirements,” the USEPA considers a number of factors, including: (1) the authority (local, state, federal) under which the controls are required and will be implemented with respect to sources contributing to the water quality impairment (examples may include: self-executing state or local regulations, permits, and contracts and grant/funding agreements that require implementation of necessary controls), (2) existing commitments made by the sources and completion or soon to be completed implementation of the controls (including an analysis of the amount of actual implementation that has already occurred), (3) the certainty of dedicated funding for the implementation of the controls, and (4) other relevant factors as determined by USEPA depending on case-specific circumstances.<sup>26</sup>

Impaired water bodies can be included in Category 4c if the failure to meet an applicable water quality standard is not caused by a pollutant, but caused by other types of pollution. Pollution, as defined by the CWA is “the man-made or man-induced alteration of the chemical, physical, biological, and radiological integrity of water.”<sup>27</sup> In

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<sup>24</sup> USEPA, 2005. Guidance for 2006 Assessment, Listing and Reporting Requirements Pursuant to Sections 303(d), 305(b) and 314 of the Clean Water Act

<sup>25</sup> Ibid

<sup>26</sup> Ibid

<sup>27</sup> CWA section 502(19)

other cases, pollution does not result from a pollutant and a TMDL is not required. Examples of circumstances where an impaired segment may be placed in Category 4c include segments impaired solely due to lack of adequate flow, stream channelization, or hydromodification. In these situations, there may be water quality management actions that can address the cause(s) of the impairment, but a TMDL may not be required to implement the actions.

The Water Quality Improvement Plans will require the implementation of pollution controls and water quality management actions (i.e. water quality improvement strategies) which can result in the attainment of water quality standards in water bodies impaired by discharges from the Copermittees' MS4s. The Water Quality Improvement Plans also include requirements that are expected to attain water quality standards in a reasonable period of time. The San Diego Water Board considers the Water Quality Improvement Plans to be a commitment by the Copermittees to develop, plan, budget for, and implement pollution controls that will attain water quality standards in receiving waters in a reasonable period of time, or as soon as possible. The results of the Copermittees' efforts in implementing the Water Quality Improvement Plans can be used to re-evaluate the condition of the impaired water bodies during the next update to the 303(d) List.

After the Copermittees submit the Water Quality Improvement Plans and demonstrate that water quality standards are being attained or will be attained in a reasonable period of time, the San Diego Water Board may re-evaluate the water bodies on the 303(d) List. These water bodies on the 303(d) List may be re-evaluated and placed into Category 4b or Category 4c in the Integrated Report. The water bodies placed in Category 4b or Category 4c in the Integrated Report must show a record that the water bodies are attaining water quality standards or supporting the identified beneficial uses, or will attain water quality standards or support identified beneficial uses in a reasonable period of time, in order for the water bodies to be appropriately removed from the 303(d) List.

## C. Action Levels

**Purpose:** Provision C includes requirements for the Copermittees to identify and include numeric action levels in the Water Quality Improvement Plan to direct and focus the Copermittees' jurisdictional runoff management program implementation efforts for controlling MS4 discharges to receiving waters.

**Discussion:** Under Provision C, the numeric action levels required are for non-storm water discharges and storm water discharges. The non-storm water action levels (NALs) are applicable to non-storm water discharges from the Copermittees' MS4s, which can occur year-round. The storm water action levels (SALs) are applicable to storm water discharges from the Copermittees' MS4s, which occur during the rainy season defined as the period between October 1 and April 30.

The action levels required by Provision C are based on the action level requirements that were developed and incorporated into Order Nos. R9-2009-0002 and R9-2010-0016, the Orange County and Riverside County MS4 Permits, respectively. The Fact Sheets for these Orders provide detailed discussions about the development of the numeric NALs and SALs included in this Order.

Order Nos. R9-2009-0002 and R9-2010-0016 required the Copermittees to perform prescribed actions if the NALs or SALs are exceeded. The actions required under Order Nos. R9-2009-0002 and R9-2010-0016 generally included conducting additional monitoring and source investigations when a discharge from the MS4 is observed to exceed one or more NALs and/or SALs.

For this Order, however, the action levels of Provision C are to be used by the Copermittees to prioritize the actions to be implemented as part of the Water Quality Improvement Plan. Monitoring data collected by the Copermittees from MS4 outfalls will be compared with the NALs and SALs. Exceedances of the NALs and SALs will not require the Copermittees to immediately identify sources causing exceedances, but will provide some numeric indicator levels that can give the Copermittees a way to measure the relative severity of a pollutant contributing to receiving water quality impacts.

NALs and SALs must be included in the Water Quality Improvement Plans to be used by the Copermittees in directing and focusing their water quality improvement strategies. The Copermittees are expected to utilize the NALs and SALs to help focus their implementation efforts on addressing pollutants that have the most significant potential or observed impacts to receiving waters. The NALs and SALs will be used as part of the MS4 discharges assessments required under Provision D.4.b. The NALs and SALs may also be used by the Copermittees as the numeric goals to be achieved in MS4 discharges and/or receiving waters as the Water Quality Improvement Plans are implemented.

More specific and detailed discussions of the requirements of Provision C are provided below.

Provision C.1 (Non-storm Water Action Levels) requires the Copermittees to incorporate NALs into the Water Quality Improvement Plan for pollutants and/or constituents that are causing or contributing, or may be causing or contributing, to the highest priority water quality conditions identified in the Water Quality Improvement Plan related to non-storm water discharges from the MS4s. NALs generally must be consistent with the water quality objectives found within the Basin Plan.

The NALs have been included to ensure that the Copermittees are implementing and complying with several requirements of the MS4 permit. The federal CWA requires permits for municipal storm sewer systems to “*effectively prohibit non-storm water discharges into the storm sewers.*” The federal NPDES regulations, which were promulgated to implement the CWA requirements for discharges from municipal storm sewers, require a program to address illicit discharges, which are non-storm water discharges. Provision A.1.b prohibits “[*n*]on-storm water discharges into MS4s” unless the non-storm water discharge authorized by a separate NPDES permit. The NALs will be used as part of the illicit discharge detection and elimination program required pursuant to Provision E.2, as well as part of the MS4 discharges assessments required pursuant to Provision D.4.b.

Provision A.1.a prohibits non-storm water discharges from the MS4 from “*causing, or threatening to cause, a condition of pollution, contamination, or nuisance (as defined in CWC section 13050), in waters of the state.*” In addition, pursuant to Provision A.2.a, non-storm water discharges “*must not cause or contribute to the violation of water quality standards in any receiving waters.*”

Ideally, the Copermittees’ jurisdictional runoff management programs will eliminate all non-storm water discharges entering the MS4s within their jurisdictions. The complete elimination of non-storm water discharges to the Copermittees’ MS4s would be in compliance with the CWA requirements for non-storm water discharges, as well as the prohibitions and limitations of Provisions A.1.a and A.2.a.

The federal regulations, however, also refer to several non-storm water discharge categories that must be addressed as illicit discharges if they are found to be a source of pollutants. The federal regulations thus identify some non-storm water discharges that are not required to be addressed as illicit discharges if they are not a source of pollutants (e.g. non-storm water discharges specified in Provisions E.2.a.(1)-(5)). Thus, these regulations imply that some non-storm water discharges into and from the MS4 may occur even if non-storm water discharges are “effectively” prohibited by the Copermittees.

If the source of a non-storm water discharge is identified as a category of non-storm water specified in Provisions E.2.a.(1)-(5), the NALs can be used to determine if the category of non-storm water discharges is a source of pollutants. For other non-storm water discharges not specified in Provisions E.2.a.(1)-(5), the CWA requires those discharges to be “*effectively*” prohibited by removing the discharge to the MS4 through enforcement of the Copermittees’ legal authority established under “*ordinance, order or similar means*” to prohibit illicit discharges to the MS4s.

If there are non-storm water discharges that are not required to be addressed as illicit discharges, those discharges must comply, at a minimum, with the discharge prohibitions and receiving water limitations of Provision A. Thus, the non-storm water discharges from the MS4 must be at levels that will not cause or contribute to a condition of pollution, contamination, or nuisance (Provision A.1.a), and must not cause or contribute to a violation of water quality standards in receiving waters (Provision A.2.a) to be consistent with the discharge prohibitions and receiving water limitations of Provisions A.1.a and A.2.a.

Furthermore, the San Diego Region has predominantly intermittent and ephemeral rivers and streams which vary in flow volume and duration at spatial and temporal scales. For most of these river and stream systems, non-storm water discharges from the MS4 are likely to be the most significant or the only source contributing to surface flows present within the receiving water, especially during the dry season.

Therefore, because of the prohibitions and limitations of Provision A.1.a and A.2.a, and the likelihood that non-storm water discharges from the MS4 are the most significant or only source contributing to surface flows present within the receiving water, NALs generally must be consistent with the water quality objectives found within the Basin Plan. Non-storm water discharges that are meeting the NALs would not be expected to cause or contribute to an exceedance of water quality objectives in receiving waters, which would be consistent with the discharge prohibitions and receiving water limitations of Provisions A.1.a and A.2.a.

Exceedances of the NALs would then provide an indication of the relative severity of a pollutant in non-storm water discharges from the MS4 contributing to potential or observed receiving water quality impacts. The relative severity or significance of a pollutant in non-storm water discharges from the MS4 will provide the Copermittees a valuable source of information that can be used to identify priority water quality conditions within a Watershed Management Area and within each Copermittee’s jurisdiction.

Tables C-1 through C-4 under Provision C.1.a specify numeric NALs for several parameters or pollutant constituents for non-storm water discharges from the MS4 to several water body types. The NALs for MS4 discharges given under Provision C.1.a are based on the water quality objectives for inland surface waters in the Basin Plan, and the water quality objectives for ocean waters in the Ocean Plan. The NALs for

most of the metals were calculated based on the State Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (State Implementation Policy or SIP). The NALs provided in Tables C-1 through C-4 must be included in the Water Quality Improvement Plans required to be developed pursuant to Provision B.

Provision C.1.b requires the Copermittees to identify NALs for pollutants and/or constituents, not specified in Provision C.1.a, which are causing or contributing, or may be causing or contributing, to the highest priority water quality conditions of the Watershed Management Area related to non-storm water discharges from the MS4s. The NALs must be based on the water quality objectives in the Basin Plan. The NALs identified under Provision C.1.b must be included in the Water Quality Improvement Plan.

The San Diego Water Board recognizes that some of the NALs required pursuant to Provisions C.1.a and C.1.b may be exceeded more frequently than not. Thus, Provision C.1.c has been included in the Order to provide the Copermittees the option to develop secondary NALs that are set at levels greater than the levels required pursuant to Provisions C.1.a and C.1.b to further refine the prioritization and assessment of water quality improvement strategies for addressing non-storm water discharges to and from the MS4s, as well as the detection and elimination of non-storm water and illicit discharges to and from the MS4.

Provision C.2 (Storm Water Action Levels) requires the Copermittees to incorporate SALs into the Water Quality Improvement Plan for pollutants and/or constituents causing or contributing, or may be causing or contributing, to the highest priority water quality conditions identified in the Water Quality Improvement Plan related to storm water discharges from the MS4s.

The SALs have been included to ensure that the Copermittees are implementing and complying with several requirements of the MS4 permit. Provision A.1.a prohibits storm water discharges from the MS4 from *“causing, or threatening to cause, a condition of pollution, contamination, or nuisance (as defined in CWC section 13050), in waters of the state.”* In addition, pursuant to Provision A.2.a, storm water discharges *“must not cause or contribute to the violation of water quality standards in any receiving waters.”*

Provision A.3.a, however, implicitly acknowledges that compliance with Provisions A.1.a and A.2.a cannot be achieved immediately for discharges of storm water from the MS4 by applying the MEP standard. Thus, Provision A.4 requires the Copermittees to implement an iterative approach to demonstrate that MEP is being achieved. This approach is supported by USEPA.

The federal CWA requires permits for municipal storm sewer systems to *“require controls to reduce the discharge of pollutants [in storm water] 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.*” MEP is an ever-evolving, flexible, and advancing concept. As knowledge about controlling storm water runoff and discharges evolves, so does the knowledge which constitutes MEP. Reducing the discharge of storm water pollutants from the MS4 to the MEP requires the Copermittees to assess their jurisdictional runoff management programs and revise activities, control measures, BMPs, and measurable goals, as necessary to meet MEP. The SALs provide the Copermittees measureable goals that may be used to demonstrate the achievement of MEP for reducing pollutants in storm water discharges from the MS4. The SALs will be used as part of the MS4 discharges assessments required under Provision D.4.a.

In June of 2006, the State Water Board’s Blue Ribbon Storm Water Panel released its report titled “*The Feasibility of Numerical Effluent Limits Applicable to Discharges of Storm Water Associated with Municipal, Industrial and Construction Activities.*” In the recommendations, the Blue Ribbon panel proposed storm water effluent limitations which are computed using statistical based population approaches. The SALs specified in Table C-5 under Provision C.2.a were developed from a regional subset of nationwide Phase I MS4 data by using USEPA Rain Zone 6 (arid west) data.<sup>28</sup> Additionally, utilization of regional data is appropriate due to the addition of data into the nationwide Phase I MS4 monitoring dataset in February 2008. This additional data increased the number of USEPA Rain Zone 6 samples to more than 400, and included additional monitoring events within Southern California.

Utilizing data from USEPA Rain Zone 6 resulted in SALs which closely reflect the environmental conditions experienced in the San Diego Region. The localized subset of data includes sampling events from multiple Southern California locations including Orange, San Diego, Riverside, Los Angeles, and San Bernardino Counties. The dataset includes samples taken from highly built-out impervious areas and from storm events representative of Southern California conditions.

The SALs for cadmium, copper, lead and zinc require the measurement of hardness and to provide more specificity in the assessment of samples with SALs for total metal concentrations. While USEPA Rain Zone 6 data include a large sample size for concentrations of total metals, the impact the concentration will have on receiving waters will vary with receiving water hardness. Since it is the goal of the SALs, through the iterative process and MEP standard, to have MS4 storm water discharges meet all applicable water quality objectives, the hardness of the receiving water should be used when assessing the total metal concentration of a sample.

Thus, when there is an exceedance of a SAL for a metal, the Copermittee must determine if that exceedance is above the existing applicable water quality objectives based upon the hardness of the receiving water. The water quality objectives

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<sup>28</sup> Data used to develop SAL were obtained from <http://rpitt.eng.ua.edu/Research/ms4/mainms4.shtml>

Copermittees must use to assess total metal SAL exceedances are the California Toxic Rule (CTR) and USEPA National Recommended Water Quality Criteria for Freshwater Aquatic Life 1 hour maximum concentrations. The 1-hour maximum concentration is to be used for comparison since it is expected to most replicate the impacts to waters of the State from the first flush following a precipitation event.

The statistically calculated SALs given in Table C-5 are at levels greater than the water quality objectives in the Basin Plan or Ocean Plan. Because the objective of the CWA is to *“to restore and maintain the chemical, physical, and biological integrity of the Nation’s waters”*, meaning eventually pollutants in storm water discharges must be reduced to a level that cannot cause or contribute to an exceedance of water quality objectives in receiving waters, over time the SALs are expected to be reduced to a level that is based on the water quality objectives rather than statistical calculations. The San Diego Water Board will review the SALs as more data for discharges of storm water from the MS4s are collected, and revise them as conditions improve and the MEP standard advances. For the Water Quality Improvement Plans required under this Order, the SALs identified under Provision C.2.a must be included.

Provision C.2.b requires the Copermittees to identify SALs for pollutants and/or constituents, not specified in Provision C.2.a, which are causing or contributing, or may be causing or contributing, to the highest priority water quality conditions of the Watershed Management Area related to storm water discharges from the MS4s. The SALs identified under Provision C.2.b must be included in the Water Quality Improvement Plan.

The San Diego Water Board recognizes that some of the SALs required pursuant to Provisions C.2.a and C.2.b may be exceeded more frequently than not. Thus, Provision C.2.c has been included in the Order to provide the Copermittees the option to develop secondary SALs that are set at levels greater than the levels required pursuant to Provisions C.2.a and C.2.b to further refine the prioritization and assessment of water quality improvement strategies for reducing pollutants in storm water discharges from the MS4s.

## D. Monitoring and Assessment Program Requirements

**Purpose:** Provision D includes minimum monitoring and assessment requirements that must be developed and implemented by the Copermittees as part of the Water Quality Improvement Plans. Implementation of the monitoring and assessment requirements of Provision D will allow the Copermittees to demonstrate that the requirements of the CWA to effectively prohibit non-storm water discharges to the MS4 and reduce pollutants in storm water discharges from the MS4 to the MEP are being achieved. Implementation of the monitoring and assessment requirements of Provision D will also allow the Copermittees and the San Diego Water Board to track improvements to the water quality in the San Diego Region. The monitoring and assessment program requirements are necessary to implement, as well as ensure the Copermittees are in compliance with, the requirements of the Order.

**Discussion:** The San Diego Water Board recognized that changes to the monitoring and assessment requirements of the Fourth Term Permit were necessary to improve the usefulness and usability of monitoring data collected by the Copermittees to support their jurisdictional storm water programs more efficiently and with increased effectiveness. The data collected are needed to better inform the Copermittees' understanding of the physical, chemical, and biological condition of the receiving waters and the quality of the MS4 discharges. The monitoring program needs to provide opportunities for the Copermittees to integrate regional monitoring efforts into municipal storm water monitoring requirements to provide a cost-effective approach to monitoring and avoid duplication of efforts.

The requirements in Provision D were largely recommended by the Copermittees as an outcome of the San Diego Water Boards Focused Meeting process. The monitoring and assessment program requirements now require collection of more specific information necessary for each Copermittee to adapt its jurisdictional runoff management program in such a way that focuses resources on a watershed's highest priority water quality conditions. The monitoring and assessment program will require the Copermittees to collect data that can be utilized to answer both watershed level management questions (e.g. Are the chemical, physical, and biological conditions of a receiving water protective, or likely protective of beneficial uses?), and specific jurisdictional runoff management program activity questions (e.g. Are the water quality improvement strategies of the jurisdictional program effectively eliminating non-storm water discharges to the MS4?).

The monitoring data collected and assessment information that will be reported to the San Diego Water Board are necessary to determine if the Copermittees are complying with the prohibitions and limitations of Provision A. The required monitoring and assessments that must be reported to the San Diego Water Board will be utilized for three purposes:

- (1) Inform the Copermittees, San Diego Water Board, and the public on the progress of the Copermittees' efforts to effectively prohibit non-storm water discharges to the MS4 and reduce pollutants in storm water discharges from the MS4 to the MEP;
- (2) Inform the Copermittees, San Diego Water Board, and the public on the condition of water bodies receiving discharges from the Copermittees' MS4, and the progress of the Copermittees' water quality improvement implementation efforts toward improving the receiving water quality; and
- (3) Inform the Copermittees, the San Diego Water Board, and the public on the effectiveness of the Water Quality Improvement Plan toward achieving (1) and (2).

The monitoring and assessment information reported pursuant to Provision F is also expected to be key to the iterative approach and adaptive management process required under Provision A.4 and implemented through the Water Quality Improvement Plan required under Provision B. As required by Provision A.4, the iterative approach and adaptive management process is required if the Copermittees cannot meet the discharge prohibitions and receiving water limitations of Provisions A.1.a, A.1.c, and/or A.2.a under the present conditions.

Provision D provides the minimum monitoring and assessment requirements that must be included in each Water Quality Improvement Plan to be developed and implemented by the Copermittees. The Copermittees, however, are not limited to the requirements of Provision D and may include additional methods to track progress toward improving water quality in a Watershed Management Area.

More specific and detailed discussions of the requirements of Provision D are provided below.

Provision D.1 (Receiving Water Monitoring Requirements) specifies the minimum receiving water monitoring that the Copermittees must conduct within the Watershed Management Area and include as part of the Water Quality Improvement Plan.

Provision D.1 establishes minimum monitoring requirements that must be conducted by the Copermittees within each Watershed Management Area. Provision D.1 requires the Copermittees to collect and develop the data and information necessary to determine potential impacts to the beneficial uses in the receiving waters due to discharges from the MS4s. The monitoring required under Provision D.1 will also provide the data that will allow the Copermittees to gauge the effectiveness and progress of its Water Quality Improvement Plan implementation efforts toward improving the quality of receiving waters.

The receiving water monitoring requirements of Provision D.1 are focused primarily on monitoring the conditions and response of the receiving waters to the Copermittees'

collective implementation efforts to reduce receiving water impacts that may be caused by the discharges from the MS4s. The preference of the San Diego Water Board is for the Copermittees to spend their resources achieving tangible and observable improvements in receiving water conditions instead of collecting samples and analyzing data that has consistently indicated that receiving water conditions are degraded and require improvement. In general, the ability to measure potential improvements in receiving water conditions due to any actions implemented by the Copermittees as part of the Water Quality Improvement Plan may require several years before a response can be observed. Thus, the frequency of collecting receiving water monitoring data has been kept to a minimum.

During the transitional period between adoption of this Order and San Diego Water Board acceptance of a Water Quality Improvement Plan, the Copermittees must conduct receiving water monitoring in accordance with Provision D.1.a. This approach to collecting receiving water data is different from what was required in the Fourth Term Permits, but one that truly embraces the concept of an integrated, cost-effective, streamlined receiving water monitoring approach.

Provision D.1.a requires Copermittees to continue performing the receiving water monitoring programs required in Order Nos. R-2007-0001, R9-2009-002, and R9-2010-0016; plus participation in: hydromodification management plan monitoring approved by the San Diego Water Board, monitoring plans as part of load reduction plans (either Bacteria Load Reduction Plans or Comprehensive Load Reduction Plans) for TMDLs in Attachment E of the Order, Storm Water Monitoring Coalition Regional Monitoring, Southern California Bight Regional Monitoring, Sediment Quality Monitoring, and ASBS Monitoring as applicable to a Watershed Management Area.

Provision D.1.a also provides an opportunity for the Copermittees to use third party data to meet receiving water monitoring requirements where feasible. Allowing the Copermittees to use the data currently collected through its participation in existing regional receiving water programs and that of third parties provides an efficiency of resources in obtaining the data necessary to inform the Copermittees and the San Diego Water Board about the physical, chemical, and biological conditions of the receiving waters, which can also help to focus the receiving water monitoring during the implementation of the Water Quality Improvement Plan. Once a Water Quality Improvement Plan is developed for a Watershed Management Area in compliance with Provision B of this Order, the transitional period is over and Copermittees are required to conduct receiving water monitoring according to the requirements of Provisions D.1.b-e.

Provision D.1.b requires each Copermittee to identify at least one long term receiving water monitoring station to be representative of receiving water quality within each Watershed Management Area. Long term receiving water monitoring stations can be located at any existing mass loading stations, temporary watershed assessment stations, bioassessment stations, and stream assessment stations previously established by the Copermittees. The requirements under Provision D.1.b. are

consistent with 40 CFR 122.26(d)(2)(iii)(D), which specifies that a “*monitoring program for representative data collection for the term of the permit*” may include “*instream locations*.” For each Watershed Management Area, at least one long term watershed monitoring station is required to be established and monitored. The Copermittees may choose to establish additional long term monitoring stations where necessary to support the implementation and adaptation of the Water Quality Improvement Plan.

Provision D.1.b. requires the Copermittees to locate the long term receiving water monitoring station at one of these existing receiving water monitoring stations to provide the Copermittees an opportunity to experience monitoring cost savings while continuing to collect the necessary data to assess the status and trends of receiving water quality conditions in 1) coastal water, 2) enclosed bays, harbors, estuaries, and lagoons, and 3) streams under both dry weather and wet weather conditions. Ideally these stations will continue to be monitored as part of the receiving water monitoring for each Watershed Management Area to maintain a consistent set of locations and a period of data that can be built upon with the monitoring required under this Order.

The receiving water monitoring requirements are separated into monitoring required during dry weather conditions pursuant to Provision D.1.c, and wet weather conditions pursuant to Provision D.1.d.

At each long term monitoring station the Copermittees must conduct at least three dry weather monitoring events as required pursuant to Provision D.1.c and at least three wet weather monitoring events as required pursuant to Provision D.1.d per permit term. Provisions D.1.c and D.1.d require the Copermittees to monitor priority water quality conditions identified in the Water Quality Improvement Plan, constituents listed as causing impairment of receiving waters in the Watershed Management Area, applicable NALs, toxicity, constituents listed in Tables D-2 and D-3, and constituents for implementation plans (e.g. Bacteria Load Reduction Plans and Comprehensive Load Reduction Plans). Required toxicity monitoring was changed to reflect an updated understanding of the unique challenges associated with sampling storm water for toxicity. Copermittees are required to sample receiving water for toxicity during each dry weather and each wet weather event pursuant to Provision D.1.c.(4) and D.1.d.(4). Required toxicity monitoring is now consistent with the State Water Resources Control Board Policy for Toxicity Assessment and Control (Draft June 2012) and recently adopted MS4 permits for Caltrans and Los Angeles Water Board. Receiving water monitoring efforts in this Order have been streamlined to redirect resources to monitoring efforts that better support pollutant reduction solutions with an increasing emphasis on MS4 outfall monitoring, source identification, and source abatement activities.

In addition to the receiving water monitoring requirements under Provisions D.1.b-d, Provision D.1.e requires the Copermittees participate in and/or conduct other types of receiving water monitoring. As recommended and requested by the Copermittees, Provision D.1.e.(1) requires the Copermittees to participate in existing regional monitoring, as applicable to each Watershed Management Area. Existing regional

monitoring includes monitoring conducted by the Storm Water Monitoring Coalition and for the Southern California Bight. Participation in and use of monitoring data collected from these existing regional water quality monitoring programs provide the Copermittees a greater opportunity for efficiency in the use of their resources to manage their storm water programs and those controllable discharges under their authority.

Provision D.1.e.(1)(c) requires the south Orange County MS4 Copermittees to participate in “unified regional beach water quality monitoring.” This monitoring replaces requirements to conduct “core monitoring” of beach water quality, as provided for in Appendix III of the Ocean Plan.

Several different public agencies currently conduct routine, ongoing beach water quality monitoring in south Orange County in accordance with several different sets of requirements. The monitoring programs implemented to meet those requirements overlap temporally and spatially. These monitoring programs are partially but not fully integrated. In November 2010, the State Water Board adopted Resolution No. 2010-0053, which directed Regional Water Boards to work with dischargers to modify beach water quality monitoring programs required by Regional Water Board-issued permits in order to eliminate redundancies and incorporate beach water quality monitoring required by beach water quality statutes, where appropriate.

In April 2012, the San Diego Water Board requested that its staff review beach water quality monitoring conducted in south Orange County. To assist in responding to that request, staff of the Board convened a workgroup that included representatives of the three public agencies that currently conduct almost all of the routine, ongoing beach water quality monitoring in south Orange County, i.e., South Orange County Wastewater Authority (SOCWA), Orange County Public Works, and Orange County Health Care Agency (OCHCA). The workgroup also included other interested parties, including representatives of the Sierra Club and Surfrider Foundation. In December 2012, the San Diego Water Board adopted Resolution No. R9-2012-0069, which endorsed the San Diego Water Board staff report entitled “A Framework for Monitoring and Assessment in the San Diego Region,” dated November 2012.

The unified program is consistent with and will meet or exceed the minimum requirements for beach water quality monitoring and related public notification and reporting established by State law, including the Ocean Plan. The unified program is consistent with State Water Board Resolution No. 2010-0053. The unified program is also consistent with and will help implement, “A Framework for Monitoring and Assessment in the San Diego Region,” which emphasizes the need for question-driven, beneficial use-oriented monitoring and assessment. The primary purpose of the unified program will be to answer the question “Does beach water quality meet standards for the beneficial use of water contact recreation?”

The unified program is intended to be protective; it will help protect the health of swimmers, surfers, and others who use south Orange County beach waters for water

contact recreational activities. The unified program is also intended to be reasonable; it will eliminate duplicative monitoring and will include triggers for public notification and additional sampling at all sampling stations year-round. The unified program is intended to be equitable; responsibility for implementation of the unified program will be shared and the responsible agencies will jointly make arrangements to implement the program and will have the flexibility to jointly make short and/or long term changes in those arrangements.

The San Diego Water Board Executive Officer issued a written directive on December 5, 2014, pursuant to California Water Code section 13383, for SOCWA and the south Orange County MS4 Copermittees to implement the unified program in cooperation with OCHCA. The Executive Officer may make revisions to the unified program, provided that the unified program, as revised, continues to be consistent with and meet the requirements of State law, including the Ocean Plan, for beach water quality monitoring and related public notification and reporting. Following a thirty day public comment period, and subject to a request for a hearing before the San Diego Water Board, any such revision shall take effect as specified in a written directive issued by the Executive Officer pursuant to CWC section 13383. The program and any Executive Officer issued revisions to the program are subject to CWC section 13320 right of review from the date of issuance.

The unified program will supersede the existing routine, ongoing, beach water quality monitoring programs in south Orange County that are conducted in accordance with the existing requirements of the NPDES permits for discharges from the SOCWA ocean outfalls and the south Orange County MS4s. The requirement to participate in “regional monitoring” of beach water quality replaces requirements to conduct “core monitoring” of beach water quality, as provided for in Appendix III of the Ocean Plan.

The State Water Resources Control Board adopted the Water Quality Control Plan for Enclosed Bays and Estuaries of California – Part 1 Sediment Quality which became effective August 25, 2009 (Sediment Quality Monitoring Policy). Provision D.1.e.(2) requires any Copermittees with MS4 discharges to an enclosed bay or estuary to monitor the sediments in the enclosed bay or estuary receiving water in accordance with the sediment quality monitoring procedures as prescribed in the Sediment Quality Monitoring Policy.

The State Water Board adopted Resolution No. 2012-0012 which approved exceptions to the California Ocean Plan for selected discharges into Areas of Special Biological Significance (ASBS), including special protections for beneficial uses. State Board Resolution No. 2012-0012 became effective on March 20, 2012, and Attachment B to the Resolution established limitations on point source storm water discharges to ASBS. Copermittees with MS4s that discharge to an ASBS must monitor its discharge to assure compliance with State Board Resolution No. 2012-0012 as required pursuant to Provision D.1.e.(3).

The San Diego Water Board is developing a regional monitoring strategy to assess the conditions of receiving waters in the San Diego Region. The monitoring requirements of Provision D.1 are expected to be incorporated or serve as a foundation of this regional monitoring strategy, but may require some modifications. When the San Diego Water Board develops an alternative regional monitoring strategy, the Copermittees will be required to participate in the development and implementation of the alternative regional monitoring program pursuant to Provision D.1.f.

Provision D.2 (MS4 Outfall Discharge Monitoring Requirements) specifies the minimum MS4 outfall discharge monitoring requirements that the Copermittees must incorporate and implement as part of the Water Quality Improvement Plan.

The dry weather MS4 outfall discharge monitoring requirements are included under Provisions D.2.a.(2) and D.2.b. The dry weather MS4 outfall discharge monitoring requirements are part of the “*program, including a schedule, to detect and remove (or require the discharger to the municipal separate storm sewer to obtain a separate NPDES permit for) illicit discharges and improper disposal into the storm sewer*” required by 40 CFR 122.26(d)(2)(iv)(B), which is expected to achieve compliance with the CWA section 402(p)(3)(B)(ii) statutory requirement for municipal storm water permits to require the Copermittees to “*effectively prohibit non-storm water discharges into the storm sewers.*” The dry weather MS4 outfall discharge monitoring data collection requirements are based on requirements under 40 CFR 122.26(d)(1)(iv)(D) and 122.26(d)(2)(iv)(B)(3).

The dry weather MS4 outfall discharge monitoring requirements are designed to provide wide spatial and temporal coverage of each jurisdiction to better understand the extent and magnitude of non-storm water discharges to receiving waters, and make a distinction between persistent and transient non-storm water flows. This information is expected to allow each Copermittee to focus its resources on eliminating and controlling the highest priority threats to receiving water quality, as well as integrating other elements of the storm water programs (e.g. complaint call response) and third party data to efficiently and effectively assist in efforts to eliminate non-storm water discharges.

The dry weather MS4 outfall discharge monitoring requirements of Provision D.2.a.(2) and D.2.b are separated into monitoring required before and after the San Diego Water Board accepts the Copermittees’ Water Quality Improvement Plan. Outfall monitoring conducted prior to acceptance of the Water Quality Improvement Plan is referred to in the Order as Transitional MS4 Outfall Discharge Monitoring. Provision D.2.a.(2) includes the transitional dry weather MS4 outfall discharge monitoring requirements.

The requirements under Provision D.2.a.(2) are based on the requirements under 40 CFR 122.26(d)(1)(iv)(D), (d)(1)(v)(B) and (d)(2)(iv)(B), which include the requirements for a monitoring program to identify, detect, and eliminate illicit connections and illegal discharges to the MS4s. The federal regulations (40 CFR 122.26(d)(1)(iv)(D)) require

the monitoring program to include “a *field screening analysis for illicit connections and illegal dumping [that]...[a]t a minimum, include[s] a narrative description, for either each field screening point or major outfall, of visual observations made during dry weather periods.*” The federal regulations (40 CFR 122.26(d)(1)(v)(B)) require the monitoring program to include “*inspection procedures and methods for detecting and preventing illicit discharges, and describe areas where this program has been implemented.*” Furthermore, the monitoring program is required by federal regulations (40 CFR 122.26(d)(2)(iv)(B)) to include “*a schedule, to detect and remove (or require the discharger to the municipal separate storm sewer to obtain a separate NPDES permit for) illicit discharges and improper disposal into the storm sewer.*”

Dry weather transitional MS4 outfall discharge monitoring requires each Copermittee to field screen (inspect) its major MS4 outfalls to classify the MS4 outfall locations as having persistent dry weather flows, transient dry weather flows, or no dry weather flows. To account for the variance in size of the 39 jurisdictions covered under this Order, the Copermittees recommended a tiered approach to the number of major MS4 outfalls that must be inspected. Provision D.2.a.(2)(a) provides a tiered approach to the number of major MS4 outfalls that must be visually inspected per jurisdiction as well as a minimum frequency each Copermittee must inspect each major MS4 outfall per year. This tiered approach is based on the total number of major MS4 outfalls within a Copermittees jurisdiction within each Watershed Management Area.

Based on the field screening, each Copermittee is required to make a determination whether any observed flowing, pooled, or ponded waters are transient or persistent flows. Based on this field screening information, other jurisdictional program information, and third party information, each Copermittee is required to prioritize the MS4 outfalls within its jurisdiction for follow up investigation and elimination of the non-storm water discharge, as part of its illicit discharge detection and elimination program required pursuant to Provision E.2. In accordance with the requirements of Provision E.2, each Copermittee is required to immediately investigate obvious illicit discharges (e.g. outfall discharges with unusual color, unusual odor, or high flows).

This approach allows a Copermittee to use all of its resources, as well as leverage resources and information provided by third parties, to effectively eliminate non-storm water discharges from its MS4 outfalls. If the source of the non-storm water discharge cannot be immediately eliminated, the Copermittee uses the persistent flow or transient flow classification along with other programmatic implementation data to prioritize the MS4 outfalls for future investigation. In accordance with the adaptive management approach deployed throughout this Order, Provision D.2.a.(2)(c) requires each Copermittee to update its MS4 outfall discharge monitoring station inventory, compiled pursuant to Provision D.2.a.(1), with any new information on the classification of whether the MS4 outfall produces persistent flow, transient flow, or no dry weather flow. The requirement of Provision D.2.a.(2)(c) assures that each Copermittee is collecting data that can be used to demonstrate compliance with the CWA requirement that each Copermittee must implement a program to “*effectively*

*prohibit non-storm water discharges into the [MS4]" and with the requirements under 40 CFR 122.26(d)(1)(iv)(D), (d)(1)(v)(B) and (d)(2)(iv)(B).*

Provision D.2.b describes the dry weather MS4 outfall discharge monitoring required to be incorporated and implemented as part of the Water Quality Improvement Plan. Dry weather MS4 outfall discharge monitoring must be performed by each Copermittee to identify non-storm water and illicit discharges within its jurisdiction pursuant to Provision E.2.c, and to prioritize the dry weather MS4 discharges that will be investigated and eliminated pursuant to Provision E.2.d. The emphasis of the dry weather MS4 outfall discharge monitoring required pursuant to Provision D.2.b is consistent with the requirements under 40 CFR 122.26(d)(1)(iv)(D), (d)(1)(v)(B) and (d)(2)(iv)(B).

Provision D.2.b.(1) requires each Copermittee to continue field screening its major MS4 outfalls and identifying those with persistent flows and transient flows, as conducted during the transitional period (i.e. before the Water Quality Improvement Plan was developed). However, each Copermittee now has the flexibility to adjust the field screening monitoring frequencies and locations for the MS4 outfalls in its inventory, as needed, to identify and eliminate sources of non-storm water persistent flow discharges in accordance with the highest priority water quality conditions identified in the Water Quality Improvement Plan. In order to ensure a minimum number of outfalls are inspected, Provision D.2.b.(1) requires the number of visual inspections be equal to the number of visual inspections required in the tiered inspection program pursuant to Provision D.2.a.(2)(a).

Provision D.2.b.(2)(b) requires each Copermittee to monitor a minimum of 5 major MS4 outfalls with persistent flows identified as the highest priorities within a Copermittee's jurisdiction, within each Watershed Management Area. In other words, Copermittees located in more than one Watershed Management Area must identify at least 5 major MS4 outfalls with persistent flows in its jurisdiction in each Watershed Management Area. If a Copermittee is located in more than one Watershed Management Area, and they have less than 5 major MS4 outfalls with persistent flows per jurisdictional area per Watershed Management Area, all of the major MS4 outfalls must be identified as high priority dry weather persistent flow MS4 outfalls. The Copermittees identified as Responsible Copermittees by a TMDL in Attachment E of the Order may need to monitor more than 5 dry weather major MS4 outfall locations to determine compliance with the requirements of the TMDL(s).

Monitoring must occur at the highest priority outfall locations at least semi-annually until the non-storm water discharges have been eliminated for three consecutive dry weather monitoring events; identified to be authorized by a separate NPDES Permit; or reprioritized to a lower priority. Persistent flow MS4 outfall monitoring stations that have been removed must be replaced with the next highest prioritized MS4 major outfall in the Copermittee's jurisdiction within the Watershed Management Area, unless there are no remaining qualifying major MS4 outfalls within the Copermittees jurisdiction. The Copermittees must continually update their dry weather persistent

flow MS4 outfall discharge monitoring locations with the next highest priority non-storm water flow that have yet to be eliminated until all persistent and transient flows are eliminated or its threat reduced.

Non-storm water persistent flow MS4 outfall discharge monitoring data collected during each semi-annual monitoring event, must be collected and analyzed according to the requirements of Provision D.2.b.(2)(b)-(e). These monitoring requirements are consistent with the requirements under 40 CFR 122.26(d)(1)(iv)(D), (d)(1)(v)(B) and (d)(2)(iv)(B).

The wet weather MS4 outfall discharge monitoring requirements are included under Provisions D.2.a.(3) and D.2.c. The wet weather MS4 outfall discharge monitoring requirements are necessary for the Copermittees to implement a *“management program...to reduce the discharge of pollutants to the maximum extent practicable, using management practices, control techniques and system, design and engineering methods, and such other provisions which are appropriate”* required by 40CFR 122.26(d)(2)(iv), which is expected to achieve compliance with the CWA section 402(p)(3)(B)(iii) statutory requirement for municipal storm water permits to require *“controls to reduce the discharge of pollutants [in storm water] to the maximum extent practicable.”* The wet weather MS4 outfall discharge monitoring data collection requirements are based on requirements under 40 CFR 122.26(d)(2)(iii), 122.26(d)(2)(iii)(A) and 122.26(d)(2)(iii)(A)(1)-(4), and 40 CFR 122.21(g)(7)(i)-(ii).

The wet weather MS4 outfall discharge monitoring requirements of Provision D.2.a.(3) and D.2.c are separated into monitoring required before and after the San Diego Water Board accepts the Copermittees' Water Quality Improvement Plan. Outfall monitoring conducted prior to acceptance of the Water Quality Improvement Plan is referred to in the Order as Transitional MS4 Outfall Discharge Monitoring. Provision D.2.a.(3) includes the transitional wet weather MS4 outfall discharge monitoring requirements.

Until the wet weather MS4 outfall discharge monitoring requirements of Provision D.2.c are incorporated into a Water Quality Improvement Plan that is accepted by the San Diego Water Board, the Copermittees must comply with the requirements of transitional wet weather MS4 outfall monitoring requirements pursuant to Provision D.2.a.(3). Provision D.2.a.(3) requires the Copermittees in each Watershed Management Area to sample, at least five of the major MS4 outfalls inventoried pursuant to Provision D.2.a.(1) once per wet season for the monitoring data required to be collected pursuant to Provision D.2.a.(3)(c)-(e). Provision D.2.a.(3) further requires at least one major MS4 outfall monitoring station be located in each Copermittee's jurisdiction within the Watershed Management Area.

At a minimum, the five sampling locations chosen must be representative of storm water discharges from residential, commercial, industrial, and typical mixed-use land uses present within a Watershed Management Area. The San Diego Water Board expects the Copermittees to extrapolate from these data to similar land uses

throughout the Watershed Management Area to better inform the Water Quality Improvement Plan development process by prioritizing drainages for implementation of storm water control efforts required pursuant to Provision E.

Provision D.2.c describes the wet weather MS4 outfall discharge monitoring required to be included and implemented as part of the Water Quality Improvement Plan. Provision D.2.c provides the Copermittees the flexibility to adjust the wet weather MS4 outfall discharge monitoring locations and frequencies in the Watershed Management Area, as needed, to identify sources of pollutants in storm water discharges from MS4s in accordance with the highest priority water quality conditions identified in the Water Quality Improvement Plan.

Although Provision D.2.c.(1) allows the Copermittees to adaptively manage the wet weather MS4 outfall discharge monitoring locations and frequencies, the provision requires a minimum of at least five wet weather outfall stations to be monitored. Provision D.2.c.(2) further allows the Copermittees to modify the monitoring frequency at each wet weather MS4 outfall station to meet the goals of the Water Quality Improvement Plan as long as the monitoring frequency occurs at least once per year and is at an appropriate frequency to identify sources of pollutants in storm water discharges, guide pollutant source identification efforts, or determine compliance with the requirements of the applicable TMDLs in Attachment E to the Order.

The wet weather MS4 outfall discharge monitoring requirements of Provisions D.2.c.(3) and D.2.c.(4) are the same as the transitional wet weather MS4 outfall discharge monitoring. In contrast, the requirements of Provision D.2.c.(5) are focused on collecting analytical data specific to the highest priority water quality conditions in the Watershed Management Area identified in the Water Quality Improvement Plan. The wet weather MS4 outfall discharge monitoring data collection requirements are consistent with the requirements under 40 CFR 122.26(d)(2)(iii), 122.26(d)(2)(iii)(A) and 122.26(d)(2)(iii)(A)(1)-(4), and 40 CFR 122.21(g)(7)(i)-(ii).

Provision D.3 (Special Studies) requires the Copermittees to develop special studies that will be conducted for each Watershed Management Area and the entire San Diego Region. Data collected pursuant to Provision D.3 is to be used by the Copermittees to improve the effectiveness of the strategies implemented by the jurisdictional runoff management programs toward achieving the numeric goals identified in the Water Quality Improvement Plans and ultimately achieve compliance with the discharge prohibitions and receiving water limitations of Provisions A.1.a, A.1.c, and A.2.a, which is consistent with the requirements of Provision A.4.

Special studies are often necessary to fill data gaps or provide more refined information that allow the Copermittees to better manage the generation or elimination of pollutants and discharges to and from the MS4. In the Fourth Term Permits, the Copermittees have been required to implement special studies as directed by the San Diego Water Board. The special studies required by this Order provide the Copermittees more flexibility to identify and implement special studies that will be most

useful to improving the effectiveness of their jurisdictional runoff management programs.

Provision D.3.a.(1) requires the Copermittees to develop and conduct at least two special studies per Watershed Management Area, to be determined by the Copermittees. One of the two special studies may be accomplished through participation in a Regional Special Study required under Provision D.3.a.(2). The requirements provide the Copermittees great latitude in identifying and developing the special studies. Watershed Management Area special studies are required, at a minimum, to: (a) relate in some way to the highest water quality priorities identified by the Copermittees in the Water Quality Improvement Plan, (b) be conducted within the Watershed Management Area, and (c) include some form of participation (e.g. contribution of funds, personnel services, project management) by all the responsible Copermittees within the Watershed Management Area.

Examples of Watershed Management Area special studies might include, but are not limited to: (1) focused pollutant source identification studies, (2) BMP effectiveness and/or comparison studies, (3) pilot tests for new or emerging pollutant control methods, (4) receiving water pollutant or stressor source identification and/or mitigation studies, or (5) pollutant fate and transport studies. The Watershed Management Area special studies are expected to provide data that can be utilized by the Copermittees to improve the Water Quality Improvement Plan or implementation of the Copermittees' jurisdictional runoff management programs to address the highest priority water quality conditions.

Provision D.3.a.(2) requires the Copermittees to develop at least one special study that will be conducted for the entire San Diego region. The regional special study is expected to provide data that can be utilized by the Copermittees to improve the Water Quality Improvement Plan or implementation of the Copermittees' jurisdictional runoff management programs to identify or address regional water quality concerns and priorities.

An example of a regional special study would be to develop and establish allowable exceedance frequencies of the bacteria water quality objectives for several types of water bodies, during different wet and dry weather conditions the San Diego region. The special study would be related to bacteria, which is a priority for the San Diego region due to the adoption of "*Bacteria TMDL Project I – Beaches and Creeks in the San Diego Region*." The study results could be used to inform the Copermittees and the San Diego Water Board about the indicator bacteria water quality objective exceedance frequencies that occur in natural or reference watersheds.

Provision D.4 (Assessment Requirements) specifies the assessments that the Copermittees are required to perform, based on the monitoring data collected, and will be reported as part of the Annual Report for the Water Quality Improvement Plan implementation. Provision D.4 requires the Copermittees assess the progress of the

water quality improvement strategies in the Water Quality Improvement Plan toward achieving compliance with Provisions A.1.a, A.1.c, and A.2.a.

Provision D.4 specifies the assessments that Copermittees must perform for each Watershed Management Area to assess the effectiveness of each Copermittee's jurisdictional runoff management program and the Water Quality Improvement Plan. The effectiveness of each Copermittee's jurisdictional runoff management program and Water Quality Improvement Plan is measured through these types of assessments: (a) Receiving Waters Assessments (b) MS4 Outfall Discharges Assessments, (c) Special Studies Assessments, and (d) Integrated Assessment of Water Quality Improvement Plan.

Provision D.4.a requires the Copermittees to assess the status of receiving water conditions annually during the transitional monitoring period (during development of the Water Quality Improvement Plan) and after acceptance of the Water Quality Improvement Plan. The monitoring data collected pursuant to Provision D.1 will be evaluated, among other information, to assess the condition of a Watershed Management Area's streams, coastal waters, enclosed bays, harbors, estuaries, and lagoons. The focus of the receiving waters assessments is to measure progress toward the objective of the CWA to "*restore and maintain the chemical, physical, and biological integrity of the Nation's waters*" as the Water Quality Improvement Plan and each Copermittee's jurisdictional runoff management program are implemented within a Watershed Management Area. Provision D.4.a is consistent with 40 CFR 122.42(c)(7) which requires the Copermittees to annually report the "[i]dentification of water quality improvements or degradation."

Provision D.4.b includes the MS4 outfall discharges assessment requirements. The focus of MS4 outfall discharges assessments is to determine if the Copermittees' are implementing programs that comply with the requirements of the CWA for MS4 permits to "*effectively prohibit non-stormwater discharges into the storm sewers*" and "*require controls to reduce the discharge of pollutants [in storm water] to the maximum extent practicable.*" The monitoring data collected pursuant to Provisions D.2 will be evaluated, among other information, to assess the effectiveness of the transitional MS4 outfall field screening monitoring, the implementation of the Water Quality Improvement Plan and each Copermittee's jurisdictional runoff management program. The MS4 outfall discharge assessments consist of Non-Storm Water Discharges Reduction Assessments and Storm Water Pollutant Discharges Reduction Assessments.

The Non-Storm Water Discharges Reduction Assessments are how each Copermittee will demonstrate that its jurisdictional runoff management program implementation efforts are achieving the CWA requirement to "*effectively prohibit non-stormwater discharges into the storm sewers.*" Provision D.4.b.(1) requires each Copermittee to assess and report on its illicit discharge detection and elimination program required pursuant to Provision E.2 to reduce and effectively prohibit non-storm water and illicit discharges into the MS4 within its jurisdiction. The Non-Storm Water Discharges

Reduction Assessments include specific assessment requirements applicable to each Copermitttee.

As each Copermitttee collects and analyzes the data collected pursuant to dry weather MS4 outfall discharges monitoring requirements of Provisions D.2.a.(2) and D.2.b, Provision D.4.b.(1) requires each Copermitttee to assess the progress, assess the effectiveness of its current actions, and identify modifications necessary to increase the effectiveness of its actions toward reducing and eliminating non-storm water and illicit discharges to its MS4. The findings from these assessments are expected to be utilized by the Copermitttee as part of its procedures to prioritize the non-storm water discharges that will be addressed by its Illicit Discharge Detection and Elimination program required pursuant to Provision E.2.

The assessment requirements of Provision D.4.a.(1) are consistent with 40 CFR 122.26(d)(2)(iv)(B) and 122.26(d)(2)(iv)(B)(3) which require *“procedures...to investigate portions of the separate storm sewer system that, based on the results of the field screen, or other appropriate information [emphasis added], indicate a reasonable potential of contain illicit discharges or other sources of non-storm water”* as part of a *“program...to detect and remove...illicit discharges and improper disposal into the storm sewer.”* The assessment requirements of Provision D.4.a.(1) are also consistent with 40 CFR 122.42(c)(1) requires the Copermitttees to annually report the *“status of implementing the components of the storm water management program that are established as permit conditions.”*

The Storm Water Pollutant Discharges Reduction Assessment is how the Copermitttees in each Watershed Management Area will demonstrate that their jurisdictional runoff management program implementation efforts are achieving the CWA requirement to *“reduce the discharge of pollutants [in storm water] to the maximum extent practicable.”* Provision D.4.b.(2) requires the Copermitttees in each Watershed Management Area to assess and report the progress of the Copermitttees’ efforts to reduce pollutants in storm water discharges from the MS4s to the MEP. The Storm Water Pollutant Discharges Reduction Assessments include specific assessment requirements during both the transitional monitoring period and after acceptance of the Water Quality Improvement Plan applicable to the Watershed Management Area and each Copermitttee.

As the Copermitttees collect and analyze the data collected pursuant to wet weather MS4 outfall discharges monitoring requirements of Provisions D.2.a.(3) and D.2.c, Provision D.4.b.(2) requires the Copermitttees to assess runoff conditions during the transitional period, and the progress of the Water Quality Improvement Plan strategies toward reducing pollutants in storm water from the MS4 to the MEP. The findings from these assessments are expected to be utilized by the Copermitttees to identify any modifications to the wet weather MS4 outfall discharge monitoring locations and frequencies necessary to identify sources of pollutants in storm water discharges from the MS4s, as well as focus, modify, and improve the water quality improvement

strategies implemented by each Copermittee within its jurisdiction to reduce pollutants in storm water discharges to the MEP.

The assessment requirements of Provision D.4.b.(2) are consistent with 40 CFR 122.26(d)(2)(iii)(B) which requires “[e]stimates of the annual pollutant load of the cumulative discharges to waters of the United States from all identified municipal outfalls...during a storm event...accompanied by a description of the procedures for estimating constituent loads and concentrations, including any modeling, data analysis, and calculation methods.” The assessment requirements of Provision D.4.a.(2) are consistent with 40 CFR 122.26(d)(2)(v) which requires that each Copermittee assesses the “estimated reductions in loadings of pollutants from discharges of municipal storm sewer constituents from municipal storm sewer systems expected as the result of the municipal storm water quality management program.” The assessment requirements of Provision D.4.b.(2) are also consistent with 40 CFR 122.42(c)(1) which requires the Copermittees to annually report the “status of implementing the components of the storm water management program that are established as permit conditions.”

Provision D.4.c includes the special studies assessment requirements. Performing special studies are how the Copermittees will address data gaps identified during the development of and updates to the Water Quality Improvement Plan. The relevant findings from the special studies assessments are expected to be incorporated as part of the applicable receiving water assessments, MS4 outfall discharge assessments, and integrated water quality improvement assessments required in Provision D.4.a, D.4.b, and D.4.d, respectively.

The assessment requirements in Provision D.4.d are part of the iterative approach and adaptive management process required by Provision A.4. The Copermittees are required to integrate the data collected pursuant to Provisions D.4.a-c, and information collected during the implementation of the jurisdictional runoff management programs required pursuant to Provision E to re-evaluate the Water Quality Improvement Plan.

The monitoring data collected pursuant to Provisions D.1 and D.2, and the results of the assessment required pursuant to Provisions D.4.a-c, will be used to determine whether the Water Quality Improvement Plan and each Copermittee’s jurisdictional runoff management program are effective, or require modifications or improvements to become more effective to achieve the requirements of the CWA. The assessments required by Provision D.4.d are consistent with 40 CFR 122.42(c)(1) which requires that the Copermittees to report the “[t]he status of implementing the components of the storm water management program that are established as permit conditions.”

## E. Jurisdictional Runoff Management Programs

**Purpose:** Provision E includes the requirements for the jurisdictional runoff management programs to be implemented by each of the Copermittees. Compliance with the requirements for the jurisdictional runoff management programs will allow the Copermittees to demonstrate that they are implementing programs to effectively prohibit non-storm water discharges to the MS4 and reduce pollutants in storm water discharges from the MS4 to the MEP. The jurisdictional runoff management program document prepared by each Copermittee will also provide the details for implementing the water quality improvement strategies identified in the Water Quality Improvement Plan specifically within its jurisdiction.

**Discussion:** Implementation of the jurisdictional runoff management program requirements under Provision E is how the Copermittees “*effectively prohibit non-stormwater discharges into the storm sewer,*” and outlines the “*controls to reduce the discharge of pollutants to the maximum extent practicable*” consistent with the federal regulations under 40 CFR 122.26. The jurisdictional runoff management program is part of the “*comprehensive planning process*” that is required pursuant to 40 CFR 122.26(d)(2)(iv). Where the Water Quality Improvement Plan is the “*comprehensive planning process*” on a Watershed Management Area scale, requiring “*intergovernmental coordination,*” the jurisdictional runoff management program document is the “*comprehensive planning process*” on a jurisdictional scale that should be coordinated with the other Copermittees in the Watershed Management Area to achieve the goals of the Water Quality Improvement Plan.

The jurisdictional runoff management program requirements are included to provide each Copermittee criteria that can be used to demonstrate that its storm water management program is implementing the “*comprehensive planning process*” within its jurisdiction to “*effectively prohibit non-stormwater discharges into the storm sewers,*” and to identify and implement the most effective “*controls to reduce the discharge of pollutants to the maximum extent practicable*” in accordance with the performance standards given in the CWA.

Provision E includes the requirements for each of the components that must be included in the Copermittee’s jurisdictional runoff management program document that will be implemented by the Copermittee within its jurisdiction. Implementation of the components of each Copermittee’s jurisdictional runoff management program must incorporate the water quality improvement strategies identified by each Copermittee in the Water Quality Improvement Plans, described pursuant to Provision B.3.b.(1)(a).

More specific and detailed discussions of the requirements of Provision E are provided below.

Provision E.1 (Legal Authority Establishment and Enforcement) requires each Copermittee to establish and enforce sufficient legal authority to control discharges to the MS4 within its jurisdiction.

Pursuant to 40 CFR 122.26(d)(1)(ii) and 40 CFR 122.26(d)(2)(i), each Copermittee must have sufficient *“legal authority to control discharges to the municipal separate storm sewer system”* and be able to demonstrate that it can *“operate pursuant to legal authority established by statute, ordinance or series of contracts.”* Provision E.1.a describes the minimum legal authorities each Copermittee must establish for itself within its jurisdiction to control discharges to its MS4. The requirements of Provision E.1.a are consistent with the requirements set forth in 40 CFR 122.26(d)(2)(i)(A)-(F).

The certification statement required from each Copermittee by Provision E.1.b is included to provide the San Diego Water Board additional documentation that each Copermittee has established the legal authorities consistent with Provision E.1.a and 40 CFR 122.26(d)(2)(i)(A)-(F), and the Copermittee can *“operate pursuant to legal authority established by statute, ordinance or series of contracts.”*

Provision E.2 (Illicit Discharge Detection and Elimination) requires each Copermittee to implement an illicit discharge detection and elimination program to effectively prohibit non-storm water discharges to the MS4 by actively detecting and eliminating illicit discharges and disposal into its MS4. If the San Diego Water Board finds that a Copermittee is fully implementing the requirements of Provision E.2, then the Copermittee is deemed in compliance with the effective prohibition of non-storm water discharges to the MS4 required under Provision A.1.b.

Provision E.2 establishes the minimum requirements that each Copermittee must implement within its jurisdiction to effectively prohibit non-storm water discharges from entering its MS4. The federal CWA requires permits for municipal storm sewer systems to *“effectively prohibit non-storm water discharges into the storm sewers.”* The federal regulations (40CFR122.26(d)(2)(i)(B)) require each Copermittee to establish the legal authority to prohibit illicit discharges to its MS4s. Under 40 CFR 122.26(d)(2)(iv)(B), each Copermittee must implement a *“program...to detect and remove...illicit discharges and improper disposal into the storm sewer.”* The federal NPDES regulations, under 40 CFR 122.26(b)(2), define illicit discharges as *“any discharge to a municipal separate storm sewer that is not composed entirely of storm water.”* Thus, non-storm water discharges are not authorized to enter the MS4 and are considered to be illicit discharges, unless authorized by a separate NPDES permit.

The Phase I Final Rule clarifies that non-storm water discharges through an MS4 are not authorized under the CWA (55 FR 47995):

*“Today’s rule defines the term “illicit discharge” to describe any discharge through a municipal separate storm sewer system that is not composed entirely of storm water and that is not covered by an NPDES permit. Such illicit discharges are not*

*authorized under the Clean Water Act. Section 402(p)(3)(B) requires that permits for discharges from municipal separate storm sewers require the municipality to “effectively prohibit” non-storm water discharges from the municipal separate storm sewer...Ultimately, such non-storm water discharges through a municipal separate storm sewer must either be removed from the system or become subject to an NPDES permit.”*

The federal NPDES requirements for the program to address illicit discharges must include “*inspections, to implement and enforce an ordinance, orders, or other similar means to prevent illicit discharges to the MS4.*” The federal NPDES regulations also reference several categories of “*non-storm water discharges or flows [which] shall be addressed where such discharges are identified...as sources of pollutants to waters of the United States.*” The Phase I Final Rule (55 FR 48037) further clarified the requirements of 40 CFR 122.26(d)(2)(iv)(B)(1) as follows:

*“EPA is clarifying that section 402(p)(3)(B) of the CWA (which requires permits for municipal separate storm sewers to ‘effectively’ prohibit non-storm water discharges) does not require permits for municipalities to prohibit certain discharges or flows of nonstorm water to waters of the United States through municipal separate storm sewers in all cases.”*

In previous iterations of the municipal storm water permits for the San Diego Region, these categories were simply listed and referred to as categories of non-storm water discharges “not prohibited” unless identified as a source of pollutants. The Copermittees have often referred to these categories as “exempt” discharges. In both cases, however, the language is inconsistent with the federal CWA and NPDES regulations. And, the clarification provided in the Phase I Final Rule does not specifically state that such discharges are “not prohibited” or “exempt” or in any way authorized. The federal NPDES regulations do, however, state that specific categories of non-storm water discharges must be “*addressed*” if identified as “*sources of pollutants to waters of the United States.*”

The language of Provision E.2.a has been revised to be fully consistent with the language of the CWA and the requirements of the federal regulations under 40 CFR 122.26(d)(2)(iv)(B)(1). Provision E.2.a requires each Copermittee to address all types of non-storm water discharges into its MS4 as illicit discharges, unless the discharge is authorized by a separate NPDES permit, or identified as a category of non-storm water discharges or flows that must be addressed pursuant to Provisions E.2.a.(1) through E.2.a.(5). Only non-NPDES-permitted non-storm water discharges identified as a category of non-storm water discharges under Provisions E.2.a.(1) through E.2.a.(5) and not identified as a source of pollutants do not have to be addressed as illicit discharges. Categories of non-storm water discharges that meet the requirements of Provisions E.2.a.(1) through E.2.a.(5) do not have to be addressed by the Copermittee as illicit discharges.

Several of the non-storm water categories listed in 40 CFR 122.26(d)(2)(iv)(B)(1) have not been included in Provisions E.2.a.(1) through E.2.a.(5), including: street wash water, landscape irrigation, irrigation water, and lawn watering. Because these are no longer included within the categories listed under Provisions E.2.a.(1) through E.2.a.(5), the Copermittees must prohibit these types of non-storm water discharges from entering the MS4. This is consistent with the clarification of 40 CFR 122.26(d)(2)(iv)(B)(1) in the Phase I Final Rule (55 FR 48037), which states:

*“[T]he Director may include permit conditions that either require municipalities to prohibit or otherwise control any of these types of discharges where appropriate.”*

Street wash water is a category of non-storm water discharges that was removed when the Third Term Permits were issued. Street wash water is a source of several pollutants (e.g., metals, oil and grease, petroleum hydrocarbons, chlorinated solvents, sediment) which are generated during the street washing process. The removal of this category requires the Copermittees to prohibit this type of non-storm water discharge from entering the MS4.

The landscape irrigation, irrigation water, and lawn watering categories, collectively referred to hereafter as “over-irrigation” discharges, were removed from the list of non-storm water discharge categories in the Fourth Term Orange County and Riverside County Permits. Non-storm water discharges resulting from over-irrigation have been found to be a source of several types of pollutants (e.g., nutrients, bacteria, pesticides, sediment) in receiving waters. The San Diego Water Board and the Copermittees have identified categories of non-storm water discharges associated with over-irrigation as a source of pollutants and conveyance of pollutants to the MS4 and waters of the United States in the following documents:

- **SmartTimer/EdgescapE Evaluation Program (SEEP) Grant Application**

The State Water Board allocated grant funding to the SEEP project grant application submitted in 2006, which targeted irrigation runoff by retrofitting areas of existing development and documenting the conservation and runoff improvements. The basis of this grant project is that over-irrigation (landscape irrigation, irrigation water and lawn watering) into the MS4 is a source and conveyance of pollutants. In addition, the grant application indicated that this alteration of natural flows is impacting the beneficial uses of waters of the state and U.S. Results from the study indicate that that over-irrigation (landscape irrigation, irrigation water and lawn watering) into the MS4 is a source and conveyance of pollutants. The results of this study can be applied broadly to any area where over-irrigation takes place. The grant application included the following statements:

*“Irrigation runoff contributes flow & pollutant loads to creeks and beaches that are 303(d) listed for bacteria indicators.”*

*“Regional program managers agree that the reduction and/or elimination of irrigation-related urban flows and associated pollutant loads may be key to successful attainment of water quality and beneficial use goals as outlined in the San Diego Basin Plan and Bacteria TMDL over the long term.”*

*“Elevated dry-weather storm drain flows, composed primarily ... of landscape irrigation water wasted as runoff, carry pollutants that impair recreational use and aquatic habitats all along Southern California’s urbanized coastline. Storm drain systems carry the wasted water, along with landscape derived pollutants such as bacteria, nutrients and pesticides, to local creeks and the ocean. Given the local Mediterranean climate, excessive perennial dry season stream flows are an unnatural hydrologic pattern, causing species shifts in local riparian communities and warm, unseasonal contaminated freshwater plumes in the near-shore marine environment.”*

- **2006-2007 Orange County Watershed Action Plan Annual Reports**

The Watershed Action Plan Annual Reports for the 2006-2007 reporting period were submitted by the County of Orange, Orange County Flood Control District and Copermittees within the San Juan Creek, Laguna Coastal Streams, Aliso Creek, and Dana Point Coastal Streams Watersheds. San Juan Creek, Laguna Coastal Streams, Aliso Creek and Dana Point Coastal Streams are all currently 303(d) listed as impaired for indicator bacteria within their watersheds and/or in the Pacific Ocean at the discharge points of their watersheds. The Orange County Copermittees, within their Watershed Action Strategy Table for fecal indicator bacteria included the following:

*“Support programs to reduce or eliminate the discharge of anthropogenic dry weather nuisance flow throughout the ... watershed. Dry weather flow is the transport medium for bacteria and other 303(d) constituents of concern.”*

*Additionally, they state that “conditions in the MS4 contribute to high seasonal bacteria propagation in-pipe during warm weather. Landscape irrigation is a major contributor to dry weather flow, both as surface runoff due to over-irrigation and overspray onto pavements; and as subsurface seepage that finds its way into the MS4.”*

- **Fiscal Year 2008 Carlsbad Watershed Urban Runoff Management Program Annual Report**

The Carlsbad Watershed Urban Runoff Management Program Annual Report for Fiscal Year 2008 was submitted by the Carlsbad Watershed Copermittees (Cities of Carlsbad, Encinitas, Escondido, Oceanside, San Marcos, Solana Beach, and Vista, and the County of San Diego). In the Annual Report, the Carlsbad Watershed Copermittees stated the following:

*“The Carlsbad Watershed Management Area (WMA) collective watershed strategy identifies bacteria, sediment, and nutrients as high priority water quality pollutants in the Agua Hedionda (904.3 – bacteria and sediment), Buena Vista (904.2 – bacteria), and San Marcos Creek (904.5 – nutrients) Hydrologic Areas. Bacteria, sediment, and nutrients have been identified as potential discharges from over-irrigation.”*

- **2007-2008 San Diego Bay Watershed Urban Runoff Management Program Annual Report**

The San Diego Bay Watershed Urban Runoff Management Program 2007-2008 Annual Report was submitted by the San Diego Bay Watershed Copermittees (Cities of Chula Vista, Coronado, Imperial Beach, La Mesa, Lemon Grove, National City, and San Diego, the County of San Diego, the Port of San Diego, and the San Diego County Airport Authority). In Appendix D of the Annual Report, titled “Likely Sources of Pollutants,” the San Diego Bay Watershed Copermittees identified over-irrigation of lawns as a pollutant generating activity from business and/or residential land uses for bacteria, pesticides, and sediment.

- **Copermittee Public Education Materials**

The Orange County Public Works *Tips for Landscape & Gardening* public education brochure states: *“Fertilizers, pesticides and other chemicals that are left on yards or driveways can be blown or washed into storm drains that flow to the ocean. Overwatering lawns can also send materials into storm drains.”*

The Riverside County Flood Control and Water Conservation District *Landscape and Garden* public education brochure states: *“Soil, yard wastes, over-watering and garden chemicals become part of the urban runoff mix that winds its way through streets, gutters and storm drains before entering lakes, rivers, streams, etc. Urban runoff pollution contaminates water and harms aquatic life!”*

- **Los Peñasquitos Lagoon Sedimentation/Siltation TMDL Technical Report**

The Los Peñasquitos Lagoon Sedimentation/Siltation TMDL technical report was prepared for the City of San Diego and USEPA in October 2010. The technical report was included as a technical supporting document attached to the Sediment TMDL for Los Peñasquitos Lagoon staff report prepared by the San Diego Water Board, dated June 13, 2012. Under the Source Assessment section, the technical report states the following:

*“Dry weather loading is dominated by nuisance flows from urban land use activities such as car washing, sidewalk washing, and lawn over-irrigation, which pick up and transport sediment into receiving waters.”*

These documents confirm that non-storm water discharges associated with over-irrigation are a source of pollutants and should be addressed as illicit discharges to the MS4. Prohibiting non-storm water discharges associated with over-irrigation, however, is not a new requirement for the Copermittees because it is also consistent with and required by the Water Conservation in Landscaping Act (AB 1881, Laird).

The Water Conservation in Landscaping Act required the Department of Water Resources (DWR) to prepare a Model Water Efficient Landscape Ordinance for use by local agencies (e.g. the Copermittees). All local agencies were required to adopt a water efficient landscape ordinance by January 1, 2010. Local agencies could adopt the Water Efficient Landscape Ordinance developed by DWR, or an ordinance considered at least as effective as the Model Ordinance. The Water Efficient Landscape Ordinance includes a requirement that local agencies prohibit runoff from irrigation (§ 493.2):

*“Local agencies shall prevent water waste resulting from inefficient landscape irrigation by prohibiting runoff from leaving the target landscape [emphasis added] due to low head drainage, overspray, or other similar conditions where water flows onto adjacent property, non-irrigated areas, walks, roadways, parking lots, or structures. Penalties for violation of these prohibitions shall be established locally.”*

Furthermore, non-storm water discharges from over-irrigation not only transport and discharge pollutants to receiving waters, but are also a likely source of the dry weather flows causing changes to habitat within and along the receiving water bodies. Examples of habitat changes from the dry weather flows include perennialization of ephemeral streams, and conversion of saltwater and brackish water marsh habitats to freshwater marsh habitats (e.g. Los Peñasquitos Lagoon). Both of these examples have resulted in the promotion of invasive species in several areas of the San Diego Region.

The removal of the over-irrigation discharges categories does not require the Copermittees to strictly prohibit lawn and landscape irrigation, but does require the prohibition of excessive irrigation water that results in non-storm water discharges to the MS4. Non-storm water discharges to the MS4 from over-irrigation must be addressed as illicit discharges by the Copermittees pursuant to the requirements of Provision E.2.

The remaining non-storm water categories listed in 40 CFR 122.26(d)(2)(iv)(B)(1) are listed under Provisions E.2.a.(1) through E.2.a.(5) and generally fall into four categories: (1) non-storm water discharges subject to existing San Diego Water Board waste discharge requirements and NPDES permits; (2) non-storm water discharges generally not expected to be a source of pollutants to receiving waters; (3) non-storm water discharges likely to contain pollutants requiring some form of control to address

the pollutants prior to discharging to the MS4; and (4) non-storm water discharges or flows associated with firefighting.

Provisions E.2.a.(1) and E.2.a.(2) include several categories of non-storm water discharges listed in 40 CFR 122.26(d)(2)(iv)(B)(1) for which the San Diego Water Board already has developed general waste discharge requirements and NPDES permits to address the discharges. The Copermittees are only required to address these types of non-storm water discharges as illicit discharges if the Copermittees or the San Diego Water Board identifies these non-storm water discharges not having coverage under the applicable NPDES permit.

Provision E.2.a.(3) includes several categories of non-storm water discharges listed in 40 CFR 122.26(d)(2)(iv)(B)(1) which are generally not expected to be a source of pollutants to receiving waters, many of which originate from what are typically natural, uncontrollable sources. The Copermittees are only required to address these types of non-storm water discharges as illicit discharges if the Copermittees or the San Diego Water Board identifies these non-storm water discharges as a source of pollutants to receiving waters. Because many of these sources are generally uncontrollable, enforcing a prohibition may not be a possibility for the Copermittees. The Copermittees would be able to address these non-storm water discharges by preventing these non-storm water discharges from entering the MS4. This could potentially be achieved by sealing their MS4 structures so the discharges cannot enter the MS4.

Provision E.2.a.(4) includes several categories of non-storm water discharges listed in 40 CFR 122.26(d)(2)(iv)(B)(1) that are likely to contain pollutants requiring some form of control to address the pollutants prior to discharging to the MS4. At this time, an outright prohibition of these types of non-storm water discharges does not yet appear to be warranted. Thus, Provision E.2.a.(4) includes several requirements for the Copermittees to control the pollutants from these types of non-storm water discharges. This is consistent with the clarification of the federal regulations in the Phase I Final Rule (55 FR 48037), which states the San Diego Water Board has the authority to require the Copermittees to “*control any of these types of discharges where appropriate.*”

Unlike non-storm water discharges from over-irrigation, these types of non-storm water discharges are not expected to occur in close proximity to each other or very frequently. Provided these types of non-storm water discharges are controlled as required in Provision E.2.a.(4), the Copermittees would only be required to address these types of non-storm water discharges as illicit discharges if the Copermittee or the San Diego Water Board identifies these non-storm water discharges as a source of pollutants to receiving waters.

Provision E.2.a.(5) includes specific requirements for fire fighting discharges and flows. The requirements for non-storm water discharges and flows associated with fire

fighting have been separated into requirements for: a) non-emergency fire fighting discharges and flows, and b) emergency fire fighting discharges and flows.

The San Diego Water Board has found that discharges from building fire suppression system maintenance (e.g. fire sprinklers) contain waste and potentially a significant source of pollutants to receiving waters. As such, the San Diego Water Board is requiring these discharges be addressed as illicit discharges by the Copermittees. Thus, the discharges to the MS4 are to be prohibited via ordinance, order or similar means. For other non-emergency firefighting discharges and flows (i.e. flows from controlled or practice blazes, firefighting training, and maintenance activities not associated with building fire suppression systems), the Copermittees are required to develop and implement a program to address pollutants in these non-storm water discharges and flows. This is consistent with the clarification of the federal regulations in the Phase I Final Rule (55 FR 48037), which states the San Diego Water Board has the authority to require the Copermittees to “*control any of these types of discharges where appropriate.*”

For emergency firefighting discharges and flows, the Phase I Final Rule (55 FR 48037) has clarified the requirements of 40 CFR 122.26(d)(2)(iv)(B)(1) pertaining to emergency firefighting flows and discharges, which states:

*“In the case of firefighting it is not the intention of these rules to prohibit in any circumstances the protection of life and public or private property through the use of water or other fire retardants that flow into separate storm sewers.”*

Thus, the requirements have been made to be consistent with the guidance provided by the Phase I Final Rule. The Order recommends that the Copermittees develop and encourage implementation of BMPs to reduce or eliminate the discharge of pollutants from emergency firefighting flows to the MS4s and receiving waters. The Order does not include any requirements that should be interpreted as requiring the implementation of BMPs for emergency firefighting flows to the MS4s and receiving waters.

The Copermittees are expected to review the dry weather MS4 outfall discharge monitoring data they collect to determine if and when there are non-storm water discharges to or from their MS4s that are a source of pollutants to receiving waters. If the Copermittees identify one of the types of non-storm water discharges listed in Provisions E.2.a.(1) through E.2.a.(4) as a source of pollutants to receiving waters based on the review and evaluation of monitoring data, Provision E.2.a.(6) requires the Copermittees to prohibit those categories of discharges from entering the MS4 through ordinance, order or similar means. In addition, Provision E.2.a.(6) clarifies that the San Diego Water Board may identify categories of non-storm water discharges or flows listed under Provisions E.2.a.(1) through E.2.a.(4) that must be prohibited.

Provision E.2.a.(6) also provides the Copermitees an option to propose controls to be implemented for the category of non-storm water discharges as part of the Water Quality Improvement Plan instead of prohibiting the category of non-storm water discharges. If the Water Quality Improvement Plan is accepted by the San Diego Water Board with the proposed controls, the Copermitees will not be required to prohibit the category of non-storm water discharges to their MS4s as long as the controls are implemented. This is consistent with the clarification of 40 CFR 122.26(d)(2)(iv)(B)(1) in the Phase I Final Rule (55 FR 48037), which states the San Diego Water Board may “*require municipalities to prohibit or otherwise control any of these types of discharges where appropriate.*”

Finally, Provision E.2.a.(7) has been included in the requirements for non-storm water discharges to clarify that any non-storm water discharges to the Copermitee’s MS4, even those identified pursuant to Provisions E.2.a.(1) through E.2.a.(4), must be reduced or eliminated, unless a non-storm water discharge is identified as a discharge authorized by a separate NPDES permit. Provision E.2.a.(7) is consistent with the requirements of CWA section 402(p)(3)(B)(ii) and 40 CFR 122.26(d)(1)(v)(B), as clarified in the Phase I Final Rule (55 FR 47995) that “[u]ltimately, such non-storm water discharges through a municipal separate storm sewer must either be removed from the system or become subject to an NPDES permit.” However, the reduction or elimination of those non-storm water discharges are expected to be achieved as feasible, in accordance with the priorities in the Water Quality Improvement Plan and when the resources are available to the Copermitee.

Consistent with 40 CFR 122.26(d)(2)(iv)(B) and 122.26(d)(2)(iv)(B)(1), each Copermitee must implement a “*program...to prevent illicit discharges to the municipal storm sewer system*” and “*detect...illicit discharges and improper disposal into the storm sewer.*” Provision E.2.b requires each Copermitee to implement measures to prevent and detect illicit discharges and connections to its MS4 as part of its illicit discharge detection and elimination program.

As part of the program to prevent and detect illicit discharges to the MS4, 40 CFR 122.26(d)(2)(iv)(B)(2) requires “*procedures to conduct on-going field screening activities during the life of the permit, including areas or locations that will be evaluated by such field screens.*” As part of the procedures, each Copermitee is required to maintain an updated map of its entire MS4 and the corresponding drainage areas within its jurisdiction. Having knowledge about where inlets, access points, connections with other MS4s, and outfalls are located is necessary for each Copermitee to track, identify, and eliminate illicit discharges and connections. Thus, Provision E.2.b.(1) of the Order specifies that the map must include the segments of the storm sewer system owned, operated, and maintained by the Copermitee, and include locations of all known inlets, connections with other MS4s, and outfalls to the Copermitee’s MS4. The remaining requirements of Provision E.2.b are consistent with the requirements of 40 CFR 122.26(d)(2)(iv)(B)(3)-(7) related to implementing measures to prevent and detect illicit discharges and connections to the MS4.

Provision E.2.c requires each Copermittee to conduct field screening and monitoring of MS4 outfalls and other portions of its MS4 within its jurisdiction to detect non-storm water and illicit discharges and connections to the MS4. Field screening is a required element of the program to detect and eliminate illicit discharges and connections to the MS4, pursuant to 40 CFR 122.26(d)(2)(iv)(B)(2). The field screening requirement will be implemented through the dry weather MS4 outfall discharge monitoring required under Provisions D.2.a.(2) and D.2.b.(1).

Provision E.2.d specifies the measures each Copermittee must implement to eliminate illicit discharges and connections to its MS4. Elimination of illicit discharges and connections to the MS4 is consistent with the requirement of 40 CFR 122.26(d)(2)(iv)(B) *“to detect and remove [emphasis added]...illicit discharges and improper disposal into the storm sewer”* and will achieve the CWA requirement for MS4 permits to *“effectively prohibit non-storm water discharges into the storm sewers.”*

Generally, each Copermittee is responsible for prioritizing its efforts to eliminate non-storm water and illicit discharges or connections to its MS4 based on field screening and monitoring data, NALs, illicit discharge investigation records, and the known or suspected sources. Sources of non-storm water and illicit discharges or connections must be eliminated by enforcing the legal authority established by each Copermittee pursuant to Provision E.1.

Provision E.3 (Development Planning) requires each Copermittee to use its land use and planning authority to implement a development planning program to control and reduce the discharge of pollutants in storm water from new development and significant redevelopment to the MEP. Proper implementation of the development planning program will also contribute toward effectively prohibiting non-storm water discharges from development projects to the MS4.

Pursuant to 40 CFR 122.26(d)(2)(iv), each Copermittee is required to implement a *“management program...to reduce the discharge of pollutants to the maximum extent practicable using management practices, control techniques and system, design and engineering methods, and other such provisions where applicable.”* As part of the management program, 40 CFR 122.26(d)(2)(iv)(A)(2) requires *“planning procedures including a comprehensive master plan to develop, implement and enforce controls to reduce the discharge of pollutants from municipal storm sewers which receive discharges from areas of new development and significant redevelopment.”*

Land development generally alters the natural conditions of the land by removing vegetative cover, compacting soil, and/or placement of concrete, asphalt, or other impervious surfaces. These impervious surfaces concentrate urban pollutants (such as pesticides, petroleum hydrocarbons, heavy metals, and pathogens) that are otherwise not found in high concentrations in the natural environment. Pollutants that

accumulate on impervious surfaces are not easily biodegraded nor subject to natural treatment processes.

Impervious surfaces greatly affect the natural hydrology of the land because they do not allow natural infiltration and treatment of storm water runoff to take place. Instead, storm water runoff from impervious surfaces is typically directed through pipes, curbs, gutters, and other hardscape into receiving waters, with little treatment, at significantly increased volumes and accelerated flow rates over what would occur naturally. The increased pollutant loads, storm water volume, discharge rates and velocities, and discharge durations from the MS4 adversely impact stream habitat by causing accelerated, unnatural erosion and scouring within creek bed and banks. Placement of impervious surfaces also encapsulates “good” sediment (such as sand, gravel, rocks and cobbles) that would normally replenish creek beds and banks to help stabilize them. Collectively, these changes to natural hydrologic processes are termed hydrograph modification, or hydromodification.

Hydromodification, which is caused by both altered storm water flow and altered sediment flow regimes, is largely responsible for degradation of creeks, streams, and associated habitats in the San Diego Region. In an ongoing study by the Stormwater Monitoring Coalition to assess the health of streams throughout Southern California, researchers found that three of the four highest risk stressors to creeks (percent sands and fines present, channel alteration, and riparian disturbance) were related to physical habitat.<sup>29</sup> Researchers studying flood frequencies in Riverside County have found that increases in watershed imperviousness of only 9-22 percent can result in increases in peak flow rates for the two-year storm event of up to 100 percent.<sup>30</sup> Such changes in runoff have significant impacts on channel morphology.

In addition, a technical report issued by the Southern California Coastal Water Research Project (SCCWRP) stated that “[r]ecent studies indicate that California’s intermittent and ephemeral streams are more susceptible to the effects of hydromodification than streams from other parts of the United States. Physical degradation of stream channels in the central and eastern United States can initially be detected when watershed impervious cover approaches 10 percent, although biological effects (which may be more difficult to detect) may occur at lower levels. In contrast, initial response of streams in the semi-arid portions of California appears to occur between 3 and 5 percent impervious cover.”<sup>31</sup> These studies highlight the extent to which impacts originating from impervious surfaces created by land development are responsible for the degradation of creek and stream habitat.

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<sup>29</sup> Assessing the Health of Southern California Streams, Stormwater Monitoring Coalition, Fact Sheet

<sup>30</sup> Schueler and Holland, 2000. Storm Water Strategies for Arid and Semi-Arid Watersheds (Article 66). The Practice of Watershed Protection.

<sup>31</sup> Stein, E. and Zaleski, S., 2005. Technical Report 475, Managing Runoff to Protect Natural Streams: The Latest Development on Investigation and Management of Hydromodification in California. December 30, 2005.

This is consistent with what USEPA has noted, that “[m]ost stormwater runoff is the result of the man-made hydrologic modifications that normally accompany development. The addition of impervious surfaces, soil compaction, and tree and vegetation removal result in alterations to the movement of water through the environment. As interception, evapotranspiration, and infiltration are reduced and precipitation is converted to overland flow, these modifications affect not only the characteristics of the developed site but also the watershed in which the development is located. Stormwater has been identified as one of the leading sources of pollution for all waterbody types in the United States. Furthermore, the impacts of stormwater pollution are not static; they usually increase with more development and urbanization.”<sup>32</sup>

Reducing the impact from the increased pollutant loads and flows generated by impervious surfaces within a watershed is essential to protecting and restoring the integrity of the receiving waters. Provision E.3 includes the minimum “*management practices, control techniques and system, design and engineering methods, and other such provisions where applicable*” to be included in the “*planning procedures...to reduce the discharge of pollutants...from areas of new development and significant redevelopment.*” The requirements of Provision E.3 will 1) minimize the generation and discharge of pollutants in storm water from the MS4, and 2) minimize the potential of storm water discharges from the MS4 from causing altered flow regimes and excessive downstream erosion in receiving waters.

The requirements of Provision E.3.a include the minimum “*management practices, control techniques and system, design and engineering methods, and other such provisions where applicable*” to be included in the “*planning procedures...to reduce the discharge of pollutants...from areas of new development and significant redevelopment*” applicable to all development projects, regardless of size or purpose of development. In general, all development projects must implement onsite BMPs to remove pollutants from runoff prior to its discharge to any receiving waters, as close to the pollutant generating source as possible, and structural BMPs must not be constructed within waters of the U.S.

Furthermore, the onsite BMPs must be designed and implemented with measures to avoid the creation of nuisance or pollution associated with vectors (e.g. mosquitos, rodents, and flies). If not properly designed or maintained, certain BMPs implemented or required by municipalities may create a habitat for vectors. Monitoring studies conducted by the California Department of Public Health (CDPH) have documented that mosquitoes opportunistically breed in structural storm water BMPs, particularly those that hold standing water for over 96 hours. Certain site design features that hold standing water may similarly produce mosquitoes.

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<sup>32</sup> USEPA, 2007. Reducing Stormwater Costs through Low Impact Development (LID) Strategies and Practices, December 2007.

Structural BMPs and site design features should incorporate design, construction, and maintenance principles to promote drainage within 96 hours to minimize standing water available to mosquitoes. Nuisances and public health impacts resulting from vector breeding can be prevented with close collaboration and cooperative effort between municipalities and local vector control agencies and the CDPH during the development and implementation of storm water runoff management programs. The CDPH also has issued guidance for BMP implementation that will minimize potential nuisances and public health impacts resulting from vector breeding.<sup>33</sup>

All development projects are required to implement source control BMPs that will minimize the generation of pollutants. Additionally, each development project must implement, where applicable and feasible, low impact development (LID) BMPs to mimic the natural hydrology of the site and retain and/or treat pollutants in storm water runoff prior to discharging to and from the MS4.

The LID Center defines LID as “*a comprehensive land planning and engineering design approach with a goal of maintaining and enhancing the pre-development hydrologic regime of urban and developing watersheds.*”<sup>34</sup> LID designs seek to control storm water at the source, using small-scale integrated site design and management practices to mimic the natural hydrology of a site, retain storm water runoff by minimizing soil compaction and impervious surfaces, and disconnect storm water runoff from conveyances to the storm drain system.

LID BMPs may utilize interception, storage, evaporation, evapotranspiration, infiltration, and filtration processes to retain and/or treat pollutants in storm water before it is discharged from a site. Because of these numerous options, the San Diego Water Board expects that every development project will be able to implement some form of LID BMPs. Examples of LID BMPs include using permeable pavements, rain gardens, rain barrels, grassy swales, soil amendments, and native plants.

Provision E.3.a also includes requirements for all development projects to, where feasible, landscape with native and/or low water use plants to minimize the discharge of non-storm water discharges associated with excessive irrigation, as well as harvest (i.e., storage) and use precipitation to promote the concept of utilizing storm water as a resource.

While all development projects are subject to the requirements of Provision E.3.a, Provision E.3.b identifies Priority Development Projects that exceed given size thresholds and/or fit under specific use categories. Priority Development Projects are required to incorporate specific performance criteria for structural BMPs into the

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<sup>33</sup> California Department of Public Health, 2012. Best Management Practices for Mosquito Control in California. (<http://www.cdph.ca.gov/HealthInfo/discond/Documents/BMPforMosquitoControl07-12.pdf>)

<sup>34</sup> [www.lowimpactdevelopment.org](http://www.lowimpactdevelopment.org)

project plan to reduce the generation of pollutants, and address potential impacts from hydromodification.

The Priority Development Project categories are based on the requirements of the Fourth Term Permits for Orange County and Riverside County (Order Nos. R9-2009-0002 and R9-2010-0016, respectively), and do not differ significantly from the Fourth Term Permit for San Diego County. Furthermore, the Priority Development Project categories are consistent with Santa Ana Water Board Order Nos. R8-2009-0030 and R8-2010-0033 (Orange County and Riverside County MS4 Permits, respectively), and Los Angeles Water Board Order No. R4-2010-0108 (Ventura County MS4 Permit).

Because of the impact of relatively small increases in watershed impervious surfaces to receiving waters, Provision E.3.b.(1)(c)(iv) has been updated to include large driveways that are 5,000 square feet or more. The San Diego Water Board finds that large driveways can exacerbate altered flow regimes if not properly controlled.

Provision E.3.b.(3) describes projects that are exempt from Priority Development Project status. These include new or retrofit paved sidewalks, bicycle lanes, or trails that are designed and constructed to direct runoff to vegetated areas or be hydraulically disconnected from paved areas. The exemptions have been provided to encourage these types of projects because they provide multiple environmental benefits, such as promoting walking rather than driving, which will in turn improve air quality. Additionally, retrofitting of existing alleys, streets, or roads are exempt from Priority Development Project status if they are constructed using USEPA Green Streets guidance.<sup>35</sup> By doing so, retrofitting of these types of projects is encouraged. The San Diego Water Board recognizes that there are spatial constraints associated with these projects, and implementation of structural BMPs are not always feasible.

For development projects identified as Priority Development Projects, the requirements of Provision E.3.c are the minimum "*management practices, control techniques and system, design and engineering methods, and other such provisions where applicable*" to be included in the "*planning procedures...to reduce the discharge of pollutants...from areas of new development and significant redevelopment.*" Provisions E.3.c.(1)-(3) describe the performance criteria for the structural BMPs that must be implemented for each Priority Development Project defined by Provision E.3.b.

Provision E.3.c.(1) describes the storm water pollutant control BMP requirements that must be implemented by all Priority Development Projects. The purpose of Provision E.3.c.(1) is to reduce pollutants in storm water runoff to the MEP from Priority Development Projects before it is discharged to the MS4. Of all the available treatment processes available, retention of storm water, and therefore capture of the

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<sup>35</sup> "Managing Wet Weather with Green Infrastructure – Municipal Handbook: Green Streets" (USEPA, 2008).

pollutants in the storm water, will achieve 100 percent pollutant removal efficiency for the volume of storm water retained. No other method of treatment can achieve 100 percent pollutant removal efficiency. Thus, retention of as much storm water onsite is the most effective way to reduce pollutants in storm water discharges to, and consequently from the MS4, and controls pollutants in storm water discharges from a site to the MEP.

Under Provision E.3.c.(1)(a), retention of the pollutants in the runoff produced from the 85<sup>th</sup> percentile storm event (“design capture volume”) is the design standard to which Priority Development Projects must comply. Since the 85<sup>th</sup> percentile storm event has previously been used as the numeric design standard for treatment control BMPs, this same size storm event is used as the numeric design standard for storm water retention. This is the MEP standard recognized by the San Diego Water Board and is consistent with the Fourth Term Permits for Orange County and Riverside County (Order Nos. R9-2009-0002 and R9-2010-0016, respectively), as well as Santa Ana Water Board Order Nos. R8-2009-0030 and R8-2010-0033 (Orange County and Riverside County MS4 Permits, respectively), Los Angeles Water Board Order No. R4-2010-0108 (Ventura County MS4 Permit), and Los Angeles Water Board Order No. R4-2012-0175 (Los Angeles County MS4 Permit).

The 85<sup>th</sup> percentile storm event is the event that has a precipitation total greater than or equal to 85 percent of all storm events over a given period of record in a specific area or location. For example, to determine what the 85<sup>th</sup> percentile storm event is in a specific location, all 24 hour storms that have recorded values over a 30 year period would be tabulated and a 85<sup>th</sup> percentile storm would be determined from this record (i.e. 15 percent of the storms would be greater than the number determined to be the 85<sup>th</sup> percentile storm). Most jurisdictions in the San Diego Region have already developed isopluvial maps that can provide this type of information. The 85<sup>th</sup> percentile storm might be determined to be a number such as 1.0 inch, and this would be multiplied by the total area of the project footprint producing runoff to calculate the design capture volume. The Priority Development Project designer would then select a system of BMPs that would retain (i.e. intercept, store, infiltrate, evaporate, or evapotranspire) the pollutants contained in the design capture volume onsite.

Retention BMPs are necessary to capture and retain pollutants generated from a Priority Development Project. In a recent study performed by SCCWRP in the Los Angeles Region, they found *“that the magnitude of constituent load associated with storm water runoff depends, at least in part, on the amount of time available for pollutant build-up on land surfaces. The extended dry period that typically occurs in arid climates such as southern California maximizes the time for constituents to build-up on land surfaces, resulting in proportionally higher concentrations and loads during*

*initial storms of the season.*<sup>36</sup> This implies that the “first flush” of a rainy season and the first storm events after long antecedent dry periods tend to have the highest pollutant loads. Capturing and retaining the pollutant loads of the “first flush” of a rainy season and the first storm events after long antecedent dry periods will reduce a significant portion of the pollutants in storm water discharged to and from the MS4.

The San Diego Water Board, however, acknowledges that in some situations retention of the full design capture volume onsite may not be technically feasible. In this event, the Copermittee may allow the Priority Development Project to use biofiltration BMPs to treat 1.5 times the design capture volume not reliably retained onsite, or biofiltration BMPs with a flow-thru design that has a total volume, including pore spaces and pre-filter detention volume, sized to hold at least 0.75 times the portion of the design capture volume not reliably retained onsite.

The 1.5 multiplier is based on the finding in the Ventura County Technical Guidance Manual that biofiltration of 1.5 times the design capture volume not retained onsite will provide approximately the same pollutant removal as retention of the design capture volume on an annual basis.<sup>37</sup> This standard is consistent with the Los Angeles Water Board’s Los Angeles County and Ventura County municipal storm water permits (Order Nos. R4-2012-0175 and R4-2010-0108, respectively). The flow-thru design of 0.75 times the portion of the design capture volume not reliably retained onsite is consistent with the San Diego Water Board’s Fourth Term Permits for Orange County and Riverside County (Order Nos. R9-2009-0002 and R9-2010-0016, respectively). In either case, the biofiltration BMPs must be designed with an appropriate hydraulic loading rate to maximize storm water retention and pollutant removal, as well as to prevent erosion, scour, and channeling within the BMP. Each Copermittee is required to update its BMP Design Manual to provide guidance for hydraulic loading rates and other biofiltration design criteria necessary to maximize storm water retention and pollutant removal.

The San Diego Water Board further recognizes that, in addition to not being technically feasible, retention of the full design capture storm onsite may be cost prohibitive, or may not provide as much water quality benefit to the Watershed Management Area as would implementing BMPs elsewhere in the watershed. Thus, Provision E.3.c.(1)(b) allows for the use of a combination of onsite retention BMPs, and the implementation of an Alternative Compliance Program described in Provision E.3.c.(3). Provision E.3.c.(3) is discussed in more detail below.

If the full design capture volume is not retained onsite either because biofiltration is not technically feasible, or a Copermittee grants a Priority Development Project permission

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<sup>36</sup> Stein, E.D., Tiefenthaler, L.L., and Schiff, K.C., 2007. Technical Report 510, Sources, Patterns and Mechanisms of Storm Water Pollutant Loading from Watershed and Land Uses of the Greater Los Angeles Area, California, USA. March 20, 2007.

<sup>37</sup> Ventura Countywide Stormwater Management Program. 2011. Ventura Technical Guidance Manual, Manual Update, 2011.

to utilize the Alternative Compliance Program, then the pollutants in the portion of the design capture volume that are not reliably retained onsite must still be reduced to the MEP. Thus, flow-thru treatment control BMPs are required to be implemented on Priority Development Projects in addition to the retention BMPs. The requirements of Provisions E.3.c.(1)(a)(ii)[a]-[c] include the performance standards for flow-thru treatment control BMPs, consistent with the Fourth Term Permits in the San Diego Region.

Whereas the purpose of the requirements under Provision E.3.c.(1) is to reduce pollutants in storm water runoff to the MEP, the purpose of the requirements under Provision E.3.c.(2) is to maintain or restore more natural hydrologic flow regimes to prevent accelerated, unnatural erosion in downstream receiving waters, also to the MEP standard. Provision E.3.c.(2) describes hydromodification management BMP requirements that must be implemented by all Priority Development Projects.

The performance criteria for the implementation of hydromodification management BMPs on Priority Development Projects are consistent with the requirements in the Fourth Term Permits for Orange and Riverside Counties (Order Nos. R9-2009-0002 and R9-2010-0016, respectively). Modifications to the Orange County and Riverside County Hydromodification Management Plans (HMPs) will likely be minor, or may not be necessary. The HMP for San Diego County will likely require some minor modifications to incorporate the requirements of Provision E.3.c.(2) and become consistent with the Orange County and Riverside County HMPs. The San Diego Water Board does not, however, expect that it will be necessary for the San Diego County Copermittees to develop a new approach or significantly re-write the San Diego County HMP. This is because the premise of the hydromodification management BMP requirements, which are to control storm water runoff conditions (flow rates and durations) for Copermittee-defined range of flows, is unchanged from all Fourth Term Permits in the San Diego Region.

Provision E.3.c.(2)(a) requires that post-project runoff conditions mimic the *pre-development* runoff conditions, and not the *pre-project* runoff conditions. Fundamentally, the San Diego Water Board believes that using a hydrology baseline that approximates that of an undeveloped, natural watershed is the only way to facilitate the return of more natural hydrological conditions to already built-out watersheds, and ultimately improved stream health. On the other hand, using the *pre-project* hydrology as a baseline for redevelopment projects results in propagating the unnatural hydrology of urbanized areas. Propagating the urbanized flow regime does not support conditions for restoring degraded or channelized stream segments, and would forever sentence such streams to the degraded state. Furthermore, reducing the volume of storm water runoff associated with the urbanized flow regime will also result in reducing the discharge of pollutants into receiving waters, since storm water runoff from impervious surfaces contains untreated pollutants.

The San Diego Water Board understands that approximating the pre-development runoff condition associated with a redevelopment site is not necessarily straightforward because factors such as natural grade and native vegetation for the site cannot be precisely known. Therefore, the San Diego Water Board does not expect project designers to estimate historical conditions associated with redevelopment sites. Rather, the San Diego Water Board expects project designers and the Copermittees to approximate pre-development runoff conditions using the parameters of a *pervious* area rather than an *impervious* area. This means that for redevelopment sites, approximating pre-development runoff conditions equates to using existing onsite grade and assuming the infiltration characteristics of the underlying soil. A redevelopment Priority Development Project must not use runoff coefficients of concrete or asphalt to estimate pre-development runoff conditions. Rather, redevelopment projects must use available information pertaining to existing underlying soil type (such as soil maps published by the National Resource Conservation Service), onsite existing grade, and any other readily available pertinent information to estimate pre-development runoff conditions.

The San Diego Water Board understands, indeed asserts, that the pre-development hydrology of an area in question can only be roughly estimated and cannot be precisely known. However, using the hydrology of a natural condition, even if not precisely known, will provide significant benefit to receiving waters over using the hydrology associated with impervious (developed) surfaces. Therefore in order to achieve the goals of the Clean Water Act, which are to “*restore and maintain the chemical, physical, and biological integrity of the nation’s waters* [emphasis added],” the most appropriate standard to use for hydromodification management is the standard associated with the pre-development condition.

Provision E.3.c.(2)(b) requires Priority Development Projects to avoid known critical sediment yield areas or implement measures that would allow coarse sediment to be discharged to receiving waters, such that the natural sediment supply is unaffected by the project. This is necessary because the availability of coarse sediment supply is as much an issue for causing erosive conditions to receiving streams as are accelerated flows.

The San Diego Water Board recognizes that in some situations implementing the hydromodification management BMP requirements for flow control fully onsite may not be technically feasible, may be cost prohibitive, or may not provide any overall water quality benefits to the Watershed Management Area. Thus, Provision E.3.c.(2)(c) allows for the use of a combination of onsite hydromodification management BMPs for flow control and alternative compliance options described in Provision E.3.c.(3).

Provision E.3.c.(3) allows for alternative compliance in instances where the Copermittee determines that offsite measures will have a greater overall water quality benefit for the Watershed Management Area than if the Priority Development Project were to implement structural BMPs onsite. Consequently, watershed-specific

structural BMP requirements are present in this Order in the form of allowable compliance offsite. The Alternative Compliance Program to Onsite Structural BMP Implementation Provision is intended to integrate with the Copermittees' planning efforts in the Water Quality Improvement Plans.

The Alternative Compliance Program is an option for Priority Development Projects where the governing Copermittee has participated in the development of a Watershed Management Area Analysis as part of the Water Quality Improvement Plan (described in Provision B.3.b.(4)). Such an approach is consistent with the latest findings in hydromodification management by the scientific community. In a Technical Report entitled *Hydromodification Assessment and Management in California*,<sup>38</sup> the report states:

*“An effective [hydromodification] management program will likely include combinations of on-site measures (e.g., low-impact development techniques, flow-control basins), in-stream measures (e.g., stream habitat restoration), floodplain and riparian zone actions, and off-site measures. Off-site measures may include compensatory mitigation measures at upstream locations that are designed to help restore and manage flow and sediment yield in the watershed.”*

Consistent with the ideas brought forth in the report, in the Watershed Management Area Analysis of Provision B.3.b.(4), which is optional, the Copermittees will develop watershed maps that include as much detail about factors that affect the hydrology of the watershed as is available. Such factors included identification of areas suitable for infiltration, coarse sediment supply areas, and locating stream channel structures and constrictions. Once these factors are mapped and studied, the Copermittees can identify areas in the watershed where candidate projects may be implemented that are expected to improve water quality in the watershed by providing more opportunity for infiltration, slowing down storm water flows, or attenuation of pollutants naturally via healthy stream habitat. These candidate projects may be in the form of retrofitting existing development, rehabilitating degraded stream segments, identifying regional BMPs, purchasing land to preserve valuable floodplain functions, and any other project(s) that the Copermittees identify.

Under the Alternative Compliance Program, Priority Development Projects may be allowed to fund, partially fund, or implement a candidate project, in lieu of implementing structural BMPs onsite, if they enter into a voluntary agreement with the governing Copermittee permitting this arrangement. Project proponents may also propose an alternative project not previously identified by the Copermittees. In either case, whether a project proponent implements a candidate project identified by the Copermittees or a separate alternative compliance project, the governing Copermittee must determine that implementation of the project will have a greater overall water

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<sup>38</sup> 2012. ED Stein, F Federico, DB Booth, BP Bledsoe, C Bowles, Z Rubin, GM Kondolf, A Sengupta. Technical Report 667. Southern California Coastal Water Research Project. Costa Mesa, CA.

quality benefit for the Watershed Management Area than fully implementing structural BMPs onsite. Determination of greater overall water quality benefits associated with alternative compliance projects would be accomplished by utilizing Water Quality Equivalency calculations developed pursuant to Provision E.3.c.(3)(a). Water Quality Equivalency calculations are necessary to establish a regional and technical basis for determining water quality benefits associated with alternative compliance projects, which can be consistently used by all Copermittees in the San Diego Region. Finally, if alternative compliance involves funding or implementing a project that is outside the jurisdiction of the governing Copermittee, then that Copermittee may enter into an inter-agency agreement with the appropriate jurisdiction.

Finally, Provision E.3.c.(2)(d) allows Priority Development Projects to be exempt from the hydromodification management BMP requirements if there is no threat of erosion to downstream receiving waters (i.e. the receiving stream is concrete lined from the point of discharge all the way to water storage reservoirs, lakes, enclosed embayments, or the Pacific Ocean). If the Copermittees believe that more exemptions are warranted, then they must perform the optional Watershed Management Area Analysis of Provision B.3.b.(4). Additional exemptions other than those specified in this Order may be established on a watershed basis, provided the Copermittees perform the analysis, provide supporting rationale for the exemptions, and complete the Water Quality Improvement Plan approval process pursuant to Provision F.1.

To facilitate the transition to this Order from the Fourth Term Permits for Orange and Riverside County Copermittees, Provision E.3.c.(2)(e) allows two additional temporary exemptions from hydromodification management BMP implementation. The first temporary exemption allows relief from hydromodification management BMP implementation for Priority Development Projects discharging directly to an engineered channel conveyance system with a capacity to convey peak flows generated by the 10-year storm event all the way from the point of discharge to water storage reservoirs, lakes, enclosed embayments, or the Pacific Ocean. Similar to the exemption allowed for concrete-lined channels, this exemption is premised on the concept that there is little threat of erosion to these types of engineered channel systems.

The second temporary exemption allows relief from hydromodification management BMP implementation for Priority Development Projects discharging directly to large river reaches with drainage areas larger than 100 square miles and a 100-year flow capacity in excess of 20,000 cubic feet per second. If this exemption is claimed, then properly sized energy dissipation is required at all discharge points associated with the Priority Development Project. This exemption is premised on the concept that large river reaches can essentially assimilate the accelerated flow rates associated with individual Priority Development Projects because they are inconsequential compared

to the flow rate in the large river reach. Both of these exemptions are included in the Hydromodification Management Plan for San Diego County<sup>39</sup>.

These temporary exemptions are allowed as a means to facilitate Orange and Riverside County Copermittees' transition to this Order from the Fourth Term Permits and are not meant to reside as permanent exemptions without additional rigorous technical analyses specific to each County. Therefore, these exemptions will no longer apply once the Copermittees' land development programs are fully updated to reflect the requirements of this Order, i.e., upon implementation of the BMP Design Manual pursuant to Provision F.2.b. If the Copermittees believe that these or other exemptions are warranted in the context of water quality improvement and stream restoration opportunities, then the Copermittees must perform the optional Watershed Management Area Analysis of Provision B.3.b.(4) and provide supporting rationale for the exemptions. The San Diego County Copermittees are also required to perform the optional Watershed Management Area Analysis to provide supporting rationale to justify use of these and other exemptions. Updated BMP Design Manuals including rationale to justify use of exemptions will be reviewed by the San Diego Water Board pursuant to Provision F.2.b.

Provisions E.3.c.(4) and E.3.c.(5) were included under the BMP requirements applicable to all development projects in the Fourth Term Permits for San Diego, Orange, and Riverside Counties (Order Nos. R9-2007-0001, R9-2009-0002, and R9-2010-0016, respectively). In this Order, the long-term BMP maintenance and infiltration and groundwater protection requirements apply to structural BMPs implemented by Priority Development Projects only.

Provision E.3.d requires the Copermittees to update their BMP Design Manual as needed to incorporate the requirements of Provision E.3. The BMP Design Manual is formerly known as the Standard Storm Water Mitigation Plan, or SSMP, and was renamed so that the title has a more accurate description of the document content. The contents of the BMP Design Manual are largely unchanged from the previous Standard Storm Water Mitigation Plans required under the Fourth Term Permits. The BMP Design Manual fulfills the 40 CFR 122.26(d)(2)(iv)(A)(2) requirement that the Copermittee's development planning program includes "*a comprehensive master plan to develop, implement and enforce controls to reduce the discharge of pollutants from municipal storm sewers which receive discharges from areas of new development and significant redevelopment.*"

As part of the "*planning procedures,*" 40 CFR 122.26(d)(2)(iv)(A)(2) requires the procedures to "*address controls to reduce pollutants in discharges from municipal separate storm sewers after construction is completed.*" The requirements applicable to the implementation and oversight of structural BMPs at Priority Development Projects are provided under Provision E.3.e.

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<sup>39</sup> Final Hydromodification Management Plan Prepared for County of San Diego, March 2011

Proper installation of the structural BMPs approved for a Priority Development Project is necessary to ensure that pollutants in storm water discharges will be reduced to the MEP after the project is completed. In addition to the proper installation of structural BMPs, the maintenance of structural BMPs on Priority Development Projects is necessary to ensure that pollutants in storm water discharges will continue to be reduced to the MEP. Provision E.3.e.(1) includes the minimum requirements that each Copermittee must implement to ensure structural BMPs are properly installed and will be properly maintained.

Provisions E.3.e.(1)(a)(i)-(ii) have been included to provide additional clarification regarding when a Copermittee may allow land development requirements from earlier MS4 permits to apply to a Priority Development Project. Since the MS4 permits issued from 2001 to the adoption of Order No. R9-2015-0001 amending Order No. R9-2013-0001 (Regional MS4 Permit), a Copermittee could allow development projects with “prior lawful approval” to be “grandfathered” into implementing BMP requirements from previous MS4 permits. The Copermittees were given the discretion to use their land use authority to determine when it was appropriate to allow a development project with prior lawful approval to implement BMP requirements from the previous MS4 permits, and when the most recent BMP requirements should be required to achieve the reduction of pollutants in storm water runoff from development projects to the MEP. However, the San Diego Water Board has found that the Copermittees and the development community frequently disagree about when a development project has prior lawful approval and what is necessary to reduce pollutants in storm water runoff from development projects to the MEP.

Therefore, Provisions E.3.e.(1)(a)(i)-(ii) were included to provide more clarity and certainty for the Copermittees, the land development community, and the general public about when the structural BMP performance standards of earlier MS4 permits may be allowed to be implemented. A Copermittee may allow a Priority Development Project to implement BMP requirements of the previous MS4 permit only if all requirements of Provisions E.3.e.(1)(a)(i)[a]-[d] have been met. Otherwise, the Copermittees must require all Priority Development Projects to incorporate the BMP requirements of Provision E.3 into the project to reduce pollutants in storm water runoff from development projects to the MEP.

Provisions E.3.e.(1)(a)(i)[a]-[d] are dependent upon the effective date of the BMP Design Manual. Unless otherwise directed by the San Diego Water Board, the effective date of the BMP Design Manual is December 24, 2015 for the San Diego County Copermittees, September 28, 2017 for the Orange County Copermittees, and July 5, 2018 for the Riverside County Copermittees.

Alternatively, if the Copermittee can demonstrate a lack of land use authority or legal authority to require a Priority Development Project to implement the requirements of Provision E.3, the Copermittee may allow land development requirements from the previous MS4 permits to apply. However, under these circumstances the San Diego

Water Board expects the Copermittee to utilize its available land use authority or legal authority to require the implementation of as much of Provision E.3 as possible to reduce the discharge of pollutants in storm water from development and redevelopment projects within its jurisdiction to the MEP.

In cases where BMP requirements from the earlier MS4 permits govern the structural BMP design requirements of a Priority Development Project, the San Diego Water Board expects the Copermittees to be able to demonstrate, in a programmatic audit or other means, that a Priority Development Project met all the requirements listed under Provisions E.3.e.(1)(a)(i)[a]-[d], or have evidence that the Copermittee did not have the land use or legal authority to require the implementation of Provision E.3 for a Priority Development Project.

The requirements under Provision E.3.e.(2)-(3) are necessary to demonstrate each Copermittee is implementing a program that complies with Provisions E.3.b-c and E.3.e.(1), and ensure structural BMPs at Priority Development Project will continue to be able to reduce pollutants in storm water discharges to the MEP.

Pursuant to 40 CFR 122.26(d)(1)(ii) and 40 CFR 122.26(d)(2)(i), each Copermittee must have sufficient *“legal authority to control discharges to the municipal separate storm sewer system.”* Where enforcement is necessary for any development projects to compel compliance with the requirements of Provision E.3 and ensure the pollutants in storm water discharges from the MS4 are reduced and continue to be reduced to the MEP, Provision E.3.f requires each Copermittee to enforce its legal authority established pursuant to Provision E.1, and in accordance with its Enforcement Response Plan required to be developed pursuant to Provision E.6.

Provision E.4 (Construction Management) requires each Copermittee to implement a construction management program to control and reduce the discharge of pollutants in storm water from construction sites to the MEP. Proper implementation of the construction management program will also contribute toward effectively prohibiting non-storm water discharges from construction sites to the MS4.

Pursuant to 40 CFR 122.26(d)(2)(iv), each Copermittee is required to implement a *“management program...to reduce the discharge of pollutants to the maximum extent practicable using management practices, control techniques and system, design and engineering methods, and other such provisions where applicable.”* As part of the management program, 40 CFR 122.26(d)(2)(iv)(D) requires *“a program to implement and maintain structural and non-structural best management practices to reduce pollutants in storm water runoff from construction sites to the municipal storm sewer system.”*

Construction sites can be significant sources of sediment, trash, and other pollutants to receiving waters. Although sediment is naturally occurring in the natural environment, the discharge of sediment under unnatural conditions is problematic to receiving waters. Fine sediment in creeks causes high turbidity that interferes with the

functionality of native flora and fauna in local creeks. For example, turbidity interferes with both photosynthesis of water-philic plants, as well as successful foraging and reproduction of benthic macroinvertebrates. Sediment can also make it difficult for fish to breathe because it clogs fish gills. Other pollutants such as heavy metals or pesticides can adhere to sediment and are transported to receiving waters during storm events, where they dissolve in the water column and become bioavailable to aquatic organisms. Sediment is recognized as a major stressor to surface waters and is responsible for the impairment of several lagoons and creeks in the San Diego Region.

Provision E.4 includes requirements that each Copermittee must implement to minimize the discharge of sediment and other pollutants from construction sites to the MS4 within its jurisdiction. The requirements under Provision E.4 are consistent with the Fourth Term Permits for San Diego, Orange, and Riverside Counties. Therefore, Copermittees are expected to implement the requirements seamlessly, with minimal changes to their existing construction management programs. The Copermittees, however, are given more flexibility to run their programs as needed to maximize efficiency, and also to be consistent with the Water Quality Improvement Plan for the Watershed Management Area.

As part of the construction management program, 40 CFR 122.26(d)(2)(iv)(D)(1) requires “*procedures for site planning which incorporate consideration of potential water quality impacts.*” Provision E.4.a describes the minimum elements each Copermittee is required to include as part of the construction site planning and project approval process. The construction site planning and approval process is based primarily on ensuring each project had an adequate site-specific pollution control, construction BMP, and/or erosion and sediment control plan that will be implemented to minimize the discharge of pollutants in storm water to the MEP, and minimize impacts to receiving waters.

The requirements under Provision E.4.b provide the data and information necessary to identify “*priorities for inspecting sites and enforcing control measures*” required pursuant to 40 CFR 122.26(d)(2)(iv)(D)(3). Under Provision E.4.b, each Copermittee must identify construction sites that are considered a high threat to downstream surface waters. Designation of “high threat to water quality” construction sites will necessitate the Copermittees to develop criteria to identify such sites. Provision E.4.b.(2) describes a list of factors that must be considered when the Copermittee considers threat to water quality. For example, a Copermittee must identify sites as “high threat to water quality” if it is located within a hydrologic subarea where sediment is known or suspected to contribute to the highest priority water quality conditions, according to the Water Quality Improvement Plan. This ensures that construction management program implementation is compatible with the Copermittee’s identified highest priority water quality conditions.

Pursuant to 40 CFR 122.26(d)(2)(iv)(D)(2) each Copermittee is required describe “*requirements for nonstructural and structural best management practices*” at

construction sites. Provision E.4.c includes the types of construction site BMPs that the Copermittees must implement, or require the implementation of, at each construction site to reduce pollutants in storm water discharges to the MEP.

Each Copermittee is expected to require the implementation of appropriate BMPs given specific site conditions, the season and likelihood of rain events, and construction phase (i.e. grading vs. vertical construction). This means that throughout the life of the project construction, the appropriate BMPs will vary, especially if the construction of the project spans multiple wet seasons. As opposed to describing specific minimum BMPs that must be implemented, the Order describes major BMP categories that should be considered for each site.

Each Copermittee is expected to use its 20 years of storm water experience and knowledge to require implementation of appropriate BMPs from the various categories at each construction site within its jurisdiction. For example, the San Diego Water Board expects that each site will be required to implement erosion control and sediment control. The San Diego Water Board also expects each Copermittee to require implementation of active/passive sediment treatment systems at sites where other BMPs have been tried and are known to be inadequate, and discharges of sediment are causing or contributing to water quality impairment downstream. Each Copermittee is granted flexibility in specifying the minimum level of BMP requirements at each site, but the San Diego Water Board expects each site to be capable of controlling pollutants in storm water discharges to the MEP and preventing illicit discharges.

The requirements under Provision E.4.d are necessary to demonstrate that each Copermittee is implementing a program that complies with Provisions E.4.a and E.4.c and ensure BMPs at construction sites will reduce pollutants in storm water discharges to the MEP.

Provision E.4.d does not include minimum required inspection frequencies for construction sites. Each Copermittee must use its experience and knowledge to specify an appropriate inspection frequency for both high priority and lower priority sites in their jurisdictional runoff management program documents, and in accordance with the Water Quality Improvement Plan. Appropriate inspection frequencies may vary by Copermittee, but the San Diego Water Board expects that the stated frequency will be adequate for each Copermittee to properly oversee the construction sites within its jurisdiction, confirm BMPs are implemented to reduce pollutants in storm water discharges from constructions sites to the MEP, and make needed changes to its program on an ongoing basis as necessary.

Pursuant to 40 CFR 122.26(d)(1)(ii) and 40 CFR 122.26(d)(2)(i), each Copermittee must have sufficient *“legal authority to control discharges to the municipal separate storm sewer system.”* Where enforcement is necessary for any development projects to compel compliance with the requirements of Provision E.4 and ensure the pollutants in storm water discharges from the MS4 are reduced and continue to be reduced to

the MEP, Provision E.4.e requires each Copermittee to enforce its legal authority established pursuant to Provision E.1, and in accordance with its Enforcement Response Plan required to be developed pursuant to Provision E.6.

Provision E.5 (Existing Development Management) requires each Copermittee to implement an existing development management program to control and reduce the discharge of pollutants in storm water from areas of existing development to the MEP. Proper implementation of the existing development management program will also contribute toward effectively prohibiting non-storm water discharges from areas of existing development to the MS4.

Pursuant to 40 CFR 122.26(d)(2)(iv), each Copermittee is required to implement a *“management program...to reduce the discharge of pollutants to the maximum extent practicable using management practices, control techniques and system, design and engineering methods, and other such provisions where applicable.”* Within 40 CFR 122.26(d)(2)(iv)(A) and (C), the management program is required to reduce impacts on receiving waters and reduce pollutants in storm water discharges to the MEP from commercial and residential areas, industrial facilities, and municipal facilities.

Commercial and residential areas, industrial facilities, and municipal facilities must be addressed by each Copermittee with the existing development management program required under Provision E.5. All other areas within each Copermittee’s jurisdiction should be either undeveloped open space, or areas that are being developed or under construction. Areas being developed or under construction will be addressed by the Copermittee under the requirements of Provision E.3 (Development Planning) or Provision E.4 (Construction Management).

Areas of existing development typically include impervious surfaces such as sidewalks, driveways, roads, and rooftops, which generate and concentrate pollutants (such as pesticides, petroleum hydrocarbons, heavy metals, and pathogens) that are otherwise not found in high concentrations in the natural environment. Pollutants that accumulate on impervious surfaces are not easily biodegraded or not subject to natural treatment processes. When it rains, these pollutants are transported in storm water runoff from these impervious surfaces into receiving waters, resulting in poor water quality and degradation of beneficial uses.

In addition to the generation of pollutants, areas of existing development have generally altered the natural conditions of the land and removed vegetative cover, reduced the perviousness of the surface, and reduced the capacity of storm water that can be intercepted, captured, stored, infiltrated, evaporated, and/or evapotranspired. The alteration of the natural conditions and the impervious surfaces associated with areas of existing development causes water quality problems due to the alteration of natural flow regimes within the watersheds; resulting in hydromodification of channels, streams, and habitats that exist within or adjacent to the areas of existing development.

Thus, storm water discharges from areas of existing development are responsible for poor water quality, degraded habitats, and hydromodified channels throughout the developed portions of the watersheds in the San Diego Region. To improve the health and functionality of the receiving waters in a Watershed Management Area, land use practices and the amount of impervious surfaces in areas of existing development must change to reduce the various impacts caused by hydromodification and pollutants from storm water runoff generated in developed areas. Each Copermittee must be aggressive to address pollutant sources and runoff from areas of existing development to be able to reduce pollutants in storm water discharges from the MS4 to the MEP.

There is some overlap in the requirements under Provision E.5 with the requirements under Provisions E.2 (Illicit Discharge Detection and Elimination), E.3 (Development Planning), and E.4 (Construction Management). Illicit discharges frequently originate from areas of existing development. New development projects, when completed will become some type of residential, commercial, industrial or municipal existing development. Redevelopment projects are, by definition, redeveloping areas of existing development. And, redevelopment projects become construction sites located in areas of existing development. Much of the data and information collected, inspections performed, and enforcement actions taken for the requirements under Provisions E.2 to E.4 may also be utilized by the existing development management program. The requirements under Provision E.5, however, are focused primarily on reducing pollutants generated in areas of existing development that can be transported in storm water runoff and discharged to and from the MS4.

The requirements under Provision E.5 build upon existing program elements being implemented by the Copermittees. Provision E.5 is generally consistent with the existing development requirements of the Fourth Term Permits for Orange and Riverside Counties (Order Nos. R9-2009-0002 and R9-2010-0016, respectively), but modified to provide more flexibility to implement the programs so resources can be better focused toward addressing the highest priority water quality conditions identified in the Water Quality Improvement Plans.

For a Copermittee to properly manage areas of existing development, having knowledge of what development exists within its jurisdiction is essential. Provision E.5.a requires each Copermittee to maintain a watershed-based inventory of all the existing development within its jurisdiction. This requirement is necessary for each Copermittee to implement the requirements of Provision E.5.b-e.

As opposed to just maintaining separate inventories based on the type of site, each Copermittee must maintain a watershed-based inventory that includes all types of existing development within its jurisdiction. By utilizing a watershed-based inventory, the Copermittees within a Watershed Management Area can combine their inventories and review the inventories by watershed in addition to by jurisdiction. Pollutant

sources and strategies for abatement can then be evaluated on a watershed level, as opposed to evaluating sources and strategies strictly by type of site.

Provision E.5.a includes the information that must be included in the inventory. Provision E.5.a.(1) specifies what facilities or areas must be included in the inventory. A commercial type of existing development may be identified in the inventory as a facility (e.g. individual building, individual business) or an area (e.g. shopping center, commercial zone). An industrial type of existing development must be identified in the inventory by facility (e.g. individual industrial entity). A municipal type of existing development must be identified in the inventory by facility, with a list of specific municipal facilities that must be included in the inventory. A residential type of existing development must be identified by areas to be designated by the Copermittee. For each of the facilities and areas identified in the Copermittee's inventory developed pursuant to Provision E.5.a.(1), Provision E.5.a.(2) specifies the information that must be included in the description for the facility or area.

Provision E.5.a.(3) requires each Copermittee to maintain an updated map showing the location of inventoried existing development, watershed boundaries, and water bodies. This requirement was included because this information is expected to help the Copermittees in a Watershed Management Area identify and prioritize sources of pollutants and/or stressors in areas of existing development that contribute toward the highest priority water quality conditions identified in the Water Quality Improvement Plans.

Knowledge of the existing development that are likely to be sources of pollutants contributing to the highest priority water quality conditions is expected to be a key element in the Copermittees' development of the water quality improvement strategies that will be included in the Water Quality Improvement Plans. The strategies described in the Water Quality Improvement Plans will direct efforts within the existing development management programs implemented by each Copermittee.

Pursuant to 40 CFR 122.26(d)(2)(iv)(A) each Copermittee is required describe "*structural and source control measures to reduce pollutants*" in storm water runoff discharged from areas of existing development. Provision E.5.b includes the BMP implementation and maintenance requirements that the each Copermittee must require at areas of existing development to reduce pollutants in storm water discharges to the MEP. The San Diego Water Board, however, recognizes that BMP implementation and maintenance for residential areas will require much more education and encouragement through less authoritative measures than for commercial, industrial and municipal facilities and areas. Thus, the BMP implementation and maintenance requirements have been separated between requirements under Provision E.5.b.(1) for commercial, industrial and municipal facilities and areas, and Provision E.5.b.(2) for residential areas.

Most of the requirements in Provision E.5.b are consistent with the related requirements in the Fourth Term Permits. The level of specificity, however, has been changed to allow each Copermittee the flexibility to implement its program to achieve maximum efficiency, and to perform functions that will address the highest priority water quality conditions identified in the Water Quality Improvement Plans.

Each Copermittee is expected to require the implementation of appropriate BMPs to address the expected pollutants from each facility or area. The Third and Fourth Term Permits described specific minimum BMPs that must be implemented at various sites. This Order, however, requires each Copermittee to designate minimum BMPs themselves and require implementation. Consistent with the Fourth Term Permits, each Copermittee is required to maintain, or require the maintenance of, all BMPs as needed.

The BMP implementation and maintenance requirements include a schedule of operation and maintenance activities for the MS4 and related structures (such as catch basins, storm drain inlets, and detention basins), as well as public streets and roads. Public streets and roads specifically include public unpaved roads. The San Diego Water Board identified, through investigations and complaints, sediment discharges from unpaved roads as a significant source of water quality problems in the San Diego Region. Inspection activities conducted by the San Diego Water Board since the Third Term Permits have found a lack of source control for many unpaved roads within the jurisdiction of the Copermittees.

Unpaved roads are a source of sediment that can be discharged in runoff to receiving waters, especially during storm events. Erosion of unpaved roadways occurs when soil particles are loosened and carried away from the roadway base, ditch, or road bank by water, wind, traffic, or other transport means. Exposed soils, high runoff velocities and volumes, sandy or silty soil types, and poor compaction increase the potential for erosion.

Road construction, culvert installation, and other maintenance activities can disturb the soil and drainage patterns to streams in undeveloped areas, causing excess runoff and thereby erosion and the release of sediment. Poorly designed unpaved roads can act as preferential drainage pathways that carry runoff and sediment into natural streams, impacting water quality. In addition, other public works activities along unpaved roads have the potential to significantly affect sediment discharge and transport within streams and other waterways, which can degrade the beneficial uses of those waterways.

USEPA also recognizes that discharges from unpaved roads pose a significant potential threat to water quality. USEPA guidance<sup>40</sup> emphasizes the threat of unpaved roads to water quality:

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<sup>40</sup> USEPA, 2006. Environmentally Sensitive Maintenance for Dirt and Gravel Roads. Gesford and Anderson, USEPA-PA-2005.

*“Dirt and gravel roads are a major potential source of these pollutants [sediment] and pollutants that bind to sediment such as oils, nutrients, pesticides, herbicides, and other toxic substances. Many roads have unstable surfaces and bases. Roads act like dams, concentrating flows that accelerate erosion of road materials and roadsides. Both unstable surfaces and accelerated erosion then lead to sediment and dust.”*

There are several guidance documents, developed by the USEPA,<sup>41</sup> the US Forest Service,<sup>42</sup> the University of California,<sup>43</sup> and others, that include design and construction specifications and BMPs that are readily available for implementation by public entities. Implementing design and other source control BMPs for unpaved roads in the region is necessary to reduce and minimize the impacts of sediment discharged during storm events from unpaved roads to the MS4s and receiving waters.

Provision E.5.c describes existing development site inspection frequency, content, and tracking that each Copermittee must incorporate into their existing development management programs. The requirements under Provision E.5.c are necessary to demonstrate each Copermittee is implementing a program that complies with Provision E.5.b and ensure BMPs implemented in areas of existing development will reduce pollutants in storm water discharges to the MEP. Provision E.5.c has been modified to include a minimum of once every 5 years for all inventoried facilities and areas of existing development, utilizing one or more methods of inspection.

In addition to onsite inspections, the methods of inspection have been expanded to include drive-by inspections. Inspections may be performed by the Copermittee’s municipal and contract staff, or by volunteer monitoring or patrol programs. Volunteer monitoring or patrol programs are not expected to enforce the Copermittee’s ordinances, or to inspect areas or facilities where members of the public are not allowed access. Volunteer monitoring or patrol programs must be trained by the Copermittee, and are only expected to collect visual observations. By utilizing drive-by inspections and volunteer monitoring or patrol programs, the Copermittees will be able to maximize and efficiently use their resources to identify and address sources of pollutants in areas of existing development.

The municipal and contract staff of each Copermittee must annually perform onsite inspections of an equivalent of at least 20 percent of the commercial, industrial, and municipal facilities and areas in its inventoried existing development pursuant to Provision E.5.c.(1)(a)(iv). An “equivalent” of at least 20 percent means if any commercial, industrial, or municipal facilities or areas require multiple onsite

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<sup>41</sup> Ibid

<sup>42</sup> US Forest Service, 1996. Forest Service Specifications for Construction of Roads & Bridges. EM-7720-100. Revised August 1996.

<sup>43</sup> University of California Division of Agriculture and Natural Resources, 2007. Rural Roads: A Construction and Maintenance Guide of California Landowners. Publication 8262.

inspections during any given year, those additional inspections may count toward the total annual inspection requirement. Linear municipal facilities (i.e. MS4 linear channels, sanitary sewer collection systems, streets, roads and highways) in the Copermittee's existing development inventory are not subject to the inspection frequency requirement of Provision E.5.c.(1)(a)(iv).

The inspection content specified in Provision E.5.c.(2)(a) includes the information required to be collected during an inspection by any method. The inspection content specified in Provision E.5.c.(2)(b) includes additional information that must be collected when a Copermittee's municipal or contract staff perform an onsite inspection. Provision E.5.c.(3) specifies the information that each Copermittee must maintain in its existing development inspection records.

Pursuant to 40 CFR 122.26(d)(1)(ii) and 40 CFR 122.26(d)(2)(i), each Copermittee must have sufficient "*legal authority to control discharges to the municipal separate storm sewer system.*" Where enforcement is necessary to compel compliance with the requirements of Provision E.5 and ensure the pollutants in storm water discharges from the MS4 are reduced and continue to be reduced to the MEP, Provision E.5.d requires each Copermittee to enforce its legal authority established pursuant to Provision E.1, and in accordance with its Enforcement Response Plan required to be developed pursuant to Provision E.6.

Provisions E.5.e.(1)-(2) specifically require the Copermittee to identify areas of existing development as candidates for retrofitting, and streams, channels, and/or habitats as candidates for rehabilitation. Provisions E.5.e.(1)-(2) are based on the retrofitting requirements of the Fourth Term Permits for Orange and Riverside Counties, but modified to also include identifying projects to rehabilitate channels within areas of existing development. The requirements have also been modified to be more focused on utilizing these types of projects for addressing the highest priority water quality conditions identified in the Water Quality Improvement Plans.

Interest and opportunity to retrofit areas of existing development and rehabilitate channels located in areas of existing development has been observed in several programs the San Diego Water Board oversees (e.g., CWA Section 401 Water Quality Certification program, supplemental environmental projects, and grant programs). Each jurisdiction has miles and miles of streets that could be retrofitted to become green streets. Reshaping landscaped areas from convex to concave configurations can detain storm water instead of directing runoff as quickly as possible to the MS4. Retrofit projects could also include simply replacing impervious surfaces with permeable surfaces.

Retrofitting projects do not necessarily have to be expensive. Retrofitting projects could be as simple as redirecting downspouts from roofs to pervious or landscaped areas instead of to hardscaped areas discharging directly to the MS4, providing rain barrels to harvest storm water from downspouts for use at a later time, or planting more trees in areas with little vegetation to provide canopy that can intercept storm

water. The San Diego Water Board encourages the Copermittees to identify simple, low-cost retrofitting opportunities that can be easily implemented, in addition to other more expensive retrofitting and channel rehabilitation projects.

Rehabilitation of channels, streams, and/or habitat will require more significant planning and resources to implement. There are, however, also abundant opportunities to rehabilitate channels, streams and/or habitats in or adjacent to areas of existing development. Each Watershed Management Area likely has several creeks and stream reaches that have been undergrounded, artificially hardened, or hydromodified that could be rehabilitated to be more sustainably configured, which would slow down storm water flows and potentially have more assimilative capacity for pollutants while still being supportive of designated beneficial uses.

The San Diego Water Board recognizes that it may be infeasible to implement retrofitting or channel rehabilitation projects within certain areas of a Copermittee's jurisdictions. For such areas, the Copermittee must instead identify, develop, and implement regional retrofitting and channel rehabilitation projects (i.e. projects that can retain and/or treat storm water from one or more areas of existing development) adjacent to and/or downstream of the areas of existing development.

Provisions E.5.e.(1)-(2) do not require the implementation of retrofitting and rehabilitation projects, but do require the Copermittee to develop a program with strategies to facilitate the implementation of these types of projects in areas of existing development. The strategies are expected to include allowing and encouraging Priority Development Projects to implement retrofitting types of projects as a means of compliance with the structural BMP performance criteria requirements of Provisions E.3.c.(1) and E.3.c.(2).

Provision E.6 (Enforcement Response Plans) requires each Copermittee to develop an Enforcement Response Plan as part of its jurisdictional runoff management program document. Proper implementation of the Enforcement Response Plans is necessary to effectively prohibit non-storm water discharges to the MS4, and reduce the discharge of pollutants in storm water from the MS4 to the MEP.

Pursuant to 40 CFR 122.26(d)(1)(ii) and 40 CFR 122.26(d)(2)(i), each Copermittee must have sufficient "*legal authority to control discharges to the municipal separate storm sewer system*" and be able to demonstrate that it can "*operate pursuant to legal authority established by statute, ordinance or series of contracts*" to control the discharge of non-storm water and pollutants in storm water to and from its MS4. Pursuant to 40 CFR 122.26(d)(2)(i)(E) each Copermittee is specifically required to have the legal authority to "*[r]equire compliance with conditions in ordinances, permits, contracts or orders.*"

The requirements under Provision E.6 are necessary to demonstrate that each Copermittee can enforce its legal authority to "*effectively prohibit non-stormwater discharges*" and "*reduce the discharge of pollutants to the maximum extent*

*practicable*” as well as “[r]equire compliance with conditions in ordinances, permits, contracts or order.”

The Enforcement Response Plan required under Provision E.6 will serve as a reference for the Copermittee and the San Diego Water Board to determine if consistent enforcement actions are being implemented to achieve timely and effective compliance from all public and private entities that are not in compliance with the Copermittee’s ordinances, permits, or other requirements. The Enforcement Response Plan must contain clear direction for the Copermittee to take immediate enforcement action, when appropriate and necessary, in their illicit discharge detection and elimination, development planning, construction management, and existing development management programs.

If the entities subject to the Copermittee’s legal authority do not implement appropriate corrective actions in a timely manner, or if violations repeat, the Copermittee must take progressively stricter responses to enforce its legal authority and achieve compliance with its ordinances, permits, or other requirements to “*effectively prohibit non-stormwater discharges*” and “*reduce the discharge of pollutants to the maximum extent practicable*.”

Provision E.7 (Public Education and Participation) requires each Copermittee to implement a public education and participation program. Proper implementation of the public education and participation program as part of its jurisdictional runoff management program will contribute toward effectively prohibiting non-storm water discharges to the MS4, and toward the reduction of pollutants in storm water from the MS4 to the MEP.

Provision E.7 establishes the minimum requirements that each Copermittee must implement to engage members of the public as part of its jurisdictional runoff management program. In the Fourth Term Permits, the public education program requirements and the public participation requirements were included as separate jurisdictional runoff management program components. In this Order, the public education requirements have been consolidated with the public participation requirements, as both sets of requirements are related to the engagement of the public by each Copermittee. Engagement of the public is critical for the success of each Copermittee’s jurisdictional runoff management program.

The Copermittees have been implementing public education programs for the last 20 years, which are now well established. The specificity of expected public education program elements of the Fourth Term Permits has been removed. For the most part, the public education program requirements in Provision E.7.a have been reduced to a set of requirements that are specifically included in the federal regulations under 40 CFR 122.26(d)(2)(iv)(A)(6), 122.26(d)(2)(B)(6) and 122.26(d)(2)(D)(4), which should already be incorporated into each Copermittee’s existing public education program. Each Copermittee is expected to utilize the information and data collected from the monitoring and assessments conducted within the Watershed Management Area, and

from its inventories and inspections to best direct its public education program resources toward addressing the highest priority water quality conditions identified within the Water Quality Improvement Plan.

According to 40 CFR 122.26(d)(2)(iv), public participation is required to be included as part of the “*comprehensive planning process*”, which includes the development and implementation of the Water Quality Improvement Plan and jurisdictional runoff management programs. The requirements under Provision E.7.b specify the opportunities that the public must be provided to be involved in the “*comprehensive planning process*”, as required by to 40 CFR 122.26(d)(2)(iv).

Provision E.8 (Fiscal Analysis) requires each Copermittee to secure the resources and provide an analysis of the resources that will be necessary to implement the requirements of the Order. Adequate fiscal resources are necessary for a jurisdictional runoff management program to effectively prohibit non-storm water discharges to the MS4, and reduce pollutants in storm water from the MS4 to the MEP.

According to 40 CFR 122.26(d)(2)(vi), each Copermittee is responsible for providing “a *fiscal analysis of the necessary capital and operation and maintenance expenditures necessary to accomplish the activities*” required by this Order, including “a *description of the source of funds that are proposed to meet the necessary expenditures, including legal restrictions on the use of such funds.*” The fiscal analysis requirements of Provision E.8 are consistent with 40 CFR 122.26(d)(2)(vi).

The San Diego Water Board has chosen not to require a description of fiscal benefits realized from implementation of the jurisdictional runoff management programs. This is a recommendation from the National Association of Flood and Stormwater Management Agencies.<sup>44</sup> For instance, the fiscal analysis requirements do not address city-wide fiscal benefits of protection (e.g., public health, tourism, property values, economic activity, beneficial uses, etc.), even though many costs currently reported to the San Diego Water Board are for related activities. This type of assessment may help Copermittees improve the allocation of resources and it may help the Copermittees secure adequate funding for the program. Qualitative assessments, however, could be overly subjective and most Copermittees likely lack the ability to provide accurate quantitative assessments. The San Diego Water Board encourages the Copermittees to consider means for conducting assessments of fiscal benefits derived from the programs. Such assessments could be conducted on a regional scale similar to studies of program costs conducted by the State Water Board.<sup>45</sup>

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<sup>44</sup> National Association of Flood and Stormwater Management Agencies. 2006. *Guidance for Municipal Stormwater Funding*. Prepared under a grant provided by the USEPA.

<sup>45</sup> State Water Board, 2005. NPDES Stormwater Cost Survey.

## F. Reporting

**Purpose:** Provision F includes the requirements for the documents and reports that the Copermittees must prepare and provide to the San Diego Water Board. The documents prepared by the Copermittees and provided to the San Diego Water Board and made available to the public will provide the documentation that the Copermittees are complying with the requirements of the Order.

**Discussion:** Provision F requires the Copermittees to prepare several documents and reports that must be provided to the San Diego Water Board and made available to the public. The reporting requirements have been significantly reduced compared to the Fourth Term Permit reporting requirements. The reduction in reporting requirements was recommended by the San Diego County Copermittees in the Report of Water Discharge submitted in June 2011.

More specific and detailed discussions of the requirements of Provision F are provided below.

Provision F.1 (Water Quality Improvement Plans) requires the Copermittees in each Watershed Management Area to develop and submit a Water Quality Improvement Plan in accordance with the requirements of Provision B.

Of all the requirements of Provision F, the Water Quality Improvement Plans will likely be the documents requiring the most significant effort to develop. The content of the Water Quality Improvement Plans, however, is expected to include content that should already have been developed for the Watershed Plans and several elements that are included in the Monitoring and Reporting Programs required under the Fourth Term Permits.

Because the Water Quality Improvement Plan is part of the “*comprehensive planning process which involves public participation*,” Provision F.1 includes requirements to give multiple opportunities to the public to provide input on the content of the plans.

Provision F.1.a.(1) specifies the elements that the Copermittees must include in the public participation process for the development of the Water Quality Improvement Plans. In order for the public to be aware of the opportunities to provide input, Provision F.1.a.(1)(a) requires the Copermittees to develop a publicly available and noticed schedule of the opportunities for the public to participate and provide comments during the development of the Water Quality Improvement Plan. These opportunities are when the public can provide the data, information, and recommendations that the Copermittees can consider during the development of the Water Quality Improvement Plans.

The San Diego Water Board recognizes, however, that the Copermittees cannot be expected to incorporate all the data, information, and recommendations that the public may provide into the Water Quality Improvement Plans. The Copermittees will have to

review the data, information, and recommendations received and make some decisions on what to incorporate into the Water Quality Improvement Plans. Before the Copermittees finalize their decisions, members of the public should be allowed to review the Copermittees' decisions. Thus, Provision F.1.a.(1)(b) requires the Copermittees to form a Water Quality Improvement Consultation Panel (Panel).

The Panel will consist of a member from the environmental community and a member from the development community familiar with the Watershed Management Area. A representative from the San Diego Water Board staff will also be part of the Panel. The Copermittees may choose to include additional members, but the Panel is only required to include three panel members.

The Panel will serve as an additional public participation and input mechanism during the development of the Water Quality Improvement Plans. The knowledge and expertise from these Panel members are expected to provide the Copermittees valuable direction during their decision-making process. The Copermittees will review the content of their planned submittals with the Panel members to receive recommendations. If the Panel provides recommendations, the Copermittees must consider revisions to the Water Quality Improvement Plan submittals.

The San Diego Water Board recognizes that the development of multiple Water Quality Improvement Plans concurrently may limit the ability of the public to review and provide comments to the Copermittees. Thus, Provision F.1.a.(1)(c) requires the Copermittees to coordinate the schedules for the public participation process among the Watershed Management Areas to provide the public time and opportunity to participate during the development of the Water Quality Improvement Plans.

Provision F.1.a.(2) requires the Copermittees to develop and submit the first Water Quality Improvement Plan component, in accordance with the requirements of Provision B.2, which includes the identification of the priority water quality conditions and potential water quality improvement strategies. The public must be provided an opportunity to provide data, information and recommendations to be utilized in the development and identification of the priority water quality conditions and potential water quality improvement strategies for the Watershed Management Area. The Copermittees must consult with the Panel and consider making revisions. The Copermittees may submit the requirements of Provision B.2 as early as 6 months and no later than 12 months after the commencement of coverage under this Order. After the requirements of Provision B.2 are submitted to the San Diego Water Board, the public will be provided another opportunity to provide comments.

Provision F.1.a.(3) requires the Copermittees to develop and submit the second Water Quality Improvement Plan component, in accordance with the requirements of Provision B.3, which includes the identification of the numeric goals for the highest priority water quality conditions identified for the Watershed Management Area, and the strategies that will be implemented to achieve the potential numeric goals. The Copermittees may also develop the Optional Watershed Management Area Analysis, in accordance with the requirements of Provision B.3.b.(4), as part of this submittal.

The public must be provided an opportunity to provide data, information and recommendations to be utilized in the development and identification of the numeric goals and water quality improvement strategies for the Watershed Management Area. The Copermittees must consult with the Panel and consider making revisions. The Copermittees may submit the requirements of Provision B.3 as early as 9 months and no later than 18 months after the commencement of coverage under this Order. After the requirements of Provision B.3 are submitted to the San Diego Water Board, the public will be provided another opportunity to provide comments.

Finally, Provision F.1.b describes the process for the submittal and implementation of the Water Quality Improvement Plans. The complete Water Quality Improvement Plans are required to be submitted by the Copermittees within 24 months after the commencement of coverage under this Order. The San Diego Water Board will provide the public an opportunity to provide comments on each complete Water Quality Improvement Plan.

The San Diego Water Board will review each Water Quality Improvement Plan and the public comments received to determine if the Copermittees have submitted a Water Quality Improvement Plan that meets the requirements of Provision B. If a Water Quality Improvement Plan does not meet the requirements of Provision B, the Copermittees will be considered out of compliance and directed in writing by the San Diego Water Board Executive Officer to correct the deficiencies.

When a Water Quality Improvement Plan meets the requirements of Provision B, the San Diego Water Board will determine whether to hold a public hearing or to limit public input to submittal of written comments before accepting the Water Quality Improvement Plan. Implementation of the Water Quality Improvement Plan must begin within 30 days of acceptance.

The San Diego Water Board expects that any deficiencies in the Water Quality Improvement Plan will be identified either in the public comments or during the review by the San Diego Water Board before implementation begins. In the event any deficiencies are identified after the implementation of the Water Quality Improvement Plan, Provision F.1.b.(7) clarifies that the San Diego Water Board maintains the right to require the Copermittees to correct any deficiencies that may be identified.

Provision F.2 (Updates) requires the Copermittees to update specific documents that the Copermittees will utilize to implement the requirements of this Order.

Each Copermittee is required to continue implementing a jurisdictional runoff management program, as required under Provision E. Implementation of each Copermittee's jurisdictional runoff management program is directed by its jurisdictional runoff management program document. Provision F.2.a requires each Copermittee to update its jurisdictional runoff management program document to be consistent with the requirements of Provision E concurrent with the submittal of the Water Quality Improvement Plan.

Likewise, each Copermittee must continue to require new development and redevelopment projects to implement BMPs to control pollutants in storm water runoff. The control of pollutants in storm water runoff from development and redevelopment projects within each Copermittee's jurisdiction is guided and directed by its BMP Design Manual, formerly known as a Standard Storm Water Mitigation Plan (SSMP). Provision F.2.b requires each Copermittee to update its BMP Design Manual to be consistent with the requirements of Provision E.3 concurrent with the submittal of the Water Quality Improvement Plan.

For situations where the San Diego Water Board may amend the requirements of Provisions E.3.a-d after a Copermittee has updated its BMP Design Manual pursuant to Provision F.2.b.(1), Provision F.2.b.(4) gives the Copermittee up to 90 days to incorporate the amended requirements of Provision E.3.a-d into its BMP Design Manual. The San Diego Water Board Executive Officer has discretion to modify the 90-day time period depending on the complexity of the amendments or other information that warrants a change in the 90-day time period.

In general, the requirements of the Order should not necessitate a complete rewrite of each Copermittee's jurisdictional runoff management program document or BMP Design Manual, as was required by the Third Term Permits. The jurisdictional runoff management program and BMP Design Manual requirements of this Order are not significantly different than the requirements of the Fourth Term Permits. Thus, only sections of the Order which are new or have been significantly changed should warrant revisions to specific sections of the Copermittee's jurisdictional runoff management program document and BMP Design Manual.

Finally, the Water Quality Improvement Plans are expected to require updates as the iterative approach and adaptive management process included in the Water Quality Improvement Plan, as required under Provision B.5, is implemented by the Copermittees. Provision F.2.c.(1) requires the Copermittees to implement a public participation process for the proposed updates, review the proposed updates with the Panel, and submit the updates to the Water Quality Improvement Plan as part of the Annual Reports required under Provision F.3.b.

Also, because TMDLs are likely to be developed, adopted and approved during the term of the Order, Provision F.2.c.(2) has been included to expedite the incorporation of TMDLs into the Copermittees' Water Quality Improvement Plans as part of the update process, potentially before the Order is re-opened to incorporate the requirements of the new TMDLs.

Provision F.3 (Progress Reporting) requires the Copermittees to report on the progress of implementing the Water Quality Improvement Plans.

The requirements of Provision F.3 are to report the progress toward improving water quality that the Copermittees are achieving with the implementation of the Water Quality Improvement Plans and each Copermittee's jurisdictional runoff management program. The Progress Report Presentations required under Provision F.3.a are

included to provide the Copermittees an opportunity to communicate directly with the San Diego Water Board and the public. The Progress Report Presentations will also provide the members of the San Diego Water Board and members of the public an opportunity to become more acquainted with the Copermittees and their projects and programs to address non-storm water and storm water discharges into and from their MS4s.

The Annual Report requirements of Provision F.3.b are a consolidation of several reporting requirements from the Fourth Term Permits, including the Jurisdictional Runoff Management Program Annual Reports, the Watershed Annual Reports, and the Monitoring and Reporting Program Annual Reports. Furthermore, the Annual Report requirements are consistent with the requirements under 40 CFR 122.42(c).

Pursuant to 40 CFR 122.42(c), “[t]he operator of a large or medium municipal separate storm sewer system or a municipal separate storm sewer that has been designated by the Director...must submit an annual report”, which must include the following:

- (1) *The status of implementing the components of the storm water management program that are established as permit conditions [40 CFR 122.42(c)(1)];*
- (2) *Proposed changes to the storm water management programs that are established as permit conditions [40 CFR 122.42(c)(2)];*
- (3) *Revisions, if necessary, to the assessment of controls and fiscal analysis [40 CFR 122.42(c)(3)];*
- (4) *A summary of data, including monitoring data, that is accumulated throughout the reporting year [40 CFR 122.42(c)(4)];*
- (5) *Annual expenditures and budget for year following each annual report [40 CFR 122.42(c)(5)];*
- (6) *A summary describing the number and nature of enforcement actions, inspections, and public education programs [40 CFR 122.42(c)(6)];*
- (7) *Identification of water quality improvements or degradation [40 CFR 122.42(c)(7)].*

Under the Fourth Term Permits, each Copermittee is responsible for submitting a Jurisdictional Runoff Management Program Annual Report; the Copermittees in each designated watershed are responsible for submitting a Watershed Annual Report; and the Copermittees from each county are responsible for submitting a Monitoring and Reporting Program Annual Report.

There are 39 Copermittees in the San Diego Region, each required to prepare and submit a Jurisdictional Runoff Management Program Annual Report. There are 9 designated watersheds in San Diego County, 6 designated watersheds in Orange County, and 1 designated watershed in Riverside County for a total of 16 designated watersheds, each requiring a Watershed Annual Report. There are 3 sets of

Copermittees in 3 counties in the San Diego Region, requiring Copermittees from each county to prepare and submit a Monitoring and Reporting Program Annual Report. Thus each Copermittee is currently required to prepare, or participate in the preparation of at least 3 annual reports. In addition, the San Diego County Copermittees are required to prepare and submit a Regional Urban Runoff Management Plan Annual Report.

In total, there are 59 annual reports that are prepared by the Copermittees and submitted to the San Diego Water Board for the Fourth Term Permits. The preparation of these annual reports requires significant time and resources from each Copermittee, which could otherwise be expended on actions that could improve water quality within its jurisdiction. In turn, significant time and resources are required from the San Diego Water Board staff to review these reports, which could otherwise be expended on working directly with the Copermittees to improve their implementation efforts toward restoring and protecting water quality.

Until the Water Quality Improvement Plans are developed, there will be a transitional period during which the Copermittees will continue to implement their existing jurisdictional runoff management programs. There will also be a transitional period during which the Copermittees will implement the transitional monitoring and assessment requirements of Provision D. During the transitional period, the Copermittees will submit annual reports pursuant to the requirements of Provisions F.3.b.(1) and F.3.b.(2).

Provision F.3.b.(1) includes the transitional annual reporting requirements for each Copermittee's jurisdictional runoff management program. The reporting of the jurisdictional runoff management program implementation efforts have been reduced to a single 2-page form. Each Copermittee is required to complete and submit a Jurisdictional Runoff Management Program Annual Report Form (contained in Attachment D or a revised form accepted by the San Diego Water Board) no later than October 31 of each year for each jurisdictional runoff management program reporting period (i.e. July 1 to June 30) during the transitional period, until the first Water Quality Improvement Plan Annual Reports are required to be submitted. The Jurisdictional Runoff Management Program Annual Report Form will certify that each Copermittee has implemented its jurisdictional runoff management program in accordance with the requirements of Provision E. Each Copermittee may choose to continue to utilize and submit the jurisdictional runoff management program annual reporting format of its current Order until the first Water Quality Improvement Plan Annual Report is required to be submitted.

Provision F.3.b.(2) includes the transitional annual reporting requirements for the transitional monitoring and assessment program for each Watershed Management Area. The Copermittees in the Watershed Management Area are required to submit a Transitional Monitoring and Assessment Program Annual Report no later than January 31 for each complete transitional monitoring and assessment program reporting period (i.e. October 1 to September 30) during the transitional period, until the first Water

Quality Improvement Plan Annual Reports are required to be submitted. The Transitional Monitoring and Assessment Program Annual Report is required to include the transitional period monitoring data collected pursuant to Provisions D.1.a and D.2.a, and the findings from the transitional period findings from the assessments required pursuant to Provisions D.4.a.(1)(a), D.4.b.(1)(a)(i), D.4.b.(2)(a)(i).

Provision F.3.b.(3) includes the Water Quality Improvement Plan Annual Report requirements. Only one Water Quality Improvement Plan Annual Report is required for each of the ten (10) Watershed Management Areas designated under Provision B.1, which is a significant reduction in the number of annual reports required to be prepared and submitted by the Copermittees. The Water Quality Improvement Plan Annual Report will document the Copermittees' efforts to implement the Water Quality Improvement Plan. Each Water Quality Improvement Plan Annual Report will be focused primarily on reporting the analysis of the monitoring data collected pursuant to Provisions D.1-D.3 during the reporting period, and the assessments that are required pursuant to Provision D.4 based on the data. The monitoring data analyses and the assessments that are provided in the Water Quality Improvement Plan Annual Report will be the core of the report. The reporting of the jurisdictional runoff management program implementation efforts have been reduced to a single 2-page form, and will no longer be the primary focus of the reporting requirements as in the Third and Fourth Term Permits.

Each Copermittee will continue to prepare and submit a Jurisdictional Runoff Management Program Annual Report Form as part of the Water Quality Improvement Plan Annual Report to certify that each Copermittee has implemented its jurisdictional runoff management program in accordance with the requirements of Provision E. Instead of reviewing a voluminous report from each Copermittee, as was required under the Third and Fourth Term Permits, the San Diego Water Board will conduct audits of each Copermittee's jurisdictional runoff management program to investigate and confirm the information provided by each Copermittee on its Jurisdictional Runoff Management Program Annual Report Form. The audits will allow the San Diego Water Board to become more familiar with the each Copermittee's jurisdictional runoff management program, and each Copermittee will become more informed about the expectations of the San Diego Water Board.

The reduction in the number and content of the Water Quality Improvement Plan Annual Reports should result in significant time, cost and resource savings for the Copermittees, as well as the San Diego Water Board. Those savings should offset a significant portion of any additional costs that may be incurred to develop the Water Quality Improvement Plans and to implement the monitoring and assessment program requirements of Provision D.

The reporting period for the Water Quality Improvement Plan Annual Reports consists of two periods. Because the jurisdictional runoff management programs are typically budgeted and implemented during a fiscal year, the information provided on the

Jurisdictional Runoff Management Program Annual Report Forms will cover the period from July 1 to June 30 of the following year.

The Water Quality Improvement Plan Annual Reports, however, are focused primarily on the monitoring data and the assessments based on the monitoring data. The monitoring data is collected during the monitoring year, which begins October 1 and ends September 30 of the following year. The monitoring year begins after the beginning of the fiscal year and ends after the end of the fiscal year. Therefore, to accommodate and capture the information collected during the fiscal year and the monitoring year, the Annual Report reporting period incorporates both periods.

Finally, Provision F.3.c requires the Copermittees to develop and submit a Regional Monitoring and Assessment Report. The Regional Monitoring and Assessment Report is similar to the Long Term Effectiveness Assessment required under the Fourth Term San Diego County Permit. The Regional Monitoring and Assessment Report is expected to utilize the entire body of data and information collected by the Copermittees during the term of this Order to assess improvements to water quality on a regional scale.

Provision F.4 (Regional Clearinghouse) requires the Copermittees to develop, update, and maintain an internet-based Regional Clearinghouse that can be used to store, disseminate, and share the Copermittees' documents, monitoring data, special studies, and any other data or information.

Most of the documents and data that are generated by the Copermittees can be provided in electronic format, and made available to the San Diego Water Board and the public on the internet. The San Diego Water Board has been gradually transitioning its document submittal requirements to electronic submittals. Provision F.4 has been included to further these efforts.

Provision F.4 has also been included to improve the exchange and availability of information among the Copermittees, as well as between the Copermittees and the San Diego Water Board. Provision F.4 will also make the information generated during the implementation of the Order more accessible to the public.

Provision F.5 (Report of Waste Discharge) requires the Copermittees to submit a Report of Waste Discharge to reapply for renewal of the Order prior to its expiration, in accordance with 40 CFR 122.21(d)(2) and CWC section 13376.

Provision F.5 requires the Copermittees to submit a Report of Waste Discharge 180 days in advance of the expiration of this Order. Provision F.5 also describes the minimum information to be included in the Report of Waste Discharge, based on USEPA guidance "Interpretive Policy Memorandum on Reapplication Requirements for Municipal Separate Storm Sewer Systems," dated May 17, 1996.

## **G. Principal Watershed Copermittee Responsibilities**

**Purpose:** Provision G includes the requirements for the Principal Watershed Copermittee designated by the Copermittees in each Watershed Management Area.

**Discussion:** Unlike previous NPDES requirements, there will no longer be a single Principal Copermittee. Provision G.1 requires the Copermittees to designate a Principal Watershed Copermittee for each Watershed Management Area. There are ten (10) Watershed Management Areas in the San Diego Region, as defined in Table B-1 under Provision B.1 of the Order. An individual Copermittee should not be the Principal Watershed Copermittee for more than two (2) Watershed Management Areas. There could be up to ten (10) Principal Water Copermittees designated for the Watershed Management Areas in the San Diego Region.

Provision G.2 describes the minimum responsibilities of each Principal Watershed Copermittee. The primary responsibility of the Principal Watershed Copermittees is to serve as the liaison between the Copermittees in the Watershed Management Area and the San Diego Water Board on general permit issues. Ideally, the Principal Watershed Copermittee can represent the interests of all the Copermittees within a Watershed Management Area during discussions or meetings to facilitate communication with the San Diego Water Board. The Principal Watershed Copermittees are also responsible for facilitating and coordinating the implementation efforts of the Copermittees and submittals of required documents and reports.

The Principal Watershed Copermittee is responsible for facilitating the efforts of the Copermittees within the Watershed Management Area to develop the Water Quality Improvement Plan required under Provision B, and submit it for approval in accordance with Provision F.1. The Principal Watershed Copermittee is also responsible for coordinating the submittal of the document updates, Progress Report Presentations, and Annual Reports required from the Copermittees within each Watershed Management Area under Provisions F.2, F.3.a, and F.3.b. The Principal Watershed Copermittees are responsible for coordinating with each other to develop and submit the Regional Clearinghouse, Regional Monitoring and Assessment Report, and the Report of Waste Discharge required under Provisions F.3.c, F.4, and F.5.

The designated Principal Watershed Copermittee for each Watershed Management Area does not necessarily have to serve as the Principal Watershed Copermittee for the entire term of the Order. If the Copermittees in a Watershed Management Area choose to designate a new Principal Watershed Copermittee, the change may be submitted as part of the Annual Report required under Provision F.3.b, with an update to the Water Quality Improvement Plan in accordance with Provision F.2.c.

Provision G.3 specifies that the Principal Watershed Copermittee is not responsible for ensuring that the other Copermittees within the Watershed Management Area are in compliance with the requirements of this Order

## H. Modification of Order

**Purpose:** Provision H provides the conditions under which modifications to Order No. R9-2013-0001, as amended, may occur.

**Discussion:** Provision H allows for modifications to Order No. R9-2013-0001, as amended, for bases in addition to modifications (minor and major) allowed under the federal regulations at 40 CFR 122.62 and 122.63.

Modifications to the Order require re-opening the Order (see Water Code section 13223), subject to the requirements of 40 CFR 122.44, 122.62 to 122.64, and 124.5, but only for the specific provisions subject to the modification. Proposed modifications of the Order will be made available for public review, a public notice and comment period, and a public hearing if requested. Comments on the provisions not subject to the proposed modifications are not required to be considered in the San Diego Water Board's responses to comments or during the public hearing.

Provision H.4 was included to specify that the Order will be re-opened for modifications if the Basin Plan is amended to modify an existing TMDL or incorporate a new TMDL, or the monitoring and assessment program requirements need to be updated or revised.

## I. Standard Permit Provisions and General Provisions

**Purpose:** Provision I incorporates the standard permit provisions required to be included in all NPDES permits, as well as several other general provisions.

**Discussion:** Provision I refers to Attachment B to the Order. Attachment B expressly incorporates the conditions applicable to all NPDES permits as provided under 40 CFR 122.41(a)-(n), as well as the applicable conditions for MS4s and storm water discharges provided under 40 CFR 122.42(c) and 40 CFR 122.42(d), respectively. Attachment B also includes several general provisions that are typically included in or applicable to waste discharge requirements issued by the San Diego Water Board.

## **IX. ATTACHMENTS**

The attachments to the Order are discussed below. The discussions describe the content of the attachments.

### **Attachment A – Discharge Prohibitions and Special Protections**

Section 1 of Attachment A includes the Waste Discharge Prohibitions from the Basin Plan. They have been provided verbatim in their entirety.

Section 2 of Attachment A includes the “*Special Protections for Areas of Special Biological Significance, Governing Point Source Discharges of Storm Water and Nonpoint Source Waste Discharges*” applicable to permitted point source discharges of storm water, adopted under State Water Board Resolution No. 2012-0012, as amended by Resolution No. 2012-0031. The terms, prohibitions, and special conditions (collectively referred to as special conditions) are established as limitations on point source storm water discharges. These special conditions provide Special Protections for marine aquatic life and natural water quality in ASBS, as required for State Water Quality Protection Areas pursuant to California Public Resources Code sections 36700(f) and 36710(f). These Special Protections were adopted by the State Water Board as part of the Ocean Plan General Exception.

## **Attachment B – Standard Permit Provisions and General Provisions**

Conditions applicable to all NPDES permits, as required under 40 CFR 122.41, and conditions applicable to MS4s and storm water discharges, as required under 40 CFR 122.42(c) and 122.42(d), respectively are provided in Attachment B to the Order. They have been provided expressly in their entirety.

In addition to the standard provisions required to be incorporated into the Order and NPDES permit pursuant to 40 CFR 122.41 and 40 CFR 122.42, several other general provisions apply to this Order. These general provisions are typically included in or applicable to waste discharge requirements issued by the San Diego Water Board. Many of the general provisions were developed by the State Water Board. Where a general provision is derived from statute or regulation, a citation of the statute or regulation section is provided. General provisions that do not provide a citation are included under the authority provided CWC 13377.

## **Attachment C – Acronyms, Abbreviations and Definitions**

The acronyms and abbreviations that are used in the Order are provided in Attachment C. Attachment C also includes definitions that may provide an explanation or description of the meaning or intent of specific terms or phrases included in the Order.

## **Attachment D – Jurisdictional Runoff Management Program Annual Report Form**

An example of the Jurisdictional Runoff Management Program Annual Report Form required to be submitted by each Copermittee as part of the Annual Reports required under Provision F.3.b.(1)(e) is provided as Attachment D to the Order. An electronic version of the form will be available from the San Diego Water Board after the adoption of the Order.

The Jurisdictional Runoff Management Program Annual Report Form includes the minimum information necessary to demonstrate that the Copermittee is implementing and in compliance with the requirements of Provision E, and includes much of the information required to be reported pursuant to 40 CFR 122.42(c).

The information that must be provided on the Jurisdictional Runoff Management Program Annual Report Form is limited to the fiscal year, which begins July 1 and ends June 30 of the following year. The information expected to be provided by the Copermittees in each section of the Jurisdictional Runoff Management Program Annual Report Form is discussed below.

### **I. COPERMITTEE INFORMATION**

The name of the Copermittee (e.g. name of city, county, or special district) and the contact information for the storm water program manager are provided under this section.

### **II. LEGAL AUTHORITY**

The Copermittee must confirm whether or not the legal authorities under Provision E.1.a have been established for itself within its jurisdiction.

The Copermittee must also confirm whether or not a Principal Executive Officer, Ranking Elected Official, or Duly Authorized Representative has certified that the Copermittee obtained and maintains adequate legal authority, as required under Provision E.1.b. The certification statement required by Provision E.1.b is only required to be submitted with the first Annual Report required under Provision F.3.b.

### **III. JURISDICTIONAL RUNOFF MANAGEMENT PROGRAM DOCUMENT UPDATE**

The Copermittee must inform the San Diego Water Board whether or not an update to its jurisdictional runoff management program document was required or recommended by the San Diego Water Board during the reporting period. An update to the jurisdictional runoff management program is required under Provision F.2.a. The San Diego Water Board may recommend modifications to the jurisdictional runoff management program as part of the iterative approach and adaptive management process required under Provision B.5, which may result in an update that is necessary for the Copermittee's jurisdictional runoff management document.

If an update was required or recommended, the Copermittee must confirm whether or not the update was completed and made available on the Regional Clearinghouse within the reporting period. If no update was required or recommended, an answer is not required. If the answer is NO, meaning the required or recommended update was not completed and/or made available on the Regional Clearinghouse, the Copermittee must attach a

schedule for the completion of the update and/or posting of the updated document on the Regional Clearinghouse.

#### IV. ILLICIT DISCHARGE DETECTION AND ELIMINATION PROGRAM

The Copermittee must confirm whether or not a program was implemented during the fiscal year to actively detect and eliminate illicit discharges and connections in accordance with the requirements under Provision E.2.

In addition to confirming that a program to detect and eliminate illicit discharges was implemented during the reporting period, the Copermittee is also required to report on several items related to the program. The information that must be reported is limited to the fiscal year for the Annual Report.

All non-storm water discharges are considered illicit discharges unless the source is identified as one of the categories on non-storm water discharges under Provisions E.2.a.(1)-(5). If a non-storm water discharge is identified as one of the categories on non-storm water discharges under Provisions E.2.a.(1)-(5), the discharge is a non-storm water discharge, but not an illicit discharge. If a non-storm water discharge is identified but not in one of the categories on non-storm water discharges under Provisions E.2.a.(1)-(5), the discharge is both a non-storm water discharge and an illicit discharge.

#### V. DEVELOPMENT PLANNING PROGRAM

The Copermittee must confirm whether or not a development planning program was implemented during the fiscal year in accordance with the requirements under Provision E.3.

The Copermittee must also inform the San Diego Water Board whether or not an update to its BMP Design Manual was required or recommended by the San Diego Water Board during the fiscal year. An update to the BMP Design Manual is required under Provision F.2.b. The San Diego Water Board may recommend modifications to the BMP Design Manual, which may result in an update that is necessary for Copermittee's the BMP Design Manual.

If an update was required or recommended, the Copermittee must confirm whether or not the update was completed and made available on the Regional Clearinghouse within the reporting period. If no update was required or recommended, an answer is not required. If the answer is NO, meaning the required or recommended update was not completed and/or made available on the Regional Clearinghouse, the Copermittee must attach a schedule for the completion of the update and/or posting of the updated document on the Regional Clearinghouse.

The Copermittee is also required to report on several items related to the program. For the development and redevelopment projects that are reviewed under the program, the Copermittee must report the total number projects submitted for review during the fiscal year. Of those projects, the Copermittee must report the number that are Priority Development Projects, as defined under Provision E.3.b.(1). The Copermittee must also report the number of Priority Development Projects that were approved and/or granted occupancy during the fiscal year, regardless of when the project was originally submitted for review. Any projects that were approved during the fiscal year and granted any

exemptions from the BMP Design Manual requirements and/or allowed to implement alternative compliance options in accordance with Provision E.3.c.(3) must be reported.

Finally, the Copermittee must also report on several items related to its oversight of permanent BMPs on Priority Development Projects within its jurisdiction, as required under Provision E.3.e. The information that must be reported is limited to the fiscal year for the Annual Report.

#### VI. CONSTRUCTION MANAGEMENT PROGRAM

The Copermittee must confirm whether or not a construction management program was implemented during the fiscal year in accordance with the requirements under Provision E.4.

The Copermittee is also required to report on several items related to its oversight construction projects within its jurisdiction. The information that must be reported is limited to the fiscal year for the Annual Report.

#### VII. EXISTING DEVELOPMENT MANAGEMENT PROGRAM

The Copermittee must confirm whether or not an existing development management program was implemented during the fiscal year in accordance with the requirements under Provision E.5.

The Copermittee is also required to report on several items related to its oversight in areas of existing development within its jurisdiction. The information that must be reported is limited to the fiscal year for the Annual Report. The information must also be separated into four categories of existing development: municipal, commercial, industrial, and residential.

#### VIII. PUBLIC EDUCATION AND PARTICIPATION

The Copermittee must confirm whether or not a public education program component was implemented during the fiscal year in accordance with the requirements under Provision E.7.a.

The Copermittee must also confirm whether or not a public participation program component was implemented during the fiscal year in accordance with the requirements under Provision E.7.b.

#### IX. FISCAL ANALYSIS

The Copermittee must confirm a summary of its fiscal analysis, conducted in accordance with the requirements under Provision E.8, has been attached to the form.

#### X. CERTIFICATION

A Principal Executive Officer, Ranking Elected Official, or Duly Authorized Representative must sign and certify the Jurisdictional Runoff Management Program Annual Report Form. The appropriate box must be checked to indicate the whether a Principal Executive Officer, Ranking Elected Official, or Duly Authorized Representative is signing the form.

## Attachment E – Specific Provisions for Total Maximum Daily Loads

Attachment E provides specific provisions for implementing the load allocations (LAs) and wasteload allocations (WLAs) of Total Maximum Daily Loads (TMDLs) adopted by the San Diego Water Board and approved by USEPA in which the Copermitees are identified as responsible for discharges subject to the requirements of the TMDLs. Federal regulations require that NPDES requirements incorporate water quality based effluent limitations (WQBELs) that must be consistent with the requirements and assumptions of any available WLAs,<sup>46</sup> which may be expressed as numeric effluent limitations, when feasible, and/or as a best management practice (BMP) program of expanded or better-tailored BMPs.<sup>47</sup> Where the TMDL includes WLAs that provide numeric pollutant load or pollutant parameter objectives, the WLA has been, where feasible, translated into numeric WQBELs.<sup>48</sup>

For each TMDL in Attachment E, four sections are included:

- a. **Applicability:** This section provides the resolution under which the TMDL Basin Plan amendment was adopted and approved, with the applicable adoption and approval dates. This section also gives the effective date of the TMDL and where the TMDL is applicable (i.e. Watershed Management Area and water body). The Copermitees that are responsible for implementing the specific provisions are also given in this section.
- b. **Final TMDL Compliance Requirements:** For each TMDL, the final TMDL compliance requirements consist of the final TMDL compliance date(s), the final WQBELs, and the final TMDL compliance determination requirements. The final WQBELs are expressed in terms of receiving water limitations, effluent limitations, and/or best management practices (BMPs). The final WQBELs for the TMDLs are incorporated by reference into Provision A of the Order. The final WQBELs become enforceable when the final TMDL compliance dates have passed. Applicable BMPs within the final WQBELs must be incorporated into the Water Quality Improvement Plans. Compliance with the final WQBELs will be determined in accordance with the options provided under the final TMDL compliance determination requirements.
- c. **Interim TMDL Compliance Requirements:** If the final TMDL compliance date has not passed and there are interim TMDL compliance requirements, they are included in this section. If there are interim WQBELs with interim compliance dates, the interim WQBELs become enforceable when the corresponding interim compliance dates have passed. Compliance with the interim WQBELs will be determined in accordance with the options provided under the interim TMDL compliance determination requirements.
- d. **Specific Monitoring and Assessment Requirements:** If there are specific monitoring and assessment requirements that cannot be met with the monitoring and assessment program

<sup>46</sup> 40 CFR 122.44(d)(1)(vii)(B)

<sup>47</sup> 40 CFR 122.44(k)(2) and 40 CFR 122.44(k)(3)

<sup>48</sup> November 26, 2014 Memorandum from the USEPA, Revisions to the November 22, 2002 Memorandum "Establishing Total Maximum Daily Load (TMDL) Wasteload Allocations (WLAs) for Storm Water Sources and NPDES Permit Requirements Based on Those WLA"

requirements under Provision D of the Order, the additional requirements are included in this section.

The requirements of the TMDLs are based on and consistent with the assumptions and requirements of any available adopted and approved TMDLs that have been incorporated into the Basin Plan. Modifications to the requirements for the TMDLs in Attachment E cannot be made unless the TMDLs are modified in the Basin Plan.

A modification to any aspect of a TMDL in the Basin Plan requires a Basin Plan amendment. A Basin Plan amendment to modify a TMDL will require the San Diego Water Board to adopt a resolution to amend the Basin Plan, which includes a separate public process. When the San Diego Water Board adopts a Basin Plan amendment, it subsequently requires approval from the State Water Board, the Office of Administrative Law, and the USEPA before it becomes effective.

If and when the TMDLs are modified in the Basin Plan, the San Diego Water Board will revise the requirements of the Order in accordance with the Basin Plan amendment. When a Basin Plan amendment to modify a TMDL becomes effective, the San Diego Water Board will modify the requirements of the Order pursuant to the requirements of Provision H.4 of the Order as soon as possible.

## California Regional Water Quality Control Board, San Diego Region

November 10, 2016

San Diego County Copermittees  
Orange County Copermittees  
Riverside County Copermittees

Sent Via Email  
**In reply refer to:**  
786088:CArias

**SUBJECT: Tentative Order No. R9-2016-0205, Investigative Order Directing the Owners and Operators of Phase I Municipal Separate Storm Sewer Systems (MS4s) Draining the Watersheds within the San Diego Region to Submit Technical and Monitoring Reports Pertaining to the Control of Trash From Phase I MS4s to Ocean Waters, Inland Surface Waters, Enclosed Bays and Estuaries in the San Diego Region**

The California Regional Water Quality Control Board, San Diego Region (San Diego Water Board) is releasing for public review and comment Tentative Order No. R9-2016-0205. The Tentative Order implements specific statewide requirements of amendments adopted by the State Water Resources Control Board in 2015 to the *Water Quality Control Plan for Ocean Waters of California* (Ocean Plan) and the *Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (ISWEBE Plan) addressing the impacts of trash to the surface waters of California (collectively referred to hereafter as the Trash Amendments).<sup>1</sup> Pursuant to the Trash Amendments, the Tentative Order proposes to require each municipal Copermittee in the San Diego Region to submit written notice indicating whether Track 1 or Track 2 control measures will be used to comply with the trash discharge prohibition. If Track 2 is selected, the Tentative Order requires submittal of an implementation plan within eighteen months.

The enclosed "Notice of Opportunity to Review and Comment" provides detailed information on the procedures for submittal of written comments on the Tentative Order and notice of the San Diego Water Board Executive Officer's intent to issue the Tentative Order. The Tentative Order is enclosed with this letter and is also available on the San Diego Water Board website at:

[http://www.waterboards.ca.gov/sandiego/board\\_decisions/tentative\\_orders/](http://www.waterboards.ca.gov/sandiego/board_decisions/tentative_orders/).

In the subject line of any response, please include the requested "**In reply refer to:**" information located in the header of this letter. If you have any questions or comments,

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<sup>1</sup> The Trash Amendments can be accessed for review on the State Water Board website at [http://www.waterboards.ca.gov/water\\_issues/programs/trash\\_control/documentation.shtml](http://www.waterboards.ca.gov/water_issues/programs/trash_control/documentation.shtml)

Transmittal Letter  
Tentative Order No. R9-2016-0205

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November 10, 2016

please contact Christina Arias at (619) 521-3361, or e-mail at [Christina.Arias@waterboards.ca.gov](mailto:Christina.Arias@waterboards.ca.gov).

Respectfully,



David T. Barker  
Supervising Engineer

DTB:law:cma

Enclosure: Notice of Opportunity to Review and Comment  
Tentative Order No. R9-2016-0205

Cc via email: San Diego County MS4 Permit Lyris List  
Riverside County MS4 Permit Lyris List  
Orange County MS4 Permit Lyris List

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**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
SAN DIEGO REGION**

**TENTATIVE INVESTIGATIVE ORDER NO. R9-2016-0205**

**AN ORDER DIRECTING THE OWNERS AND OPERATORS OF  
PHASE I MUNICIPAL SEPARATE STORM SEWER SYSTEMS (MS4s)  
DRAINING THE WATERSHEDS WITHIN THE SAN DIEGO REGION**

**TO SUBMIT TECHNICAL AND MONITORING REPORTS PERTAINING TO  
THE CONTROL OF TRASH IN DISCHARGES FROM PHASE I MS4s  
TO OCEAN WATERS, INLAND SURFACE WATERS,  
ENCLOSED BAYS, AND ESTUARIES  
IN THE SAN DIEGO REGION**

The California Regional Water Quality Control Board, San Diego Region (hereinafter San Diego Water Board) finds:

- 1. Legal and Regulatory Authority.** This Order conforms to and implements policies and requirements of the Porter-Cologne Water Quality Control Act (division 7 of the Water Code, commencing with Section 13000) including (1) sections 13267 and 13383; (2) applicable state and federal regulations; (3) all applicable provisions of statewide Water Quality Control Plans adopted by the State Water Resources Control Board (State Water Board) and the *Water Quality Control Plans for the San Diego Basin* (Basin Plan) adopted by the San Diego Water Board including beneficial uses, water quality objectives, and implementation plans; (4) State Water Board policies and regulations, including Resolution No. 68-16 (Statement of Policy with Respect to Maintaining High Quality of Waters in California); and (5) relevant standards, criteria, and advisories adopted by other state and federal agencies.
- 2. Trash Amendments.** On April 7, 2015, the State Water Board adopted Resolution No. 2015-0019, amending the *Water Quality Control Plan for Ocean Waters of California* (Ocean Plan) and the *Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (ISWEBE Plan) to address the impacts of trash to the surface waters of California (referred to hereafter as the Trash Amendments). The effective date of the Trash Amendments is December 2, 2015.
- 3. Trash Amendments Implementation.** The Trash Amendments establish a statewide narrative water quality objective and implementation requirements to control trash, including a prohibition against the discharge of trash to ocean waters, inland surface waters, enclosed bays, and estuaries in California. Within eighteen (18) months of the effective date (i.e. by June 2, 2017), for each MS4 that has been issued a National Pollutant Discharge Elimination System (NPDES) permit by the San Diego Water Board with regulatory authority over priority land uses in the San Diego Region, the San Diego Water Board is required to modify, re-issue, or adopt an applicable MS4 permit, or issue an order pursuant to Water Code section 13267 or 13383 to implement the Trash Amendments.

**4. Persons Responsible for the Discharges of Trash.** The owners and operators of Phase I MS4s are responsible for discharges of waste, including trash, from land uses and locations within their jurisdictions through their MS4s to ocean waters, inland surface waters, enclosed bays, and estuaries in the San Diego Region. In the San Diego Region, owners and operators of Phase I MS4s (herein referred to as MS4 permittees) include the following entities:

- County of Orange
  - City of Aliso Viejo
  - City of Dana Point
  - City of Laguna Beach
  - City of Laguna Hills
  - City of Laguna Niguel
  - City of Laguna Woods
- County of Riverside
  - City of Menifee<sup>2</sup>
  - City of Murrieta
  - City of Temecula
  - City of Wildomar
- County of San Diego
  - City of Carlsbad
  - City of Chula Vista
  - City of Coronado
  - City of Del Mar
  - City of El Cajon
  - City of Encinitas
  - City of Escondido
  - City of Imperial Beach
  - City of La Mesa
  - City of Lemon Grove
- City of Lake Forest<sup>1</sup>
- City of Mission Viejo
- City of Ranch Santa Margarita
- City of San Clemente
- City of San Juan Capistrano
- Orange County Flood Control District
- Riverside County Flood Control and Water Conservation District
- City of National City
- City of Oceanside
- City of Poway
- City of San Diego
- City of San Marcos
- City of Santee
- City of Solana Beach
- City of Vista
- San Diego County Regional Airport Authority
- San Diego Unified Port District

**5. Water Quality Standards.** The Trash Amendments established the following statewide narrative water quality objectives for trash in ocean waters, inland surface waters, enclosed bays, and estuaries in California.

<sup>1</sup> On February 10, 2015, the San Diego Water Board and the Santa Ana Water Board entered into an agreement, pursuant to Water Code section 13228, regarding MS4 discharges within the City of Lake Forest geographically located in the San Diego Region. According to the agreement, the City of Lake Forest must participate in preparation and implementation of the Water Quality Improvement Plan for the Aliso Creek Watershed Management Area. The requirements of the Trash Amendments will be incorporated into the Regional MS4 Permit during reissuance which may require an update to the Water Quality Improvement Plan.

<sup>2</sup> On October 26, 2015, the San Diego Water Board and the Santa Ana Water Board entered into an agreement, pursuant to Water Code section 13228, regarding MS4 discharges within the City of Menifee geographically located in the San Diego Region. According to the agreement, the City of Menifee must participate in preparation and implementation of the Water Quality Improvement Plan for the Santa Margarita River Watershed Management Area. The requirements of the Trash Amendments will be incorporated into the Regional MS4 Permit during reissuance which may require an update to the Water Quality Improvement Plan.

- a. The Trash Amendments established the following narrative water quality objective for trash in Chapter II.C.5 of the Ocean Plan:

*“Trash shall not be present in ocean waters, along shorelines or adjacent areas in amounts that adversely affect beneficial uses or cause nuisance.”*

- b. The Trash Amendments established the following narrative water quality objective or trash in Chapter III.A of the ISWEBE Plan:

*“Trash shall not be present in inland surface waters, enclosed bays, estuaries, and along shorelines or adjacent areas in amounts that adversely affect beneficial uses or cause nuisance.”*

Meeting these narrative water quality objectives for trash will be protective and supportive of numerous beneficial uses for the ocean waters, inland surface waters, enclosed bays, and estuaries in the San Diego Region, including but not limited to, wildlife habitat (WILD), marine habitat (MAR), preservation of rare and endangered species (RARE), fish migration (MIGR), navigation (NAV), and water contact and non-contact recreation (REC1 and REC2).

- 6. Trash Discharge Prohibition.** The Trash Amendments established the following discharge prohibition in Chapter III.I.6 of the Ocean Plan and Chapter IV.A.2 of the ISWEBE Plan:

*“The discharge of trash to surface waters of the State or the deposition of trash where it may be discharged into surface waters of the State is prohibited.”*

- 7. MS4 Permit Implementation of the Trash Amendments.** The Trash Amendments are required to be implemented through the incorporation of the trash narrative water quality objectives and discharge prohibition into NPDES MS4 permits. The NPDES MS4 permit then will require the MS4 permittees to comply with the trash narrative water quality objectives and discharge prohibition through the implementation of one of two measures to be selected by the MS4 permittees.

To comply with the trash narrative water quality objectives and discharge prohibition, the MS4 permittees are required to implement either of the following measures:

*Track 1:* Install, operate, and maintain full capture systems for all storm drains that capture runoff from the priority land uses in their jurisdictions; or

*Track 2:* Install, operate, and maintain any combination of full capture systems, multi-benefit projects, other treatment controls, and/or institutional controls within either the jurisdiction of the MS4 permittee or within the jurisdiction of the MS4 permittee and contiguous MS4 permittees. The MS4 permittee shall demonstrate that such combination achieves full capture system equivalency. The MS4 permittee may determine which controls to implement to achieve compliance with full capture system equivalency. It is, however, the State Water Board’s expectation

that the MS4 permittee will elect to install full capture systems where such installation is not cost-prohibitive.

Within three (3) months of the effective date of the first implementing permit, or the receipt of an order issued by the San Diego Water Board pursuant to Water Code section 13267 or 13383, each MS4 permittee is required to provide written notice to the San Diego Water Board stating whether the MS4 permittee elects to comply with the trash discharge prohibition by implementing Track 1 or Track 2. MS4 permittees that elect to implement Track 2 are also required to submit an implementation plan to the San Diego Water Board within eighteen (18) months of the effective date of the first implementing permit, or the receipt of the order issued pursuant to Water Code section 13267 or 13383. The implementation plan is required to describe: (i) the combination of controls selected by the MS4 permittee and the rationale for the selection, (ii) how the combination of controls is designed to achieve full capture system equivalency, and (iii) how full capture equivalency will be demonstrated. The implementation plan is subject to approval by the San Diego Water Board.

**8. Full Capture System Equivalency.** The Trash Amendments define full capture system equivalency as follows:

*“Full capture system equivalency is 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 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 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."*

- 9. Land Uses and Locations Requiring Trash Controls.** The Trash Amendments define land uses and locations that are to be controlled for trash discharges by MS4 permittees:
- a. Priority Land Uses:** Those developed sites, facilities, or land uses (i.e. not simply zoned land uses) within a MS4 permittee's jurisdiction from which discharges of trash are regulated by the Ocean Plan or ISWEBE Plan as follows:
    - High-density residential: all land uses with at least ten (10) developed dwelling units/acre.
    - 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).
    - 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.).
    - Mixed urban: land uses where high-density residential, industrial, and/or commercial land uses predominate collectively (i.e., are intermixed).
    - Public transportation stations: facilities or sites where public transit agencies' vehicles load or unload passengers or goods (e.g., bus stations and stops).
  - b. Equivalent Alternative Land Uses:** An MS4 permittee with regulatory authority over priority land uses may issue a request to the San Diego Water Board that the MS4 permittee be allowed to substitute a land use identified above with an alternate land use within the MS4 permittee's jurisdiction that generates rates of trash that is equivalent to or greater than the priority land use being substituted. 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 "Keeping America Beautiful Visible Litter Survey"; or other information as required by the San Diego Water Board.
  - c. Coordination with California Department of Transportation (Caltrans).** The Trash Amendments (Ocean Plan Chapter III.L.2.b and ISWEBE Plan Chapter IV.A.3.b) require that Caltrans and MS4 permittees coordinate their efforts to install, operate, and maintain full capture systems, multi-benefit projects, other treatment controls, and/or institutional controls in significant trash generating areas and/or priority land

uses.

- d. *Specific Land Uses or Locations Determined by the San Diego Water Board:* The Trash Amendments (Ocean Plan Chapter III.L.2.d and ISWEBE Plan Chapter IV.A.3.d) provide the San Diego Water Board with the authority to determine that specific land uses or locations generate substantial amounts of trash in addition to the priority land uses defined above. In the event the San Diego Water Board makes that determination, the San Diego Water Board may require the MS4 permittees to comply with the requirements of the Trash Amendments with respect to such land uses or locations.

The San Diego Water Board has evaluated the San Diego River Park Foundation's 2013, 2014, and 2015 State of the River reports, and information received in regard to Item 5 on the May 14, 2014 Board meeting agenda pertaining to trash generated by transient encampments in the San Diego River watershed and related water quality issues. Based on this information the San Diego Water Board has determined that transient encampments in the San Diego River watershed are generating substantial trash in amounts that adversely affect beneficial uses or cause nuisance in the San Diego River. This Order requires MS4 permittees in the San Diego River Watershed Management Area to develop plans to address trash runoff from the relevant areas of land affected by transient encampments through Track 1 or Track 2 controls as stipulated in the Trash Amendments (Ocean Plan Chapter III.L.2.d and ISWEBE Plan Chapter IV.A.3.d).

- 10. Compliance Time Schedule.** The Trash Amendments require the implementing permit to state that full compliance with the trash discharge prohibition shall occur within ten (10) years of the effective date of the first implementing permit. In addition, the implementing permit must require the MS4 permittees to demonstrate achievements of interim milestones. In no case may the final compliance date be later than fifteen (15) years from the effective date of the Trash Amendments (i.e. December 2, 2030).
- 11. Monitoring and Reporting.** The Trash Amendments require the implementing permit to include monitoring and reporting requirements. The MS4 permittees will be required to provide reports to the San Diego Water Board on an annual basis to monitor progress toward achieving full compliance with the trash discharge prohibition. The monitoring and reporting requirements are dependent on the measures elected to be implemented by a MS4 permittee.
- 12. Regional MS4 Permit.** On May 8, 2013, the San Diego Water Board adopted Order No. R9-2013-0001, NPDES No. CAS0109266, National Pollutant Discharge Elimination System (NPDES) Permit and Waste Discharge Requirements for Discharges from the Municipal Separate Storm Sewer Systems (MS4s) Draining the Watersheds within the San Diego Region (Regional MS4 Permit). The Regional MS4 Permit initially only incorporated the owners and operators of Phase I MS4s in San Diego County (San Diego County MS4 permittees). The Regional MS4 Permit was subsequently amended in 2015 to incorporate the owners and operators of the Phase I MS4s in south Orange County (Orange County MS4 permittees) and in southwest Riverside County (Riverside

County Copermittees). The San Diego Water Board intends to incorporate the requirements of the Trash Amendments into the Regional MS4 Permit after it expires (June 27, 2018). The renewed Regional MS4 Permit will be the first implementing permit of the Trash Amendments for the MS4 permittees.

**13. Water Quality Improvement Plans.** The Regional MS4 Permit requires the MS4 permittees to develop and implement Water Quality Improvement Plans for ten (10) Watershed Management Areas, designated in the Regional MS4 Permit as shown in Table 1 below:

**Table 1. San Diego Region Watershed Management Areas**

Hydrologic Unit(s)	Watershed Management Area	Major Surface Water Bodies	Responsible MS4 permittees
San Juan (901.00)	South Orange County	<ul style="list-style-type: none"> <li>- Aliso Creek</li> <li>- San Juan Creek</li> <li>- San Mateo Creek</li> <li>- Pacific Ocean</li> <li>- Heisler Park ASBS</li> </ul>	<ul style="list-style-type: none"> <li>- City of Aliso Viejo</li> <li>- City of Dana Point</li> <li>- City of Laguna Beach</li> <li>- City of Laguna Hills<sup>1</sup></li> <li>- City of Laguna Niguel</li> <li>- City of Laguna Woods<sup>1</sup></li> <li>- City of Lake Forest<sup>2</sup></li> <li>- City of Mission Viejo</li> <li>- City of Rancho Santa Margarita</li> <li>- City of San Clemente</li> <li>- City of San Juan Capistrano</li> <li>- County of Orange</li> <li>- Orange County Flood Control District</li> </ul>
Santa Margarita (902.00)	Santa Margarita River	<ul style="list-style-type: none"> <li>- Murrieta Creek</li> <li>- Temecula Creek</li> <li>- Santa Margarita River</li> <li>- Santa Margarita Lagoon</li> <li>- Pacific Ocean</li> </ul>	<ul style="list-style-type: none"> <li>- City of Menifee<sup>3</sup></li> <li>- City of Murrieta<sup>4</sup></li> <li>- City of Temecula</li> <li>- City of Wildomar<sup>4</sup></li> <li>- County of Riverside</li> <li>- County of San Diego</li> <li>- Riverside County Flood Control and Water Conservation District</li> </ul>
San Luis Rey (903.00)	San Luis Rey River	<ul style="list-style-type: none"> <li>- San Luis Rey River</li> <li>- San Luis Rey Estuary</li> <li>- Pacific Ocean</li> </ul>	<ul style="list-style-type: none"> <li>- City of Oceanside</li> <li>- City of Vista</li> <li>- County of San Diego</li> </ul>
Carlsbad (904.00)	Carlsbad	<ul style="list-style-type: none"> <li>- Loma Alta Slough</li> <li>- Buena Vista Lagoon</li> <li>- Agua Hedionda Lagoon</li> <li>- Batiquitos Lagoon</li> <li>- San Elijo Lagoon</li> <li>- Pacific Ocean</li> </ul>	<ul style="list-style-type: none"> <li>- City of Carlsbad</li> <li>- City of Encinitas</li> <li>- City of Escondido</li> <li>- City of Oceanside</li> <li>- City of San Marcos</li> <li>- City of Solana Beach</li> <li>- City of Vista</li> <li>- County of San Diego</li> </ul>
San Dieguito (905.00)	San Dieguito River	<ul style="list-style-type: none"> <li>- San Dieguito River</li> <li>- San Dieguito Lagoon</li> <li>- Pacific Ocean</li> </ul>	<ul style="list-style-type: none"> <li>- City of Del Mar</li> <li>- City of Escondido</li> <li>- City of Poway</li> <li>- City of San Diego</li> <li>- City of Solana Beach</li> <li>- County of San Diego</li> </ul>
Penasquitos (906.00)	Penasquitos	<ul style="list-style-type: none"> <li>- Los Penasquitos Lagoon</li> <li>- Pacific Ocean</li> </ul>	<ul style="list-style-type: none"> <li>- City of Del Mar</li> <li>- City of Poway</li> <li>- City of San Diego</li> <li>- County of San Diego</li> </ul>

**Table 1. San Diego Region Watershed Management Areas**

Hydrologic Unit(s)	Watershed Management Area	Major Surface Water Bodies	Responsible MS4 permittees
	Mission Bay	- Mission Bay - Pacific Ocean - San Diego Marine Life Refuge ASBS	- City of San Diego
San Diego (907.00)	San Diego River	- San Diego River - Pacific Ocean	- City of El Cajon - City of La Mesa - City of San Diego - City of Santee - County of San Diego
Pueblo San Diego (908.00) Sweetwater (909.00) Otay (910.00)	San Diego Bay	- Sweetwater River - Otay River - San Diego Bay - Pacific Ocean	- City of Chula Vista - City of Coronado - City of Imperial Beach - City of La Mesa - City of Lemon Grove - City of National City - City of San Diego - County of San Diego - San Diego County Regional Airport Authority - San Diego Unified Port District
Tijuana (911.00)	Tijuana River	- Tijuana River - Tijuana Estuary - Pacific Ocean	- City of Imperial Beach - City of San Diego - County of San Diego

Notes:

1. By agreement dated February 10, 2015, pursuant to Water Code section 13228, the Phase I MS4 discharges within the jurisdiction of the City of Laguna Hills and the City of Laguna Woods located in the Santa Ana Region are regulated by San Diego Water Board Order No. R9-2013-0001 as amended by Order No. R9-2015-0001, upon the later effective date of Order No. R9-2015-0001 or Santa Ana Water Board Tentative Order No. R8-2015-0001. The City of Laguna Hills and Laguna Woods must also comply with the requirements of the San Diego Creek/Newport Bay TMDL in section XVIII of Santa Ana Water Board Order No. R8-2015-0001.
2. By agreement dated February 10, 2015, pursuant to Water Code section 13228, Phase I MS4 discharges within the City of Lake Forest located within the San Diego Water Board Region are regulated by the Santa Ana Water Board Order No. R8-2015-0001 (NPDES No. CAS618030) upon the later effective date of this Order or Santa Ana Water Board Tentative Order No. R8-2015-0001. In accordance with the terms of the agreement between the San Diego Water Board and the Santa Ana Water Board, the City of Lake Forest must implement the requirements of the Bacteria TMDL in Attachment E of this Order, participate in preparation and implementation of the Water Quality Improvement Plan for the Aliso Creek Watershed Management Area as described in Provision B of this Order and continue implementation of its over-irrigation discharge prohibition in its City Ordinance, Title 15, Chapter 15, section 14.030, List (b).
3. By agreement dated October 26, 2015, pursuant to Water Code section 13228, Phase I MS4 discharges within the City of Menifee located within the San Diego Water Board Region are regulated by the Santa Ana Water Board Order No. R8-2010-0033 as it may be amended or reissued (NPDES No. CAS618033) upon the later effective date of this Order. In accordance with the terms of the agreement between the San Diego Water Board and the Santa Ana Water Board, the City of Menifee must participate in preparation and implementation of the Water Quality Improvement Plan for the Santa Margarita River Watershed Management Area as described in Provision B of this Order.
4. By agreement dated October 26, 2015, pursuant to Water Code section 13228, the Phase I MS4 discharges within the jurisdiction of the City of Murrieta and the City of Wildomar located in the Santa Ana Region are regulated by San Diego Water Board Order No. R9-2013-0001 as amended by Orders No. R9-2015-0001 and R9-2015-0100. The City of Murrieta and City of Wildomar must also comply with the requirements of the Lake Elsinore/Canyon Lake Nutrient TMDLs in section VI.D.2 of Santa Ana Water Board Order No. R8-2010-0033, or corresponding section as it may be amended or reissued.

The Water Quality Improvement Plans include the following: (a) identification of priority water quality conditions that need to be addressed to improve the water quality in each Watershed Management Area; (2) numeric goals for the highest priority water quality conditions to be achieved that will demonstrate discharges from the MS4s are not causing or contributing to exceedances of applicable water quality objectives, or water quality objectives are being attained in receiving waters; (3) a description of the water quality improvement strategies that will be and may be implemented to achieve the numeric goals; and (4) schedules for implementing the water quality improvement strategies and achieving the numeric goals.

The Regional MS4 Permit also requires incorporation of implementation plans for applicable Total Maximum Daily Loads (TMDLs) and Areas of Special Biological Significance (ASBS), which include interim and final water quality-based effluent limitations, compliance strategies, and compliance schedules, into the Water Quality Improvement Plans. The implementation measures, interim milestones, and

compliance schedules for Track 1 or Track 2 of the Trash Amendments shall also be incorporated into the Water Quality Improvement Plans to be implemented by the MS4 permittees as part of the adaptive management process.

Through the issuance of this Order pursuant to Water Code section 13267, the San Diego Water Board intends the MS4 permittees to incorporate the requirements of the Trash Amendments into the Water Quality Improvement Plans after renewal of the Regional MS4 Permit.

**14. Basis for Requiring Technical and Monitoring Reports.** Water Code section 13267 provides that the San Diego Water Board may require dischargers, past dischargers, or suspected dischargers to furnish those technical or monitoring reports as the San Diego Water Board may specify, provided that the burden, including costs, of these reports, must bear a reasonable relationship to the need for the reports and the benefits to be obtained from the reports. The technical and monitoring reports required under this Investigative Order are needed to provide information to the San Diego Water Board regarding (a) the measures each MS4 permittee is electing to implement (i.e. Track 1 or Track 2) within its jurisdiction to comply with the trash discharge prohibition, (b) the plan that will be implemented by each MS4 permittee to comply with the trash discharge prohibition, (c) the interim milestones that each MS4 permittee will achieve within its jurisdiction, (d) the schedules to achieving the interim milestones, and full compliance with the trash discharge prohibition, and (e) the monitoring and reporting that will be implemented to demonstrate progress toward achieving full compliance with the trash discharge prohibition.

**15. California Environmental Quality Act.** Adoption of this Order is for the protection of the environment and is exempt from the provisions of the California Environmental Quality Act (CEQA) (Public Resources Code section 21000 et seq.) in accordance with section 15308, Chapter 3, Title 14 of the California Code of Regulations (CCR). This action is also exempt from the provisions of CEQA in accordance with section 15061(b)(3) of Chapter 3, Title 14 of the CCR because it can be seen with certainty that there is no possibility that the activity in question may have a significant effect on the environment.

**IT IS HEREBY ORDERED**, pursuant to California Water Code section 13267, that the MS4 Permittees must comply with the following directives:

#### **A. TECHNICAL AND MONITORING REPORTS**

- 1. Written Notices.** Each MS4 permittee must submit to the San Diego Water Board, **no later than three (3) months from the date of this Order [INSERT DATE]**, a written notice stating whether the MS4 permittee will implement Track 1 or Track 2 to comply with the trash discharge prohibition in the Ocean Plan and ISWEBE Plan.
- 2. Track 2 Implementation Plans.** Each MS4 permittee electing to comply with Track 2 must submit, **no later than eighteen (18) months from the date of this Order**

**[INSERT DATE]**, an implementation plan for each Watershed Management Area described in Table 1 in Finding 13 above that describes:

- a. The combination of controls<sup>3</sup> selected by the MS4 permittee and the rationale for each 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. How the trash implementation plans will be monitored and assessed in Water Quality Improvement Plan Annual Reports;
  - e. Requests by MS4 permittees, if any, for authorization to substitute a Priority Land Use described in Finding 9 above with an Equivalent Alternate Land Use that generates rates of trash equivalent to, or greater than, the Priority Land Use being substituted. The MS4 permittees must provide data or information which establishes that trash generation rates from the Alternate Land Use(s) are greater than the Priority Land Use(s) being substituted;
  - f. A compliance time schedule based on the shortest practicable time to achieve full compliance with the trash discharge prohibition, including interim milestones (such as average load reductions of ten percent per year) and a final compliance date. The final compliance date must not be later than fifteen (15) years from the effective date of the Trash Amendments (i.e. December 2, 2030).
- 3. Coordination with Caltrans.** Each MS4 permittee subject to this Order must submit, **no later than eighteen (18) months from the date of this Order [INSERT DATE]**, a description of how MS4 permittees will coordinate their efforts to install, operate, and maintain full capture systems, multi-benefit projects, and other controls with Caltrans in significant trash generating areas and/or priority land uses, as applicable.
- 4. Transient Encampments in the San Diego River.** MS4 permittees discharging to the San Diego River watershed (Cities of San Diego, Santee, El Cajon, La Mesa, and County of San Diego), must submit, **no later than eighteen (18) months from the date of this Order [INSERT DATE]**, a description of how trash generated from transient encampments in the San Diego River Watershed Management Area will be addressed.

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<sup>3</sup> Controls include, but are not limited to, treatment controls and institutional controls, as defined in the Appendix D to the California Ocean Plan and Appendix E of the Inland Surface Waters, Enclosed Bays, and Estuaries of California.

## B. PROVISIONS

### 1. **Signatory Requirements.** All documents submitted to the San Diego Water Board must be signed and certified.

#### a. All reports required by this Order must be signed as follows:

- (1) For a corporation, by a principal executive officer of at least the level of vice-president;
- (2) For a partnership or sole proprietorship, by a general partner or the proprietor, respectively;
- (3) For a municipality, state, federal or other public agency, by either a principal executive or ranking elected official.
- (4) By a duly authorized representative of the person designated above (B.6.a.(1), B.6.a.(ii), or B.6.a.(iii)). A person is a duly authorized representative only if:
  - (a) The authorization is made in writing by a person described in paragraph B.6.a above;
  - (b) The authorization specifies either an individual or position having responsibility for the overall operation of the regulated facility or activity; and
  - (c) The written authorization is submitted to the San Diego Water Board.

#### b. Any person signing a document required by this Order 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."*

### 2. **Submittal of Documents.** All documents submitted to the San Diego Water Board in compliance with this Order must be submitted in electronic format (compact disk (CD-ROM or CD) in a Portable Document Format (PDF), unless otherwise directed. All electronic format documents required under this Order must be submitted to:

Executive Officer  
California Regional Water Quality Control Board  
San Diego Region  
2375 Northside Drive, Suite 100  
San Diego, CA 92108  
Attn: Laurie Walsh, PE, Storm Water Management Unit

- 3. Changes to Order.** This Order may be amended, rescinded, or updated by the Executive Officer. The MS4 permittees may propose changes or alternatives to the requirements in this Order if a valid rationale for the changes is shown. The filing of a request by a MS4 permittees for amending, rescinding, or updating this Order, or notification of planned changes or anticipated noncompliance does not stay any condition of this Order.

## C. NOTIFICATIONS

- 1. Enforcement Discretion.** The San Diego Water Board reserves its right to take any enforcement action authorized by law for violations of the terms and conditions of this Order.
- 2. Requesting Administrative Review by the State Water Board.** Any aggrieved person may petition the State Water Board regarding this Order in accordance with Water Code section 13320 and the 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 following the date of this Order. Copies of the laws and regulations applicable to filing petitions may be found on the State Water Board website at [http://www.waterboards.ca.gov/public\\_notices/petitions/water\\_quality](http://www.waterboards.ca.gov/public_notices/petitions/water_quality) or will be provided upon request.

For instructions on how to file a petition for review, see the State Water Board website at:  
[http://www.waterboards.ca.gov/public\\_notices/petitions/water\\_quality/wqpetition\\_instr.shtml](http://www.waterboards.ca.gov/public_notices/petitions/water_quality/wqpetition_instr.shtml)

Ordered By: \_\_\_\_\_  
David W. Gibson  
EXECUTIVE OFFICER  
Date

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
SAN DIEGO REGION**

**NOTICE OF OPPORTUNITY TO REVIEW AND COMMENT**

**PROPOSED ISSUANCE OF TENTATIVE ORDER NO. R9-2016-0205, AN INVESTIGATIVE  
ORDER TO THE OWNERS AND OPERATORS OF THE PHASE I MUNICIPAL SEPARATE  
STORM SEWER SYSTEMS (MS4s) DRAINING THE WATERSHEDS  
WITHIN THE SAN DIEGO REGION**

**TO SUBMIT TECHNICAL AND MONITORING REPORTS PERTAINING TO  
THE CONTROL OF TRASH IN DISCHARGES FROM PHASE I MS4s TO OCEAN WATERS,  
INLAND SURFACE WATERS, ENCLOSED BAYS, AND ESTUARIES  
IN THE SAN DIEGO REGION**

The California Regional Water Quality Control Board, San Diego Region (San Diego Water Board) is releasing, for public review and comment:

- Tentative Order No. R9-2016-0205 (Tentative Order) an Investigative Order directing the owners and operators of the Phase I MS4s (municipal Copermittees) draining the watersheds within the San Diego Region to submit technical and monitoring reports pertaining to the control of trash in discharges from MS4s to ocean waters, inland surface waters, enclosed bays, and estuaries in the San Diego Region.

On April 7, 2015, the State Water Resources Control Board adopted Resolution No. 2015-0019, amending the *Water Quality Control Plan for Ocean Waters of California* (Ocean Plan) and the *Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (ISWEBE Plan) to address the impacts of trash to the surface waters of California (referred to hereafter as the Trash Amendments).

This Tentative Order will require each municipal Copermittee to comply with the Trash Amendments by: 1) submitting a written notice to the San Diego Water Board, no later than three (3) months from the date of the Order, stating whether the Copermittee will implement Track 1 or Track 2 (as described in the Trash Amendments), and 2) if Track 2 is selected, submitting a trash control implementation plan to the San Diego Water Board within eighteen (18) months from the date of the Order.

**Document Availability**

The Tentative Order and attachments thereto, and other related documents are available on the San Diego Water Board website at:

[http://www.waterboards.ca.gov/sandiego/board\\_decisions/tentative\\_orders/](http://www.waterboards.ca.gov/sandiego/board_decisions/tentative_orders/).

Interested persons may also receive copies of the Tentative Order by contacting Ms. Christina Arias at (619) 521-3361 or email at [Christina.Arias@waterboards.ca.gov](mailto:Christina.Arias@waterboards.ca.gov) or by visiting the San Diego Water Board's office at 2375 Northside Drive, Suite 100, San Diego, California 92108-2700, weekdays between 8:00 a.m. and 5:00 p.m.

**Submission of Written Comments**

The submission of written comments is the opportunity for interested persons to raise and comment on issues pertaining to the Tentative Order. All written comments pertaining to the Tentative Order to be considered by the San Diego Water Board must be received no later than

**5:00 p.m. on Wednesday December 14, 2016.** Written comments must be e-mailed to [sandiego@waterboards.ca.gov](mailto:sandiego@waterboards.ca.gov) with attention to Christina Arias. Please indicate in the subject line of written comments "Comment - Tentative Order No.R9-2016-0205" indicating the Tentative Order being addressed. The early submission of written comments on the Tentative Order is encouraged. The San Diego Water Board will prepare written responses to significant comments that are timely received.

Consistent with State Water Resources Control Board regulations that apply to this proceeding, written comments received after 5:00 p.m. on Wednesday December 14, 2016, will not be accepted and will not be incorporated into the administrative record if doing so would prejudice any party.

**Procedure for Issuance of Tentative Order**

On the basis of preliminary staff review and application of lawful standards and regulations, the Executive Officer of the San Diego Water Board, pursuant to delegated authority from the San Diego Water Board, tentatively proposes to issue Order No. R9-2016-0205 without a public hearing. Because interested persons may not have an opportunity to make oral comments, interested persons must submit all comments in writing as described above. The Executive Officer will consider all timely written comments prior to administratively issuing Order No. R9-2016-0205.

**Contact for Further Information**

Please contact Christina Arias by phone at (619) 521-3361 or e-mail at [Christina.Arias@waterboards.ca.gov](mailto:Christina.Arias@waterboards.ca.gov) for information regarding the above listed proposed action. Please bring the foregoing to the attention of any person known to you who would be interested in these matters.

**From:** [Arias, Christina@Waterboards](mailto:Arias.Christina@Waterboards)  
**To:** [Gilb, Richard](mailto:Gilb, Richard); [Godby, Kim](mailto:Godby, Kim); "[Helen M. Davies](mailto:Helen.M.Davies)" ([hdavies@ci.escondido.ca.us](mailto:hdavies@ci.escondido.ca.us)); [Joe Kuhn](mailto:Joe.Kuhn); [Lahsaiezadeh, Mo](mailto:Lahsaiezadeh, Mo); [ctipton@cityofsanteeca.gov](mailto:ctipton@cityofsanteeca.gov); [Weber, Jo Ann](mailto:Weber, Jo Ann); [eluke@ci.carlsbad.ca.us](mailto:eluke@ci.carlsbad.ca.us); [James Wood Jr](mailto:James.Wood.Jr) ([James.Wood@carlsbadca.gov](mailto:James.Wood@carlsbadca.gov)); [kelly@mogawaeng.com](mailto:kelly@mogawaeng.com); "[Erik Steenblock](mailto:Erik.Steenblock)" ([esteenblock@encinitasca.gov](mailto:esteenblock@encinitasca.gov)); [mtamimi@lemongrove.ca.gov](mailto:mtamimi@lemongrove.ca.gov); [ssstrapac@poway.org](mailto:ssstrapac@poway.org); [Karen Holman](mailto:Karen.Holman); [dgoldberg@cosb.org](mailto:dgoldberg@cosb.org); [Ron Borromeo](mailto:Ron.Borromeo) ([rborromeo@cosb.org](mailto:rborromeo@cosb.org)); [bsalem@chulavistaca.gov](mailto:bsalem@chulavistaca.gov); [Campos, Jaime](mailto:Campos, Jaime) ([JCampos@ci.el-cajon.ca.us](mailto:JCampos@ci.el-cajon.ca.us)); [Chris Helmer](mailto:Chris.Helmer) ([chelmer@imperialbeachca.gov](mailto:chelmer@imperialbeachca.gov)); [John Quenzer](mailto:John.Quenzer) ([jquenzer@dmaxinc.com](mailto:jquenzer@dmaxinc.com)); [kmuthusamy@nationalcityca.gov](mailto:kmuthusamy@nationalcityca.gov); [Kleis, Andrew](mailto:Kleis, Andrew); [Brown, Clement](mailto:Brown, Clement); [Danek, Karina](mailto:Danek, Karina); [Harry, Jim](mailto:Harry, Jim) ([JHarry@san-diego.gov](mailto:JHarry@san-diego.gov)); [rthornberry@san-marcos.net](mailto:rthornberry@san-marcos.net); [Filar, Cheryl](mailto:Filar, Cheryl); [Moy Yahya](mailto:Moy.Yahya); [afalk@ci.laguna-hills.ca.us](mailto:afalk@ci.laguna-hills.ca.us); [Devin Slaven](mailto:Devin.Slaven); [Greg Yi](mailto:Greg.Yi); [hajideh@sanjuancapistrano.org](mailto:hajideh@sanjuancapistrano.org); [Lisa Zawaski](mailto:Lisa.Zawaski); [Nancy Palmer](mailto:Nancy.Palmer); [Ames, Joe](mailto:Ames, Joe) ([MISSIONVIEJO@DOT](mailto:MISSIONVIEJO@DOT)); [Rae Beimer](mailto:Rae.Beimer); [jlee@cityofrsm.org](mailto:jlee@cityofrsm.org); [mvondrak@lagunabeachcity.net](mailto:mvondrak@lagunabeachcity.net); [Christopher Macon](mailto:Christopher.Macon); [Chris Crompton](mailto:Chris.Crompton); [Boon, Richard](mailto:Boon, Richard) ([Richard.Boon@ocpw.ocgov.com](mailto:Richard.Boon@ocpw.ocgov.com)); [caseyz@san-clemente.org](mailto:caseyz@san-clemente.org); [Bill Woolsey](mailto:Bill.Woolsey); [bmoehling@murrieta.org](mailto:bmoehling@murrieta.org); [Aldo Licitra](mailto:Aldo.Licitra); [shorn@rceo.org](mailto:shorn@rceo.org); [Matt Bennett](mailto:Matt.Bennett) ([mbennett@cityofwildomar.org](mailto:mbennett@cityofwildomar.org)); [erlomeli@rcflood.org](mailto:erlomeli@rcflood.org); [sglynn@cityofmenifee.us](mailto:sglynn@cityofmenifee.us)  
**Cc:** [Walsh, Laurie@Waterboards](mailto:Walsh, Laurie@Waterboards); [Ryan, Erica@Waterboards](mailto:Ryan, Erica@Waterboards); [Felix, Tony@Waterboards](mailto:Felix, Tony@Waterboards); [Mitchell, Roger@Waterboards](mailto:Mitchell, Roger@Waterboards); [Arias, Christina@Waterboards](mailto:Arias, Christina@Waterboards)  
**Subject:** Draft Trash Investigative Order available for review and comment  
**Date:** Thursday, November 10, 2016 1:07:28 PM  
**Attachments:** [2016-1110 Cvr Ltr Draft Trash IO signed.pdf](#)  
[2016-1110 Draft Trash Amendments Investigative Order.pdf](#)  
[2016-1110 Notice of Comment Period Draft Trash IO.pdf](#)  
[image003.jpg](#)

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Dear Regional MS4 Permit Copermittees,

The San Diego Water Board is preparing to issue an Investigative Order to all parties regulated under the Regional MS4 Permit, as part of implementation of the Trash Amendments that were adopted by the State Water Resources Control Board in 2015. We are issuing a draft of the Investigative Order for a 30-day review and comment period, and hope to receive feedback from you before a final version is issued early in 2017. Attached please find a cover letter, the draft Investigative Order, and a Notice with instructions for submitting comments.

You are invited to meet with us on Wednesday November 16, 2016 to discuss the draft Investigative Order. We have set up a meeting at the City of Vista:

Wednesday Nov. 16, 2016, 9:30-11:30 am  
City of Vista—Community Room  
200 Civic Center Drive

WEBEX conference calling will be available if you cannot attend in person.

Please review the attached documents and submit comments by **December 14, 2016**. Thanks and hope to see you on the 16<sup>th</sup>.

*Christina Arias, PE*

Water Resource Control Engineer  
San Diego Regional Water Quality Control Board  
2375 Northside Drive, Suite 100  
San Diego, CA 92108  
Tel. (619) 521-3361  
[Christina.Arias@waterboards.ca.gov](mailto:Christina.Arias@waterboards.ca.gov)

save\_water



**From:** [lyris@swrcb18.waterboards.ca.gov](mailto:lyris@swrcb18.waterboards.ca.gov)  
**To:** [Arias\\_Christina@Waterboards](mailto:Arias_Christina@Waterboards)  
**Subject:** Draft Trash Investigative Order available for review and comment  
**Date:** Thursday, November 10, 2016 1:13:41 PM  
**Attachments:** [image002.jpg](#)  
[2016-1110 Cvr Ltr Draft Trash IO signed.pdf](#)  
[2016-1110 Draft Trash Amendments Investigative Order.pdf](#)  
[2016-1110 Notice of Comment Period Draft Trash IO.pdf](#)

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 This is a message from the California Regional Water Quality Control Board, San Diego Region (9).

Dear Region 9 MS4 Permit Stakeholder,

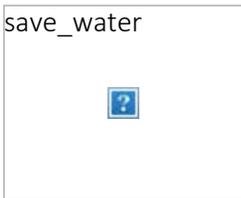
The San Diego Water Board is preparing to issue an Investigative Order to all parties regulated under the Regional MS4 Permit, as part of implementation of the Trash Amendments that were adopted by the State Water Resources Control Board in 2015. We are issuing a draft of the Investigative Order for a 30-day review and comment period. Attached please find a cover letter, the draft Investigative Order, and a Notice with instructions for submitting comments.

Comments on the draft Investigative Order are due no later than 5 p.m., December 14, 2016.

Thank you and feel free to contact me with any questions.

*Christina Arias, PE*

Water Resource Control Engineer  
San Diego Regional Water Quality Control Board  
2375 Northside Drive, Suite 100  
San Diego, CA 92108  
Tel. (619) 521-3361  
[Christina.Arias@waterboards.ca.gov](mailto:Christina.Arias@waterboards.ca.gov)



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Summary of Questions/Comments from San Diego Region Phase I MS4 Copermittees-  
Draft Trash Investigative Order No. R9-2016-0205

Meeting with Copermittees and San Diego Water Board, 12/1/16

QUESTIONS

- What does the Tentative Investigative Order (Draft IO)/Trash Amendments mean for current Water Quality Improvement Plan priorities?
- What other sorts of guidance will be provided by the State Water Board? For instance, swapping Priority Land Uses (with alternatives) and development of monitoring plans?
- What guidance will the State Water Board be providing to Phase I MS4 Copermittees on switching between Tracks 1 and 2?
- Wonder if the Draft Trash IO is the best regulatory mechanism for addressing homeless camps? Would a separate order issued by the San Diego Water Board be better at addressing homeless camp trash issues? Homeless camps are more of a nonpoint source rather than a point source.
- Was there a particular segment(s) of the San Diego River of particular interest by the San Diego Water Board in regards to homeless camps?
- What are the San Diego Water Board's expectations of the Copermittees to coordinate with CalTrans?
- Why is CalTrans not included in this Draft IO?
- What is the timeline for the State Water Board to issue a similar trash IO for CalTrans?
- What about coordination efforts with schools?
- Are Phase II permittees going to have similar efforts to comply with the Trash Amendments?
- How does the San Diego Water Board envision monitoring and reporting requirements to be different between Tracks 1 and 2?
- Is water quality monitoring required for both Tracks?
- Can a Phase I Copermittee declaring Track 2 for its jurisdiction, implement Track 1 for specific drainage areas?
- Can a larger city, with multiple watersheds, place more effort on reducing trash in one watershed versus another? Can the monitoring and reporting requirements be flexible to reflect the varying level of effort?
- Is the San Diego Water Board okay with Phase I Copermittees focusing efforts more strongly on one watershed over another?
- Is there going to be any leniency granted for Phase I Copermittees inheriting/inundated with trash from other jurisdictions, CalTrans, or other entities where the Copermittees do not have any legal authority?
- The Trash Amendments require Copermittees to establish milestones. What is the relationship between Trash milestones and the milestones for other constituents in the Water Quality Improvement Plans?
- If Phase I Copermittees implement full capture systems, can they be modified based on new information to ensure 100% compliance?
- Wonder if Draft IO should say less about Water Quality Improvement Plans since the Amendments envision this as a jurisdictional requirement?
- Is the intent of the Draft IO to use the specific terms as defined in the Trash Amendments?
- If a Phase I Copermittee monitors and demonstrates that they can achieve compliance with the Trash Amendments (full capture equivalency), can the Copermittee then reduce/eliminate the required monitoring and reporting?
- What does the Water Board expect from home owners associations, Native American groups, and other private entities in terms of retrofitting?

Summary of Questions/Comments from San Diego Region Phase I MS4 Copermittees-  
Draft Trash Investigative Order No. R9-2016-0205

Meeting with Copermittees and San Diego Water Board, 12/1/16

- What part of Water Code Section 13267 allows the Water Boards to require Copermittees to make a decision (choose a Track), as opposed to conducting an investigation?
- If a Phase I Copermittee implements Track 2, can current, ongoing efforts be used as credit towards compliance, or would the Copermittee be required to describe and implement totally new efforts?
- If a Phase I Copermittee chooses Track 1, looking at land uses, would the IO require municipalities to go into private properties to perform retrofitting?
- For the San Diego River, there are already trash measures described in the Water Quality Improvement Plan. What does the Draft IO require in addition?
- When does the San Diego Water Board anticipate incorporating the Trash Amendments into the Regional MS4 Permit?
- What is the first “implementing permit”?
- What will be the Copermittee’s responsibility with trash from transients, the wind, boaters, or beach users?
- Can Phase I Copermittees prioritize/de-prioritize receiving water bodies based on current information?
- What happens if trash becomes a High Priority in a Water Quality Improvement Plan—would the numeric milestones need to be developed jointly with all Copermittees, or could each Copermittee use the individual numeric goals developed as part of the Trash Amendments?

COMMENTS

- Important to have an approved list of Full Capture Devices and guidance from the State Water Board before the issuance of the Final IO.
- The approved list of Full Capture Devices and guidance from the State Water Board will be important to know in evaluating implementation of Track 1/Track 2, specifically the crafting of cost analysis presented to managements.
- Addressing homeless camps is very complicated, requiring multiple departments to coordinate efforts.
- Phase I Copermittees express the importance of other dischargers (Phase II, CalTrans, etc.) to have consistent requirements with regards to the Trash Amendments.
- Many permittees supportive of jurisdictional reporting over watershed reporting.
- Since enforcement will focus on individual Copermittees, the Draft IO should focus on jurisdictional approach and not watershed approach.
- The nexus between land uses subject to trash requirements and receiving water conditions is missing.



December 5, 2016

Ms. Christina Arias  
San Diego Regional Water Quality Control Board  
2375 Northside Dr. Ste 100  
San Diego, CA 92108

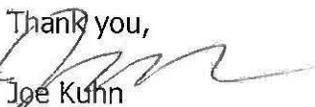
**Subject: Comment: Tentative Order R9-2016-0205**

Ms. Arias,

Upon review of the Tentative Order, the City of La Mesa has the following comments.

1. Item 9 Section d discusses transient encampments within the San Diego River Watershed. The City of La Mesa requests that this topic be removed from the Tentative Order. Transient encampments involve legal issues that are much more complicated than the scope of this Tentative Order. Transient encampments involve property rights and human rights issues and often involve persons living within the designated waterbody. Litter from transients should be addressed identically to that of any other. Requiring additional plans for the San Diego River Watershed is not appropriate, as much of the issue revolves around persons living in the waterbody with significant legal and ethical hurdles regarding encampments.
2. The City of La Mesa does not dispute the water quality benefits of controlling trash, however, the amendments represent added costs, and may take away from other planned water quality efforts. Not only are we concerned with the initial cost of installing these full capture devices but also the ongoing costs of managing and maintaining them. The City of La Mesa recommends that the State and Regional Water Boards partner with permittees to explore possible ways to fund these trash control measures.

Thank you,

  
Joe Kuhn  
Storm Water Program Manager  
City of La Mesa



# County of San Diego

**RICHARD E. CROMPTON**  
DIRECTOR

DEPARTMENT OF PUBLIC WORKS  
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December 14, 2016

Christina Arias, PE  
Water Resource Control Engineer  
San Diego Regional Water Quality Control Board  
2375 Northside Drive, Suite 100  
San Diego, CA 92108-2700

Electronic submission: [sandiego@waterboards.ca.gov](mailto:sandiego@waterboards.ca.gov)

Dear Ms. Arias:

**COMMENTS ON TENTATIVE INVESTIGATIVE ORDER - NO. R9-2016-0205  
REFERENCE 786088: CARIAS**

The County of San Diego (County) appreciates the opportunity to comment on Tentative Investigative Order R9-2016-0205, An Order Directing the Owners and Operators of Phase I Municipal Separate Storm Sewer Systems (MS4s) draining the Watersheds within the San Diego Region to submit Technical and Monitoring Reports Pertaining to the Control of Trash in Discharges from Phase I MS4s to Ocean Waters, Inland Surface Waters, Enclosed Bays, and Estuaries in the San Diego Region (Tentative Order). The County acknowledges that the San Diego Regional Water Quality Control Board released the Tentative Investigative Order to meet the requirements of the Statewide Trash Amendments to the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California (ISWEBE Plan) and the Water Quality Control Plan for Ocean Waters of California (Ocean Plan) (referred to hereafter as "Trash Amendments"). With this in mind, the County respectfully submits the following comments to reflect our concerns with the Tentative Order as drafted and to propose improvements to the revised Order.

The County has identified eight key areas of concern within the Tentative Order as described in the detailed comments below. For each area of concern, a recommendation is included. Related detailed suggestions for modifications to the Tentative Order are included in "redline/strikeout" form in Attachment A.

Ms. Arias  
December 14, 2016  
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***Issue #1 – Clear Definition of Track 1 and Track 2 Requirements and Consistency with Trash Amendments***

***(Findings 7, 8, 9.a, 9.b, 11, 14; Directives A.2.e, A.3.f)***

The Trash Amendments provide jurisdictions with two tracks for compliance. The tracks differ in terms of compliance methodology, timelines, and reporting and monitoring requirements. Selecting which track to follow is one of the first decisions the County and other jurisdictions will face, and this choice will guide future implementation efforts. Moreover, because the Tentative Order will be issued prior to incorporation of the Trash Amendments into the Regional MS4 Permit, it will be the regulatory document that most directly defines the minimum requirements for complying with a Track 1 or Track 2 approach. It is therefore essential that the Tentative Order's findings and directives clearly define the requirements for Track 1 and 2 and the differences between them.

In addition, the County requests revisions to the Tentative Order to ensure that its language is consistent with language from the Trash Amendments. Statewide consistency is a stated goal of the State Water Resources Control Board (State Water Board) in developing the Trash Amendments. There are several portions of the Tentative Order, such as Findings 7 and 9, where Amendment language has been incompletely incorporated. These omissions reduce needed flexibility that will help ensure effective and efficient trash reduction over the long-term.

***Recommendations (with specific language suggestions provided in Attachment A):***

- 1. Finding 7. Under a Track 2 approach, implementation actions are not limited to the priority land use areas. Add language from the Trash Amendments.***
- 2. Finding 8 presents the definition for Full Capture System Equivalency. However, the definition omits some of the language from the Trash Amendments that provides flexibility to the MS4 Permittees. Add the omitted language from the Trash Amendments to the Tentative Investigative Order.***
- 3. Finding 9.a should clarify that the priority land uses only apply under a Track 1 approach.***
- 4. Finding 9.b should include all language from the Trash Amendments.***
- 5. Finding 11 needs to provide more clarity regarding the reporting requirements under Track 1 vs. Track 2. Add language from the Trash Amendments.***
- 6. Finding 14 should include clarifying language to specify which requirements apply to Track 1, Track 2, or both.***
- 7. Directive A.2.e incorrectly links Priority Land Uses and Equivalent Alternative Land Uses with a Track 2 approach. Suggest deletion of A.2.e.***
- 8. Directive A.2.f imposes a schedule based on the "shortest practicable time", which is not consistent with the schedule requirements within the Trash Amendments. Recommend deletion of "based on the shortest practicable time" to maintain consistency. Footnote 3 should also be revised for consistency with the Trash Amendments.***

Ms. Arias  
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## **Issue #2 – Incorporation of Compliance Time Schedule in Implementing Permit**

### ***(Finding 10)***

The inclusion of an enforceable compliance schedule is not an appropriate subject to be addressed in an Investigative Order according to the statutory terms and conditions of Water Code Sections 13267 and 13383 combined. It is imperative that any compliance schedule be adopted directly into the MS4 Permit to ensure proper legal protection for permittees while they implement the plans and practices to meet the timeframes contained within the Trash Amendments.

*Recommendation: Revise language from the Compliance Time Schedule finding (Finding 10) to state the Regional MS4 Permit reissued after June 27, 2018 will be the first implementing permit and will contain a compliance time schedule consistent with the requirements of the Trash Amendments.*

## **Issue #3 – Incorporation into the Water Quality Improvement Plan**

### ***(Finding 13, Directive A.2)***

The Trash Amendments were developed to focus on trash originating from the combinations of land uses and landscape features which are unique to every jurisdiction. By offering the track choices, the State Water Board has shown its desire to develop a tool that is functional for the particular characteristics of each jurisdiction founded on the premise that different kinds of land uses “produce” trash at different rates and each jurisdiction has different combinations and locations of those land uses. For this reason, the Amendments do not fit well into a watershed-based regulatory context, as they are designed for use on a jurisdiction-by-jurisdiction basis. For example, under Track 2, a jurisdiction’s Full Capture System Equivalency value is developed based on its own combination of Priority Land Uses and is a value specific only to that jurisdiction.

The County is a Copermittee in eight watersheds within the San Diego region, and will develop compliance approaches based on its own jurisdictional responsibilities, which reflect the characteristics of the unincorporated portions of San Diego County at large, not based on watershed boundaries. For this reason, the County feels that Finding 13 of the Tentative Order should provide flexibility for jurisdictions by including the option of incorporating Amendment compliance language into the Water Quality Improvement Plans or the Jurisdictional Runoff Management Plan (JRMP) or a combination of the Water Quality Improvement Plans and JRMP. Jurisdictions would then have the choice of determining which method best meets their situation. As discussed with Regional Board staff during a meeting on December 1, 2016, it is possible that over time, trash could be raised to the highest priority water quality condition in a particular watershed. If this happens, then a goal based on watershed or sub-watershed scale implementation may be appropriate.

*Recommendation: Delete Finding 13 and Revise Finding 12 to allow the flexibility for agencies to include their approach for compliance with the Trash Amendments, whether Track 1 or Track 2, within the Water Quality Improvement Plans or their respective JRMPs or in a combination of the Water Quality Improvement Plans and JRMPs. The options should also be supported with revisions to the language in Directive A.2.*

Ms. Arias  
December 14, 2016  
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#### **Issue #4 – Compliance through Implementation of a Track 1 or Track 2 Approach and Approval of Track 2 Implementation Plan**

##### ***(Finding 7)***

The County requests a modification to the Tentative Order to clarify that the timely and complete implementation of an approved Track 1 or 2 compliance approach will meet the narrative water quality objective and constitute compliance with the trash discharge prohibitions. Revisions to Finding 7 of the Tentative Order should be made to reflect these needed clarifications. In addition, in order to better understand the process through which the required implementation plans under Track 2 will be approved by the Regional Water Board, language outlining the milestones and timing for approval involved should be added to Finding 7.

*Recommendation: Include language in Finding 7 describing the Regional Board's approval process for Implementation Plans developed under a Track 2 approach. Add language indicating that timely and complete implementation under a Track 1 or Track 2 approach will meet the narrative water quality objective (Finding 5) and constitute compliance with the trash discharge prohibitions (Finding 6).*

#### **Issue #5 – Clarification of a Jurisdiction's Ability to Change Compliance Tracks with Supporting Justification**

##### ***(Finding 7)***

Jurisdictions should be provided with the ability to change their initial determination of which compliance track to pursue. Implementation of the Trash Amendments will surely involve many lessons learned and efficiencies to be gained along the way. The State Water Board has clearly expressed its expectation "that the MS4 permittee will elect to install full capture systems where such installation is not cost-prohibitive". The County may be inclined to pursue Track 1 because of the simplicity of the approach and the compliance certainty it provides. However, with an MS4 that includes nearly 4,000 storm drain inlets within high priority land use areas; there may be some limited number of locations where installation of full capture systems is either not possible or cost-prohibitive. We will not know whether this is the case by the time we are required to submit our choice of compliance track, thus potentially forcing us to select Track 2. Allowing jurisdictions to change tracks during the implementation period, with sufficient supporting justification, is reasonable and would provide jurisdictions with much needed flexibility to implement this 10-year program. It will also likely encourage more jurisdictions to take a full capture approach, which appears to be the intent of the State Water Board.

*Recommendation: Add language to Finding 7 stating MS4 permittees may change tracks, provided they submit sufficient supporting justification. In addition, this language should be added to the first implementing permit (Regional MS4 Permit reissued after June 27, 2018).*

Ms. Arias  
December 14, 2016  
Page 5

## **Issue #6 – Transient Encampments in the San Diego River Watershed**

### ***(Finding 9.d, Directive A.4)***

The County supports CASQA's December 14, 2016 comment letter on the Tentative Order, which refers to the State Water Board's Responses to Comments on transient encampments during consideration of the Trash Amendments. Clearly, the intent of the Trash Amendments was not to address transient encampments.

The County has two key concerns with the methods proposed to address transient encampments within the San Diego River Watershed. First, transient encampments are by their nature a non-point source of trash and should be regulated as such. Therefore, they should not be regulated within an MS4 Permit which is a point source permit. As noted in their Response to Comments for the Trash Amendments, the State Water Board intended for the Trash Amendments to apply to NPDES Permits issued pursuant to Federal Clean Water Act Section 402(p) (see response 10.6), with other sources addressed through Waste Discharge Requirements (WDRs) or waivers of WDRs (see response 34.2). As has been found in other regions (e.g., Ventura River Estuary), only addressing MS4 sources of trash, when the problem stems from transient encampments, has little effect on the overall levels of trash. The transient encampments simply pick up and move, at least temporarily, to another part of the watershed. Further, Copermitees often do not have effective "regulatory control" over properties where transient encampments are common, i.e., private, state, and federal properties. The request for the Permittees to "address trash runoff from the relevant areas of land affected by transient encampments" via the MS4 Permit is inappropriate as it is the wrong mechanism for controlling this type of discharge. In order to effectively address the issue, participation from all land owners and key responsible parties, particularly those beyond the control of the MS4 permit, will be needed. Further, it will be necessary to involve other agencies to holistically address the transient problems within the watershed (e.g., social services, law enforcement) to ensure that the issue is not simply transferred from one portion of the region to another.

Second, the requirement to address trash from transient encampments for an entire watershed under the Trash Amendments limits the ability of the permittee to be in compliance with Track 1 or Track 2. To implement a Track 1 approach, consistent with the intent of the Amendments, full capture devices would only treat MS4 discharges from priority land use areas, not other non-priority land uses or receiving waters where many transient encampments occur. To implement a Track 2 approach, "transient encampments" would have to be identified as a "land use" and a "full capture equivalency" would need to be demonstrated. Such an approach is cumbersome, certainly not the intent of the Amendments, and may be counterproductive to actually solving the problem.

***Recommendations:*** *Finding 9.d and Directive A.4 should be removed. The San Diego Board should maintain consistency with the State Water Board and other Regional Boards in addressing trash generated from transient encampments as non-point in nature. In order to effectively address this particular source, the Regional Board could issue a separate Conditional Waiver of Waste Discharge Requirement to all land owners/responsible parties where trash from transient encampments has been determined to be a problem. However, if the San Diego Board does not remove Finding 9.d and Directive A.4, then consider the revision proposed in redline/strikeout that requests that the MS4s coordinate with entities under their jurisdiction to address trash from transient encampments.*

Ms. Arias  
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**Issue #7 – Coordination with Caltrans*****(Directive A.3)***

The County requests a modification to the Tentative Order to be consistent with the Trash Amendments and with the MS4 Permit with respect to coordination with Caltrans. The Amendments and the MS4 Permit already require coordination with Caltrans, as applicable, but neither requires a submittal to the Regional Board describing these efforts. In general, the County and Copermitees have established a good working relationship with Caltrans through the Water Quality Improvement Plans. As this coordination continues, it will include implementation of the requirements under the Trash Amendments as appropriate for Caltrans and for the MS4 Permittees to be compliant. Coordination should not necessitate a new reporting requirement for the Copermitees.

*Recommendation: Require coordination with Caltrans, as applicable, to effectively implement the requirements of the Amendments, but remove the requirement to describe this coordination in a separate submittal to the Regional Board.*

**Issue #8 - Clarification of the Monitoring and Reporting requirements of the 13267 Order*****(Finding 11, New Directive)***

Finding 11 does not provide adequate information related to the monitoring and reporting requirements specific to the Track 1 and Track 2 compliance options as detailed in the Trash Amendments. By not providing the specific requirements for the Track 1 and Track 2 compliance options, the Tentative Order leaves the monitoring and reporting requirements ambiguous and could cause unnecessary monitoring and/or reporting by the MS4 Permittees. Furthermore, including the monitoring requirements as a finding rather than a directive is also problematic. Including the monitoring and reporting requirements as a directive would clearly indicate what the MS4 Permittees are responsible for.

*Recommendation: Revise Finding 11 language and add a new Directive A.3 to describe the specific monitoring and reporting requirements applicable to each track.*

Thank you for your time and consideration of these comments offered in an effort to improve the Tentative Order and ensure consistency with the Trash Amendments. If you have questions or require additional information, please contact Jo Ann Weber, Planning Manager, at (858) 495-5317 or e-mail at [JoAnn.Weber@sdcounty.ca.gov](mailto:JoAnn.Weber@sdcounty.ca.gov).

Sincerely,



TODD E. SNYDER, Manager  
Watershed Protection Program

Attachment: County of San Diego Recommended Redline-Strikeout of Tentative Order

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
SAN DIEGO REGION**

**TENTATIVE INVESTIGATIVE ORDER NO. R9-2016-0205**

**AN ORDER DIRECTING THE OWNERS AND OPERATORS OF  
PHASE I MUNICIPAL SEPARATE STORM SEWER SYSTEMS (MS4s)  
DRAINING THE WATERSHEDS WITHIN THE SAN DIEGO REGION**

**TO SUBMIT TECHNICAL AND MONITORING REPORTS PERTAINING TO  
THE CONTROL OF TRASH IN DISCHARGES FROM PHASE I MS4s  
TO OCEAN WATERS, INLAND SURFACE WATERS,  
ENCLOSED BAYS, AND ESTUARIES  
IN THE SAN DIEGO REGION**

The California Regional Water Quality Control Board, San Diego Region (hereinafter San Diego Water Board) finds:

- 1. Legal and Regulatory Authority.** This Order conforms to and implements policies and requirements of the Porter-Cologne Water Quality Control Act (division 7 of the Water Code, commencing with Section 13000) including (1) sections 13267 and 13383; (2) applicable state and federal regulations; (3) all applicable provisions of statewide Water Quality Control Plans adopted by the State Water Resources Control Board (State Water Board) and the *Water Quality Control Plans for the San Diego Basin* (Basin Plan) adopted by the San Diego Water Board including beneficial uses, water quality objectives, and implementation plans; (4) State Water Board policies and regulations, including Resolution No. 68-16 (Statement of Policy with Respect to Maintaining High Quality of Waters in California); and (5) relevant standards, criteria, and advisories adopted by other state and federal agencies.
- 2. Trash Amendments.** On April 7, 2015, the State Water Board adopted Resolution No. 2015-0019, amending the *Water Quality Control Plan for Ocean Waters of California* (Ocean Plan) and the *Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (ISWEBE Plan) to address the impacts of trash to the surface waters of California (referred to hereafter as the Trash Amendments). The effective date of the Trash Amendments is December 2, 2015.
- 3. Trash Amendments Implementation.** The Trash Amendments establish a statewide narrative water quality objective and implementation requirements to control trash, including a prohibition against the discharge of trash to ocean waters, inland surface waters, enclosed bays, and estuaries in California. Within eighteen (18) months of the effective date (i.e. by June 2, 2017), for each MS4 that has been issued a National Pollutant Discharge Elimination System (NPDES) permit by the San Diego Water Board with regulatory authority over priority land uses in the San Diego Region, the San Diego Water Board is required to modify, re-issue, or adopt an applicable MS4 permit, or issue an order pursuant to Water Code section 13267 or 13383 to implement the Trash Amendments.

**4. Persons Responsible for the Discharges of Trash.** The owners and operators of Phase I MS4s are responsible for discharges of waste, including trash, from land uses and locations within their jurisdictions through their MS4s to ocean waters, inland surface waters, enclosed bays, and estuaries in the San Diego Region. In the San Diego Region, owners and operators of Phase I MS4s (herein referred to as MS4 permittees) include the following entities:

- County of Orange
  - City of Aliso Viejo
  - City of Dana Point
  - City of Laguna Beach
  - City of Laguna Hills
  - City of Laguna Niguel
  - City of Laguna Woods
- County of Riverside
  - City of Menifee<sup>2</sup>
  - City of Murrieta
  - City of Temecula
  - City of Wildomar
- County of San Diego
  - City of Carlsbad
  - City of Chula Vista
  - City of Coronado
  - City of Del Mar
  - City of El Cajon
  - City of Encinitas
  - City of Escondido
  - City of Imperial Beach
  - City of La Mesa
  - City of Lemon Grove
- City of Lake Forest<sup>1</sup>
- City of Mission Viejo
- City of Ranch Santa Margarita
- City of San Clemente
- City of San Juan Capistrano
- Orange County Flood Control District
- Riverside County Flood Control and Water Conservation District
- City of National City
- City of Oceanside
- City of Poway
- City of San Diego
- City of San Marcos
- City of Santee
- City of Solana Beach
- City of Vista
- San Diego County Regional Airport Authority
- San Diego Unified Port District

**5. Water Quality Standards.** The Trash Amendments established the following statewide narrative water quality objectives for trash in ocean waters, inland surface waters, enclosed bays, and estuaries in California.

<sup>1</sup> On February 10, 2015, the San Diego Water Board and the Santa Ana Water Board entered into an agreement, pursuant to Water Code section 13228, regarding MS4 discharges within the City of Lake Forest geographically located in the San Diego Region. According to the agreement, the City of Lake Forest must participate in preparation and implementation of the Water Quality Improvement Plan for the Aliso Creek Watershed Management Area. The requirements of the Trash Amendments will be incorporated into the Regional MS4 Permit during reissuance which may require an update to the Water Quality Improvement Plan.

<sup>2</sup> On October 26, 2015, the San Diego Water Board and the Santa Ana Water Board entered into an agreement, pursuant to Water Code section 13228, regarding MS4 discharges within the City of Menifee geographically located in the San Diego Region. According to the agreement, the City of Menifee must participate in preparation and implementation of the Water Quality Improvement Plan for the Santa Margarita River Watershed Management Area. The requirements of the Trash Amendments will be incorporated into the Regional MS4 Permit during reissuance which may require an update to the Water Quality Improvement Plan.

- a. The Trash Amendments established the following narrative water quality objective for trash in Chapter II.C.5 of the Ocean Plan:

*"Trash shall not be present in ocean waters, along shorelines or adjacent areas in amounts that adversely affect beneficial uses or cause nuisance."*

- b. The Trash Amendments established the following narrative water quality objective or trash in Chapter III.A of the ISWEBE Plan:

*"Trash shall not be present in inland surface waters, enclosed bays, estuaries, and along shorelines or adjacent areas in amounts that adversely affect beneficial uses or cause nuisance."*

Meeting these narrative water quality objectives for trash will be protective and supportive of numerous beneficial uses for the ocean waters, inland surface waters, enclosed bays, and estuaries in the San Diego Region, including but not limited to, wildlife habitat (WILD), marine habitat (MAR), preservation of rare and endangered species (RARE), fish migration (MIGR), navigation (NAV), and water contact and non-contact recreation (REC1 and REC2).

- 6. Trash Discharge Prohibition.** The Trash Amendments established the following discharge prohibition in Chapter III.I.6 of the Ocean Plan and Chapter IV.A.2 of the ISWEBE Plan:

*"The discharge of trash to surface waters of the State or the deposition of trash where it may be discharged into surface waters of the State is prohibited."*

- 7. MS4 Permit Implementation of the Trash Amendments.** The Trash Amendments are required to be implemented through the incorporation of the trash narrative water quality objectives and discharge prohibition into NPDES MS4 permits. The NPDES MS4 permit then will require the MS4 permittees to comply with the trash narrative water quality objectives and discharge prohibition through the implementation of one of two measures to be selected by the MS4 permittees.

To comply with the trash narrative water quality objectives and discharge prohibition, the MS4 permittees are required to implement either of the following measures:

*Track 1:* Install, operate, and maintain full capture systems for all storm drains that capture runoff from the priority land uses in their jurisdictions; or

*Track 2:* Install, operate, and maintain any combination of full capture systems, multi-benefit projects, other treatment controls, and/or institutional controls within either the jurisdiction of the MS4 permittee or within the jurisdiction of the MS4 permittee and contiguous MS4 permittees. The MS4 permittee may determine the locations or land uses within its jurisdiction to implement any combination of controls. The MS4 permittee shall demonstrate that such combination achieves full capture system equivalency. The MS4 permittee may determine which controls to implement to achieve compliance with full capture system equivalency. It is, however, the State Water Board's expectation that the MS4 permittee will elect to

install full capture systems where such installation is not cost-prohibitive.

Within three (3) months of the effective date of the first implementing permit, or the receipt of an order issued by the San Diego Water Board pursuant to Water Code section 13267 or 13383, each MS4 permittee is required to provide written notice to the San Diego Water Board stating whether the MS4 permittee elects to comply with the trash discharge prohibition by implementing Track 1 or Track 2. MS4 permittees that elect to implement Track 2 are also required to submit an implementation plan to the San Diego Water Board within eighteen (18) months of the effective date of the first implementing permit, or the receipt of the order issued pursuant to Water Code section 13267 or 13383. The implementation plan is required to describe: (i) the combination of controls selected by the MS4 permittee and the rationale for the selection, (ii) how the combination of controls is designed to achieve full capture system equivalency, and (iii) how full capture equivalency will be demonstrated. The implementation plan is subject to approval by the San Diego Water Board. Track 2 Implementation Plans will be deemed approved by the San Diego Water Board ninety (90) days after submission unless otherwise directed in writing by the San Diego Water Board Executive Officer. MS4 permittees may elect to change tracks through their adaptive management process during the 10-year implementation period, provided they submit sufficient, supporting justification to the San Diego Water Board. MS4 permittees fully complying with Track 1 or Track 2 are deemed to be in compliance with the trash discharge prohibition and narrative water quality objectives incorporated into the MS4 permit.

**8. Full Capture System Equivalency.** The Trash Amendments define full capture system equivalency as follows:

*“Full capture system equivalency is 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 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."*

**9. Land Uses and Locations Requiring Trash Controls.** The Trash Amendments define land uses and locations that are to be controlled for trash discharges by MS4 permittees using the Track 1 compliance option:

- a. *Priority Land Uses:* Those developed sites, facilities, or land uses (i.e. not simply zoned land uses) within a MS4 permittee's jurisdiction from which discharges of trash are regulated by the Ocean Plan or ISWEBE Plan as follows:
- High-density residential: all land uses with at least ten (10) developed dwelling units/acre.
  - 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).
  - 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.).
  - Mixed urban: land uses where high-density residential, industrial, and/or commercial land uses predominate collectively (i.e., are intermixed).
  - Public transportation stations: facilities or sites where public transit agencies' vehicles load or unload passengers or goods (e.g., bus stations and stops).
- b. *Equivalent Alternative Land Uses:* An MS4 permittee with regulatory authority over priority land uses may issue a request to the San Diego Water Board that the MS4 permittee be allowed to substitute a land use identified above with an alternate land use within the MS4 permittee's jurisdiction that generates rates of trash that is equivalent to or greater than the priority land use 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 or greater than the total trash generated from the priority land uses 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 "Keeping America Beautiful Visible

Litter Survey"; or other information as required by the San Diego Water Board.

- c. *Coordination with California Department of Transportation (Caltrans).* The Trash Amendments (Ocean Plan Chapter III.L.2.b and ISWEBE Plan Chapter IV.A.3.b) require that Caltrans and MS4 permittees coordinate their efforts to install, operate, and maintain full capture systems, multi-benefit projects, other treatment controls, and/or institutional controls in significant trash generating areas and/or priority land uses.
- d. *Specific Land Uses or Locations Determined by the San Diego Water Board:* The Trash Amendments (Ocean Plan Chapter III.L.2.d and ISWEBE Plan Chapter IV.A.3.d) provide the San Diego Water Board with the authority to determine that specific land uses or locations generate substantial amounts of trash in addition to the priority land uses defined above. In the event the San Diego Water Board makes that determination, the San Diego Water Board may require the MS4 permittees to comply with the requirements of the Trash Amendments with respect to such land uses or locations.

[Note: The County of San Diego requests the removal of this paragraph, but if Regional Board must keep, then recommended edits are shown] The San Diego Water Board has evaluated the San Diego River Park Foundation's 2013, 2014, and 2015 State of the River reports, and information received in regard to Item 5 on the May 14, 2014 Board meeting agenda pertaining to trash generated by transient encampments in the San Diego River watershed and related water quality issues. Based on this information the San Diego Water Board has determined that transient encampments in the San Diego River watershed are generating substantial trash in amounts that adversely affect beneficial uses or cause nuisance in the San Diego River. ~~This Order requires MS4 permittees in the San Diego River Watershed Management Area to develop plans to address trash runoff from the relevant areas of land affected by transient encampments through Track 1 or Track 2 controls as stipulated in the Trash Amendments (Ocean Plan Chapter III.L.2.d and ISWEBE Plan Chapter IV.A.3.d)~~ This Order requires MS4 permittees in the San Diego River watershed to coordinate with other entities within the watershed, as appropriate, to address trash associated with transient encampments from areas under their jurisdiction. Because this may involve entities not subject to the MS4 Permit, the coordination may be implemented through another regulatory mechanism, such as a Conditional Waiver of Waste Discharge Requirements, or cooperative agreements which would be separate from the NPDES permit for the MS4 permittees.

**10. Compliance Time Schedule.** ~~The Trash Amendments require the implementing permit to state that full compliance with the trash discharge prohibition shall occur within ten (10) years of the effective date of the first implementing permit. In addition, the implementing permit must require the MS4 permittees to demonstrate achievements of interim milestones. In no case may the final compliance date be later than fifteen (15) years from the effective date of the Trash Amendments (i.e. December 2, 2030).~~ The current Regional MS4 Permit (Order R9-2013-0001, as amended by Orders R9-2015-0001 and R9-2015-0100) will expire on June 27, 2018. The Regional MS4 Permit reissued after June 27, 2018 will be the first implementing permit and will contain a compliance time schedule consistent with the requirements of the Trash Amendments.

Full compliance with the Trash Amendments will be within 10 years of the effective date of the re-issued Regional MS4 Permit.

**11. Monitoring and Reporting.** The Trash Amendments require the implementing permit to include monitoring and reporting requirements. The MS4 permittees will be required to provide reports to the San Diego Water Board on an annual basis to monitor progress toward achieving full compliance with the trash discharge prohibition. ~~The monitoring and reporting requirements are dependent on the measures elected to be implemented by a MS4 permittee.~~

**12. Regional MS4 Permit and Incorporation into Copermittee Planning Documents.** On May 8, 2013, the San Diego Water Board adopted Order No. R9-2013-0001, NPDES No. CAS0109266, National Pollutant Discharge Elimination System (NPDES) Permit and Waste Discharge Requirements for Discharges from the Municipal Separate Storm Sewer Systems (MS4s) Draining the Watersheds within the San Diego Region (Regional MS4 Permit). The Regional MS4 Permit initially only incorporated the owners and operators of Phase I MS4s in San Diego County (San Diego County MS4 permittees). The Regional MS4 Permit was subsequently amended in 2015 to incorporate the owners and operators of the Phase I MS4s in south Orange County (Orange County MS4 permittees) and in southwest Riverside County (Riverside County Copermittees). The San Diego Water Board intends to incorporate the requirements of the Trash Amendments into the Regional MS4 Permit after it expires (June 27, 2018). The renewed Regional MS4 Permit will be the first implementing permit of the Trash Amendments for the MS4 permittees.

The Regional MS4 Permit requires the MS4 Copermittees to develop and implement Water Quality Improvement Plans for ten (10) Watershed Management Areas (WMAs), designated in Table B-1 of the Permit. Each jurisdiction is also required to develop and implement a Jurisdictional Runoff Management Plan (JRMP) that describes how specific strategies in the Water Quality Improvement Plans are implemented as well as how other agency specific permit requirements are met. While the JRMPs are not explicitly part of the Water Quality Improvement Plan, reporting related to JRMP programs is accomplished through the Water Quality Improvement Plan Annual Reporting Process.

Compliance with the Trash Amendments is based on implementation of specific measures to control trash within a jurisdiction. There may be synergy to be gained through implementation of watershed scale efforts to mitigate trash impacts also. The implementation measures, interim milestones, and compliance schedules for Track 1 or Track 2 of the Trash Amendments shall be incorporated into the Water Quality Improvement Plans for the watershed, into the jurisdictional specific JRMPs, or a combination of the two, to be implemented by the MS4 permittees as part of the adaptive management process.

Through the issuance of this Order pursuant to Water Code section 13267, the San Diego Water Board intends the MS4 permittees to incorporate the requirements of the Trash Amendments into the Water Quality Improvement Plans, into the Jurisdictional Runoff Management Plans, or a combination of the two, after renewal of the Regional MS4 Permit. Reporting on implementation of measures to comply with the Trash Amendments will be provided through JRMP Annual Report forms, which are submitted as part of the WQIP Annual Reports.

**13. Water Quality Improvement Plans.** The Regional MS4 Permit requires the MS4 permittees to develop and implement Water Quality Improvement Plans for ten (10) Watershed Management Areas, designated in the Regional MS4 Permit as shown in Table 1 below:

**Table 1. San Diego Region Watershed Management Areas**

Hydrologic Unit(s)	Watershed Management Area	Major Surface Water Bodies	Responsible MS4 permittees
San Juan (901.00)	South Orange County	- Aliso Creek - San Juan Creek - San Mateo Creek - Pacific Ocean - Hoisler Park ASBS	- City of Aliso Viejo - City of Dana Point - City of Laguna Beach - City of Laguna Hills <sup>1</sup> - City of Laguna Niguel - City of Laguna Woods <sup>1</sup> - City of Lake Forest <sup>2</sup> - City of Mission Viejo - City of Rancho Santa Margarita - City of San Clemente - City of San Juan Capistrano - County of Orange - Orange County Flood Control District - City of Menifee <sup>3</sup> - City of Murrieta <sup>4</sup>
Santa Margarita (902.00)	Santa Margarita River	- Murrieta Creek - Temecula Creek - Santa Margarita River - Santa Margarita Lagoon - Pacific Ocean	- City of Temecula - City of Wildomar <sup>4</sup> - County of Riverside - County of San Diego - Riverside County Flood Control and Water Conservation District
San Luis Rey (903.00)	San Luis Rey River	- San Luis Rey River - San Luis Rey Estuary - Pacific Ocean	- City of Oceanside - City of Vista - County of San Diego
Carlsbad (904.00)	Carlsbad	- Loma Alta Slough - Buena Vista Lagoon - Agua Hedionda Lagoon - Batiquitos Lagoon - San Elijo Lagoon - Pacific Ocean	- City of Carlsbad - City of Encinitas - City of Escondido - City of Oceanside - City of San Marcos - City of Solana Beach - City of Vista - County of San Diego
San Dieguito (905.00)	San Dieguito River	- San Dieguito River - San Dieguito Lagoon - Pacific Ocean	- City of Del Mar - City of Escondido - City of Poway - City of San Diego - City of Solana Beach - County of San Diego
Penasquitos (906.00)	Penasquitos	- Los Penasquitos Lagoon - Pacific Ocean	- City of Del Mar - City of Poway - City of San Diego - County of San Diego

**Table 1. San Diego Region Watershed Management Areas**

Hydrologic Unit(s)	Watershed Management Area	Major Surface Water Bodies	Responsible MS4 permittees
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	Mission Bay	- Mission Bay - Pacific Ocean - San Diego Marine Life Refuge ASBS	- City of San Diego
San Diego (907.00)	San Diego River	- San Diego River - Pacific Ocean	- City of El Cajon - City of La Mesa - City of San Diego - City of Santee - County of San Diego
Pueblo San Diego (908.00) Sweetwater (909.00) Otay (910.00)	San Diego Bay	- Sweetwater River - Otay River - San Diego Bay - Pacific Ocean	- City of Chula Vista - City of Coronado - City of Imperial Beach - City of La Mesa - City of Lemon Grove - City of National City - City of San Diego - County of San Diego - San Diego County Regional Airport Authority - San Diego Unified Port District
Tijuana (911.00)	Tijuana River	- Tijuana River - Tijuana Estuary - Pacific Ocean	- City of Imperial Beach - City of San Diego - County of San Diego

Notes:

1. By agreement dated February 10, 2015, pursuant to Water Code section 13228, the Phase I MS4 discharges within the jurisdiction of the City of Laguna Hills and the City of Laguna Woods located in the Santa Ana Region are regulated by San Diego Water Board Order No. R9-2013-0001 as amended by Order No. R9-2015-0001, upon the later effective date of Order No. R9-2015-0001 or Santa Ana Water Board Tentative Order No. R8-2015-0001. The City of Laguna Hills and Laguna Woods must also comply with the requirements of the San Diego Creek/Newport Bay TMDL in section XVIII of Santa Ana Water Board Order No. R8-2015-0001.
2. By agreement dated February 10, 2015, pursuant to Water Code section 13228, Phase I MS4 discharges within the City of Lake Forest located within the San Diego Water Board Region are regulated by the Santa Ana Water Board Order No. R8-2015-0004 (NPDES No. CAS618030) upon the later effective date of this Order or Santa Ana Water Board Tentative Order No. R8-2015-0001. In accordance with the terms of the agreement between the San Diego Water Board and the Santa Ana Water Board, the City of Lake Forest must implement the requirements of the Bacteria TMDL in Attachment E of this Order, participate in preparation and implementation of the Water Quality Improvement Plan for the Alice Creek Watershed Management Area as described in Provision B of this Order and continue implementation of its over-irrigation discharge prohibition in its City Ordinance, Title 15, Chapter 15, section 14.030, List (b).
3. By agreement dated October 26, 2015, pursuant to Water Code section 13228, Phase I MS4 discharges within the City of Menifee located within the San Diego Water Board Region are regulated by the Santa Ana Water Board Order No. R8-2010-0033 as it may be amended or reissued (NPDES No. CAS618033) upon the later effective date of this Order. In accordance with the terms of the agreement between the San Diego Water Board and the Santa Ana Water Board, the City of Menifee must participate in preparation and implementation of the Water Quality Improvement Plan for the Santa Margarita River Watershed Management Area as described in Provision B of this Order.
4. By agreement dated October 26, 2015, pursuant to Water Code section 13228, the Phase I MS4 discharges within the jurisdiction of the City of Murietta and the City of Wildomar located in the Santa Ana Region are regulated by San Diego Water Board Order No. R9-2013-0001 as amended by Orders No. R9-2015-0001 and R9-2015-0100. The City of Murietta and City of Wildomar must also comply with the requirements of the Lake Elsinore/Canyon Lake Nutrient TMDLs in section VI.D.2 of Santa Ana Water Board Order No. R8-2010-0033, or corresponding section as it may be amended or reissued.

The Water Quality Improvement Plans include the following: (a) identification of priority water quality conditions that need to be addressed to improve the water quality in each Watershed Management Area; (2) numeric goals for the highest priority water quality conditions to be achieved that will demonstrate discharges from the MS4s are not causing or contributing to exceedances of applicable water quality objectives, or water quality objectives are being attained in receiving waters; (3) a description of the water quality improvement strategies that will be and may be implemented to achieve the numeric goals; and (4) schedules for implementing the water quality improvement strategies and achieving the numeric goals.

The Regional MS4 Permit also requires incorporation of implementation plans for applicable Total Maximum Daily Loads (TMDLs) and Areas of Special Biological Significance (ASBS), which include interim and final water quality-based effluent limitations, compliance strategies, and compliance schedules, into the Water Quality Improvement Plans. The implementation measures, interim milestones, and compliance schedules for Track 1 or Track 2 of the Trash Amendments shall also be incorporated into the Water Quality Improvement Plans to be implemented by the MS4 permittees as part of the adaptive management process.

Through the issuance of this Order pursuant to Water Code section 13267, the San Diego Water Board intends the MS4 permittees to incorporate the requirements of

~~the Trash Amendments into the Water Quality Improvement Plans after renewal of the Regional MS4 Permit.~~

**14.13. Basis for Requiring Technical and Monitoring Reports.** Water Code section 13267 provides that the San Diego Water Board may require dischargers, past dischargers, or suspected dischargers to furnish those technical or monitoring reports as the San Diego Water Board may specify, provided that the burden, including costs, of these reports, must bear a reasonable relationship to the need for the reports and the benefits to be obtained from the reports. The technical and monitoring reports required under this Investigative Order are needed to provide information to the San Diego Water Board regarding (a) the measures each MS4 permittee is electing to implement (i.e. Track 1 or Track 2) within its jurisdiction to comply with the trash discharge prohibition (Track 1 and Track 2), (b) the plan that will be implemented by each MS4 permittee to comply with the trash discharge prohibition (Track 2 only), (c) the interim milestones that each MS4 permittee will achieve within its jurisdiction (Track 1 and Track 2), (d) the schedules to achieving the interim milestones, and full compliance with the trash discharge prohibition (Track 1 and Track 2), and (e) the monitoring (Track 2 only) and reporting (Track 1 and Track 2) that will be implemented to demonstrate progress toward achieving full compliance with the trash discharge prohibition.

**15.14. California Environmental Quality Act.** Adoption of this Order is for the protection of the environment and is exempt from the provisions of the California Environmental Quality Act (CEQA) (Public Resources Code section 21000 et seq.) in accordance with section 15308, Chapter 3, Title 14 of the California Code of Regulations (CCR). This action is also exempt from the provisions of CEQA in accordance with section 15061(b)(3) of Chapter 3, Title 14 of the CCR because it can be seen with certainty that there is no possibility that the activity in question may have a significant effect on the environment.

**IT IS HEREBY ORDERED**, pursuant to California Water Code section 13267, that the MS4 Permittees must comply with the following directives:

#### **A. TECHNICAL AND MONITORING REPORTS**

1. **Written Notices.** Each MS4 permittee must submit to the San Diego Water Board, **no later than three (3) months from the date of this Order** INSERT DATE, a written notice stating whether the MS4 permittee will implement Track 1 or Track 2 to comply with the trash discharge prohibition in the Ocean Plan and ISWEBE Plan.
2. **Track 2 Implementation Plans.** Each MS4 permittee electing to comply with Track 2 must submit, **no later than eighteen (18) months from the date of this Order** INSERT DATE, an implementation plan, which shall also be incorporated into the applicable Water Quality Improvement Plan or Jurisdictional Runoff Management Plan, or combination of the two, after renewal of the Regional MS4 Permit, for each Watershed Management Area described in Table 1 in Finding 13-above that describes:

- a. The combination of controls<sup>3</sup> selected by the MS4 permittee and the rationale for each 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. How the trash implementation plans will be monitored and assessed ~~in Water Quality Improvement Plan Annual Reports;~~
  - ~~e. Requests by MS4 permittees, if any, for authorization to substitute a Priority Land Use described in Finding 9 above with an Equivalent Alternate Land Use that generates rates of trash equivalent to, or greater than, the Priority Land Use being substituted. The MS4 permittees must provide data or information which establishes that trash generation rates from the Alternate Land Use(s) are greater than the Priority Land Use(s) being substituted;~~
  - f. A compliance time schedule ~~based on the shortest practicable time~~ to achieve full compliance with the trash discharge prohibition, including interim milestones (such as average load reductions of ten percent per year) and a final compliance date. The final compliance date must not be later than fifteen (15) years from the effective date of the Trash Amendments (i.e. December 2, 2030).
- 3. Monitoring and Reporting.** Upon adoption of the implementing MS4 Permit, the MS4 permittees are required to provide reports to the San Diego Water Board on an annual basis to demonstrate progress toward achieving full compliance with the trash discharge prohibition. The monitoring and reporting requirements are dependent on the compliance track selected by a MS4 permittee. Reporting may be performed using the Jurisdictional Urban Runoff Management Plan form, submitted with the Water Quality Improvement Plan Annual Report.
- a. MS4 permittees that elect to comply with the Statewide Trash Amendments via the Track 1 compliance option shall provide a report to the 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 as part of the JRMP reporting form within the Water Quality Improvement Plan Annual Report.
  - b. MS4 permittees that elect to comply with the Statewide Trash Amendments via the Track 2 compliance option 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. Monitoring reports shall be provided on an annual basis as part of the JRMP reporting form within the Water Quality Improvement Plan Annual Report 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 MS4 permittee.

4. **Coordination with Caltrans.** Each MS4 permittee subject to this Order must ~~submit, no later than eighteen (18) months from the date of this Order [INSERT DATE], a description of how MS4 permittees will~~ coordinate their efforts to install, operate, and maintain full capture systems, multi-benefit projects, and other controls with Caltrans in significant trash generating areas and/or priority land uses, as applicable.
  
5. **[Note: The County of San Diego requests removal of this paragraph, if Regional Board keeps in then recommended edits presented.]** **Transient Encampments in the San Diego River Watershed.** MS4 permittees discharging to the San Diego River watershed (Cities of San Diego, Santee, El Cajon, La Mesa, and County of San Diego), must ~~submit, no later than eighteen (18) months from the date of this Order [INSERT DATE], a description of how~~ coordinate with other entities in the watershed, as appropriate, to address trash generated from transient encampments in areas under their jurisdiction in the San Diego River Watershed Management Area will be addressed. These efforts may be implemented under another regulatory mechanism, such as a Conditional Waiver of Waste Discharge Requirements, or non-regulatory cooperative agreements, separate from the NPDES permit for the MS4 permittees.

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<sup>3</sup> Controls include, but are not limited to, full capture systems, multi-benefit projects, other treatment controls, and/or institutional controls ~~treatment controls and institutional controls~~, as defined in ~~the~~ Appendix D to the Water Quality Control Plan for Ocean Waters of California California Ocean Plan and Appendix E of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California.

**B. PROVISIONS**

1. **Signatory Requirements.** All documents submitted to the San Diego Water Board must be signed and certified.

a. All reports required by this Order must be signed as follows:

(1) For a corporation, by a principal executive officer of at least the level of vice-president;

(2) For a partnership or sole proprietorship, by a general partner or the proprietor, respectively;

(3) For a municipality, state, federal or other public agency, by either a principal executive or ranking elected official.

(4) By a duly authorized representative of the person designated above (B.6.a.(1), B.6.a.(ii), or B.6.(a)(iii)). A person is a duly authorized representative only if:

(a) The authorization is made in writing by a person described in paragraph B.6.a above;

(b) The authorization specifies either an individual or position having responsibility for the overall operation of the regulated facility or activity; and

(c) The written authorization is submitted to the San Diego Water Board.

b. Any person signing a document required by this Order 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."*

2. **Submittal of Documents.** All documents submitted to the San Diego Water Board in compliance with this Order must be submitted in electronic format (compact disk (CD-ROM or CD) in a Portable Document Format (PDF), unless otherwise directed. All electronic format documents required under this Order must be submitted to:

Executive Officer  
 California Regional Water Quality Control Board  
 San Diego Region  
 2375 Northside Drive, Suite 100  
 San Diego, CA 92108  
 Attn: Laurie Walsh, PE, Storm Water Management Unit

3. **Changes to Order.** This Order may be amended, rescinded, or updated by the Executive Officer. The MS4 permittees may propose changes or alternatives to the requirements in this Order if a valid rationale for the changes is shown. The filing of a request by a MS4 permittees for amending, rescinding, or updating this Order, or notification of planned changes or anticipated noncompliance does not stay any condition of this Order.

### C. NOTIFICATIONS

1. **Enforcement Discretion.** The San Diego Water Board reserves its right to take any enforcement action authorized by law for violations of the terms and conditions of this Order.
2. **Requesting Administrative Review by the State Water Board.** Any aggrieved person may petition the State Water Board regarding this Order in accordance with Water Code section 13320 and the 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 following the date of this Order. Copies of the laws and regulations applicable to filing petitions may be found on the State Water Board website at [http://www.waterboards.ca.gov/public\\_notices/petitions/water\\_quality](http://www.waterboards.ca.gov/public_notices/petitions/water_quality) or will be provided upon request.

For instructions on how to file a petition for review, see the State Water Board website at:

[http://www.waterboards.ca.gov/public\\_notices/petitions/water\\_quality/wqpetition\\_instr.shtml](http://www.waterboards.ca.gov/public_notices/petitions/water_quality/wqpetition_instr.shtml)

Ordered By: \_\_\_\_\_

David W. Gibson  
 EXECUTIVE OFFICER  
 Date

RB9 001901



# CITY OF SANTEE

**MAYOR**  
Randy Voepel

**CITY COUNCIL**  
Jack E. Dale  
Ronn Hall  
Rob McNelis  
John W. Minto

December 14, 2016

Via Email: sandiego@waterboards.ca.gov

David Gibson, Executive Officer  
San Diego Regional Water Quality Control Board  
2375 Northside Drive, Suite 100  
San Diego, CA 92108-2700

2016 DEC 19 AM 8:11

Attn: Christina Arias

**Re: Comment- Tentative Order No. R9-2016-0205**

Dear Mr. Gibson:

The City of Santee ("City") has reviewed Tentative Order No. R9-2016-0205, a draft of the *Order Directing the Owners and Operators of Phase I Municipal Separate Storm Sewer Systems Draining the Watersheds within the San Diego Region to Submit Technical and Monitoring Reports Pertaining to the Control of Trash in Discharges from Phase I MS4s to Ocean Waters, Inland Surface Waters, Enclosed Bays, and Estuaries in the San Diego Region* ("Draft Order"). As an entity subject to the Draft Order, which is intended to fulfill the requirements of the Amendment to the Water Quality Control Plan for Ocean Waters ("Ocean Plan") and for Inland Surface Waters, Enclosed Bays, and Estuaries ("ISWEBE Plan") of California (collectively the "Trash Amendments"), the City appreciates the opportunity to provide comments.

For the reasons set forth in this letter, the City requests that the San Diego Regional Water Quality Control Board ("Regional Board") not issue the Draft Order until a source of funding and State guidelines are provided and remove requirements that exceed the scope and intent of the Trash Amendments.

## 1. The Draft Order Is Premature

The State's guidelines on Track 2 are not yet available. This leaves uncertainty regarding issues, especially interjurisdictional matters, such as how a downstream MS4 monitors and evaluates compliance under Track 2 when upstream MS4s continue to discharge trash into a common MS4.

Without guidance from the State, it is difficult to make an informed choice between Track 1 and Track 2. Similarly, if the City wishes to switch tracks, there is no information regarding how or whether this can be accomplished. The City requests that the Regional Board issue the Draft Order after the State guidance is available, so that the City can make a properly informed selection.

## **2. The Draft Order Exceeds the Mandates in the Trash Amendments**

The City is concerned that the Draft Order imposes requirements on the City that are not required in the Trash Amendments and requests that these requirements and related findings be removed from the Draft Order. The Trash Amendments require the Regional Board to modify, re-issue, or adopt an MS4 permit to add requirements implementing the Trash Amendments for dischargers permitted pursuant to Clean Water Act Section 402(p) or to:

Issue an order pursuant to Water Code section 13267 or 13383 requiring the MS4 permittee to submit, within three (3) months from receipt of the order, written notice to the PERMITTING AUTHORITY stating whether such MS4 permittee will comply with the prohibition of discharge under Chapter IV.A.3.a.1 (Track 1) or Chapter IV.A.3.a.2 (Track 2). ... Within eighteen (18) months of the receipt of the Water Code section 13267 or 13383 order, MS4 permittees that have elected to comply with Track 2 shall submit an implementation plan to the PERMITTING AUTHORITY that describes: (i) the combination of controls selected by the MS4 permittee and the rationale for the selection, (ii) how the combination of controls is designed to achieve FULL CAPTURE SYSTEM EQUIVALENCY, and (iii) how FULL CAPTURE SYSTEM EQUIVALENCY will be demonstrated. The implementation plan is subject to approval by the PERMITTING AUTHORITY.<sup>1</sup>

The Trash Amendments thus only require a Water Code section 13267 or 13383 order to direct MS4 Permittees to select between Track 1 and Track 2, and if selecting Track 2, to submit an implementation plan. Requirements in the Draft Order to coordinate with Caltrans and to address transient encampments exceed the direction in the Trash Amendments. For these reasons, the City requests removal of Findings 9.c and 9.d and Provisions A.3 and A.4 from the Draft Order.

### **a. Remove Requirements to Coordinate with Caltrans (Draft Order Finding 9.c and Section A.3)**

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<sup>1</sup> Ocean Plan Chapter III.L.4.a(1)A, B and ISWEBE Plan Chapter IV.A.5.a(1)A, B.

The Draft Order requires the City to describe how it “will coordinate ... efforts to install, operate, and maintain full capture systems, multi-benefit projects, and other controls with Caltrans in significant trash generating areas and/or priority land uses” (“Caltrans Requirements”).<sup>2</sup> As noted above, the Trash Amendments only require an investigative order to address the selection of Track 1 or 2; they do not require the Regional Board to address the City’s role in coordinating with Caltrans. Requiring the City to describe how it will coordinate with Caltrans exceeds the direction in the Trash Amendments.

The City is concerned that including the Caltrans Requirements in the Draft Order is also unnecessarily duplicative. First, the MS4 Permit already requires the City to coordinate with Caltrans in controlling the contribution of pollutants.<sup>3</sup> Including additional requirements in the Draft Order appears to be duplicative of the City’s obligations under the MS4 Permit’s WQIP provisions. Second, requiring a description of how the City will coordinate with Caltrans shifts Caltrans’ responsibility to the City. Under the Trash Amendments, Caltrans is required to develop an implementation plan identifying significant trash generating areas, describing trash controls, and describing how it will demonstrate full capture system equivalency.<sup>4</sup> The City’s obligation under the Trash Amendments is to cooperate in Caltrans’ efforts. Caltrans is in the best position to identify what cooperative efforts are needed from the City. The Draft Order shifts the obligation to identify cooperative efforts to the City.

The City has and intends to continue cooperating with Caltrans to control the contribution of pollutants to the City’s MS4. Because the Draft Order duplicates provisions already in the MS4 Permit and shifts Caltrans’ responsibilities on the City, the City requests that the Caltrans Requirements be removed from the Draft Order.

**b. Remove Requirements to Address Transients Encampments (Draft Order Finding 9.d and Section A.4)**

The City is concerned that the Transient Encampment Requirements (defined below) exceed the scope and intent of the Trash Amendments in three ways and make the Draft Order an inappropriate mechanism to impose such requirements. First, the City’s land use authority does not extend to transient encampments. Second, implementing Track 1 and/or Track 2 will not control the trash issues described in the Draft Order. Third, significant constitutional and statutory restraints limit the City’s ability to address trash from these programs. For these reasons, the City requests that the Transient Encampments Requirements be removed from the Draft Order and that the Regional Board consider alternative regulatory mechanisms targeted to specific areas known to generate the greatest amounts of trash.

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<sup>2</sup> Draft Order, Finding 9.c and Section A.3.

<sup>3</sup> San Diego Regional Water Quality Control Board Order No. R9-2013-0001, Provisions B.3.b.(1)(c); E.1.a.(5).

<sup>4</sup> Ocean Plan Chapter III.L.4.b(1) and ISWEBE Plan Chapter IV.A.5.b(1).

***i. Land Use Authority Does Not Address Transient Encampments***

The Trash Amendments are written in terms of the City’s “regulatory authority over land uses”<sup>5</sup> and authorize the Regional Board to make a determination that a specific land use or location generates a substantial amount of trash.<sup>6</sup> If the Regional Board makes this determination, it may require the MS4 to comply with Track 1 or Track 2 with respect to such land uses or locations.<sup>7</sup> The Draft Order identifies “transient encampments in the San Diego River watershed” as generating substantial trash in amounts that adversely affect beneficial uses or cause nuisance in the San Diego River.<sup>8</sup> It then requires certain MS4 permittees to develop “plans to address trash runoff from the relevant areas of land affected by transient encampments through Track 1 or Track 2 controls” (“Transient Encampment Requirements”).<sup>9</sup>

The “San Diego River watershed” and “transient encampments” are not priority land uses as defined in the Trash Amendments. Priority land uses are high density residential, industrial, commercial, mixes of these uses, and public transportation stations.<sup>10</sup> The San Diego River watershed is also not a specific land use or location; instead, it is a vast geographical designation covering multiple local agency jurisdictions. Similarly, transient encampments are not specific land uses or locations; they are generally illegal activities that occur on a wide range of land use designations.

The City is concerned that including requirements to address transient encampments represents a dramatic divergence from the land use-based structure of the Trash Amendments, and, as a result, distracts from the intended focus on and prioritization of specific land-use based controls.

***ii. Track 1 and 2 Land Use Controls Will Not Effectively Control Trash From Transient Encampments***

The intent of the Trash Amendments is “to allow MS4s to allocate trash-control resources to the developed areas that generate the highest sources of trash.”<sup>11</sup> The City is concerned, however, that Tracks 1 and 2, as required by the Draft Order and future MS4 Permit, will be largely ineffective at addressing a complex social issue spanning multiple land uses and locations because these controls are not designed to capture trash from transient encampments.

The Draft Order relies on information received in regard to Item 5 on the Regional Board’s May 14, 2014 agenda (“Transient Encampment Information”), for the determination that transient encampments in the San Diego River watershed generate substantial trash. The Executive Officer’s report for that item states, in part:

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<sup>5</sup> Ocean Plan Chapter III.L.2.a and ISWEBE Plan Chapter IV.A.3.a.

<sup>6</sup> Ocean Plan Chapter III.L.2.d and ISWEBE Plan Chapter IV.A.2.d (emphasis added).

<sup>7</sup> *Ibid.*

<sup>8</sup> Draft Order, Finding 9.d.

<sup>9</sup> Draft Order, Finding 9.d; Section A.4.

<sup>10</sup> Ocean Plan Appendix I and ISWEBE Plan Appendix A.

<sup>11</sup> Staff Report for Trash Amendments, p. 13.

Transient encampments within the San Diego River present the largest challenge for trash abatement for both the municipal storm water Copermittees and Caltrans. Specific and lengthy procedures must be followed to assist and disperse identified transient populations and post notices of abatement and intent to cleanup sites prior to initiation of trash removal at these sites.<sup>12</sup>

Transient encampments within the river – i.e., encampments that discharge directly to a receiving water – are not discharges from an MS4. A Draft Order or MS4 permit regulating discharges from an MS4 should not regulate transient encampments within a receiving water because these encampments do not cause or contribute to discharges to or from an MS4.

As noted above, even though the Draft Order relies on the Transient Encampment Information, it directs certain MS4 permittees to address transient encampments within the entire San Diego River watershed using Track 1 or 2. In addition to the problems with this approach noted above, the City is concerned that such overreach will be ineffective. It is possible that transient encampments may be located within priority land use areas that discharge to an MS4. In these cases, trash from the encampments will be addressed, together with all other sources of trash from priority land uses, through implementation of the Trash Amendments based on priority land uses. To the extent transient encampments may be located in areas other than priority land uses that discharge to an MS4, the Trash Amendments explicitly prioritize control of trash through the use of land use designations and specific locations. As noted above, transient encampments are not land use designations or specific locations. It is contrary to the intent of the Trash Amendments to direct MS4 permittees to address trash by means other than land use designations or specific locations.

It is also possible that transient encampments may be located within an MS4 that discharges to the San Diego River. There are two issues associated with regulating discharges of trash from transient encampments located within an MS4. As noted above, a transient encampment within an MS4 is not a land use designation or specific location. It is contrary to the express intent of the Trash Amendments to require controls unrelated to an MS4's land use authority. Further, even if an MS4 implements Track 1 or 2 with respect to such discharges, the Trash Amendments expect that full capture systems will be installed where installation is not cost-prohibitive,<sup>13</sup> but full capture systems are generally not designed or intended to address such trash discharges. This is because the currently certified devices are designed to be installed primarily in catch

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<sup>12</sup> Emphasis added. The 2013, 2014, and 2015 State of the River reports, cited in the Draft Order, also note that “trash/debris [and] homeless encampments” were observed at all monitoring sites. See, San Diego River Park Foundation, State of the River Report, Water Quality Monitoring Supplemental Report, Table E.3 (2013-2015). Each monitoring site is located within a reach or tributary of the San Diego River, suggesting that the observed encampments were located within the San Diego River. *Id.* at Table E.1.

<sup>13</sup> Ocean Plan Chapter III.L.2.a.(2) and ISWEBE Plan Chapter IV.A.3.a.(2)

basins and pipes.<sup>14</sup> Transient encampments within MS4s are often found in close proximity to the river, after the places where full capture devices are installed. As a result, Track 1 and Track 2 are poorly designed to address trash generated by transient encampments.

***iii. Statutory and Constitutional Provisions Limit City's Ability to Address Trash from Transient Encampments***

Finally, to the extent that transient encampments are located within a non-priority land use area in the San Diego River watershed, including within the MS4 and within the riverbed, MS4 permittees may need to undertake activities other than Track 1 or Track 2 to address the trash. MS4 permittees face significant constitutional and statutory restraints on their ability to address trash from these encampments. As the Executive Officer's Report for Item 5 on the Regional Board's May 14, 2014 meeting notes, "[s]pecific and lengthy procedures must be followed to assist and disperse identified transient populations and post notices of abatement and intent to cleanup sites prior to initiation of trash removal[.]" For example, under the Fourth and Fourteenth Amendments, unattended property cannot be searched, seized, destroyed or discarded without reasonable notice and opportunity for the person to reclaim the property.<sup>15</sup> In many cases, local government control over activities associated with transient encampments may be limited under the Eighth Amendment when there is inadequate shelter space in the area.<sup>16</sup>

Because the San Diego River watershed and transient encampments are not specific land uses or locations, the Draft Order exceeds the scope and intent of the Trash Amendments by requiring control of trash generated from transient encampments in the San Diego River Watershed Management Area. In addition, the Transient Encampment Information identified encampments within the river as presenting the largest challenge for trash abatement, but neither Track 1 nor Track 2 will address trash from encampments within the River because these encampments do not discharge to an MS4. Finally, actions beyond Track 1 and 2 that may be necessary to control trash from transient encampments are circumscribed by constitutional limitations. The complex problem of transient encampments is not an appropriate subject for the Draft Order or a subsequent MS4 permit. For these reasons, the City requests that Finding 9.d and Section A.4 be removed from the Draft Order. It is appropriate for the Regional Board to conduct further studies into the issue of trash from transient encampments, identify specific locations known to generate the greatest amounts of trash, and possible issue a separate order targeted to controls at those areas.

**3. Provide a Source of Funding for the State Mandates in the Draft Order**

The Investigative Order and implementation of the Trash Amendments through a renewed MS4 Permit constitute unfunded state mandates. Section 6 of Article XIII B of the California

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<sup>14</sup> Certified full capture devices include those certified by the Los Angeles Regional Water Quality Control Board prior to April 7, 2015 and those listed in Appendix I of the Bay Area-wide Trash Capture Demonstration Project, Final Project Report (May 8, 2014). Ocean Plan Appendix I and ISWEBE Plan Appendix A.

<sup>15</sup> U.S. Const. Amends. IV and XIV; see also *Lavan v. City of Los Angeles* (9th Cir. 2012) 693 F.3d 1022, 1032; *Joyce v. City and County of San Francisco* (N.D. Cal. 1994) 846 F.Supp. 843, 863.

<sup>16</sup> See, e.g., *Jones v. City of Los Angeles* (9th Cir. 2006) 444 F.3d 1118, *vacated after settlement* by 505 F.3d 1006.

Constitution requires the State to provide a subvention of funds to local agencies any time the Legislature or a state agency requires the local agency to implement a new program or provide a higher level of service under an existing program. The purpose of Section 6 “is to preclude the state from shifting financial responsibility for carrying out governmental functions to local agencies, which are ‘ill equipped’ to assume increased financial responsibilities because of the taxing and spending limitations that articles XIII A and XIII B impose.”<sup>17</sup> The section “was designed to protect the tax revenues of local governments from state mandates that would require expenditure of such revenues.”<sup>18</sup>

Government Code section 17556 identifies seven exceptions to the subvention requirement of Section 6, including statutes or executive orders that impose a requirement mandated by a federal law or regulation, which results in costs mandated by the federal government.<sup>19</sup> When considering this exception, California’s Supreme Court determined that requirements which are “animated” by flexible federal laws and regulations do not constitute federal requirements unless, perhaps, the requirements constitute “the only means by which the [flexible] standard could be implemented[.]”<sup>20</sup> To demonstrate the applicability of this exemption, “the party claiming the applicability of an exception bears the burden of demonstrating that it applies.”<sup>21</sup>

The Draft Order constitutes a new program or higher level of service by requiring the City to submit a notice stating: (1) whether the City will implement Track 1 or Track 2; (2) how the City will coordinate with Caltrans to install, operate, and maintain full capture systems, multi-benefit projects, and other controls; and (3) for the cities of San Diego, Santee, El Cajon, La Mesa and the County of San Diego, how trash generated from transient encampments will be addressed. When incorporated into a future MS4 Permit, implementation of the Trash Amendments will also constitute a new program. The activities mandated by the Draft Order and implementation of the Trash Amendments through a future MS4 Permit are referred to in this letter as “Programs.”

The Programs are State mandates. According to the Draft Order, the Programs are required pursuant to state laws, policies and regulations: California’s Porter-Cologne Water Quality Control Act, including sections 13267 and 13383 of the California Water Code, State and Regional Water Quality Control Plans, and State Water Board policies and regulations.<sup>22</sup> The Draft Order also alleges it conforms to and implements “applicable state and federal regulations” and “relevant standards, criteria, and advisories adopted by other state and federal agencies.” No federal regulations, standards, criteria, or advisories are identified as mandating the new programs, however. There is no evidence in the Draft Order that the Programs constitute “the

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<sup>17</sup> *County of San Diego v. State of California* (1997) 15 Cal.4th 68, 81; *County of Fresno v. State of California* (1991) 53 Cal.3d 482, 487.

<sup>18</sup> *County of Fresno v. State of California* (1991) 53 Cal.3d 482, 487; *Redevelopment Agency v. Commission on State Mandates* (1997) 55 Cal.App.4th 976, 984-985.

<sup>19</sup> Gov. Code, § 17556, subd. (c).

<sup>20</sup> *Dep’t of Finance v. Comm’n on State Mandates* (2016) 1 Cal.5th 749, 768.

<sup>21</sup> *Id.* at p. 769, citing *Simpson Strong-Tie Co., Inc. v. Gore* (2010) 49 Cal.4th 12, 23.

<sup>22</sup> Draft Order, Finding 1.

only means” by that the unnamed federal regulations, standards criteria, or advisories could be implemented.<sup>23</sup> Consistent with the Supreme Court’s decision, the Programs are state mandates.

The City does not have a source of funding to dedicate to the Programs and requests that the Regional Board not issue the Draft Order until a source of funding is provided or provide funding to implement the Programs.

### Conclusion

The City takes the region’s water quality seriously and appreciates the opportunity to provide comments on the Draft Order. Because the Trash Amendments establish a system that prioritizes trash controls through land use regulations, the City respectfully requests that the Regional Board consider the City’s request to provide a means to fund implementation of the chosen Track, delay issuance of the Draft Order until after the State’s guidelines and funding are available, and remove the Caltrans Requirements and Transient Encampment Requirements from the Draft Order.

Sincerely,



Melanie Kush, AICP  
Development Services Director  
City of Santee

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<sup>23</sup> *Dep’t of Finance v. Comm’n on State Mandates* (2016) 1 Cal.5th 749, 768.



## Department of Public Works

- Flood Control
- Operations
- Solid Waste Management
- Surveyor
- Transportation

Gerry Newcombe  
Director

December 14, 2016

Via Email ([sandiego@waterboards.ca.gov](mailto:sandiego@waterboards.ca.gov))

San Diego Regional Water Quality Control Board  
2375 Northside Drive, No. 100  
San Diego, CA 92108

Attention: Christina Arias

**RE: COMMENT – TENTATIVE ORDER NO. R9-2016-0205**

Dear Ms. Arias:

The County of San Bernardino and San Bernardino County Flood Control District (collectively referred to herein as "County") appreciate the opportunity to provide these comments to the San Diego Regional Water Quality Control Board ("Regional Board") regarding its Tentative Instigative Order R9-2016-0205, An Order Directing the Owners and Operators of Phase I Municipal Separate Storm Sewer Systems (MS4s) draining the Watersheds within the San Diego Region to submit Technical and Monitoring Reports Pertaining to the Control of Trash in Discharges from Phase I MS4s to Ocean Waters, Inland Surface Waters, Enclosed Bays, and Estuaries in the San Diego Region ("Tentative Order").

The County appreciates the Regional Board's cooperative approach in seeking public review and comment to the Tentative Order as the Tentative Order establishes the implementation of policy which could have broader implications for other agencies, such as the County. Therefore, the County respectfully submits this comment letter on the Tentative Order.

Also, as a threshold matter, the County notes the existing San Bernardino County MS4 permit, and most MS4 permits, already contain comprehensive municipal inspection programs, which encompasses construction, industrial, commercial and residential activities. See, e.g., Order No. 08-2010-0036 (NPDES No. CAS 618036), at Section X. Under those MS4 permits, the Permittees are already required to evaluate and prioritize sources of pollutants within their geographical boundaries, including trash and to take action for those sources causing impairments.

For brevity and to avoid duplication of comments, the County hereby supports and joins in the comments made by the City of San Juan Capistrano.

2016 DEC 19 AM 8:14

### BOARD OF SUPERVISORS

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Fifth District

GREGORY C. DEVEREAUX  
Chief Executive Officer

The County's submittal of this letter shall not be deemed to preclude additional comments to the Santa Ana Regional Water Quality Control Board and other regional boards having jurisdiction over the County related to the control of trash and the County hereby reserves the right to raise additional comments in response to an order issued for Phase I MS4s related to the control of trash in San Bernardino County by the Santa Ana Regional Water Quality Control Board and other regional boards.

Please note the County Board of Supervisors has not adopted an official position on the Tentative Order, however, to assist the Regional Board with its consideration of the Tentative Order, the undersigned has provided the above comments.

We are available to provide any further assistance so the Regional Board clearly understands the comments submitted by the County. If you wish to discuss the County's comments, please contact Marc Rodabaugh or Harold Zamora at (909) 387-8109.

Sincerely,



**GERRY NEWCOMBE**, Director  
Flood Control District

cc: Kevin Blakeslee  
Harold Zamora  
Marc Rodabaugh

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 PAM PATTERSON, ESQ.  
 DEREK REEVE

December 14, 2016

Via Email: sandiego@waterboards.ca.gov

David Gibson, Executive Officer  
 San Diego Regional Water Quality Control Board  
 2375 Northside Drive, Suite 100  
 San Diego, CA 92108-2700  
 Attn: Christina Arias

**Re: Comment- Tentative Order No. R9-2016-0205**

2016 DEC 16 PM 1:11  
 SAN JUAN CAPISTRANO

Dear Mr. Gibson:

The City of San Juan Capistrano ("City") has reviewed Tentative Order No. R9-2016-0205, a draft of the *Order Directing the Owners and Operators of Phase I Municipal Separate Storm Sewer Systems Draining the Watersheds within the San Diego Region to Submit Technical and Monitoring Reports Pertaining to the Control of Trash in Discharges from Phase I MS4s to Ocean Waters, Inland Surface Waters, Enclosed Bays, and Estuaries in the San Diego Region* ("Draft Order"). As an entity subject to the Draft Order, which is intended to fulfill the requirements of the Amendment to the Water Quality Control Plan for Ocean Waters ("Ocean Plan") and for Inland Surface Waters, Enclosed Bays, and Estuaries ("ISWEBE Plan") of California (collectively the "Trash Amendments"), the City appreciates the opportunity to provide comments.

For the reasons set forth in this letter, the City requests that the San Diego Regional Water Quality Control Board ("Regional Board") not issue the Draft Order until a source of funding and State guidelines are provided and remove requirements that exceed the scope and intent of the Trash Amendments.

#### **1. The Draft Order Is Premature**

The State's guidelines on implementing the Trash Amendments are not yet available. Without guidance from the State, it is difficult to make an informed choice between Track 1 and Track 2. Uncertainty surrounds the expectations relating to full capture system equivalency, existing drainages that currently meet the full capture system equivalency, and the perpetual monitoring and reporting requirements in Track 2. Similarly, if the City wishes to switch tracks, there is no information regarding how or whether this can be accomplished.

The City requests that the Regional Board issue the Draft Order after the State guidance is available, so that the City can make a properly informed selection. Alternatively, the City requests that guidance regarding these and other issues be included in the Draft Order if it will be issued before the State's guidelines.

## 2. The Draft Order Exceeds the Mandates in the Trash Amendments

The City is concerned that the Draft Order imposes requirements on the City that are not required in the Trash Amendments and requests that these requirements and related findings be removed from the Draft Order. The Trash Amendments require the Regional Board to modify, re-issue, or adopt an MS4 permit to add requirements implementing the Trash Amendments for dischargers permitted pursuant to Clean Water Act Section 402(p) or to:

Issue an order pursuant to Water Code section 13267 or 13383 requiring the MS4 permittee to submit, within three (3) months from receipt of the order, written notice to the PERMITTING AUTHORITY stating whether such MS4 permittee will comply with the prohibition of discharge under Chapter IV.A.3.a.1 (Track 1) or Chapter IV.A.3.a.2 (Track 2). ... Within eighteen (18) months of the receipt of the Water Code section 13267 or 13383 order, MS4 permittees that have elected to comply with Track 2 shall submit an implementation plan to the PERMITTING AUTHORITY that describes: (i) the combination of controls selected by the MS4 permittee and the rationale for the selection, (ii) how the combination of controls is designed to achieve FULL CAPTURE SYSTEM EQUIVALENCY, and (iii) how FULL CAPTURE SYSTEM EQUIVALENCY will be demonstrated. The implementation plan is subject to approval by the PERMITTING AUTHORITY.<sup>1</sup>

The Trash Amendments thus only require a Water Code section 13267 or 13383 order to direct MS4 Permittees to select between Track 1 and Track 2, and if selecting Track 2, to submit an implementation plan. Requirements in the Draft Order to coordinate with Caltrans and to address transient encampments exceed the direction in the Trash Amendments. For these reasons, the City requests removal of Findings 9.c and 9.d and Provisions A.3 and A.4 from the Draft Order.

### a. Remove Requirements to Coordinate with Caltrans (Draft Order Finding 9.c and Section A.3)

The Draft Order requires the City to describe how it “will coordinate ... efforts to install, operate, and maintain full capture systems, multi-benefit projects, and other controls with Caltrans in significant trash generating areas and/or priority land uses” (“Caltrans Requirements”).<sup>2</sup> As noted above, the Trash Amendments only require an investigative order to address the selection of Track 1 or 2; they do not require the Regional Board to address the City’s role in coordinating with Caltrans. Requiring the City to describe how it will coordinate with Caltrans exceeds the direction in the Trash Amendments.

The City is concerned that including the Caltrans Requirements in the Draft Order is also unnecessarily duplicative. First, the MS4 Permit already requires the City to coordinate with Caltrans in controlling the contribution of pollutants.<sup>3</sup> Including additional requirements in the Draft Order appears to be duplicative of the City’s obligations under the MS4 Permit’s WQIP provisions. Second, requiring a description of how the City will coordinate with Caltrans shifts Caltrans’ responsibility to the City. Under the Trash Amendments, Caltrans is required to develop an implementation plan identifying significant trash generating areas, describing trash controls, and describing how it will demonstrate full capture system.

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equivalency.<sup>4</sup> The City's obligation under the Trash Amendments is to cooperate in Caltrans' efforts. Caltrans is in the best position to identify what cooperative efforts are needed from the City. The Draft Order shifts the obligation to identify cooperative efforts to the City.

The City has and intends to continue cooperating with Caltrans to control the contribution of pollutants to the City's MS4. Because the Draft Order duplicates provisions already in the MS4 Permit and shifts Caltrans' responsibilities on the City, the City requests that the Caltrans Requirements be removed from the Draft Order.

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***i. Land Use Authority Does Not Address Transient Encampments***

The Trash Amendments are written in terms of the City's "regulatory authority over land uses"<sup>5</sup> and authorize the Regional Board to make a determination that a specific land use or location generates a substantial amount of trash.<sup>6</sup> If the Regional Board makes this determination, it may require the MS4 to comply with Track 1 or Track 2 with respect to such land uses or locations.<sup>7</sup>

The Draft Order identifies "transient encampments in the San Diego River watershed" as generating substantial trash in amounts that adversely affect beneficial uses or cause nuisance in the San Diego River.<sup>8</sup> It then requires certain MS4 permittees to develop "plans to address trash runoff from the relevant areas of land affected by transient encampments through Track 1 or Track 2 controls" ("Transient Encampment Requirements").<sup>9</sup>

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<sup>7</sup> *Ibid.*

<sup>8</sup> Draft Order, Finding 9.d.

<sup>9</sup> Draft Order, Finding 9.d; Section A.4.

<sup>10</sup> Ocean Plan Appendix I and ISWEBE Plan Appendix A.

***ii. Track 1 and 2 Land Use Controls Will Not Effectively Control Trash From Transient Encampments***

The intent of the Trash Amendments is “to allow MS4s to allocate trash-control resources to the developed areas that generate the highest sources of trash.”<sup>11</sup> The City is concerned, however, that Tracks 1 and 2, as required by the Draft Order and future MS4 Permit, will be largely ineffective at addressing a complex social issue spanning multiple land uses and locations because these controls are not designed to capture trash from transient encampments.

The Draft Order relies on information received in regard to Item 5 on the Regional Board’s May 14, 2014 agenda (“Transient Encampment Information”), for the determination that transient encampments in the San Diego River watershed generate substantial trash. The Executive Officer’s report for that item states, in part:

Transient encampments within the San Diego River present the largest challenge for trash abatement for both the municipal storm water Copermittees and Caltrans. Specific and lengthy procedures must be followed to assist and disperse identified transient populations and post notices of abatement and intent to cleanup sites prior to initiation of trash removal at these sites.<sup>12</sup>

Transient encampments within the river – i.e., encampments that discharge directly to a receiving water – are not discharges from an MS4. A Draft Order or MS4 permit regulating discharges from an MS4 should not regulate transient encampments within a receiving water because these encampments do not cause or contribute to discharges to or from an MS4. Further, the City’s authority to implement BMPs within a water of the United States is limited.

As noted above, even though the Draft Order relies on the Transient Encampment Information, it directs certain MS4 permittees to address transient encampments within the entire San Diego River watershed using Track 1 or 2. In addition to the problems with this approach noted above, the City is concerned that such overreach will be ineffective. It is possible that transient encampments may be located within priority land use areas that discharge to an MS4. In these cases, trash from the encampments will be addressed, together with all other sources of trash from priority land uses, through implementation of the Trash Amendments based on priority land uses. To the extent transient encampments may be located in areas other than priority land uses that discharge to an MS4, the Trash Amendments explicitly prioritize control of trash through the use of land use designations and specific locations. As noted above, transient encampments are not land use designations or specific locations. It is contrary to the intent of the Trash Amendments to direct MS4 permittees to address trash by means other than land use designations or specific locations.

It is also possible that transient encampments may be located within an MS4 that discharges to the San Diego River. There are two issues associated with regulating discharges of trash from transient encampments located within an MS4. As noted above, a transient encampment within an MS4 is not a land use designation or specific location. It is contrary to the express intent of the Trash Amendments to

<sup>11</sup> Staff Report for Trash Amendments, p. 13.

<sup>12</sup> Emphasis added. The 2013, 2014, and 2015 State of the River reports, cited in the Draft Order, also note that “trash/debris [and] homeless encampments” were observed at all monitoring sites. See, San Diego River Park Foundation, State of the River Report, Water Quality Monitoring Supplemental Report, Table E.3 (2013-2015). Each monitoring site is located within a reach or tributary of the San Diego River, suggesting that the observed encampments were located within the San Diego River. *Id.* at Table E.1.

require controls unrelated to an MS4's land use authority. Further, even if an MS4 implements Track 1 or 2 with respect to such discharges, the Trash Amendments expect that full capture systems will be installed where installation is not cost-prohibitive,<sup>13</sup> but full capture systems are generally not designed or intended to address such trash discharges. This is because the currently certified devices are designed to be installed primarily in catch basins and pipes.<sup>14</sup> Transient encampments within MS4s are often found in close proximity to the river, after the places where full capture devices are installed. The City is unaware of any certified full capture system or device applicable to Transient Encampments. As a result, Track 1 and Track 2 are poorly designed to address trash generated by transient encampments.

### ***iii. Statutory and Constitutional Provisions Limit City's Ability to Address Trash from Transient Encampments***

Finally, to the extent that transient encampments are located within a non-priority land use area in the San Diego River watershed, including within the MS4 and within the riverbed, MS4 permittees may need to undertake activities other than Track 1 or Track 2 to address the trash. MS4 permittees face significant constitutional and statutory restraints on their ability to address trash from these encampments. As the Executive Officer's Report for Item 5 on the Regional Board's May 14, 2014 meeting notes, "[s]pecific and lengthy procedures must be followed to assist and disperse identified transient populations and post notices of abatement and intent to cleanup sites prior to initiation of trash removal[.]" For example, under the Fourth and Fourteenth Amendments, unattended property cannot be searched, seized, destroyed or discarded without reasonable notice and opportunity for the person to reclaim the property.<sup>15</sup> In many cases, local government control over activities associated with transient encampments may be limited under the Eighth Amendment when there is inadequate shelter space in the area.<sup>16</sup>

Because the San Diego River watershed and transient encampments are not specific land uses or locations, the Draft Order exceeds the scope and intent of the Trash Amendments by requiring control of trash generated from transient encampments in the San Diego River Watershed Management Area. In addition, the Transient Encampment Information identified encampments within the river as presenting the largest challenge for trash abatement, but neither Track 1 nor Track 2 will address trash from encampments within the River because these encampments do not discharge to an MS4. Finally, actions beyond Track 1 and 2 that may be necessary to control trash from transient encampments are circumscribed by constitutional limitations. The complex problem of transient encampments is not an appropriate subject for the Draft Order or a subsequent MS4 permit. For these reasons, the City requests that Finding 9.d and Section A.4 be removed from the Draft Order. It is appropriate for the Regional Board to conduct further studies into the issue of trash from transient encampments, identify specific locations known to generate the greatest amounts of trash, and possibly issue a separate order targeted to controls at those areas.

### **3. Provide a Source of Funding for the State Mandates in the Draft Order**

The Investigative Order and implementation of the Trash Amendments through a renewed MS4 Permit constitute unfunded state mandates. Section 6 of Article XIII B of the California Constitution requires the State to provide a subvention of funds to local agencies any time the Legislature or a state agency requires

<sup>13</sup> Ocean Plan Chapter III.L.2.a.(2) and ISWEBE Plan Chapter IV.A.3.a.(2)

<sup>14</sup> Certified full capture devices include those certified by the Los Angeles Regional Water Quality Control Board prior to April 7, 2015 and those listed in Appendix I of the Bay Area-wide Trash Capture Demonstration Project, Final Project Report (May 8, 2014). Ocean Plan Appendix I and ISWEBE Plan Appendix A.

<sup>15</sup> U.S. Const. Amends. IV and XIV; see also *Lavan v. City of Los Angeles* (9th Cir. 2012) 693 F.3d 1022, 1032; *Joyce v. City and County of San Francisco* (N.D. Cal. 1994) 846 F.Supp. 843, 863.

<sup>16</sup> See, e.g., *Jones v. City of Los Angeles* (9th Cir. 2006) 444 F.3d 1118, *vacated after settlement* by 505 F.3d 1006.

the local agency to implement a new program or provide a higher level of service under an existing program. The purpose of Section 6 “is to preclude the state from shifting financial responsibility for carrying out governmental functions to local agencies, which are ‘ill equipped’ to assume increased financial responsibilities because of the taxing and spending limitations that articles XIII A and XIII B impose.”<sup>17</sup> The section “was designed to protect the tax revenues of local governments from state mandates that would require expenditure of such revenues.”<sup>18</sup>

Government Code section 17556 identifies seven exceptions to the subvention requirement of Section 6, including statutes or executive orders that impose a requirement mandated by a federal law or regulation, which results in costs mandated by the federal government.<sup>19</sup> When considering this exception, California’s Supreme Court determined that requirements which are “animated” by flexible federal laws and regulations do not constitute federal requirements unless, perhaps, the requirements constitute “the only means by which the [flexible] standard could be implemented[.]”<sup>20</sup> To demonstrate the applicability of this exemption, “the party claiming the applicability of an exception bears the burden of demonstrating that it applies.”<sup>21</sup>

The Draft Order constitutes a new program or higher level of service by requiring the City to submit a notice stating: (1) whether the City will implement Track 1 or Track 2; (2) how the City will coordinate with Caltrans to install, operate, and maintain full capture systems, multi-benefit projects, and other controls; and (3) for the cities of San Diego, Santee, El Cajon, La Mesa and the County of San Diego, how trash generated from transient encampments will be addressed. When incorporated into a future MS4 Permit, implementation of the Trash Amendments will also constitute a new program. The activities mandated by the Draft Order and implementation of the Trash Amendments through a future MS4 Permit are referred to in this letter as “Programs.”

The Programs are State mandates. According to the Draft Order, the Programs are required pursuant to state laws, policies and regulations: California’s Porter-Cologne Water Quality Control Act, including sections 13267 and 13383 of the California Water Code, State and Regional Water Quality Control Plans, and State Water Board policies and regulations.<sup>22</sup> The Draft Order also alleges it conforms to and implements “applicable state and federal regulations” and “relevant standards, criteria, and advisories adopted by other state and federal agencies.” No federal regulations, standards, criteria, or advisories are identified as mandating the new programs, however. There is no evidence in the Draft Order that the Programs constitute “the only means” by that the unnamed federal regulations, standards criteria, or advisories could be implemented.<sup>23</sup> Consistent with the Supreme Court’s decision, the Programs are state mandates.

The City does not have a source of funding to dedicate to the Programs and requests that the Regional Board not issue the Draft Order until a source of funding is provided or provide funding to implement the Programs.

<sup>17</sup> *County of San Diego v. State of California* (1997) 15 Cal.4th 68, 81; *County of Fresno v. State of California* (1991) 53 Cal.3d 482, 487.

<sup>18</sup> *County of Fresno v. State of California* (1991) 53 Cal.3d 482, 487; *Redevelopment Agency v. Commission on State Mandates* (1997) 55 Cal.App.4th 976, 984-985.

<sup>19</sup> Gov. Code, § 17556, subd. (c).

<sup>20</sup> *Dep’t of Finance v. Comm’n on State Mandates* (2016) 1 Cal.5th 749, 768.

<sup>21</sup> *Id.* at p. 769, citing *Simpson Strong-Tie Co., Inc. v. Gore* (2010) 49 Cal.4th 12, 23.

<sup>22</sup> Draft Order, Finding 1.

<sup>23</sup> *Dep’t of Finance v. Comm’n on State Mandates* (2016) 1 Cal.5th 749, 768.

**Conclusion**

The City takes the region's water quality seriously and appreciates the opportunity to provide comments on the Draft Order. Because the Trash Amendments establish a system that prioritizes trash controls through land use regulations, the City respectfully requests that the Regional Board consider the City's request to provide a means to fund implementation of the chosen Track, delay issuance of the Draft Order until after the State's guidelines and funding are available, and remove the Caltrans Requirements and Transient Encampment Requirements from the Draft Order.

Sincerely,

A handwritten signature in black ink that reads "Steve May". The signature is written in a cursive, flowing style.

Steve May  
Public Works & Utilities Director

**VIA EMAIL**

December 14, 2016

California Water Quality Control Board – San Diego Region  
2375 Northside Drive, Suite 100  
San Diego, CA 92108-2700  
Attention: Christina Arias  
Email: sandiego@waterboards.ca.gov

Subject: **Comment – Tentative Order No. R9-2016-0205 Reference 786088,  
Attn: CArias**

Dear Ms. Arias:

The San Diego Unified Port District (District) appreciates the opportunity to provide comments in response to the Tentative Order No.R9-2016-0205, *Investigative Order Directing the Owners and Operators of Phase I Municipal Separate Storm Sewer Systems (MS4s) Draining the Watersheds within the San Diego Region to Submit Technical and Monitoring Reports Pertaining to the Control of Trash From Phase I MS4s to Ocean Waters, Inland Surface Waters, Enclosed Bays and Estuaries in the San Diego Region* (referred to herein as Tentative Investigative Order). Pursuant to Statewide Trash Amendments, the Tentative Investigative Order proposes to require written notice from each San Diego Regional municipal Copermittee (Copermittee) of their chosen trash control measure selection that complies with the State Water Quality Control Board's (State Board) trash discharge prohibition, as well as implementation plan submittals, where required.

As public trustee of San Diego Bay (Bay), the District shares a common interest with the San Diego Regional Water Quality Control Board (Regional Board) in ensuring the protection of the Bay's beneficial uses. The District supports the Regional Board's continued efforts to address trash issues within the Bay and the surrounding inland waters, and remains committed to working collaboratively with the Regional Board to fulfill our respective agencies' shared goals. To this end, the District respectfully submits the following comments on the Tentative Investigative Order.

Subject: **Comment – Tentative Order No. R9-2016-0205 Reference 786088**

Attention: Christina Arias

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- 1. The deadlines for Copermittees to select an implementation track (Track 1 or 2) and submit an implementation plan (Track 2 only) should be extended until guidance for using full-capture devices has been released from the State Board.**

Per the Tentative Investigative Order, written notices from Copermittees are due within three (3) months from the date of adoption of the Tentative Investigative Order regardless of whether Track 1 or Track 2 is selected. Since the adoption of the Statewide Trash Amendments, the State Board has been developing new guidance pertaining to the identification of certified full-capture devices, full capture equivalency, and alternate/equivalent land uses; however, this guidance has not been completed. The State's guidance on approved full-capture devices can help Copermittees make informed management decisions, as the devices vary significantly in upfront, operating, and maintenance costs. The District recommends the Tentative Investigative Order timelines be set in accordance with the release of the State's guidance document so Copermittees can incorporate the related information into their track selection process (i.e. three (3) months after State's guidance is released).

In addition, Copermittees that select Track 2 are required to submit an Implementation Plan within 18 months of the adoption of the Tentative Investigative Order. However, the 2018 permit language has not been drafted, and Track 2 Copermittees will be required to submit an Implementation Plan without having a clear understanding of the trash related requirements that may be included in the permit. The District strongly recommends the Implementation Plan submittal correspond with the release of permit language that will be included in the 2018 MS4 permit.

- 2. Remove Directive 3 requiring a written plan for Copermittee and Caltrans coordination.**

Directive 3 (page 10) of the Tentative Investigative Order requires Copermittees to coordinate with Caltrans, yet there is no language within the current Caltrans permit; nor is there a Tentative Investigative Order issued to Caltrans requiring the same actions. As such, there is nothing that mandates Caltrans to reciprocate coordination. The District suggests either removing the Caltrans coordination requirement from the Tentative Investigative Order until the same language is issued to Caltrans by means of a permit amendment or Investigative Order; or softening the language to match the current MS4 permit in regards to Caltrans (which simply advises working with Caltrans when possible).

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**3. The specific monitoring and reporting requirements related to the State Trash Amendments should be available to Copermittees prior to the track selection deadline.**

The Tentative Investigative Order has no specific language regarding Track 2 monitoring and reporting requirements. As a result, there are many unknown factors relating to associated monitoring costs and resource requirements that may result from selecting Track 2. Copermittees cannot reasonably be expected to submit their track selection without a clear awareness of the monitoring and reporting requirements for each track. The District recommends including specific monitoring and reporting language in the Tentative Investigative Order.

**4. The Tentative Investigative Order should include guidance language and provisions for selecting a track and switching tracks.**

Currently the Tentative Investigative Order does not provide language for adjusting management approaches and options to pursue an alternate track should a Copermittee realize, upon initial implementation, that the track declared by their agency is not the most effective approach to manage trash within their MS4. Given that these regulations are new, guidance and flexibility is necessary during the initial implementation process. In the spirit of adaptive management, a provision describing a structured process that enables a Copermittee to switch tracks after their original declaration should be included in the Tentative Investigative Order.

**5. Language addressing the jurisdictional liability related to trash from sources outside a Copermittee's jurisdictional authority and nonpoint sources should be added to the Tentative Investigative Order.**

The District requests that the Regional Board include language clarifying that a Copermittee is not liable for any trash resulting from MS4 facilities that the Copermittee does not own or operate. The District recognizes that trash from upstream jurisdictions has the potential to impact receiving waters or portions of the MS4 at or near "end of pipe" locations. For example, San Diego Bay is the receiving water body for a large watershed in which the District is located at the extreme end. Several portions of MS4 systems traverse District tidelands but are owned or operated by upstream Copermittees. Further, the District recognizes that trash also may enter the receiving water from the ocean via tidal transport and surface currents. With this in mind, the District supports jurisdictional accountability throughout the watershed and encourages the Regional Board to incorporate these concepts in both the Tentative Investigative Order and the 2018 MS4 permit renewal.

Subject: **Comment – Tentative Order No. R9-2016-0205 Reference 786088**

Attention: Christina Arias

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The comments offered in this document by the District are suggestions to assist the Regional Board in effectively implementing the State Trash Amendments. The District also supports the County of San Diego's red-line version of the Tentative Investigative Order as many of the District's aforementioned comments are addressed by the County's proposed changes. The District is committed to participating in management programs that assist in achieving our respective agencies' shared goal of improving water quality in San Diego Bay. The District greatly appreciates the Regional Board's continued efforts to achieve clean water and looks forward to continued collaboration on cleanup and monitoring efforts throughout the Bay.

If you have any questions or would like additional information related to the comments submitted herein, please contact Kelly Tait at (619) 686-6372 or via email at [ktait@portofsandiego.org](mailto:ktait@portofsandiego.org).

Sincerely,



Karen Holman  
Principal,  
Planning & Green Port  
San Diego Unified Port District

CC: Jason Giffen, Assistant Vice President, Planning & Green Port  
John Carter, Deputy General Counsel  
Kelly Tait, Senior Environmental Specialist



RB9 001923



December 14, 2016

Christina Arias  
San Diego Regional Water Quality Control Board  
2735 Northside Drive, Suite 100  
San Diego, CA 92108-2700

Re: Comments on Tentative Order No. R9-2016-0205

Dear Ms. Arias:

The undersigned organizations, representing many of the state’s leading employers, appreciate the opportunity to provide comments on the San Diego Regional Water Quality Control Board’s (Board) proposed issuance of Tentative Order No. R9-2016-0205 (Tentative Order), an Investigative Order directing the owners and operators of the Phase I MS4s draining into the watersheds within the San Diego Region to submit technical and monitoring reports pertaining to the control of trash in discharges from MS4s to ocean waters, inland surface waters, enclosed bays, and estuaries in the San Diego Region.

Our organizations believe that reducing trash in California's waterways is an important water quality issue, and we are committed to doing our part to keep trash out of our waterways. To that end, our organizations participated, commented, and supported the final State Water Resources Control Board’s trash policy (Resolution No. 2015-0019) that was adopted on April 7,

2015, including the policy's recognition that the use of full capture systems as identified in "Track 1" compliance option is the preferred method of dealing with trash in our waterways. We agree that full capture systems offer the most effective solution in preventing all forms of trash from entering the state's waterways. These types of infrastructure controls are essentially working 24/7 and their effectiveness in meeting the trash reduction objectives in the Tentative Order can be appropriately monitored and measured.

As stated in the Notice of Opportunity to Review and Comment regarding the proposed Tentative Order, each municipal Copermittee needs to comply with the Trash Amendments by:

- 1) submitting a written notice to the San Diego Water Board, no later than three (3) months from the date of the Order, stating whether the municipal Copermittee will implement Track 1 or Track 2 (as described in the Trash Amendments), and
- 2) if Track 2 is selected, submitting a trash control implementation plan to the San Diego Water Board within eighteen (18) months from the date of the Order.

As previously mentioned, our organizations believe that Track 1 is the most effective way of complying with the trash amendments and we agree that it is the State Water Board's expectation that the municipal Copermittee will elect to install full capture systems where such installation is not cost-prohibitive.

However, in those instances where a municipal Copermittee decides to implement Track 2, it is our understanding that the municipal Copermittee must install, operate and maintain any combination of full capture systems, multi-benefit projects, other treatment controls, and/or institutional controls within its jurisdiction and demonstrate that such combinations achieve full capture system equivalency.

Our organizations recognize that the ability to install full capture systems throughout a municipal Copermittee's jurisdiction may be too costly and that other types of projects or controls like street sweeping, litter education, and enforcement of existing litter laws can assist a municipal Copermittee in achieving full capture system equivalency in a more cost-effective manner. We believe the implementation plans that are required as part of choosing Track 2 will show how the combination of controls will be designed to achieve full capture system equivalency and how full capture equivalency will be demonstrated.

We caution the Board that when reviewing these implementation plans to make sure institutional controls cited by a municipal Copermittee will achieve full capture system equivalency based on required monitoring and assessments. For example, our organizations have witnessed municipalities attempting to use the adoption of local product ban ordinances as a way to comply with trash requirements in municipal stormwater permits. This very issue was discussed during the State Water Board's adoption of the trash policy. In the final staff report, the Board states:

"Contrary to ordinances or laws that prohibit distribution of plastic carry-out bags, which are typically accompanied with requirements and/or incentives to utilize reusable bags to avoid a product-substitution effect (such as Senate Bill 270), other types of product bans

enacted by an ordinance, such as take-out items, may involve a substitution of the banned item. Mere substitution would not result in reduced trash generation if such product substitution would be discarded in the same manner as the banned item. Any such product ban enacted by an ordinance that would not reduce trash would not assist in achieving compliance.”<sup>1</sup>

We agree with the conclusion reached by the State Water Board regarding product ban ordinances and the fact that product substitution does not result in a reduction in trash.

Our organizations believe that the Tentative Order is an appropriate first step in complying with the State Water Board’s trash policy. And, as implementation of the Tentative Order begins, our organizations and member companies look forward to working with the Board and municipal Copermittees to identify opportunities for collaborative efforts - provided that such efforts are balanced; economically and environmentally sustainable; and represent real reductions in overall trash loads.

Thank you in advance for your consideration of our comments. If you have any questions, please feel free to contact Becky Warren at (310) 446-4800. We look forward to working with the Board on this important issue.

Sincerely,

*American Chemistry Council  
Automotive Specialty Products Alliance  
California Business Roundtable  
California Chamber of Commerce  
California Manufacturers & Technology Association  
California Restaurant Association  
California Retailers Association  
Consumer Specialty Products Association  
Partnership for Sound Science in Environmental Policy  
Plastics Industry Association  
Western Plastics Association*

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<sup>1</sup> Final Staff Report

Including the Substitute Environmental Documentation

Amendment to the Water Quality Control Plan for the Ocean Waters of California to Control Trash and Part 1 Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California, Page 96, [http://www.waterboards.ca.gov/water\\_issues/programs/trash\\_control/docs/01\\_final\\_sed.pdf](http://www.waterboards.ca.gov/water_issues/programs/trash_control/docs/01_final_sed.pdf)

Christina Arias, P.E.  
San Diego Regional Water Quality Control Board  
2375 Northside Drive, Ste 100  
San Diego, CA 92108-2700

Submitted VIA EMAIL TO: [sandiego@waterboards.ca.gov](mailto:sandiego@waterboards.ca.gov)  
Attn: Christina Arias (Reference 786088: CArias)

December 14, 2016

Re: City of Escondido Comments – Tentative Order No. R9-2016-0205 on Trash Control

Dear Ms. Arias:

The City of Escondido (the City) respectfully submits the following comments on Tentative Order No. R9-2016-0205, *Investigative Order Directing the Owners and Operators of Phase I Municipal Separate Storm Sewer Systems (MS4s) Draining the Watersheds within the San Diego Region to Submit Technical and Monitoring Reports Pertaining to the Control of Trash from Phase I MS4s to Ocean Waters, Inland Surface Waters, Enclosed Bays and Estuaries in the San Diego Region* ("Tentative Order"). The City understands that the San Diego Regional Water Quality Control Board (Regional Water Board) developed this order in response to the requirements of the Statewide Trash Amendments from the California State Water Resources Control Board.<sup>1</sup>

The City of Escondido appreciates the opportunity to comment on the Tentative Order. The City has reviewed the final comment letter developed by the County of San Diego, and supports each recommendation and key area of concern, listed below, as well as the specific language changes in the redline strikeout (Attachment A).

1. Clear Definition of Track 1 and Track 2 Requirements and Consistency with Trash Amendments  
*Recommendation: Revise Order (Findings 7, 8, 9.a, 9.b, 11, 14; Directives A.2.e, A.3.f) in accordance with attached redline strikeout.*
2. Incorporation of Compliance Time Schedule in Implementing Permit  
*Recommendation: Revise language from the Compliance Time Schedule finding (Finding 10) to state the Regional MS4 Permit reissued after June 27, 2018 will be the first implementing permit and will contain a compliance time schedule consistent with the requirements of the Trash Amendments.*
3. Incorporation into the Water Quality Improvement Plan  
*Recommendation: Delete Finding 13 and Revise Finding 12 to allow the flexibility for agencies to include their approach for compliance with the Trash Amendments, whether Track 1 or Track 2, within the Water*

<sup>1</sup> Statewide Trash Amendments to the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California (ISWEBE Plan) and the Water Quality Control Plan for Ocean Waters of California (Ocean Plan); collectively referred to as the "State Trash Amendments"



*Quality Improvement Plans or their respective JRMPs or in a combination of the Water Quality Improvement Plans and JRMPs. The options should be supported with revisions to Directive A.2.*

4. Compliance through Track 1 or Track 2 Implementation; Approval of Track 2 Implementation Plan  
*Recommendation: Include language in Finding 7 describing the Regional Board's approval process for Implementation Plans developed under a Track 2 approach. Add language indicating that timely and complete implementation under a Track 1 or Track 2 approach will meet the narrative water quality objective (Finding 5) and constitute compliance with the trash discharge prohibitions (Finding 6).*
5. Clarification of a Jurisdiction's Ability to Change Compliance Tracks with Supporting Justification  
*Recommendation: Add language to Finding 7 stating MS4 permittees may change tracks, provided they submit sufficient supporting justification. In addition, this language should be added to the first implementing permit (Regional MS4 Permit reissued after June 27, 2018).*
6. Transient Encampments in the San Diego River Watershed  
*Recommendations: Finding 9.d and Directive A.4 should be removed.*
7. Coordination with Caltrans  
*Recommendation: Require coordination with Caltrans, as applicable, to effectively implement the requirements of the Amendments, but remove the requirement to describe this coordination in a separate submittal to the Regional Board.*
8. Clarification of the Monitoring and Reporting requirements of the 13267 Order  
*Recommendation: Revise Finding 11 language and add a new Directive A.3 to describe the specific monitoring and reporting requirements applicable to each track.*

Finally, the City views these amendments as an unfunded mandate. While the City has not completed an in-depth analysis of the optimal course of implementation, initial estimates suggest that purchase and installation costs will be between \$9-\$12 million over twenty years. The Tentative Order does not identify a funding source for these requirements, so presumably the City will be required to fund it out of its budget. This will be a significant burden to city finances unless permanent alternative funding sources are established.

Thank you for your consideration of these comments.

Sincerely,

A handwritten signature in blue ink that reads "Helen M. Davies".

Helen M. Davies  
Environmental Programs Manager  
City of Escondido

Attachment A: County of San Diego Recommended Redline – Strikeout of Tentative Order

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
SAN DIEGO REGION**

**TENTATIVE INVESTIGATIVE ORDER NO. R9-2016-0205**

**AN ORDER DIRECTING THE OWNERS AND OPERATORS OF  
PHASE I MUNICIPAL SEPARATE STORM SEWER SYSTEMS (MS4s)  
DRAINING THE WATERSHEDS WITHIN THE SAN DIEGO REGION**

**TO SUBMIT TECHNICAL AND MONITORING REPORTS PERTAINING TO  
THE CONTROL OF TRASH IN DISCHARGES FROM PHASE I MS4s  
TO OCEAN WATERS, INLAND SURFACE WATERS,  
ENCLOSED BAYS, AND ESTUARIES  
IN THE SAN DIEGO REGION**

The California Regional Water Quality Control Board, San Diego Region (hereinafter San Diego Water Board) finds:

- 1. Legal and Regulatory Authority.** This Order conforms to and implements policies and requirements of the Porter-Cologne Water Quality Control Act (division 7 of the Water Code, commencing with Section 13000) including (1) sections 13267 and 13383; (2) applicable state and federal regulations; (3) all applicable provisions of statewide Water Quality Control Plans adopted by the State Water Resources Control Board (State Water Board) and the *Water Quality Control Plans for the San Diego Basin* (Basin Plan) adopted by the San Diego Water Board including beneficial uses, water quality objectives, and implementation plans; (4) State Water Board policies and regulations, including Resolution No. 68-16 (Statement of Policy with Respect to Maintaining High Quality of Waters in California); and (5) relevant standards, criteria, and advisories adopted by other state and federal agencies.
- 2. Trash Amendments.** On April 7, 2015, the State Water Board adopted Resolution No. 2015-0019, amending the *Water Quality Control Plan for Ocean Waters of California* (Ocean Plan) and the *Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (ISWEBE Plan) to address the impacts of trash to the surface waters of California (referred to hereafter as the Trash Amendments). The effective date of the Trash Amendments is December 2, 2015.
- 3. Trash Amendments Implementation.** The Trash Amendments establish a statewide narrative water quality objective and implementation requirements to control trash, including a prohibition against the discharge of trash to ocean waters, inland surface waters, enclosed bays, and estuaries in California. Within eighteen (18) months of the effective date (i.e. by June 2, 2017), for each MS4 that has been issued a National Pollutant Discharge Elimination System (NPDES) permit by the San Diego Water Board with regulatory authority over priority land uses in the San Diego Region, the San Diego Water Board is required to modify, re-issue, or adopt an applicable MS4 permit, or issue an order pursuant to Water Code section 13267 or 13383 to implement the Trash Amendments.

**4. Persons Responsible for the Discharges of Trash.** The owners and operators of Phase I MS4s are responsible for discharges of waste, including trash, from land uses and locations within their jurisdictions through their MS4s to ocean waters, inland surface waters, enclosed bays, and estuaries in the San Diego Region. In the San Diego Region, owners and operators of Phase I MS4s (herein referred to as MS4 permittees) include the following entities:

- County of Orange
  - City of Aliso Viejo
  - City of Dana Point
  - City of Laguna Beach
  - City of Laguna Hills
  - City of Laguna Niguel
  - City of Laguna Woods
- County of Riverside
  - City of Menifee<sup>2</sup>
  - City of Murrieta
  - City of Temecula
  - City of Wildomar
- County of San Diego
  - City of Carlsbad
  - City of Chula Vista
  - City of Coronado
  - City of Del Mar
  - City of El Cajon
  - City of Encinitas
  - City of Escondido
  - City of Imperial Beach
  - City of La Mesa
  - City of Lemon Grove
- City of Lake Forest<sup>1</sup>
- City of Mission Viejo
- City of Ranch Santa Margarita
- City of San Clemente
- City of San Juan Capistrano
- Orange County Flood Control District
- Riverside County Flood Control and Water Conservation District
- City of National City
- City of Oceanside
- City of Poway
- City of San Diego
- City of San Marcos
- City of Santee
- City of Solana Beach
- City of Vista
- San Diego County Regional Airport Authority
- San Diego Unified Port District

**5. Water Quality Standards.** The Trash Amendments established the following statewide narrative water quality objectives for trash in ocean waters, inland surface waters, enclosed bays, and estuaries in California.

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<sup>1</sup> On February 10, 2015, the San Diego Water Board and the Santa Ana Water Board entered into an agreement, pursuant to Water Code section 13228, regarding MS4 discharges within the City of Lake Forest geographically located in the San Diego Region. According to the agreement, the City of Lake Forest must participate in preparation and implementation of the Water Quality Improvement Plan for the Aliso Creek Watershed Management Area. The requirements of the Trash Amendments will be incorporated into the Regional MS4 Permit during reissuance which may require an update to the Water Quality Improvement Plan.

<sup>2</sup> On October 26, 2015, the San Diego Water Board and the Santa Ana Water Board entered into an agreement, pursuant to Water Code section 13228, regarding MS4 discharges within the City of Menifee geographically located in the San Diego Region. According to the agreement, the City of Menifee must participate in preparation and implementation of the Water Quality Improvement Plan for the Santa Margarita River Watershed Management Area. The requirements of the Trash Amendments will be incorporated into the Regional MS4 Permit during reissuance which may require an update to the Water Quality Improvement Plan.

- a. The Trash Amendments established the following narrative water quality objective for trash in Chapter II.C.5 of the Ocean Plan:

*“Trash shall not be present in ocean waters, along shorelines or adjacent areas in amounts that adversely affect beneficial uses or cause nuisance.”*

- b. The Trash Amendments established the following narrative water quality objective or trash in Chapter III.A of the ISWEBE Plan:

*“Trash shall not be present in inland surface waters, enclosed bays, estuaries, and along shorelines or adjacent areas in amounts that adversely affect beneficial uses or cause nuisance.”*

Meeting these narrative water quality objectives for trash will be protective and supportive of numerous beneficial uses for the ocean waters, inland surface waters, enclosed bays, and estuaries in the San Diego Region, including but not limited to, wildlife habitat (WILD), marine habitat (MAR), preservation of rare and endangered species (RARE), fish migration (MIGR), navigation (NAV), and water contact and non-contact recreation (REC1 and REC2).

- 6. Trash Discharge Prohibition.** The Trash Amendments established the following discharge prohibition in Chapter III.I.6 of the Ocean Plan and Chapter IV.A.2 of the ISWEBE Plan:

*“The discharge of trash to surface waters of the State or the deposition of trash where it may be discharged into surface waters of the State is prohibited.”*

- 7. MS4 Permit Implementation of the Trash Amendments.** The Trash Amendments are required to be implemented through the incorporation of the trash narrative water quality objectives and discharge prohibition into NPDES MS4 permits. The NPDES MS4 permit then will require the MS4 permittees to comply with the trash narrative water quality objectives and discharge prohibition through the implementation of one of two measures to be selected by the MS4 permittees.

To comply with the trash narrative water quality objectives and discharge prohibition, the MS4 permittees are required to implement either of the following measures:

*Track 1:* Install, operate, and maintain full capture systems for all storm drains that capture runoff from the priority land uses in their jurisdictions; or

*Track 2:* Install, operate, and maintain any combination of full capture systems, multi-benefit projects, other treatment controls, and/or institutional controls within either the jurisdiction of the MS4 permittee or within the jurisdiction of the MS4 permittee and contiguous MS4 permittees. The MS4 permittee may determine the locations or land uses within its jurisdiction to implement any combination of controls. The MS4 permittee shall demonstrate that such combination achieves full capture system equivalency. The MS4 permittee may determine which controls to implement to achieve compliance with full capture system equivalency. It is, however, the State Water Board’s expectation that the MS4 permittee will elect to

install full capture systems where such installation is not cost-prohibitive.

Within three (3) months of the effective date of the first implementing permit, or the receipt of an order issued by the San Diego Water Board pursuant to Water Code section 13267 or 13383, each MS4 permittee is required to provide written notice to the San Diego Water Board stating whether the MS4 permittee elects to comply with the trash discharge prohibition by implementing Track 1 or Track 2. MS4 permittees that elect to implement Track 2 are also required to submit an implementation plan to the San Diego Water Board within eighteen (18) months of the effective date of the first implementing permit, or the receipt of the order issued pursuant to Water Code section 13267 or 13383. The implementation plan is required to describe: (i) the combination of controls selected by the MS4 permittee and the rationale for the selection, (ii) how the combination of controls is designed to achieve full capture system equivalency, and (iii) how full capture equivalency will be demonstrated. The implementation plan is subject to approval by the San Diego Water Board. Track 2 Implementation Plans will be deemed approved by the San Diego Water Board ninety (90) days after submission unless otherwise directed in writing by the San Diego Water Board Executive Officer. MS4 permittees may elect to change tracks through their adaptive management process during the 10-year implementation period, provided they submit sufficient, supporting justification to the San Diego Water Board. MS4 permittees fully complying with Track 1 or Track 2 are deemed to be in compliance with the trash discharge prohibition and narrative water quality objectives incorporated into the MS4 permit.

**8. Full Capture System Equivalency.** The Trash Amendments define full capture system equivalency as follows:

*“Full capture system equivalency is 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 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."*

**9. Land Uses and Locations Requiring Trash Controls.** The Trash Amendments define land uses and locations that are to be controlled for trash discharges by MS4 permittees using the Track 1 compliance option:

- a. *Priority Land Uses:* Those developed sites, facilities, or land uses (i.e. not simply zoned land uses) within a MS4 permittee's jurisdiction from which discharges of trash are regulated by the Ocean Plan or ISWEBE Plan as follows:
- High-density residential: all land uses with at least ten (10) developed dwelling units/acre.
  - 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).
  - 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.).
  - Mixed urban: land uses where high-density residential, industrial, and/or commercial land uses predominate collectively (i.e., are intermixed).
  - Public transportation stations: facilities or sites where public transit agencies' vehicles load or unload passengers or goods (e.g., bus stations and stops).
- b. *Equivalent Alternative Land Uses:* An MS4 permittee with regulatory authority over priority land uses may issue a request to the San Diego Water Board that the MS4 permittee be allowed to substitute a land use identified above with an alternate land use within the MS4 permittee's jurisdiction that generates rates of trash that is equivalent to or greater than the priority land use 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 or greater than the total trash generated from the priority land uses 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 "Keeping America Beautiful Visible

Litter Survey”; or other information as required by the San Diego Water Board.

- c. *Coordination with California Department of Transportation (Caltrans).* The Trash Amendments (Ocean Plan Chapter III.L.2.b and ISWEBE Plan Chapter IV.A.3.b) require that Caltrans and MS4 permittees coordinate their efforts to install, operate, and maintain full capture systems, multi-benefit projects, other treatment controls, and/or institutional controls in significant trash generating areas and/or priority land uses.
- d. *Specific Land Uses or Locations Determined by the San Diego Water Board.* The Trash Amendments (Ocean Plan Chapter III.L.2.d and ISWEBE Plan Chapter IV.A.3.d) provide the San Diego Water Board with the authority to determine that specific land uses or locations generate substantial amounts of trash in addition to the priority land uses defined above. In the event the San Diego Water Board makes that determination, the San Diego Water Board may require the MS4 permittees to comply with the requirements of the Trash Amendments with respect to such land uses or locations.

[Note: The County of San Diego requests the removal of this paragraph, but if Regional Board must keep, then recommended edits are shown] The San Diego Water Board has evaluated the San Diego River Park Foundation’s 2013, 2014, and 2015 State of the River reports, and information received in regard to Item 5 on the May 14, 2014 Board meeting agenda pertaining to trash generated by transient encampments in the San Diego River watershed and related water quality issues. Based on this information the San Diego Water Board has determined that transient encampments in the San Diego River watershed are generating substantial trash in amounts that adversely affect beneficial uses or cause nuisance in the San Diego River. ~~This Order requires MS4 permittees in the San Diego River Watershed Management Area to develop plans to address trash runoff from the relevant areas of land affected by transient encampments through Track 1 or Track 2 controls as stipulated in the Trash Amendments (Ocean Plan Chapter III.L.2.d and ISWEBE Plan Chapter IV.A.3.d)~~ This Order requires MS4 permittees in the San Diego River watershed to coordinate with other entities within the watershed, as appropriate, to address trash associated with transient encampments from areas under their jurisdiction. Because this may involve entities not subject to the MS4 Permit, the coordination may be implemented through another regulatory mechanism, such as a Conditional Waiver of Waste Discharge Requirements, or cooperative agreements which would be separate from the NPDES permit for the MS4 permittees.

**10. Compliance Time Schedule.** ~~The Trash Amendments require the implementing permit to state that full compliance with the trash discharge prohibition shall occur within ten (10) years of the effective date of the first implementing permit. In addition, the implementing permit must require the MS4 permittees to demonstrate achievements of interim milestones. In no case may the final compliance date be later than fifteen (15) years from the effective date of the Trash Amendments (i.e. December 2, 2030). The current Regional MS4 Permit (Order R9-2013-0001, as amended by Orders R9-2015-0001 and R9-2015-0100) will expire on June 27, 2018. The Regional MS4 Permit reissued after June 27, 2018 will be the first implementing permit and will contain a compliance time schedule consistent with the requirements of the Trash Amendments.~~

~~Full compliance with the Trash Amendments will be within 10 years of the effective date of the re-issued Regional MS4 Permit.~~

**11. Monitoring and Reporting.** The Trash Amendments require the implementing permit to include monitoring and reporting requirements. The MS4 permittees will be required to provide reports to the San Diego Water Board on an annual basis to monitor progress toward achieving full compliance with the trash discharge prohibition. ~~The monitoring and reporting requirements are dependent on the measures elected to be implemented by a MS4 permittee.~~

**12. Regional MS4 Permit and Incorporation into Copermittee Planning Documents.** On May 8, 2013, the San Diego Water Board adopted Order No. R9-2013-0001, NPDES No. CAS0109266, National Pollutant Discharge Elimination System (NPDES) Permit and Waste Discharge Requirements for Discharges from the Municipal Separate Storm Sewer Systems (MS4s) Draining the Watersheds within the San Diego Region (Regional MS4 Permit). The Regional MS4 Permit initially only incorporated the owners and operators of Phase I MS4s in San Diego County (San Diego County MS4 permittees). The Regional MS4 Permit was subsequently amended in 2015 to incorporate the owners and operators of the Phase I MS4s in south Orange County (Orange County MS4 permittees) and in southwest Riverside County (Riverside County Copermittees). The San Diego Water Board intends to incorporate the requirements of the Trash Amendments into the Regional MS4 Permit after it expires (June 27, 2018). The renewed Regional MS4 Permit will be the first implementing permit of the Trash Amendments for the MS4 permittees.

~~The Regional MS4 Permit requires the MS4 Copermittees to develop and implement Water Quality Improvement Plans for ten (10) Watershed Management Areas (WMAs), designated in Table B-1 of the Permit. Each jurisdiction is also required to develop and implement a Jurisdictional Runoff Management Plan (JRMP) that describes how specific strategies in the Water Quality Improvement Plans are implemented as well as how other agency specific permit requirements are met. While the JRMPs are not explicitly part of the Water Quality Improvement Plan, reporting related to JRMP programs is accomplished through the Water Quality Improvement Plan Annual Reporting Process.~~

~~Compliance with the Trash Amendments is based on implementation of specific measures to control trash within a jurisdiction. There may be synergy to be gained through implementation of watershed scale efforts to mitigate trash impacts also. The implementation measures, interim milestones, and compliance schedules for Track 1 or Track 2 of the Trash Amendments shall be incorporated into the Water Quality Improvement Plans for the watershed, into the jurisdictional specific JRMPs, or a combination of the two, to be implemented by the MS4 permittees as part of the adaptive management process.~~

~~Through the issuance of this Order pursuant to Water Code section 13267, the San Diego Water Board intends the MS4 permittees to incorporate the requirements of the Trash Amendments into the Water Quality Improvement Plans, into the Jurisdictional Runoff Management Plans, or a combination of the two, after renewal of the Regional MS4 Permit. Reporting on implementation of measures to comply with the Trash Amendments will be provided through JRMP Annual Report forms, which are submitted as part of the WQIP Annual Reports.~~

**13. Water Quality Improvement Plans.** The Regional MS4 Permit requires the MS4 permittees to develop and implement Water Quality Improvement Plans for ten (10) Watershed Management Areas, designated in the Regional MS4 Permit as shown in Table 1 below:

**Table 1. San Diego Region Watershed Management Areas**

Hydrologic Unit(s)	Watershed Management Area	Major Surface Water Bodies	Responsible MS4 permittees
San Juan (901.00)	South Orange County	<ul style="list-style-type: none"> <li>-Aliso Creek</li> <li>-San Juan Creek</li> <li>-San Mateo Creek</li> <li>-Pacific Ocean</li> <li>-Heisler Park ASBS</li> </ul>	<ul style="list-style-type: none"> <li>-City of Aliso Viejo</li> <li>-City of Dana Point</li> <li>-City of Laguna Beach</li> <li>-City of Laguna Hills<sup>1</sup></li> <li>-City of Laguna Niguel</li> <li>-City of Laguna Woods<sup>1</sup></li> <li>-City of Lake Forest<sup>2</sup></li> <li>-City of Mission Viejo</li> <li>-City of Rancho Santa Margarita</li> <li>-City of San Clemente</li> <li>-City of San Juan Capistrano</li> <li>-County of Orange</li> <li>-Orange County Flood Control District</li> <li>-City of Menifee<sup>3</sup></li> <li>-City of Murrieta<sup>4</sup></li> <li>-City of Temecula</li> <li>-City of Wildomar<sup>4</sup></li> <li>-County of Riverside</li> <li>-County of San Diego</li> <li>-Riverside County Flood Control and Water Conservation District</li> </ul>
Santa Margarita (902.00)	Santa Margarita River	<ul style="list-style-type: none"> <li>-Murrieta Creek</li> <li>-Temecula Creek</li> <li>-Santa Margarita River</li> <li>-Santa Margarita Lagoon</li> <li>-Pacific Ocean</li> </ul>	<ul style="list-style-type: none"> <li>-County of Riverside</li> <li>-County of San Diego</li> <li>-Riverside County Flood Control and Water Conservation District</li> </ul>
San Luis Rey (903.00)	San Luis Rey River	<ul style="list-style-type: none"> <li>-San Luis Rey River</li> <li>-San Luis Rey Estuary</li> <li>-Pacific Ocean</li> </ul>	<ul style="list-style-type: none"> <li>-City of Oceanside</li> <li>-City of Vista</li> <li>-County of San Diego</li> </ul>
Carlsbad (904.00)	Carlsbad	<ul style="list-style-type: none"> <li>-Loma Alta Slough</li> <li>-Buena Vista Lagoon</li> <li>-Agua Hedionda Lagoon</li> <li>-Batiquitos Lagoon</li> <li>-San Elijo Lagoon</li> <li>-Pacific Ocean</li> </ul>	<ul style="list-style-type: none"> <li>-City of Carlsbad</li> <li>-City of Encinitas</li> <li>-City of Escondido</li> <li>-City of Oceanside</li> <li>-City of San Marcos</li> <li>-City of Solana Beach</li> <li>-City of Vista</li> <li>-County of San Diego</li> </ul>
San Dieguito (905.00)	San Dieguito River	<ul style="list-style-type: none"> <li>-San Dieguito River</li> <li>-San Dieguito Lagoon</li> <li>-Pacific Ocean</li> </ul>	<ul style="list-style-type: none"> <li>-City of Del Mar</li> <li>-City of Escondido</li> <li>-City of Poway</li> <li>-City of San Diego</li> <li>-City of Solana Beach</li> <li>-County of San Diego</li> </ul>
Penasquitos (906.00)	Penasquitos	<ul style="list-style-type: none"> <li>-Los Penasquitos Lagoon</li> <li>-Pacific Ocean</li> </ul>	<ul style="list-style-type: none"> <li>-City of Del Mar</li> <li>-City of Poway</li> <li>-City of San Diego</li> <li>-County of San Diego</li> </ul>

**Table 1. San Diego Region Watershed Management Areas**

Hydrologic Unit(s)	Watershed Management Area	Major Surface Water Bodies	Responsible MS4 permittees
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	Mission Bay	<ul style="list-style-type: none"> <li>-Mission Bay</li> <li>-Pacific Ocean</li> <li>-San Diego Marine Life Refuge ASBS</li> </ul>	-City of San Diego
San Diego (907.00)	San Diego River	<ul style="list-style-type: none"> <li>-San Diego River</li> <li>-Pacific Ocean</li> </ul>	<ul style="list-style-type: none"> <li>-City of El Cajon</li> <li>-City of La Mesa</li> <li>-City of San Diego</li> <li>-City of Santee</li> <li>-County of San Diego</li> </ul>
<ul style="list-style-type: none"> <li>Pueblo San Diego (908.00)</li> <li>Sweetwater (909.00)</li> <li>Otay (910.00)</li> </ul>	San Diego Bay	<ul style="list-style-type: none"> <li>-Sweetwater River</li> <li>-Otay River</li> <li>-San Diego Bay</li> <li>-Pacific Ocean</li> </ul>	<ul style="list-style-type: none"> <li>-City of Chula Vista</li> <li>-City of Coronado</li> <li>-City of Imperial Beach</li> <li>-City of La Mesa</li> <li>-City of Lemon Grove</li> <li>-City of National City</li> <li>-City of San Diego</li> <li>-County of San Diego</li> <li>-San Diego County Regional Airport Authority</li> <li>-San Diego Unified Port District</li> </ul>
Tijuana (911.00)	Tijuana River	<ul style="list-style-type: none"> <li>-Tijuana River</li> <li>-Tijuana Estuary</li> <li>-Pacific Ocean</li> </ul>	<ul style="list-style-type: none"> <li>-City of Imperial Beach</li> <li>-City of San Diego</li> <li>-County of San Diego</li> </ul>

Notes:

1. By agreement dated February 10, 2015, pursuant to Water Code section 13228, the Phase I MS4 discharges within the jurisdiction of the City of Laguna Hills and the City of Laguna Woods located in the Santa Ana Region are regulated by San Diego Water Board Order No. R9-2013-0001 as amended by Order No. R9-2015-0001, upon the later effective date of Order No. R9-2015-0001 or Santa Ana Water Board Tentative Order No. R8-2015-0001. The City of Laguna Hills and Laguna Woods must also comply with the requirements of the San Diego Creek/Newport Bay TMDL in section XVIII of Santa Ana Water Board Order No. R8-2015-0001.
2. By agreement dated February 10, 2015, pursuant to Water Code section 13228, Phase I MS4 discharges within the City of Lake Forest located within the San Diego Water Board Region are regulated by the Santa Ana Water Board Order No. R8-2015-0001 (NPDES No. CAS618030) upon the later effective date of this Order or Santa Ana Water Board Tentative Order No. R8-2015-0001. In accordance with the terms of the agreement between the San Diego Water Board and the Santa Ana Water Board, the City of Lake Forest must implement the requirements of the Bacteria TMDL in Attachment E of this Order, participate in preparation and implementation of the Water Quality Improvement Plan for the Aliso Creek Watershed Management Area as described in Provision B of this Order and continue implementation of its over-irrigation discharge prohibition in its City Ordinance, Title 15, Chapter 15, section 14.030, List (b).
3. By agreement dated October 26, 2015, pursuant to Water Code section 13228, Phase I MS4 discharges within the City of Menifee located within the San Diego Water Board Region are regulated by the Santa Ana Water Board Order No. R8-2010-0033 as it may be amended or reissued (NPDES No. CAS618033) upon the later effective date of this Order. In accordance with the terms of the agreement between the San Diego Water Board and the Santa Ana Water Board, the City of Menifee must participate in preparation and implementation of the Water Quality Improvement Plan for the Santa Margarita River Watershed Management Area as described in Provision B of this Order.
4. By agreement dated October 26, 2015, pursuant to Water Code section 13228, the Phase I MS4 discharges within the jurisdiction of the City of Murrieta and the City of Wildomar located in the Santa Ana Region are regulated by San Diego Water Board Order No. R9-2013-0001 as amended by Orders No. R9-2015-0001 and R9-2015-0100. The City of Murrieta and City of Wildomar must also comply with the requirements of the Lake Elsinore/Canyon Lake Nutrient TMDLs in section VI.D.2 of Santa Ana Water Board Order No. R8-2010-0033, or corresponding section as it may be amended or reissued.

~~The Water Quality Improvement Plans include the following: (a) identification of priority water quality conditions that need to be addressed to improve the water quality in each Watershed Management Area; (2) numeric goals for the highest priority water quality conditions to be achieved that will demonstrate discharges from the MS4s are not causing or contributing to exceedances of applicable water quality objectives, or water quality objectives are being attained in receiving waters; (3) a description of the water quality improvement strategies that will be and may be implemented to achieve the numeric goals; and (4) schedules for implementing the water quality improvement strategies and achieving the numeric goals.~~

~~The Regional MS4 Permit also requires incorporation of implementation plans for applicable Total Maximum Daily Loads (TMDLs) and Areas of Special Biological Significance (ASBS), which include interim and final water quality based effluent limitations, compliance strategies, and compliance schedules, into the Water Quality Improvement Plans. The implementation measures, interim milestones, and compliance schedules for Track 1 or Track 2 of the Trash Amendments shall also be incorporated into the Water Quality Improvement Plans to be implemented by the MS4 permittees as part of the adaptive management process.~~

~~Through the issuance of this Order pursuant to Water Code section 13267, the San Diego Water Board intends the MS4 permittees to incorporate the requirements of~~

~~the Trash Amendments into the Water Quality Improvement Plans after renewal of the Regional MS4 Permit.~~

**14.13. Basis for Requiring Technical and Monitoring Reports.** Water Code section 13267 provides that the San Diego Water Board may require dischargers, past dischargers, or suspected dischargers to furnish those technical or monitoring reports as the San Diego Water Board may specify, provided that the burden, including costs, of these reports, must bear a reasonable relationship to the need for the reports and the benefits to be obtained from the reports. The technical and monitoring reports required under this Investigative Order are needed to provide information to the San Diego Water Board regarding (a) the measures each MS4 permittee is electing to implement (i.e. Track 1 or Track 2) within its jurisdiction to comply with the trash discharge prohibition (Track 1 and Track 2), (b) the plan that will be implemented by each MS4 permittee to comply with the trash discharge prohibition (Track 2 only), (c) the interim milestones that each MS4 permittee will achieve within its jurisdiction (Track 1 and Track 2), (d) the schedules to achieving the interim milestones, and full compliance with the trash discharge prohibition (Track 1 and Track 2), and (e) the monitoring (Track 2 only) and reporting (Track 1 and Track 2) that will be implemented to demonstrate progress toward achieving full compliance with the trash discharge prohibition.

**15.14. California Environmental Quality Act.** Adoption of this Order is for the protection of the environment and is exempt from the provisions of the California Environmental Quality Act (CEQA) (Public Resources Code section 21000 et seq.) in accordance with section 15308, Chapter 3, Title 14 of the California Code of Regulations (CCR). This action is also exempt from the provisions of CEQA in accordance with section 15061(b)(3) of Chapter 3, Title 14 of the CCR because it can be seen with certainty that there is no possibility that the activity in question may have a significant effect on the environment.

**IT IS HEREBY ORDERED**, pursuant to California Water Code section 13267, that the MS4 Permittees must comply with the following directives:

#### **A. TECHNICAL AND MONITORING REPORTS**

1. **Written Notices.** Each MS4 permittee must submit to the San Diego Water Board, **no later than three (3) months from the date of this Order [INSERT DATE]**, a written notice stating whether the MS4 permittee will implement Track 1 or Track 2 to comply with the trash discharge prohibition in the Ocean Plan and ISWEBE Plan.
2. **Track 2 Implementation Plans.** Each MS4 permittee electing to comply with Track 2 must submit, **no later than eighteen (18) months from the date of this Order [INSERT DATE]**, an implementation plan, which shall also be incorporated into the applicable Water Quality Improvement Plan or Jurisdictional Runoff Management Plan, or combination of the two, after renewal of the Regional MS4 Permit, for each Watershed Management Area described in Table 1 in Finding 13-above that describes:

- a. The combination of controls<sup>3</sup> selected by the MS4 permittee and the rationale for each 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. How the trash implementation plans will be monitored and assessed ~~in Water Quality Improvement Plan Annual Reports~~;
  - e. ~~Requests by MS4 permittees, if any, for authorization to substitute a Priority Land Use described in Finding 9 above with an Equivalent Alternate Land Use that generates rates of trash equivalent to, or greater than, the Priority Land Use being substituted. The MS4 permittees must provide data or information which establishes that trash generation rates from the Alternate Land Use(s) are greater than the Priority Land Use(s) being substituted;~~
  - f. A compliance time schedule ~~based on the shortest practicable time~~ to achieve full compliance with the trash discharge prohibition, including interim milestones (such as average load reductions of ten percent per year) and a final compliance date. The final compliance date must not be later than fifteen (15) years from the effective date of the Trash Amendments (i.e. December 2, 2030).
- 3. Monitoring and Reporting.** Upon adoption of the implementing MS4 Permit, the MS4 permittees are required to provide reports to the San Diego Water Board on an annual basis to demonstrate progress toward achieving full compliance with the trash discharge prohibition. The monitoring and reporting requirements are dependent on the compliance track selected by a MS4 permittee. Reporting may be performed using the Jurisdictional Urban Runoff Management Plan form, submitted with the Water Quality Improvement Plan Annual Report.
- a. MS4 permittees that elect to comply with the Statewide Trash Amendments via the Track 1 compliance option shall provide a report to the 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 as part of the JRMP reporting form within the Water Quality Improvement Plan Annual Report.
  - b. MS4 permittees that elect to comply with the Statewide Trash Amendments via the Track 2 compliance option 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. Monitoring reports shall be provided on an annual basis as part of the JRMP reporting form within the Water Quality Improvement Plan Annual Report 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 MS4 permittee.

4. **Coordination with Caltrans.** Each MS4 permittee subject to this Order must ~~submit, no later than eighteen (18) months from the date of this Order [INSERT DATE], a description of how MS4 permittees will~~ coordinate their efforts to install, operate, and maintain full capture systems, multi-benefit projects, and other controls with Caltrans in significant trash generating areas and/or priority land uses, as applicable.
5. **[Note: The County of San Diego requests removal of this paragraph, if Regional Board keeps in then recommended edits presented.]** **Transient Encampments in the San Diego River Watershed.** MS4 permittees discharging to the San Diego River watershed (Cities of San Diego, Santee, El Cajon, La Mesa, and County of San Diego), must ~~submit, no later than eighteen (18) months from the date of this Order [INSERT DATE], a description of how~~ coordinate with other entities in the watershed, as appropriate, to address trash generated from transient encampments in areas under their jurisdiction in the San Diego River Watershed Management Area ~~will be addressed. These efforts may be implemented under another regulatory mechanism, such as a Conditional Waiver of Waste Discharge Requirements, or non-regulatory cooperative agreements, separate from the NPDES permit for the MS4 permittees.~~

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<sup>3</sup> Controls include, but are not limited to, full capture systems, multi-benefit projects, other treatment

~~controls, and/or institutional controls treatment controls and institutional controls~~, as defined in ~~the~~ Appendix D to the ~~Water Quality Control Plan for Ocean Waters of California California Ocean Plan~~ and Appendix E of the ~~Water Quality Control Plan for~~ Inland Surface Waters, Enclosed Bays, and Estuaries of California.

## B. PROVISIONS

1. **Signatory Requirements.** All documents submitted to the San Diego Water Board must be signed and certified.

a. All reports required by this Order must be signed as follows:

- (1) For a corporation, by a principal executive officer of at least the level of vice-president;
- (2) For a partnership or sole proprietorship, by a general partner or the proprietor, respectively;
- (3) For a municipality, state, federal or other public agency, by either a principal executive or ranking elected official.
- (4) By a duly authorized representative of the person designated above (B.6.a.(1), B.6.a.(ii), or B.6.(a)(iii)). A person is a duly authorized representative only if:
  - (a) The authorization is made in writing by a person described in paragraph B.6.a above;
  - (b) The authorization specifies either an individual or position having responsibility for the overall operation of the regulated facility or activity; and
  - (c) The written authorization is submitted to the San Diego Water Board.

b. Any person signing a document required by this Order 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."*

2. **Submittal of Documents.** All documents submitted to the San Diego Water Board in compliance with this Order must be submitted in electronic format (compact disk (CD-ROM or CD) in a Portable Document Format (PDF), unless otherwise directed. All electronic format documents required under this Order must be submitted to:

Executive Officer  
 California Regional Water Quality Control Board  
 San Diego Region  
 2375 Northside Drive, Suite 100  
 San Diego, CA 92108  
 Attn: Laurie Walsh, PE, Storm Water Management Unit

3. **Changes to Order.** This Order may be amended, rescinded, or updated by the Executive Officer. The MS4 permittees may propose changes or alternatives to the requirements in this Order if a valid rationale for the changes is shown. The filing of a request by a MS4 permittees for amending, rescinding, or updating this Order, or notification of planned changes or anticipated noncompliance does not stay any condition of this Order.

### C. NOTIFICATIONS

1. **Enforcement Discretion.** The San Diego Water Board reserves its right to take any enforcement action authorized by law for violations of the terms and conditions of this Order.
2. **Requesting Administrative Review by the State Water Board.** Any aggrieved person may petition the State Water Board regarding this Order in accordance with Water Code section 13320 and the 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 following the date of this Order. Copies of the laws and regulations applicable to filing petitions may be found on the State Water Board website at [http://www.waterboards.ca.gov/public\\_notices/petitions/water\\_quality](http://www.waterboards.ca.gov/public_notices/petitions/water_quality) or will be provided upon request.

For instructions on how to file a petition for review, see the State Water Board website at:

[http://www.waterboards.ca.gov/public\\_notices/petitions/water\\_quality/wqpetition\\_instr.shtml](http://www.waterboards.ca.gov/public_notices/petitions/water_quality/wqpetition_instr.shtml)

Ordered By: \_\_\_\_\_

David W. Gibson  
 EXECUTIVE OFFICER  
 Date



Neil R. Winter  
Mayor

Matthew Liesemeyer  
Mayor Pro Tem

Greg August  
Councilmember

Lesla A. Sobek  
Councilmember

John V. Denver  
Councilmember

December 14, 2016

VIA EMAIL TO: [sandiego@waterboards.ca.gov](mailto:sandiego@waterboards.ca.gov)  
Attn: Christina Arias

Christina Arias, PE  
California Regional Water Quality Control Board, San Diego Region

Subject: Comment – Tentative Order No. R9-2016-0205  
Reference 786088: CArias

Dear Ms. Arias:

The City of Menifee (City) would like to thank you for the opportunity to provide comments on Tentative Order No. R9-2016-0205, Investigative Order Directing the Owners and Operators of Phase I Municipal Separate Storm Sewer Systems (MS4s) Draining the Watersheds within the San Diego Region to Submit Technical and Monitoring Reports Pertaining to the Control of Trash From Phase I MS4s to Ocean Waters, Inland Surface Waters, Enclosed Bays and Estuaries in the San Diego Region (Tentative Order). The City is committed to developing and implementing jurisdictional and regional programs and strategies that will improve overall water quality.

The City is located primarily within the jurisdiction of the Santa Ana Regional Water Quality Control Board (Santa Ana Regional Board), but a small portion of the City totaling less than 1.3 square miles is located within the jurisdiction of the San Diego Regional Water Quality Control Board (San Diego Regional Board). Finding 29.b. of the San Diego MS4 Permit (Order No. R9-2013-001 as amended by Order No. R9-2015-0001 and Order No. R9-2015-0100) states:

*“... the City of Menifee is largely regulated by the Santa Ana Water Board under Order No. R8- 2010-0033 as it may be amended or reissued, including those portions of the City of Menifee within the San Diego Water Board’s jurisdiction, upon the effective date of this Order. The agreement also requires the City of Menifee to actively participate during development and implementation of the Santa Margarita River Watershed Management Area Water Quality Improvement Plan required pursuant to this Order.”*

In accordance with the above language, the City of Menifee is not included in Table 1c. at the beginning of the San Diego MS4 Permit, which lists the Riverside County Co-Permittees regulated by that order

In contrast to Table 1c. of the San Diego MS4 Permit, Section 4 of the Tentative Order includes the City of Menifee in the list of agencies which it defines as “MS4 permittees.” The designation of the City as an MS4 permittee inaccurately implies that all of the requirements of the Tentative Order are applicable to the City. It is the City’s opinion that this designation is inconsistent with the San Diego Regional Board Designation described in Finding 29.b. of the San Diego MS4 Permit (quoted above). The City understands that both the San Diego Regional Board and the Santa Ana Regional Board will be required by the State to implement the requirements of the Trash Amendments (State Water Board Resolution No. 2015-0019) through MS4 permit reissuance or through a Water Code Section 13267 or 13383 Order. Therefore, there is the distinct possibility that the same or—even more troubling—conflicting, requirements of the Trash Amendments will be imposed on the City by both the Santa Ana Regional Board and the San Diego Regional Board, even though the City of Menifee believe it is not an MS4 discharger to the Santa Margarita River watershed. Since the State Board Trash Amendment requirements are not unique to the San Diego Region, and since the Regional Board’s two proposed compliance tracks are jurisdiction-based rather than watershed-based, designating two separate Regional Water Boards to regulate the Trash Amendments requirements within the City of Menifee has the potential to create confusion and increased burden on the City without providing water quality benefits to the Santa Margarita River Watershed.

For example, the City reports to the Santa Ana Regional Board on all of its jurisdiction-wide activities, including activities within the portion of the City in the Santa Margarita Watershed. By the San Diego Regional Board applying its monitoring and reporting requirements, and requiring the City to choose a compliance track that will be enforced via the *San Diego Regional MS4 Permit*, the San Diego Regional Board has arguably *de facto* brought Menifee under the San Diego Regional MS4 Permit without naming the City as a discharger. Proceeding in this manner simply raises more problems than it solves given the very small portion of the City within the Santa Margarita Watershed. The City will likely end up reporting on that same area to two separate Regional Water Boards under two separate MS4 permits, with potential conflicts in compliance timetables and performance standards. .

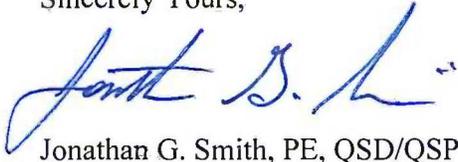
The small portion of the City within the Santa Margarita River WMA does not currently contain any Priority Land Use (PLU) areas, as defined by the Trash Amendments. Since the City of Menifee has no jurisdiction over any PLUs in the San Diego Region but does have jurisdiction over PLUs in the Santa Ana Region, it seems appropriate for only the Santa Ana Regional Board to issue the requirements of the Trash Amendments to the City on a jurisdictional basis.

**Recommendation:**

It is the City’s recommendation that the City of Menifee be removed from Section 4 of the draft order as indicated in Exhibit 1 attached hereto. Additionally, the Tentative Order should be amended to: (1) clarify that Menifee is not an MS4 discharger regulated by the San Diego Regional MS4 Permit; (2) specify which of the planning, implementation, and reporting requirements do not apply to the City of Menifee so as to prevent duplicative or contradicting requirements from two separate Regional Boards; 3) establish a compliance track for a City such as Menifee that does not have PLUs in the San Diego region and cannot feasibly select either Track 1 or Track 2 because the vast majority of the City falls outside the Santa Margarita Watershed.

If you have any questions or need additional information with regards to this comment letter, please contact me at 951-723-3704 or email at [jsmith@cityofmenifee.us](mailto:jsmith@cityofmenifee.us). You may also contact Yolanda Macalalad, Principal Engineer, Public Works-Engineering Department at 951-723-3718 or email at [ymacalalad@cityofmenifee.us](mailto:ymacalalad@cityofmenifee.us).

Sincerely Yours,

A handwritten signature in blue ink, appearing to read "Jonathan G. Smith".

Jonathan G. Smith, PE, QSD/QSP

Public Works Director/City Engineer

Attachment: Exhibit 1 – City of Menifee Recommended Revisions to Tentative Order

Cc: Rob Johnson, City Manager  
Yolanda Macalalad, Principal Engineer  
Jeffrey Melching, Rutan & Tucker, LLP  
Jeremy N. Jungreis, Rutan & Tucker, LLP  
Tad Nakatani, DMax Engineering, Inc.  
Jamie Richards, DMax Engineering, Inc.

## EXHIBIT 1: CITY OF MENIFEE RECOMMENDED REVISIONS TO TENTATIVE ORDER

**Persons Responsible for the Discharges of Trash.** The owners and operators of Phase I MS4s are responsible for discharges of waste, including trash, from land uses and locations within their jurisdictions through their MS4s to ocean waters, inland surface waters, enclosed bays, and estuaries in the San Diego Region. In the San Diego Region, owners and operators of Phase I MS4s (herein referred to as MS4 permittees) include the following entities:

- County of Orange
  - City of Aliso Viejo
  - City of Dana Point
  - City of Laguna Beach
  - City of Laguna Hills
  - City of Laguna Niguel
  - City of Laguna Woods
- County of Riverside
  - ~~City of Menifee<sup>2</sup>~~
  - City of Murrieta
  - City of Temecula
  - City of Wildomar
- County of San Diego
  - City of Carlsbad
  - City of Chula Vista
  - City of Coronado
  - City of Del Mar
  - City of El Cajon
  - City of Encinitas
  - City of Escondido
  - City of Imperial Beach
  - City of La Mesa
  - City of Lemon Grove
- City of Lake Forest<sup>1</sup>
- City of Mission Viejo
- City of Ranch Santa Margarita
- City of San Clemente
- City of San Juan Capistrano
- Orange County Flood Control District
- Riverside County Flood Control and Water Conservation District
- City of National City
- City of Oceanside
- City of Poway
- City of San Diego
- City of San Marcos
- City of Santee
- City of Solana Beach
- City of Vista
- San Diego County Regional Airport Authority
- San Diego Unified Port District

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<sup>1</sup> On February 10, 2015, the San Diego Water Board and the Santa Ana Water Board entered into an agreement, pursuant to Water Code section 13228, regarding MS4 discharges within the City of Lake Forest geographically located in the San Diego Region. According to the agreement, the City of Lake Forest must participate in preparation and implementation of the Water Quality Improvement Plan for the Aliso Creek Watershed Management Area. The requirements of the Trash Amendments will be incorporated into the Regional MS4 Permit during reissuance which may require an update to the Water Quality Improvement Plan.

~~<sup>2</sup> On October 26, 2015, the San Diego Water Board and the Santa Ana Water Board entered into an agreement, pursuant to Water Code section 13228, regarding MS4 discharges within the City of Menifee geographically located in the San Diego Region. According to the agreement, the City of Menifee must participate in preparation and implementation of the Water Quality Improvement Plan for the Santa Margarita River Watershed Management Area. The requirements of the Trash Amendments will be incorporated into the Regional MS4 Permit during reissuance which may require an update to the Water Quality Improvement Plan.~~



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**CITY OF SOLANA BEACH**

[www.cityofsolanabeach.org](http://www.cityofsolanabeach.org)

635 SOUTH HIGHWAY 101 • SOLANA BEACH, CA 92075 • (858) 720-2400 • Fax (858) 720-2455

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December 14, 2016

Christina Arias, PE  
Water Resource Control Engineer  
California Regional Water Quality Control Board  
San Diego Region  
2375 Northside Drive, Suite 100  
San Diego, CA 92108

**SUBJECT: City of Solana Beach Comments, Tentative Investigative Order  
No. R9-2016-0205, Reference 786088: CArias**

Dear Ms. Arias:

The City of Solana Beach (City) appreciates the opportunity to comment on Tentative Investigative Order R9-2016-0205, An Order Directing the Owners and Operators of Phase I Municipal Separate Storm Sewer Systems (MS4s) draining the Watersheds within the San Diego Region to submit Technical and Monitoring Reports Pertaining to the Control of Trash in Discharges from Phase I MS4s to Ocean Waters, Inland Surface Waters, Enclosed Bays, and Estuaries in the San Diego Region (Tentative Order). The City acknowledges the San Diego Regional Water Quality Control Board released the Tentative Investigative Order to meet the requirements of the Statewide Trash Amendments to the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California (ISWEBE Plan) and the Water Quality Control Plan for Ocean Waters of California (Ocean Plan) (referred to hereafter as "Trash Amendments").

The City generally supports the intent of the Tentative Investigative Order to the extent that it is necessary to implement the Statewide Trash Amendments. We respectfully submit the following comments and suggested revisions to address certain issues.

**Issue #1 – Consistency with Trash Amendments and Clear Definition of Track 1 and Track 2 Requirements (Findings 7, 8, 9.b, 11, 14; Directive A.2.f)**

The City requests revisions to the Tentative Order to ensure that its language is consistent with language from the Trash Amendments and that Track 1 and Track 2 requirements are clearly defined and distinguished. Statewide consistency is a stated goal of the State Water Resources Control Board (State Water Board) in developing the Trash Amendments. Since the Tentative Order will be issued prior to incorporation of the Trash Amendments into the Regional MS4 Permit, it will be the regulatory document defining key required components. It is therefore essential that the Tentative Order

findings and directives include the same language and clarity as the Trash Amendments. Suggested revisions are provided for the following Tentative Order items:

**Finding 7.** *Language from the Trash Amendments regarding Track 2 implementation is omitted.*

**Finding 8.** *Definition of Full Capture System Equivalency omits some of the language from the Trash Amendments.*

**Finding 9.b.** *Language from the Trash Amendments regarding Equivalent Alternative Land Uses is omitted.*

**Finding 10.** *Language from the Trash Amendments regarding interim milestones is omitted.*

**Finding 11.** *Language from the Trash Amendments regarding Track 1 and Track 2 monitoring and reporting is omitted.*

**Finding 14.** *Language should be clarified to specify which requirements apply to Track 1, Track 2, or both.*

**Directive A.2.f.** *Language imposes a schedule based on the “shortest practicable time,” which is not consistent with the schedule requirements within the Trash Amendments.*

### **Finding 7. MS4 Permit Implementation of the Trash Amendments**

Finding 7 presents the Track 1 and Track 2 compliance options detailed in the Statewide Trash Amendments. However, the Track 2 language omits some of the Track 2 language within the Statewide Trash Amendments.

Recommendation: Add the omitted language (underlined below) from the Statewide Trash Amendments to the Tentative Investigative Order. Suggested revision:

*Track 2: Install, operate, and maintain any combination of full capture systems, multi-benefit projects, other treatment controls, and/or institutional controls within either the jurisdiction of the MS4 permittee or within the jurisdiction of the MS4 permittee and contiguous MS4 permittees. The MS4 permittee may determine the locations or land uses within its jurisdiction to implement any combination of controls. The MS4 permittee shall demonstrate that such combination achieves full capture system equivalency. The MS4 permittee may determine which controls to implement to achieve compliance with full capture system equivalency. It is, however, the State Water Board’s expectation that the MS4 permittee will elect to install full capture systems where such installation is not cost-prohibitive.*

### **Finding 8. Full Capture System Equivalency**

Finding 8 presents the definition for Full Capture System Equivalency. However, the definition omits some of the language within the Statewide Trash Amendments.

Recommendation: Add the omitted language (underlined below) from the Statewide Trash Amendments to the Tentative Investigative Order. Suggested revision:

*Examples of such approaches include, but are not limited to, the following:*

### **Finding 9.b. Land Uses and Locations Requiring Trash Controls – Equivalent Alternative Land Uses**

Finding 9.b does not contain the full language from the Equivalent Land Use Provisions in the Statewide Trash Amendments. Finding 9.b omits “*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 or greater than the total trash generated from the priority land uses for which substitution is requested.*” The Statewide Trash Amendments included this language because the State Water Board recognized there is variability in trash generation within the same land use type based on local conditions. Omitting this language reduces the flexibility MS4 Permittees have to define the priority land uses within their jurisdictions using local trash-generation information.

Recommendation: Add the omitted language (underlined below) from the Statewide Trash Amendments to the Tentative Investigative Order. Suggested revision:

*An MS4 permittee with regulatory authority over priority land uses may issue a request to the San Diego Water Board that the MS4 permittee be allowed to substitute one or more a land uses identified above with an 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 or greater than the total trash generated from the priority land uses 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 “Keeping America Beautiful Visible Litter Survey”; or other information as required by the San Diego Water Board.*

### **Finding 10. Compliance Time Schedule**

Finding 10 presents the compliance time schedule and states that, through the implementing permit, MS4 permittees will be required to demonstrate achievements of interim milestones. Clarity on interim milestones is provided in the Trash Amendments but is omitted in the Tentative Order.

Recommendation: Add omitted language (underlined below) from the Statewide Trash Amendments to the Tentative Order. Suggested revision:

*In addition, the implementing permit must require the MS4 Permittees to demonstrate achievements of interim milestones such as average load reductions of ten percent (10%) per year or other progress.*

The State Water Board also included a footnote in the Trash Amendments to add clarity to “other progress.” Since Track 1 is an implementation-based compliance option, interim milestones shall not be exclusive to water quality or load reduction measures. Per the language in the Trash Amendments, other progress should be clarified to include measures of implementation such as ten percent (10%) of full capture systems installed per year. The ambiguity implies that interim milestones may not include implementation-based milestones. Implementation-based milestone as an example of “other progress” would be appropriate for Track 1 as Track 1 does not requiring monitoring.

Recommendation: Add a footnote to add clarity for interim milestones. Suggested revision:

*In addition, the implementing permit must require the MS4 Permittees to demonstrate achievements of interim milestones<sup>1</sup>...*

<sup>1</sup> Interim milestones are quantitative measures of progress towards full compliance of Track 1 or Track 2. An example may be average load reductions of ten percent (10%) per year or other progress such as 10% of full capture systems installed per year.

## **Finding 11. Monitoring and Reporting**

Finding 11 does not provide adequate information related to the monitoring and reporting requirements specific to the Track 1 and Track 2 compliance options as detailed in the Trash Amendments. By not providing the specific requirements for the Track 1 and Track 2 compliance options, the Tentative Order leaves the monitoring and reporting requirements ambiguous and could cause unnecessary or noncompliant monitoring and/or reporting by the MS4 Permittees.

Recommendation: Add the omitted language (underlined below) from the Statewide Trash Amendments to the Tentative Order. Suggested revision:

*The MS4 permittees will be required to provide reports to the San Diego Water Board on an annual basis to monitor progress toward achieving full compliance with the trash discharge prohibition. The monitoring and reporting requirements are dependent on the measures elected to be implemented by a MS4 permittee.*

- a. MS4 permittees that elect to comply with the Track 1 compliance option shall provide a report to the 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

- b. MS4 permittees that elect to comply with the Track 2 compliance option 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. Monitoring reports shall be provided 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 MS4 permittee.

#### **Finding 14. Basis for Requiring Technical and Monitoring Reports**

Finding 14 states that the technical and monitoring reports are needed to provide information, however, the language does not specify which of the items relate to Track 1 and/or Track 2. Without the specific requirements, the Tentative Order leaves the monitoring and reporting requirements ambiguous and could cause unnecessary monitoring and/or reporting by the MS4 Permittees.

Recommendation: Revise language in Finding 14 to specify which items relate to Track 1 and/or Track 2. Suggested revision:

*The technical and monitoring reports required under this Investigative Order are needed to provide information to the San Diego Water Board regarding (a) the measures each MS4 permittee is electing to implement (i.e. Track 1 or Track 2) within its jurisdiction to comply with the trash discharge prohibition (Track 1 and Track 2), (b) the plan that will be implemented by each MS4 permittee to comply with the trash discharge prohibition (Track 2), (c) the interim milestones that each MS4 permittee will achieve within its jurisdiction (Track 1 and Track 2), (d) the schedules to achieving the interim milestones, and full compliance with the trash discharge prohibition (Track 1 and Track 2), and (e) the monitoring (Track 2) and reporting (Track 1 and Track 2) that will be implemented to demonstrate progress toward achieving full compliance with the trash discharge prohibition.*

#### **Directive A.2.f. Technical and Monitoring Reports – Implementation Plans**

Directive A.2.f states that a compliance schedule should be developed and based on the “shortest practicable time.” This schedule requirement is not consistent with the schedule requirements within the Trash Amendments.

Recommendation: Delete “based on the shortest practicable time” to maintain consistency with the Trash Amendments. Suggested revision:

*A compliance time schedule ~~based on the shortest practicable time~~ to achieve full compliance with the trash discharge prohibition, including interim milestones (such as average load reductions of ten percent per year) and a final compliance date. The final compliance date must not be later than fifteen (15) years from the effective date of the Trash Amendments (i.e. December 2,*

2030).

## **Issue #2 – Compliance through Implementation of Track 1 or Track 2 and Approval Process for Track 2 Implementation Plan (Finding 7)**

Finding 7 does not clearly state that the MS4 Permittee will be in compliance with the Trash discharge prohibitions and water quality objectives through implementation of Track 1 or Track 2.

Recommendation: Include language that clearly states that permittees in full and timely compliance with Track 1 or Track 2 are deemed to be in compliance with the discharge prohibition and narrative water quality objectives as incorporated into the MS4 Permit. Suggested language to include:

*MS4 Permittees fully complying with Track 1 or Track 2 are deemed to be in compliance with the trash discharge prohibition and narrative water quality objectives incorporated into the MS4 Permit.*

MS4 Permittees that choose Track 2 need to submit an Implementation Plan “*subject to approval by the San Diego Water Board.*” However, there is no language that identifies what the process and timing are for the Regional Water Board’s review and approval of the Track 2 Implementation Plans.

Recommendation: Include language in Finding 7 describing the Regional Board’s approval process for Implementation Plans developed under a Track 2 approach. Suggested language to include:

*Track 2 Implementation Plans will be deemed approved by the San Diego Water Board ninety (90) days after submission unless otherwise directed in writing by the San Diego Water Board Executive Officer.*

## **Issue #3 – Clarification of a Jurisdiction’s Ability to Change Compliance Tracks with Supporting Justification (Finding 7)**

Jurisdictions should be provided with the ability to change their initial determination of which compliance track to pursue. Implementation of the Trash Amendments will surely involve many lessons learned and efficiencies to be gained along the way. The State Water Board has clearly expressed its expectation “that the MS4 permittee will elect to install full capture systems where such installation is not cost-prohibitive.” A jurisdiction may be inclined to pursue Track 1 because of the simplicity of the approach and the compliance certainty it provides. As implementation progresses, installation of some full capture systems may be found to be not possible or cost-prohibitive. Allowing jurisdictions to change tracks during the implementation period, with sufficient, supporting justification, is reasonable and would provide jurisdictions with much needed flexibility to implement this 10-year program.

Recommendation: Add language to Finding 7 stating MS4 permittees may change tracks, provided they submit sufficient, supporting justification. In addition, this

language should be added to the first implementing permit (Regional MS4 Permit reissued after June 27, 2018). Suggested language to include:

*MS4 Permittees may elect to change tracks through their adaptive management process during the 10-year implementation period, provided they submit sufficient, supporting justification to the San Diego Water Board through a written request. Track change will be deemed approved by the San Diego Water Board forty-five (45) days after submission unless otherwise directed in writing by the San Diego Water Board Executive Officer.*

#### **Issue #4 – Clarification of Controls (Finding 7)**

Under Track 2, the MS4 Permittee may use a combination of controls within its jurisdiction to achieve full capture system equivalency. The Tentative Order does not clarify that existing controls may be used and monitored to achieve full capture system equivalency. MS4 Permittees may have dedicated resources to address trash within their jurisdiction and should be able to receive credit for their current and on-going efforts.

Recommendation: Include a footnote in Finding 7 stating that controls implemented to achieve full capture system equivalency may include pre-existing implementation efforts. Suggested revision:

*The MS4 Permittee shall demonstrate that such combination achieves full capture system equivalency. The MS4 Permittee may determine which controls<sup>1</sup> to implement to achieve compliance with full capture system equivalency.*

<sup>1</sup>Controls to achieve full capture system equivalency may include full capture systems, multi-benefit projects, other treatment controls, and/or institutional controls already implemented by the MS4 Permittee.

#### **Issue #5 – Implementation Plans Format (Directive A.2)**

Directive A.2 requires each MS4 Permittee electing to comply with Track 2 to submit an Implementation Plan for each Watershed Management Area. Due to the uniqueness of jurisdictional land use combinations, trash rates, and Full Capture System Equivalency values, watershed-based implementation plans may not be the appropriate approach for compliance with the Trash Amendments. The MS4 Permittees should have the flexibility to determine the appropriate approach for compliance with the Trash Amendments and include the Implementation Plan in their respective JRMP or WQIP(s).

Recommendation: Revise language in Directive A.2 to eliminate the requirement for Implementation Plans to be developed for each Watershed Management Area. Suggested revision:

***Track 2 Implementation Plans.*** *Each MS4 permittee electing to comply with Track 2 must submit, **no later than eighteen (18) months from the date of this Order** [INSERT DATE], an implementation Pplan for each Watershed*

Ms. Christina Arias  
December 14, 2016  
Page 8 of 8

Management Area described in Table 1 in Finding 13 above that describes...

**Issue #6 – Monitoring and Assessment Components in the Implementation Plan (Directive A.2.d)**

The Trash Amendments require that the Implementation Plans describe “how full capture system equivalency will be demonstrated.” Under this requirement, MS4 Permittees are expected to describe their monitoring plan. The monitoring plan will outline efforts the MS4 Permittee plans to implement to measure efficacy of implemented controls in achieving full capture system equivalency. The language in Directive A.2.d is ambiguous and implies the monitoring and assessment of implementation plans is required rather than monitoring and assessment of efficacy of implementation controls in achieving full capture system equivalency.

Recommendation: Revise language to more accurately convey requirements in Trash Amendments. Suggested revision:

*How the implemented controls identified in the trash implementation plans will be monitored and assessed in ~~Water Quality Improvement Plan Annual Reports~~;*

Thank you for your time and consideration of these comments offered to clarify specific items in the Tentative Order and ensure consistency with the Trash Amendments. If you have questions, please contact Ron Borromeo at (858) 720-2487 or at [rborromeo@cosb.org](mailto:rborromeo@cosb.org).

Sincerely,



Mohammad Sammak  
City Engineer / Public Works Director  
City of Solana Beach



December 14, 2016

By E-Mail to: [sandiego@waterboards.ca.gov](mailto:sandiego@waterboards.ca.gov)

Attn: Christina Arias

Christina Arias, PE

Water Resource Control Engineer

California Regional Water Quality Control Board, San Diego Region

**Subject: Comment - Tentative Order No. R9-2016-0205 (786088 C.Arias)**

Dear Ms. Arias:

The County of Orange, as Principal Permittee of the Orange County Stormwater Program, and the Orange County Flood Control District (collectively, County) appreciate the opportunity to provide comments on *Tentative Order No. R9-2016-0205, Investigative Order Directing the Owners and Operators of the Phase I Municipal Separate Storm Sewer Systems (MS4s) Draining the Watersheds within the San Diego Region to Submit Technical and Monitoring Reports Pertaining to the Control of Trash From Phase I MS4s to Ocean Waters, Inland Surface Waters, Enclosed Bays and Estuaries in the San Diego Region*, issued on November 10, 2016 (hereafter, "TIO"). To the extent they are consistent, these comments support those submitted by the California Stormwater Quality Association (CASQA) as well as the City of San Diego and County of San Diego, and were prepared in consultation with our co-permittees. The cities of Aliso Viejo, Dana Point, Laguna Hills, Laguna Niguel, Lake Forest, Mission Viejo and Rancho Santa Margarita have directed that they be recognized as concurring entities..

The San Diego Regional Water Quality Control Board (Regional Board) released the TIO in response to Amendments to the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California (ISWEBE Plan) and the Water Quality Control Plan for Ocean Waters of California (Ocean Plan) adopted by the State Water Resources Control Board on April 7, 2015, in Resolution No. 2015-0019 (hereinafter, "Trash Amendments").

The County and Cities provide the following comments to the TIO:

1. Finding 3 of the TIO indicates that the Regional Board is required to "modify, re-issue, or adopt an applicable MS4 permit, or issue an order pursuant to Water Code section 13267 or 13383 to implement the Trash Amendments. (Emphasis added). This finding suggests that the Trash Amendments may be implemented pursuant to an investigative order issued under Water Code 13267. This is contrary to the Trash Amendments, and beyond the scope of a section 13267 order. Sections IV.A.1.a and III.L.1.A of the Trash Amendments provide, in pertinent part, that the Trash Amendments shall be implemented through a prohibition of discharge and through NPDES permits issued pursuant to section 402(p) of the Federal Clean Water Act. Furthermore, sections IV.A.3 and III.L.2 of the Trash Amendments specifically set forth the specific provisions to be

included in NPDES permits, including the requirement to comply with the discharge prohibition by either Track 1 or Track 2, as well as coordination efforts with Caltrans.

While the Trash Amendments allow for the Regional Board to issue a 13267 order in the interim period prior to modification, re-issuance or adoption of NPDES permits that are subject to the Trash Amendments (see Section IV.A.5, for example), the orders included in the TIO go far beyond what the Trash Amendments call for in a 13267 order.

2. TIO Order A.2.f requires that the implementation plan should include a compliance time schedule based on the shortest practicable time to achieve compliance with the trash discharge prohibition. The Amendments state, however, that their implementation is to be through a prohibition of discharge and through NPDES permits. Further, under sections IV.A.5.a.(1).B and III.L.2.a.(2), the information to be required in response to a 13267 order does include the proposal of a compliance time schedule on the part of permittees. Based upon this language, compliance schedule provisions should be incorporated into the implementing permit and not implemented through a 13267/13383 order. This will ensure proper legal protection for the permittees while they implement the Trash Amendments.
  - It is requested that Regional Board staff strike TIO Order A.2.F. Alternatively, the deletion of “based on the shortest practicable time” is requested. Footnote 3 should also be revised for consistency with the Trash Amendments.
3. TIO Order A.3 requires permittees to submit a description of how they will coordinate their efforts to install, operate and maintain full capture systems, multi-benefit projects and other controls with Caltrans. Again, this order goes beyond the scope of a 13267 order, and beyond what sections IV.A.5.a.(1).B and III.L.2.a.(2) of the Trash Amendments call for in 13267 orders issued by the Regional Board.
  - It is requested that Regional Board staff strike TIO order A.3.
  - For the same reasons, it is requested that Regional Board staff strike TIO Order A.2.d.
4. In adopting the Trash Amendments, the State Board was clear that the amendments were to be implemented and not interpreted by the Regional Boards. The TIO is not entirely consistent with the Trash Amendments. To ensure that the Amendments are implemented as intended by the State Board, the following changes are requested:
  - Finding 7 Finding 7 does not properly reflect the text of the Trash Amendments with respect to the discretion of a permittee opting to implement Track 2. Specifically, the Trash Amendments allow that Track 2 permittees “may determine the locations or land uses within its jurisdiction to implement any combination of controls.” This specific language is missing from Finding 7. It is requested that Finding 7 be modified to include the above-specified language and that Finding 7 overall accurately reflect the language of Trash Amendments section IV.A.3 and III.L.2.
  - Finding 8 presents the definition for Full Capture System Equivalency. However, the definition omits some of the language from the Trash Amendments that provides

- flexibility to the MS4 Permittees. Add the omitted language from the Trash Amendments to the Tentative Investigative Order.
- Finding 9.a should clarify that the priority land uses only apply under a Track 1 approach.
  - Finding 9.b should include all language from the Trash Amendments.
  - Finding 11 needs to provide more clarity regarding the reporting requirements under Track 1 vs. Track 2. Language from the Trash Amendments should be added.
  - Finding 14 should include clarifying language to specify which requirements apply to Track 1, Track 2, or both.
  - Directive A.2.e incorrectly links Priority Land Uses and Equivalent Alternative Land Uses with a Track 2 approach. Suggest deletion of A.2.e.
5. The Tentative Investigative Order requires the incorporation of the requirements of the Statewide Trash Amendments into the WQIPs. The Statewide Trash Amendments were not, however, written to be part of a watershed-based management approach. Indeed, mandating that trash be a focus of the WQIP may be construed as antithetical to the watershed management approach which emphasizes local prioritization of issues. It should be noted, for example, that trash was not identified as a high priority condition in South Orange County Watershed Management Area. Moreover, for Track 1, incorporation of the Amendments into the WQIP provision unnecessarily complicates what was intended to be a very simple scheme of control device implementation. The Tentative Investigative Order therefore needs to allow jurisdictions the flexibility to determine the best option for incorporating the Trash Amendments, either through the WQIPs or the Jurisdictional Runoff Management Plan (JRMP) or a combination of both.
- It is requested that Regional Board staff delete Finding 13 and revise Finding 12 to enable agencies to include their approach for compliance with the Trash Amendments, whether Track 1 or Track 2, within the Water Quality Improvement Plans or their respective JRMPs, or in a combination of the Water Quality Improvement Plans and JRMPs. TIO Order A.2.d should also be deleted.
6. As recognized by the State Water Resources Control Board and other Regional Boards throughout California, transient encampments have been identified as a non-point source of trash. Public works departments can address some of the consequences of homelessness but not the root causes. While the Regional Water Board's keen interest in tackling the trash and debris associated with transient encampments within flood control infrastructure is recognized, this interest needs to be addressed using an alternative non-point source regulatory construct that includes all responsible parties and is not tied to compliance with the municipal stormwater Permit.

TIO Finding 9.d. seeks to designate "transient encampments" in the San Diego Watershed as "specific land use or locations determined to generate substantial amounts of trash," and requires permittees in the San Diego River Watershed Management Area to develop plans to address trash runoff from the relevant areas of land affected by transient encampments.

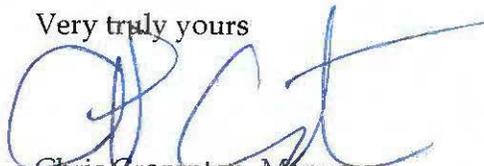
Sections III.L.2.d and IV.A.3.d of the Trash Amendments provides that a permitting authority may determine that specific land uses or locations generate substantial amounts of trash, and that in the event this determination is made, the permitting authority may require the MS4 to comply with IV.A.3.a.1 (Track 1) or IV.A.3.a.2 (Track 2). However, the San Diego Watershed is a large geographic area, and is not a specific location, such as a park, stadium, school, campus, or road, all examples provided in the Trash Amendments. Further, "transient encampments," if this term is meant to exclude specific grounds designated as recreational campground, is not an otherwise sanctioned "land use." The requirement to address trash generated within the entirety of the San Diego Watershed as a result of "transient encampments," is thus overbroad and ambiguous, and fails to identify the "specific land uses or locations" for purposes of Sections III.L.2.d and IV.A.3.d of the Trash Amendments. Further, the requirement to address "how trash generated from transient encampments will be addressed" raises a myriad of other issues, including feasibility, and, importantly, constitutional concerns, especially under the Fourth and Fifth Amendments.

- o In light of the above considerations, it is requested that Regional Board staff strike the second paragraph of Finding 9.d, and also strike Order A.4, in favor of considering alternative regulatory mechanisms outside of the Trash Amendments, which have the capability of addressing the issue.

In addition to the above comments, as various letters submitted by cities subject to the TIO have set forth, the TIO represents a state agency order directed to local government and requiring those local governments to expend funds to implement a new program or higher level of service, i.e., the requirements set forth in the TIO. As such, the TIO is a state mandate for which funding has not been provided, and thus is subject to the provisions of Calif. Const. article XIII B, section 6.

Thank you for your attention to our comments. Please contact Richard Boon at (714) 955-0670, with any questions.

Very truly yours



Chris Crompton, Manager  
 Water Quality Compliance

Cc: (Electronic copies only)

South Orange County Permittees  
 Orange County Technical Advisory Committee  
 Andrew Kleis, Deputy Director, City of San Diego  
 Todd Snyder, Manager, Watershed Protection Program, County of San Diego  
 Stuart McKibben, Riverside County Flood Control and Water Conservation District  
 Marc Rodabaugh, San Bernardino County Flood Control District



**JAY E. ORR**  
COUNTY EXECUTIVE OFFICER

RB9 001959  
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**GEORGE A. JOHNSON**  
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HUMAN RESOURCES  
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ASSISTANT COUNTY EXECUTIVE OFFICER  
HEALTH SYSTEMS  
**PAUL McDONNELL**  
ASSISTANT COUNTY EXECUTIVE OFFICER  
COUNTY FINANCE DIRECTOR

December 14, 2016

*Sent via email: [sandiego@waterboards.ca.gov](mailto:sandiego@waterboards.ca.gov)*

Ms. Christina Arias  
RWQCB – San Diego Region  
2375 Northside Drive, Suite 100  
San Diego, CA 92108

Dear Ms. Arias:

Re: Comment – Tentative Order  
No. R9-2016-0205 (786088 C. Arias)

The County of Riverside (County) appreciates this opportunity to provide comment on the Draft Investigative Order to address State Water Board Resolution No. 2015-0019 (the Trash Amendments), Tentative Order No. R9-2016-0205 (Draft IO). The County is submitting this comment letter on behalf of itself and the Cities of Murrieta, Temecula, and Wildomar (the "upper Santa Margarita Co-Permittees"), the Municipal Separate Storm Sewer System (MS4) Co-Permittees located within the Riverside County portion of the Santa Margarita Watershed Management Area. The Riverside County Flood Control and Water Conservation District and the City of Menifee are submitting separate comment letters to address their unique concerns. The San Diego Regional Water Board's (Regional Board) careful consideration of each of these comments is appreciated.

The upper Santa Margarita Co-Permittees' comments pertain to several key areas of the Draft IO. Specifically, we request the following modifications:

1. Revise Draft IO Finding 13 to allow flexibility for Co-Permittees to address the Trash Amendments either within a Water Quality Improvement Plan (WQIP) or in their respective Jurisdictional Runoff Management Programs (JRMPS);
2. Delete Draft IO Finding 9.d and Directive A.4, the proposed requirement to address transient encampments under the Regional MS4 Permit for the San Diego River Watershed Management Area (WMA);
3. Assure that the language of the Draft IO is consistent with the language of the Trash Amendments;
4. Clarify a Co-Permittee's ability to change compliance tracks, with justification; and
5. Modify Draft IO Directive A.3 to remove the requirement to report coordination with Caltrans to the Regional Board.

These modifications are requested to ensure that, upon adoption, the requirements of the Draft IO are consistent with the State Board's Trash Amendments.

Re: Comment – Tentative Order

No. R9-2016-0205 (786088 C. Arias)

**COMMENT # 1 – REVISE DRAFT IO FINDING 13 TO ALLOW FLEXIBILITY FOR CO-PERMITTEES TO ADDRESS THE TRASH AMENDMENTS WITHIN THE WQIP, OR RESPECTIVE JRMPS**

Finding 13 states that the Regional Board intends that MS4 permittees would "incorporate the requirements of the Trash Amendments into the [WQIPs] after renewal of the regional MS4 Permit." Incorporation of trash controls into WQIPs would effectively require that trash be addressed on a watershed scale. We believe that this proposed approach would be inconsistent with the intent of the State Board in adopting the Trash Amendments and the wrong policy choice for the following reasons.

First, the State Board intended for the Trash Amendments to be addressed at the jurisdictional level. For example, Trash Amendments Chapter IV.A.3.a(1) states that Track 1 shall be implemented by MS4 permittees, "in their jurisdictions." Chapter IV.A.3.a(2) states that Track 2 shall be implemented "within either the jurisdiction of the MS4 permittee or within the jurisdiction of the MS4 permittee and contiguous MS4 permittees." This language indicates a clear State Board intent that trash controls be adopted within jurisdictions, not watersheds. This makes sense, as many areas which are sources for trash in a watershed are not within MS4 permittee jurisdiction (e.g., federal, state, and tribal lands).

Second, incorporation of trash control provisions into the WQIP could result in requirements which exceed the scope of the efforts intended by the State Board in adopting the Trash Amendments. For example, Regional MS4 Permit Provisions B3.b(1)(b)-(2) set forth that in developing or revising a WQIP, watershed Co-Permittees must collaborate to develop jurisdictional strategies, optional jurisdictional strategies, and watershed management area strategies, to be implemented in a tiered fashion to address the watershed's identified highest priority water quality conditions. Placing Trash Amendment requirements into the WQIP would require that all Co-Permittees perform these steps to address trash. However, Trash Amendments Chapter IV.A.3.a(1)-(2) provides that compliance with the trash discharge prohibition shall be achieved through implementation of Track 1 or 2, and clearly prescribes and defines the trash control strategies which must be implemented. These prescribed strategies do not include requirements for development or implementation of tiered optional jurisdictional or watershed management area strategies.

This regulatory misfit also applies to monitoring. Regional MS4 Permit Provisions B.4 and B.5 require that WQIPs include watershed monitoring for the highest priority water quality conditions. Trash Amendments Chapter IV.A.6 also sets forth trash monitoring and reporting programs, the requirements of which vary depending upon which Track a Co-Permittee chooses and the specifics detailed within each individual Co-Permittee's developed monitoring plan. The upper Santa Margarita Co-Permittees anticipate that within the Santa Margarita WMA, different Co-Permittees may select different Tracks. Further, it is anticipated that significant differences will exist among the Co-Permittees' respective Track 2 strategies and their resultant monitoring programs. This anticipated level of specificity in individual jurisdictional trash monitoring programs will be significantly and unnecessarily burdensome to incorporate into a watershed-wide monitoring program, which aims to measure attainment of watershed goals for trash.

The upper Santa Margarita Co-Permittees submit that the State Board adopted the Trash Amendments with the intent that they would be implemented at the jurisdictional scale, so as to avoid conflicts with watershed-based planning documents both in terms of the development and implementation of trash control strategies, and in monitoring and reporting. For these reasons, the Draft IO should not require that the Trash Amendment requirements be incorporated into WQIPs, but instead Co-Permittees should have the flexibility to address trash on a jurisdictional or watershed scale, at their discretion. Therefore, our request is that the Regional Board revise the last sentence of Draft IO Finding 13 as follows (recommended revision in *italics*):

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Through the issuance of this Order pursuant to Water Code section 13267, the San Diego Water Board intends the MS4 permittees *either* to incorporate the requirements of the Trash Amendments into the Water Quality Improvement Plans *or into their Jurisdictional Runoff Management Plans* after renewal of the Regional MS4 Permit.

**COMMENT # 2: DELETE DRAFT IO FINDINGS 9.d AND DIRECTIVE A.4, THE PROPOSED REQUIREMENT TO ADDRESS TRANSIENT ENCAMPMENTS UNDER THE REGIONAL MS4 PERMIT FOR THE SAN DIEGO RIVER WMA**

Draft IO Finding 9.d and Directive A.4 requires certain Co-Permittees within the San Diego River WMA to address trash from transient encampments. While this requirement does not apply to the upper Santa Margarita Co-Permittees, we believe that this requirement should not be contained in the IO.

Transient encampments are just that, transient. Encampment locations, size, and the numbers of inhabitants within them cannot be known by MS4 Co-Permittees at any given moment, because these factors are constantly in flux. Thus, these encampments are fundamentally non-point sources of trash, and not appropriate for regulation in an NPDES permit. In fact, as the comment letter being filed concurrently by the California Stormwater Quality Association (CASQA) sets forth, the State Board in responses to comments on the Trash Amendments suggested that non-point source trash should be addressed by specific waste discharge requirements or waivers. (See CASQA comment letter, Issue #3.)

It is evident in the language of Chapter IV.A.3.d of the Trash Amendments that the State Board did not intend to require Co-Permittees to address non-point, mobile sources of trash throughout an entire watershed. Instead, the State Board focused on the targeting of specific locations or land uses which might generate high amounts of trash. This is evidenced in the Chapter's language, which directs Regional Boards to include "specific *land uses* or *locations* (e.g., parks, stadia, schools, campuses, or roads leading to landfills)" (emphasis added), if those specific locations have been determined to generate substantial amounts of trash. Transient encampments which move throughout a watershed are neither a specific land use nor a specific location.

Moreover, transient encampment locations may be located in areas that are not under MS4 Co-Permittee control (e.g., such as on Federal, tribal, state or private lands); this severely limits the Co-Permittees' capability to address trash from transient encampments. Similarly, as the Trash Amendments' Track 1 compliance option requires installation of full capture devices to treat MS4 discharges from priority land use areas, the Co-Permittees' ability to implement Track 1 to address transient encampments would be limited. Also, transient encampments often can be located within receiving waters themselves. Trash generated in encampments under these conditions does not ever enter the MS4, and would thereby constitute a discharge which is beyond the scope of the MS4 permit. Last, we note that a Track 2 approach requiring monitoring and demonstration of full capture would be extremely challenging given the diffuse and constantly mobile nature of transient encampments. Therefore, we request that the Regional Board *delete Draft IO Finding 9.d and Directive A.4 and instead regulate trash from transient encampments pursuant to Trash Amendments Chapter IV.A.4.*

**COMMENT # 3: ASSURE THAT THE LANGUAGE OF THE DRAFT IO IS CONSISTENT WITH THE LANGUAGE OF THE TRASH AMENDMENTS**

CASQA's comment letter, as filed concurrently on this matter, sets forth in Issue #2 how the findings in the Draft IO need to be modified to be consistent with the Trash Amendments. We incorporate such comments

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as if set forth in full and respectfully request the Regional Board to make the language modifications requested by CASQA.

**COMMENT # 4: PROVIDE CLARIFICATION OF A CO-PERMITTEE'S ABILITY TO CHANGE COMPLIANCE TRACKS, WITH JUSTIFICATION**

Co-Permittees must be provided with the ability to change their initial determination of which compliance Track to pursue, without being at risk of non-compliance with the trash discharge prohibition. California is a pioneer in implementing statewide requirements for MS4s to address trash, and because of that "leading edge" stance, the Co-Permittees will face challenges and the need to absorb lessons learned. For example, while we understand that some Co-Permittees have expressed an initial preference for Track 1 because of its simplicity and the compliance certainty it provides, due to structural differences among various drainage and flow collection structures in a watershed, installation of full capture systems may be cost-prohibitive or not structurally possible in certain areas. It is highly likely that a discovery like this would occur after a Co-Permittee's selection of compliance Track.

Enabling Co-Permittees to change tracks during the implementation period, so long as sufficient justification is provided, would provide appropriate flexibility to implement this 10-year program. Therefore, our recommendation is that the Regional Board *revise the Draft IO to provide clarification of a Co-Permittee's ability to change compliance Tracks, with justification.*

**COMMENT # 5: MODIFY DRAFT IO DIRECTIVE 3 TO REMOVE REQUIREMENTS TO REPORT COORDINATION WITH CALTRANS TO THE REGIONAL BOARD**

Trash Amendments Chapter IV.A.3.b requires that "the Department and MS4 permittees that are subject to the provisions of Chapter IV.A.3.a herein shall coordinate their efforts" in the implementation of Track 1 or 2. Additionally, various Regional MS4 Permit provisions require coordination with Caltrans. The upper Santa Margarita Co-Permittees currently coordinate with Caltrans on various issues, and will continue to coordinate with them, including, as required on implementation of the Trash Amendments.

Directive A.3 of the Draft IO requires the Co-Permittees subject to the Order to provide a report describing how they will coordinate with Caltrans. The upper Santa Margarita Co-Permittees submit that the requirement to produce yet another report and plan for coordination is over-burdensome, unnecessary, and not required under the Trash Amendments. Further, the Regional Board does not specify how it intends to utilize this submittal. Our recommendation is that the Regional Board *revise Draft IO Directive A.3 to require coordination with Caltrans, as applicable, but remove the requirement to describe this coordination in a submittal to the Regional Board.*

In summary, the upper Santa Margarita Co-Permittees request that the Regional Board revise the Draft IO to be consistent with the Trash Amendments by (1) revising Draft IO Finding 13 to allow flexibility for Co-Permittees to address the Trash Amendments either within the WQIP or their respective JRMPs, (2) deleting Draft IO Finding 9.d, and Directive A.4, and instead regulating trash from transient encampments pursuant to Trash Amendments Chapter IV.A.4, (3) assuring that the language of the Draft IO is consistent with the language of the Trash Amendments, (4) revising the Draft IO to provide clarification of a Co-Permittee's ability to change compliance Tracks, with justification, and (5) revising Draft IO Directive A.3 to require coordination with Caltrans, as applicable, but removing the requirement to describe this coordination in a submittal to the Regional Board.

December 14, 2016

Ms. Christina Arias

Re: Comment – Tentative Order

No. R9-2016-0205 (786088 C. Arias)

The upper Santa Margarita Co-Permittees are committed to water quality in the Santa Margarita WMA, and look forward to the continued collaboration with Regional Board staff. Thank you for your consideration of these comments. If you have any questions, please contact me at [shorn@rceo.org](mailto:shorn@rceo.org) or 951.955.1110.

Very truly yours,



STEVE HORN

Principal Management Analyst

RIVERSIDE COUNTY FLOOD CONTROL  
AND WATER CONSERVATION DISTRICT

December 14, 2016

*Sent via email: [sandiego@waterboards.ca.gov](mailto:sandiego@waterboards.ca.gov)*

Ms. Christina Arias  
RWQCB – San Diego Region  
2375 Northside Drive, Suite 100  
San Diego, CA 92108

Dear Ms. Arias:

Re: Comment – Tentative Order  
No. R9-2016-0205 (786088 C. Arias)

The Riverside County Flood Control and Water Conservation District (District) appreciates this opportunity to provide comment on the draft investigative order to address State Water Board Resolution No. 2015-0019 (the Trash Amendments), Tentative Order No. R9-2016-0205 (Draft IO). Comments set forth herein are specific to the District. The County of Riverside and the Cities of Murrieta, Temecula, and Wildomar (the "upper Santa Margarita Co-Permittees") will submit a separate joint comment letter. Without waiving the District's position that it should not be included within the Draft IO, the District concurs with each of the comments of the upper Santa Margarita Co-Permittees, and incorporates those comments herein by reference. The City of Menifee will also submit a separate comment letter to address its unique concerns. The San Diego Regional Water Quality Control Board's (Regional Board) careful consideration of each of these comments is appreciated.

The District's comments pertain to Draft IO Section 4, Persons Responsible for the Discharge of Trash, and Section 13, Water Quality Improvement Plans (WQIPs). Specifically, we request the following modifications:

- Remove the District as a "Person Responsible for the Discharge of Trash" under Finding 4 of the Draft IO, as the District does not have regulatory authority over priority land uses and modify the language of Provision A.1 to set forth that "Each MS4 permittee *listed in Finding 4* must, etc."; and
- Revise Draft IO Finding 13 to allow flexibility for Co-Permittees to address the Trash Amendments either within a WQIP or in their respective Jurisdictional Runoff Management Programs (JRMPs).

These modifications are requested to ensure that, upon adoption, the requirements of the Draft IO are consistent with the State Board's Trash Amendments.

**COMMENT # 1 – REMOVE THE DISTRICT AS A "PERSON RESPONSIBLE FOR THE DISCHARGE OF TRASH" UNDER FINDING 4 OF THE DRAFT IO, AS THE DISTRICT DOES NOT HAVE REGULATORY AUTHORITY OVER PRIORITY LAND USES**

Chapters IV.A.3.a and IV.A.5.a of the Trash Amendments require that in implementing the Trash Amendments, Regional Water Boards must place requirements into NPDES permits for "MS4 permittees *with regulatory authority over PRIORITY LAND USES*" (emphasis added). This language highlights the State Board's decision to implement a land-use based approach toward addressing trash, and its recognition that Co-Permittees can vary significantly in their structure and function. Vital to the Amendments' land-use based approach is the need for land use authority to condition development projects and require retrofit of street-level drainage structures to capture trash (i.e., implement Track 1 controls), and utilize police powers to create trash control ordinances, inspect property, and enforce those ordinances (i.e., implement Track 2 controls). The Riverside County Flood Control and Water Conservation District Act (Act 6642 of State Legislature) does not afford it with land use authority or police powers to control new or existing development. Additionally, the District does not maintain street-level drainage and flow collection structures, such as street catch basins, which most typically collect trash from high priority land use areas.

Therefore, to recognize the District's unique function and to remain consistent with the Trash Amendments, we recommend that the Draft IO remove the District from Draft IO Finding 4 and modify Provision A. 1 to read as follows (recommended revision in *italics*):

1. **Written Notices.** Each MS4 permittee *listed in Finding 4* must submit to the San Diego Regional Water Quality Control Board, a written notice stating whether the MS4 permittee will implement Track 1 or Track 2 to comply with the trash discharge prohibition in the Ocean Plan and ISWEBE Plan.

**COMMENT # 2 - REVISE DRAFT IO FINDING 13 TO ALLOW FLEXIBILITY FOR CO-PERMITTEES TO ADDRESS THE TRASH AMENDMENTS WITHIN THE WQIP, OR RESPECTIVE JRMPS**

The upper Santa Margarita Co-Permittee's comment letter, as filed concurrently on this matter, sets forth in Comment #1 how the Regional Board's proposal to require that Co-Permittees address trash in WQIPs would be inconsistent with the intent of the State Board in adopting the Trash Amendments, and the wrong policy choice for addressing trash. The District concurs with each of these comments. However, while the District submits that it is not a jurisdiction "with regulatory authority over priority land uses" and thus should not be covered under the Draft IO, because the District is a Co-Permittee under the Regional MS4 Permit and is subject to WQIP requirements under that permit, it has specific concerns regarding Draft IO Finding 13.

Regional MS4 Permit Provision B.3.a requires that any priority water quality conditions listed in the WQIP include watershed-based interim and final goals; if the Trash Amendment requirements are incorporated into a WQIP, such watershed-based goals would need to be developed for trash. This is of concern to the District, because the Regional MS4 Permit requires periodic assessment of attainment of interim and final watershed goals, and adaptation of strategies as a watershed to meet those goals, when necessary. These requirements could result in the District having to implement such strategies when, as previously noted, the Trash Amendments are not applicable to the District. Moreover, the

Ms. Christina Arias  
Re: Comment – Tentative Order  
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District is concerned that pursuant to Trash Amendments Chapters IV.A.3.a(1)-(2), compliance with the trash discharge prohibition can only be achieved through implementation of Track 1 or 2. If watershed assessments revealed that more rigorous watershed strategies were necessary to meet interim or final watershed goals for trash, the District might be required to implement strategies beyond its authority, but without being afforded compliance with the Trash Amendment's discharge prohibition.

The Trash Amendments do not require development of watershed goals for trash. Therefore, because development of such watershed goals would exceed Trash Amendment requirements, and because the intent of the State Board in adopting the Trash Amendments was that they be addressed at the jurisdictional level, and to avoid the regulatory complexity and confusion noted above, the District joins with the upper Santa Margarita Co-Permittees in requesting that the Regional Board revise the last sentence of Draft IO Finding 13 as follows:

Through the issuance of this Order pursuant to Water Code section 13267, the San Diego Water Board intends the MS4 permittees *either* to incorporate the requirements of the Trash Amendments into the Water Quality Improvement Plans *or into their Jurisdictional Runoff Management Plans* after renewal of the Regional MS4 Permit.

The District is committed to water quality in the Santa Margarita Watershed Management Area, and looks forward to the continued collaboration with Regional Board staff. Thank you for your consideration of these comments. If you have any questions, please contact me at smckibbi@rcflood.org or 951. 955.1273.

Very truly yours,



STUART E. MCKIBBIN  
Chief of Watershed Protection Division

SEB:cw  
P8/209567



December 14, 2016

Via Email: [sandiego@waterboards.ca.gov](mailto:sandiego@waterboards.ca.gov)

David Gibson, Executive Officer  
San Diego Regional Water Quality Control Board  
2375 Northside Drive, Suite 100  
San Diego, CA 92108-2700  
Attn: Christina Arias

**Mayor**  
Andrew Hamilton

**Mayor Pro Tem**  
Scott Voigts

**Council Members**  
Dr. Jim Gardner  
Adam Nick  
Dwight Robinson

**City Manager**  
Robert C. Dunek

**Re: Comment- Tentative Order No. R9-2016-0205**

Dear Mr. Gibson:

The City of Lake Forest ("City") has reviewed Tentative Order No. R9-2016-0205, a draft of the *Order Directing the Owners and Operators of Phase I Municipal Separate Storm Sewer Systems Draining the Watersheds within the San Diego Region to Submit Technical and Monitoring Reports Pertaining to the Control of Trash in Discharges from Phase I MS4s to Ocean Waters, Inland Surface Waters, Enclosed Bays, and Estuaries in the San Diego Region* ("Draft Order"). As an entity subject to the Draft Order, which is intended to fulfill the requirements of the Amendment to the Water Quality Control Plan for Ocean Waters ("Ocean Plan") and for Inland Surface Waters, Enclosed Bays, and Estuaries ("ISWEBE Plan") of California (collectively the "Trash Amendments"), the City appreciates the opportunity to provide comments.

For the reasons set forth in this letter, the City requests that the San Diego Regional Water Quality Control Board ("Regional Board") not issue the Draft Order until a source of funding and State guidelines are provided and remove requirements that exceed the scope and intent of the Trash Amendments.

### **1. The Draft Order Is Premature**

The State's guidelines on Track 2 are not yet available. This leaves uncertainty regarding issues, especially interjurisdictional matters, such as how a downstream MS4 monitors and evaluates compliance under Track 2 when upstream MS4s continue to discharge trash into a common MS4.

Without guidance from the State, it is difficult to make an informed choice between Track 1 and Track 2. Similarly, if the City wishes to switch tracks, there is no information regarding how or whether this can be accomplished. The City requests that the Regional Board issue



the Draft Order after the State guidance is available, so that the City can make a properly informed selection.<sup>1</sup>

## 2. The Draft Order Exceeds the Mandates in the Trash Amendments

The City is concerned that the Draft Order imposes requirements on the City that are not required in the Trash Amendments and requests that these requirements and related findings be removed from the Draft Order. The Trash Amendments require the Regional Board to modify, re-issue, or adopt an MS4 permit to add requirements implementing the Trash Amendments for dischargers permitted pursuant to Clean Water Act Section 402(p) or to:

Issue an order pursuant to Water Code section 13267 or 13383 requiring the MS4 permittee to submit, within three (3) months from receipt of the order, written notice to the PERMITTING AUTHORITY stating whether such MS4 permittee will comply with the prohibition of discharge under Chapter IV.A.3.a.1 (Track 1) or Chapter IV.A.3.a.2 (Track 2). ... Within eighteen (18) months of the receipt of the Water Code section 13267 or 13383 order, MS4 permittees that have elected to comply with Track 2 shall submit an implementation plan to the PERMITTING AUTHORITY that describes: (i) the combination of controls selected by the MS4 permittee and the rationale for the selection, (ii) how the combination of controls is designed to achieve FULL CAPTURE SYSTEM EQUIVALENCY, and (iii) how FULL CAPTURE SYSTEM EQUIVALENCY will be demonstrated. The implementation plan is subject to approval by the PERMITTING AUTHORITY.<sup>2</sup>

The Trash Amendments thus only require a Water Code section 13267 or 13383 order to direct MS4 Permittees to select between Track 1 and Track 2, and if selecting Track 2, to submit an implementation plan. Requirements in the Draft Order to coordinate with Caltrans and to address transient encampments exceed the direction in the Trash Amendments. For these reasons, the City requests removal of Findings 9.c and 9.d and Provisions A.3 and A.4 from the Draft Order.

### a. Remove Requirements to Coordinate with Caltrans (Draft Order Finding 9.c and Section A.3)

The Draft Order requires the City to describe how it “will coordinate ... efforts to install, operate, and maintain full capture systems, multi-benefit projects, and other controls with Caltrans in significant trash generating areas and/or priority land uses” (“Caltrans Requirements”).<sup>3</sup> As noted above, the Trash Amendments only require an investigative

<sup>1</sup> Section 13267 of the Water Code does not create any authority for the Regional Board to require an implementation plan. This section only authorizes an investigation into the quality of waters or a monitoring program report. (Water Code, § 13267, subds. (a), (b)(1); see also State Water Resources Control Board, *Water Quality Enforcement Policy*, May 20, 2010, Appx. A, § C.3.)

<sup>2</sup> Ocean Plan Chapter III.L.4.a(1)A, B and ISWEBE Plan Chapter IV.A.5.a(1)A, B.

<sup>3</sup> Draft Order, Finding 9.c and Section A.3.

order to address the selection of Track 1 or 2; they do not require the Regional Board to address the City's role in coordinating with Caltrans. Requiring the City to describe how it will coordinate with Caltrans exceeds the direction in the Trash Amendments.

The City is concerned that including the Caltrans Requirements in the Draft Order is also unnecessarily duplicative. First, the MS4 Permit already requires the City to coordinate with Caltrans in controlling the contribution of pollutants.<sup>4</sup> Including additional requirements in the Draft Order appears to be duplicative of the City's obligations under the MS4 Permit's WQIP provisions. Second, requiring a description of how the City will coordinate with Caltrans shifts Caltrans' responsibility to the City. Under the Trash Amendments, Caltrans is required to develop an implementation plan identifying significant trash generating areas, describing trash controls, and describing how it will demonstrate full capture system equivalency.<sup>5</sup> The City's obligation under the Trash Amendments is to cooperate in Caltrans' efforts. Caltrans is in the best position to identify what cooperative efforts are needed from the City. The Draft Order shifts the obligation to identify cooperative efforts to the City.

The City has and intends to continue cooperating with Caltrans to control the contribution of pollutants to the City's MS4. Because the Draft Order duplicates provisions already in the MS4 Permit and shifts Caltrans' responsibilities on the City, the City requests that the Caltrans Requirements be removed from the Draft Order.

**b. Remove Requirements to Address Transients Encampments (Draft Order Finding 9.d and Section A.4)**

The City is concerned that the Transient Encampment Requirements (defined below) exceed the scope and intent of the Trash Amendments in three ways and make the Draft Order an inappropriate mechanism to impose such requirements. First, the City's land use authority does not extend to transient encampments. Second, implementing Track 1 and/or Track 2 will not control the trash issues described in the Draft Order. Third, significant constitutional and statutory restraints limit the City's ability to address trash from these programs. Although the Transient Encampment Requirements do not apply directly to the City, the City has concerns about these or similar requirements being applied beyond the San Diego River. For these reasons, the City requests that the Transient Encampments Requirements be removed from the Draft Order and that the Regional Board consider alternative regulatory mechanisms targeted to specific areas known to generate the greatest amounts of trash.

***i. Land Use Authority Does Not Address Transient Encampments***

The Trash Amendments are written in terms of the City's "regulatory authority over land uses"<sup>6</sup> and authorize the Regional Board to make a determination that a specific land use or location generates a substantial amount of trash.<sup>7</sup> If the Regional Board makes this

<sup>4</sup> San Diego Regional Water Quality Control Board Order No. R9-2013-0001, Provisions B.3.b.(1)(c); E.1.a.(5).

<sup>5</sup> Ocean Plan Chapter III.L.4.b(1) and ISWEBE Plan Chapter IV.A.5.b(1).

<sup>6</sup> Ocean Plan Chapter III.L.2.a and ISWEBE Plan Chapter IV.A.3.a.

<sup>7</sup> Ocean Plan Chapter III.L.2.d and ISWEBE Plan Chapter IV.A.2.d (emphasis added).

determination, it may require the MS4 to comply with Track 1 or Track 2 with respect to such land uses or locations.<sup>8</sup>

The Draft Order identifies “transient encampments in the San Diego River watershed” as generating substantial trash in amounts that adversely affect beneficial uses or cause nuisance in the San Diego River.<sup>9</sup> It then requires certain MS4 permittees to develop “plans to address trash runoff from the relevant areas of land affected by transient encampments through Track 1 or Track 2 controls” (“Transient Encampment Requirements”).<sup>10</sup>

The “San Diego River watershed” and “transient encampments” are not priority land uses as defined in the Trash Amendments. Priority land uses are high density residential, industrial, commercial, mixes of these uses, and public transportation stations.<sup>11</sup> The San Diego River watershed is also not a specific land use or location; instead, it is a vast geographical designation covering multiple local agency jurisdictions. Similarly, transient encampments are not specific land uses or locations; they are generally illegal activities that occur on a wide range of land use designations.

The City is concerned that including requirements to address transient encampments represents a dramatic divergence from the land use-based structure of the Trash Amendments, and, as a result, distracts from the intended focus on and prioritization of specific land-use based controls.

***ii. Track 1 and 2 Land Use Controls Will Not Effectively Control Trash From Transient Encampments***

The intent of the Trash Amendments is “to allow MS4s to allocate trash-control resources to the developed areas that generate the highest sources of trash.”<sup>12</sup> The City is concerned, however, that Tracks 1 and 2, as required by the Draft Order and future MS4 Permit, will be largely ineffective at addressing a complex social issue spanning multiple land uses and locations because these controls are not designed to capture trash from transient encampments.

The Draft Order relies on information received in regard to Item 5 on the Regional Board’s May 14, 2014 agenda (“Transient Encampment Information”), for the determination that transient encampments in the San Diego River watershed generate substantial trash. The Executive Officer’s report for that item states, in part:

Transient encampments within the San Diego River present the largest challenge for trash abatement for both the municipal storm water Copermittees and Caltrans. Specific and lengthy procedures must be followed to assist and disperse identified transient populations and post notices of abatement and intent to cleanup sites prior to initiation of trash removal at these sites.<sup>13</sup>

<sup>8</sup> *Ibid.*

<sup>9</sup> Draft Order, Finding 9.d.

<sup>10</sup> Draft Order, Finding 9.d; Section A.4.

<sup>11</sup> Ocean Plan Appendix I and ISWEBE Plan Appendix A.

<sup>12</sup> Staff Report for Trash Amendments, p. 13.

<sup>13</sup> Emphasis added. The 2013, 2014, and 2015 State of the River reports, cited in the Draft Order, also note that “trash/debris [and] homeless encampments” were observed at all monitoring sites. See, San Diego River

Transient encampments within the river – i.e., encampments that discharge directly to a receiving water – are not discharges from an MS4. A Draft Order or MS4 permit regulating discharges from an MS4 should not regulate transient encampments within a receiving water because these encampments do not cause or contribute to discharges to or from an MS4. Further, the City’s authority to implement BMPs within a water of the United States is limited.

As noted above, even though the Draft Order relies on the Transient Encampment Information, it directs certain MS4 permittees to address transient encampments within the entire San Diego River watershed using Track 1 or 2. In addition to the problems with this approach noted above, the City is concerned that such overreach will be ineffective. It is possible that transient encampments may be located within priority land use areas that discharge to an MS4. In these cases, trash from the encampments will be addressed, together with all other sources of trash from priority land uses, through implementation of the Trash Amendments based on priority land uses. To the extent transient encampments may be located in areas other than priority land uses that discharge to an MS4, the Trash Amendments explicitly prioritize control of trash through the use of land use designations and specific locations. As noted above, transient encampments are not land use designations or specific locations. It is contrary to the intent of the Trash Amendments to direct MS4 permittees to address trash by means other than land use designations or specific locations.

It is also possible that transient encampments may be located within an MS4 that discharges to the San Diego River. There are two issues associated with regulating discharges of trash from transient encampments located within an MS4. As noted above, a transient encampment within an MS4 is not a land use designation or specific location. It is contrary to the express intent of the Trash Amendments to require controls unrelated to an MS4’s land use authority. Further, even if an MS4 implements Track 1 or 2 with respect to such discharges, the Trash Amendments expect that full capture systems will be installed where installation is not cost-prohibitive,<sup>14</sup> but full capture systems are generally not designed or intended to address such trash discharges. This is because the currently certified devices are designed to be installed primarily in catch basins and pipes.<sup>15</sup> Transient encampments within MS4s are often found in close proximity to the river, after the places where full capture devices are installed. The City is unaware of any certified full capture system or device applicable to transient encampments. As a result, Track 1 and Track 2 are poorly designed to address trash generated by transient encampments.

### ***iii. Statutory and Constitutional Provisions Limit City’s Ability to Address Trash from Transient Encampments***

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Park Foundation, State of the River Report, Water Quality Monitoring Supplemental Report, Table E.3 (2013-2015). Each monitoring site is located within a reach or tributary of the San Diego River, suggesting that the observed encampments were located within the San Diego River. *Id.* at Table E.1.

<sup>14</sup> Ocean Plan Chapter III.L.2.a.(2) and ISWEBE Plan Chapter IV.A.3.a.(2)

<sup>15</sup> Certified full capture devices include those certified by the Los Angeles Regional Water Quality Control Board prior to April 7, 2015 and those listed in Appendix I of the Bay Area-wide Trash Capture Demonstration Project, Final Project Report (May 8, 2014). Ocean Plan Appendix I and ISWEBE Plan Appendix A.

Finally, to the extent that transient encampments are located within a non-priority land use area in the San Diego River watershed, including within the MS4 and within the riverbed, MS4 permittees may need to undertake activities other than Track 1 or Track 2 to address the trash. MS4 permittees face significant constitutional and statutory restraints on their ability to address trash from these encampments. As the Executive Officer's Report for Item 5 on the Regional Board's May 14, 2014 meeting notes, "[s]pecific and lengthy procedures must be followed to assist and disperse identified transient populations and post notices of abatement and intent to cleanup sites prior to initiation of trash removal[.]" For example, under the Fourth and Fourteenth Amendments, unattended property cannot be searched, seized, destroyed or discarded without reasonable notice and opportunity for the person to reclaim the property.<sup>16</sup> In many cases, local government control over activities associated with transient encampments may be limited under the Eighth Amendment when there is inadequate shelter space in the area.<sup>17</sup> Stormwater controls are ill-suited to address complex issues arising from transient encampments.

Because the San Diego River watershed and transient encampments are not specific land uses or locations, the Draft Order exceeds the scope and intent of the Trash Amendments by requiring control of trash generated from transient encampments in the San Diego River Watershed Management Area. In addition, the Transient Encampment Information identified encampments within the river as presenting the largest challenge for trash abatement, but neither Track 1 nor Track 2 will address trash from encampments within the River because these encampments do not discharge to an MS4. Finally, actions beyond Track 1 and 2 that may be necessary to control trash from transient encampments are circumscribed by constitutional limitations. The complex socioeconomic challenges posed by transient encampments are not an appropriate subject for the Draft Order or a subsequent MS4 permit. For these reasons, the City requests that Finding 9.d and Section A.4 be removed from the Draft Order. It is appropriate for the Regional Board to conduct further studies into the issue of trash from transient encampments, identify specific locations known to generate the greatest amounts of trash, and possibly issue a separate order targeted to controls at those areas.

### **3. Provide a Source of Funding for the State Mandates in the Draft Order**

The Investigative Order and implementation of the Trash Amendments through a renewed MS4 Permit constitute unfunded state mandates. Section 6 of Article XIII B of the California Constitution requires the State to provide a subvention of funds to local agencies any time the Legislature or a state agency requires the local agency to implement a new program or provide a higher level of service under an existing program. The purpose of Section 6 "is to preclude the state from shifting financial responsibility for carrying out governmental functions to local agencies, which are 'ill equipped' to assume increased financial responsibilities because of the taxing and spending limitations that articles XIII A

<sup>16</sup> U.S. Const. Amends. IV and XIV; see also *Lavan v. City of Los Angeles* (9th Cir. 2012) 693 F.3d 1022, 1032; *Joyce v. City and County of San Francisco* (N.D. Cal. 1994) 846 F.Supp. 843, 863.

<sup>17</sup> See, e.g., *Jones v. City of Los Angeles* (9th Cir. 2006) 444 F.3d 1118, *vacated after settlement* by 505 F.3d 1006.

and XIII B impose.”<sup>18</sup> The section “was designed to protect the tax revenues of local governments from state mandates that would require expenditure of such revenues.”<sup>19</sup>

Government Code section 17556 identifies seven exceptions to the subvention requirement of Section 6, including statutes or executive orders that impose a requirement mandated by a federal law or regulation, which results in costs mandated by the federal government.<sup>20</sup> When considering this exception, California’s Supreme Court determined that requirements which are “animated” by flexible federal laws and regulations do not constitute federal requirements unless, perhaps, the requirements constitute “the only means by which the [flexible] standard could be implemented[.]”<sup>21</sup> To demonstrate the applicability of this exemption, “the party claiming the applicability of an exception bears the burden of demonstrating that it applies.”<sup>22</sup>

The Draft Order constitutes a new program or higher level of service by requiring the City to submit a notice stating: (1) whether the City will implement Track 1 or Track 2; (2) how the City will coordinate with Caltrans to install, operate, and maintain full capture systems, multi-benefit projects, and other controls; and (3) for the cities of San Diego, Santee, El Cajon, La Mesa and the County of San Diego, how trash generated from transient encampments will be addressed. When incorporated into a future MS4 Permit, implementation of the Trash Amendments will also constitute a new program. The activities mandated by the Draft Order and implementation of the Trash Amendments through a future MS4 Permit are referred to in this letter as “Programs.”

The Programs are State mandates. According to the Draft Order, the Programs are required pursuant to state laws, policies and regulations: California’s Porter-Cologne Water Quality Control Act, including sections 13267 and 13383 of the California Water Code, State and Regional Water Quality Control Plans, and State Water Board policies and regulations.<sup>23</sup> The Draft Order also alleges it conforms to and implements “applicable state and federal regulations” and “relevant standards, criteria, and advisories adopted by other state and federal agencies.” No federal regulations, standards, criteria, or advisories are identified as mandating the new programs, however. There is no evidence in the Draft Order that the Programs constitute “the only means” by that the unnamed federal regulations, standards criteria, or advisories could be implemented.<sup>24</sup> Consistent with the Supreme Court’s decision, the Programs are state mandates.

The City does not have a source of funding to dedicate to the Programs and requests that the Regional Board not issue the Draft Order until a source of funding is provided or provide funding to implement the Programs.

<sup>18</sup> *County of San Diego v. State of California* (1997) 15 Cal.4th 68, 81; *County of Fresno v. State of California* (1991) 53 Cal.3d 482, 487.

<sup>19</sup> *County of Fresno v. State of California* (1991) 53 Cal.3d 482, 487; *Redevelopment Agency v. Commission on State Mandates* (1997) 55 Cal.App.4th 976, 984-985.

<sup>20</sup> Gov. Code, § 17556, subd. (c).

<sup>21</sup> *Dep’t of Finance v. Comm’n on State Mandates* (2016) 1 Cal.5th 749, 768.

<sup>22</sup> *Id.* at p. 769, citing *Simpson Strong-Tie Co., Inc. v. Gore* (2010) 49 Cal.4th 12, 23.

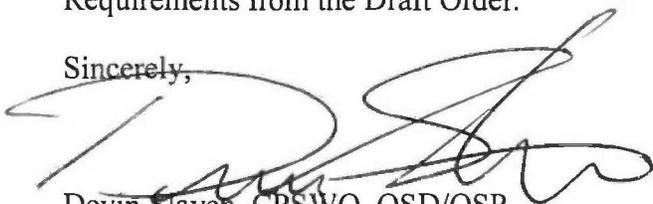
<sup>23</sup> Draft Order, Finding 1.

<sup>24</sup> *Dep’t of Finance v. Comm’n on State Mandates* (2016) 1 Cal.5th 749, 768.

**Conclusion**

The City takes the region's water quality seriously and appreciates the opportunity to provide comments on the Draft Order. Because the Trash Amendments establish a system that prioritizes trash controls through land use regulations, the City respectfully requests that the Regional Board consider the City's request to provide a means to fund implementation of the chosen Track, delay issuance of the Draft Order until after the State's guidelines and funding are available, and remove the Caltrans Requirements and Transient Encampment Requirements from the Draft Order.

Sincerely,

A handwritten signature in black ink, appearing to read 'Devin Slaven', written over a horizontal line.

Devin Slaven, CPSWQ, QSD/QSP  
Environmental Manager  
CITY OF LAKE FOREST

cc: Thomas Wheeler, P.E., Director of Public Works/City Engineer  
Rebecca Andrews, ESQ., Special Counsel



December 14, 2016

*VIA ELECTRONIC MAIL ONLY*

Ms. Christina Arias  
San Diego Regional Water Quality Control Board  
2375 Northside Drive, Suite 100  
San Diego, CA 92108  
[sandiego@waterboards.ca.gov](mailto:sandiego@waterboards.ca.gov)

**Subject:** Comment – Tentative Order No. R9-2016-0205

The City of Dana Point (City) appreciates the opportunity to comment on the Tentative Investigative Order No. R9-2016-0205, an order directing the owners and operators of Phase I MS4s Draining the Watersheds within the San Diego Region to Submit Technical and Monitoring Reports Pertaining to the Control of Trash in the Discharges from Phase I MS4s to Ocean Waters, inland Surface Waters, Enclosed Bays and Estuaries in the San Diego Region (TIO).

The City also appreciated staff's effort to hold the public workshop on December 8, 2016 and looks forward to some needed clarification and resolution to some of the items that were discussed at the workshop. The City provides the following comments:

1. It is understood that the State Water Resources Control Board (SWRCB) is finalizing the list of "certified" BMPs, including Low Impact Development (LID) type BMPs, and guidance documents on topics such as demonstration of full capture equivalency and proposing equivalent alternative land uses, etc. It is imperative that the MS4 permittees have these final documents available to them prior to issuance of this Investigative Order so the MS4 permittees have all the information available in order to conduct a comprehensive evaluation and make well-informed decisions regarding the selection of Track 1 or Track 2.<sup>1</sup>

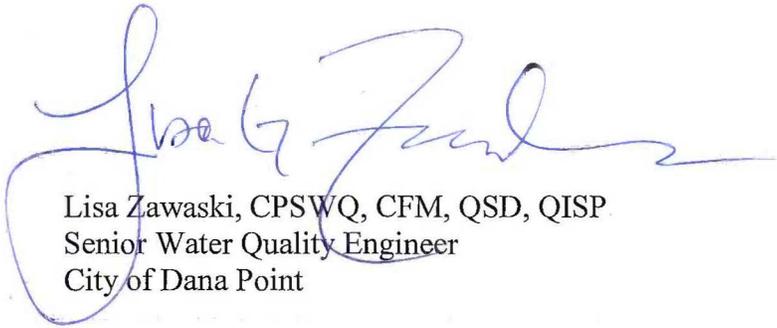
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<sup>1</sup> As the Regional Board is likely aware, the City has already undertaken significant efforts, per the requirements of the Regional Permit, and the prior S. Orange County MS4 Permit(s), to install, operate, and maintain Best Management Practice (BMP) systems for storm drains, including inlet filters, trash separation units and diversions that capture dry weather flows within the City's MS4. However, to the extent that the TIO can be read to require the City to go above and beyond the BMPs that the City already has in place, the City is concerned that such requirements would appear to constitute an unfunded state mandate for which the City has no fee authority. The City would benefit from understanding how the Regional Board intends for the City to pay for the "full capture systems" or equivalent level of stormwater treatment that the TIO appears to envision.

2. It is unclear why Caltrans and Phase II permittees are not being issued a consistent Investigative Order at the same time. Without clear and consistent requirements, applicable to all regulated parties at the same time, effective cooperation and coordination is challenging.
3. The TIO inappropriately addresses transient encampments as a point source of trash. The State and other Regional Boards consider transient encampments a non-point source of trash. An alternative program or mechanism is needed to address this issue, recognizing limits of land use authority and significant constitutional and statutory restraints.
4. Although the TIO provides for electronic submittal of documents, it specifies a CD-ROM or CD, however many new computers do not have optical drives. Can email or file sharing options (such as hightail or dropbox) also be provided?

Thank you for your consideration of these comments. If you have any questions, please contact me at (949) 248-3584 or [lzawaski@danapoint.org](mailto:lzawaski@danapoint.org).

Respectfully,



Lisa Zawaski, CPSWQ, CFM, QSD, QISP  
Senior Water Quality Engineer  
City of Dana Point

Cc; Mark Denny, Matt Sinacori, Dana Point



# City of San Clemente Engineering

Tom Bonigut, Deputy Public Works Director  
Phone: (949) 361-6187 Fax: (949) 361-8316  
bonigutt@san-clemente.org

Wednesday, December 14, 2016

Via Email: sandiego@waterboards.ca.gov

David Gibson, Executive Officer  
San Diego Regional Water Quality Control Board  
2375 Northside Drive, Suite 100  
San Diego, CA 92108-2700  
Attn: Christina Arias

**Re: Comment - Tentative Order No. R9-2016-0205**

Dear Mr. Gibson:

The City of San Clemente has reviewed Tentative Order No. R9-2016-0205, a draft of the *Order Directing the Owners and Operators of Phase I Municipal Separate Storm Sewer Systems Draining the Watersheds within the San Diego Region to Submit Technical and Monitoring Reports Pertaining to the Control of Trash in Discharges from Phase I MS4s to Ocean Waters, Inland Surface Waters, Enclosed Bays, and Estuaries in the San Diego Region* ("Draft Order"). As an entity subject to the Draft Order, which is intended to fulfill the requirements of the Amendment to the Water Quality Control Plan for Ocean Waters ("Ocean Plan") and for Inland Surface Waters, Enclosed Bays, and Estuaries ("ISWEBE Plan") of California (collectively the "Trash Amendments"), the City appreciates the opportunity to provide comments.

For the reasons set forth in this letter, the City requests that the San Diego Regional Water Quality Control Board ("Regional Board") not issue the Draft Order until a source of funding and State guidelines are provided and remove requirements that exceed the scope and intent of the Trash Amendments.

## **1. The Draft Order Is Premature**

The State's guidelines on Track 2 are not yet available. This leaves uncertainty regarding issues, especially interjurisdictional matters, such as how a downstream MS4 monitors and evaluates compliance under Track 2 when upstream MS4s continue to discharge trash into a common MS4.

Without guidance from the State, it is difficult to make an informed choice between Track 1 and Track 2. Similarly, if the City wishes to switch tracks, there is no information regarding how or whether this can be accomplished. The City requests that the Regional Board issue the Draft Order after the State guidance is available, so that the City can make a properly informed selection.

## **2. The Draft Order Exceeds the Mandates in the Trash Amendments**

The City is concerned that the Draft Order imposes requirements on the City that are not required in the Trash Amendments and requests that these requirements and related findings be removed from the Draft Order. The Trash Amendments require the Regional Board to modify, re-issue, or adopt an MS4 permit to add requirements implementing the Trash Amendments for dischargers permitted pursuant to Clean Water Act Section 402(p) or to:

Issue an order pursuant to Water Code section 13267 or 13383 requiring the MS4 permittee to submit, within three (3) months from receipt of the order, written notice to the PERMITTING AUTHORITY stating whether such MS4 permittee will comply with the prohibition of discharge under Chapter IV.A.3.a.1 (Track 1) or Chapter IV.A.3.a.2 (Track 2). ... Within eighteen (18) months of the receipt of the Water Code section 13267 or 13383 order, MS4 permittees that have elected to comply with Track 2 shall submit an implementation plan to the PERMITTING AUTHORITY that describes: (i) the combination of controls selected by the MS4 permittee and the rationale for the selection, (ii) how the combination of controls is designed to achieve FULL CAPTURE SYSTEM EQUIVALENCY, and (iii) how FULL CAPTURE SYSTEM EQUIVALENCY will be demonstrated. The implementation plan is subject to approval by the PERMITTING AUTHORITY.<sup>1</sup>

The Trash Amendments thus only require a Water Code section 13267 or 13383 order to direct MS4 Permittees to select between Track 1 and Track 2, and if selecting Track 2, to submit an implementation plan. Requirements in the Draft Order to coordinate with Caltrans and to address transient encampments exceed the direction in the Trash Amendments. For these reasons, the City requests removal of Findings 9.c and 9.d and Provisions A.3 and A.4 from the Draft Order.

### **a. Remove Requirements to Coordinate with Caltrans (Draft Order Finding 9.c and Section A.3)**

The Draft Order requires the City to describe how it “will coordinate ... efforts to install, operate, and maintain full capture systems, multi-benefit projects, and other controls with

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<sup>1</sup> Ocean Plan Chapter III.L.4.a(1)A, B and ISWEBE Plan Chapter IV.A.5.a(1)A, B.

Requirements”).<sup>2</sup> As noted above, the Trash Amendments only require an investigative order to address the selection of Track 1 or 2; they do not require the Regional Board to address the City’s role in coordinating with Caltrans. Requiring the City to describe how it will coordinate with Caltrans exceeds the direction in the Trash Amendments.

The City is concerned that including the Caltrans Requirements in the Draft Order is also unnecessarily duplicative. First, the MS4 Permit already requires the City to coordinate with Caltrans in controlling the contribution of pollutants.<sup>3</sup> Including additional requirements in the Draft Order appears to be duplicative of the City’s obligations under the MS4 Permit’s WQIP provisions. Second, requiring a description of how the City will coordinate with Caltrans shifts Caltrans’ responsibility to the City. Under the Trash Amendments, Caltrans is required to develop an implementation plan identifying significant trash generating areas, describing trash controls, and describing how it will demonstrate full capture system equivalency.<sup>4</sup> The City’s obligation under the Trash Amendments is to cooperate in Caltrans’ efforts. Caltrans is in the best position to identify what cooperative efforts are needed from the City. The Draft Order shifts the obligation to identify cooperative efforts to the City.

The City has and intends to continue cooperating with Caltrans to control the contribution of pollutants to the City’s MS4. Because the Draft Order duplicates provisions already in the MS4 Permit and shifts Caltrans’ responsibilities on the City, the City requests that the Caltrans Requirements be removed from the Draft Order.

**b. Remove Requirements to Address Transient Encampments (Draft Order Finding 9.d and Section A.4)**

The City is concerned that the Transient Encampment Requirements (defined below) exceed the scope and intent of the Trash Amendments in three ways and make the Draft Order an inappropriate mechanism to impose such requirements. First, the City’s land use authority does not extend to transient encampments. Second, implementing Track 1 and/or Track 2 will not control the trash issues described in the Draft Order. Third, significant constitutional and statutory restraints limit the City’s ability to address trash from these programs. For these reasons, the City requests that the Transient Encampments Requirements be removed from the Draft Order and that the Regional Board consider alternative regulatory mechanisms targeted to specific areas known to generate the greatest amounts of trash.

***i. Land Use Authority Does Not Address Transient Encampments***

The Trash Amendments are written in terms of the City’s “regulatory authority over land uses”<sup>5</sup> and authorize the Regional Board to make a determination that a specific land use

<sup>2</sup> Draft Order, Finding 9.c and Section A.3.

<sup>3</sup> San Diego Regional Water Quality Control Board Order No. R9-2013-0001, Provisions B.3.b.(1)(c); E.1.a.(5).

<sup>4</sup> Ocean Plan Chapter III.L.4.b(1) and ISWEBE Plan Chapter IV.A.5.b(1).

<sup>5</sup> Ocean Plan Chapter III.L.2.a and ISWEBE Plan Chapter IV.A.3.a.

or location generates a substantial amount of trash.<sup>6</sup> If the Regional Board makes this determination, it may require the MS4 to comply with Track 1 or Track 2 with respect to such land uses or locations.<sup>7</sup>

The Draft Order identifies “transient encampments in the San Diego River watershed” as generating substantial trash in amounts that adversely affect beneficial uses or cause nuisance in the San Diego River.<sup>8</sup> It then requires certain MS4 permittees to develop “plans to address trash runoff from the relevant areas of land affected by transient encampments through Track 1 or Track 2 controls” (“Transient Encampment Requirements”).<sup>9</sup>

The “San Diego River watershed” and “transient encampments” are not priority land uses as defined in the Trash Amendments. Priority land uses are high density residential, industrial, commercial, mixes of these uses, and public transportation stations.<sup>10</sup> The San Diego River watershed is also not a specific land use or location; instead, it is a vast geographical designation covering multiple local agency jurisdictions. Similarly, transient encampments are not specific land uses or locations; they are generally illegal activities that occur on a wide range of land use designations.

The City is concerned that including requirements to address transient encampments represents a dramatic divergence from the land use-based structure of the Trash Amendments, and, as a result, distracts from the intended focus on and prioritization of specific land-use based controls.

***ii. Track 1 and 2 Land Use Controls Will Not Effectively Control Trash From Transient Encampments***

The intent of the Trash Amendments is “to allow MS4s to allocate trash-control resources to the developed areas that generate the highest sources of trash.”<sup>11</sup> The City is concerned, however, that Tracks 1 and 2, as required by the Draft Order and future MS4 Permit, will be largely ineffective at addressing a complex social issue spanning multiple land uses and locations because these controls are not designed to capture trash from transient encampments.

The Draft Order relies on information received in regard to Item 5 on the Regional Board’s May 14, 2014 agenda (“Transient Encampment Information”), for the determination that transient encampments in the San Diego River watershed generate substantial trash. The Executive Officer’s report for that item states, in part:

Transient encampments within the San Diego River present the largest challenge for trash abatement for both the municipal storm

<sup>6</sup> Ocean Plan Chapter III.L.2.d and ISWEBE Plan Chapter IV.A.2.d (emphasis added).

<sup>7</sup> *Ibid.*

<sup>8</sup> Draft Order, Finding 9.d.

<sup>9</sup> Draft Order, Finding 9.d; Section A.4.

<sup>10</sup> Ocean Plan Appendix I and ISWEBE Plan Appendix A.

<sup>11</sup> Staff Report for Trash Amendments, p. 13.

water Copermittees and Caltrans. Specific and lengthy procedures must be followed to assist and disperse identified transient populations and post notices of abatement and intent to cleanup sites prior to initiation of trash removal at these sites.<sup>12</sup>

Transient encampments within the river – i.e., encampments that discharge directly to a receiving water – are not discharges from an MS4. A Draft Order or MS4 permit regulating discharges from an MS4 should not regulate transient encampments within a receiving water because these encampments do not cause or contribute to discharges to or from an MS4.

As noted above, even though the Draft Order relies on the Transient Encampment Information, it directs certain MS4 permittees to address transient encampments within the entire San Diego River watershed using Track 1 or 2. In addition to the problems with this approach noted above, the City is concerned that such overreach will be ineffective. It is possible that transient encampments may be located within priority land use areas that discharge to an MS4. In these cases, trash from the encampments will be addressed, together with all other sources of trash from priority land uses, through implementation of the Trash Amendments based on priority land uses. To the extent transient encampments may be located in areas other than priority land uses that discharge to an MS4, the Trash Amendments explicitly prioritize control of trash through the use of land use designations and specific locations. As noted above, transient encampments are not land use designations or specific locations. It is contrary to the intent of the Trash Amendments to direct MS4 permittees to address trash by means other than land use designations or specific locations.

It is also possible that transient encampments may be located within an MS4 that discharges to the San Diego River. There are two issues associated with regulating discharges of trash from transient encampments located within an MS4. As noted above, a transient encampment within an MS4 is not a land use designation or specific location. It is contrary to the express intent of the Trash Amendments to require controls unrelated to an MS4's land use authority. Further, even if an MS4 implements Track 1 or 2 with respect to such discharges, the Trash Amendments expect that full capture systems will be installed where installation is not cost-prohibitive,<sup>13</sup> but full capture systems are generally not designed or intended to address such trash discharges. This is because the currently certified devices are designed to be installed primarily in catch basins and pipes.<sup>14</sup> Transient encampments within MS4s are often found in close proximity to the river, after the places where full

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<sup>12</sup> Emphasis added. The 2013, 2014, and 2015 State of the River reports, cited in the Draft Order, also note that “trash/debris [and] homeless encampments” were observed at all monitoring sites. See, San Diego River Park Foundation, State of the River Report, Water Quality Monitoring Supplemental Report, Table E.3 (2013-2015). Each monitoring site is located within a reach or tributary of the San Diego River, suggesting that the observed encampments were located within the San Diego River. *Id.* at Table E.1.

<sup>13</sup> Ocean Plan Chapter III.L.2.a.(2) and ISWEBE Plan Chapter IV.A.3.a.(2)

<sup>14</sup> Certified full capture devices include those certified by the Los Angeles Regional Water Quality Control Board prior to April 7, 2015 and those listed in Appendix I of the Bay Area-wide Trash Capture Demonstration Project, Final Project Report (May 8, 2014). Ocean Plan Appendix I and ISWEBE Plan Appendix A.

capture devices are installed. As a result, Track 1 and Track 2 are poorly designed to address trash generated by transient encampments.

**iii. *Statutory and Constitutional Provisions Limit City's Ability to Address Trash from Transient Encampments***

Finally, to the extent that transient encampments are located within a non-priority land use area in the San Diego River watershed, including within the MS4 and within the riverbed, MS4 permittees may need to undertake activities other than Track 1 or Track 2 to address the trash. MS4 permittees face significant constitutional and statutory restraints on their ability to address trash from these encampments. As the Executive Officer's Report for Item 5 on the Regional Board's May 14, 2014 meeting notes, "[s]pecific and lengthy procedures must be followed to assist and disperse identified transient populations and post notices of abatement and intent to cleanup sites prior to initiation of trash removal[.]" For example, under the Fourth and Fourteenth Amendments, unattended property cannot be searched, seized, destroyed or discarded without reasonable notice and opportunity for the person to reclaim the property.<sup>15</sup> In many cases, local government control over activities associated with transient encampments may be limited under the Eighth Amendment when there is inadequate shelter space in the area.<sup>16</sup>

Because the San Diego River watershed and transient encampments are not specific land uses or locations, the Draft Order exceeds the scope and intent of the Trash Amendments by requiring control of trash generated from transient encampments in the San Diego River Watershed Management Area. In addition, the Transient Encampment Information identified encampments within the river as presenting the largest challenge for trash abatement, but neither Track 1 nor Track 2 will address trash from encampments within the River because these encampments do not discharge to an MS4. Finally, actions beyond Track 1 and 2 that may be necessary to control trash from transient encampments are circumscribed by constitutional limitations. The complex problem of transient encampments is not an appropriate subject for the Draft Order or a subsequent MS4 permit. For these reasons, the City requests that Finding 9.d and Section A.4 be removed from the Draft Order. It is appropriate for the Regional Board to conduct further studies into the issue of trash from transient encampments, identify specific locations known to generate the greatest amounts of trash, and possibly issue a separate order targeted to controls at those areas.

**3. Provide a Source of Funding for the State Mandates in the Draft Order**

The Investigative Order and implementation of the Trash Amendments through a renewed MS4 Permit constitute unfunded state mandates. Section 6 of Article XIII B of the California Constitution requires the State to provide a subvention of funds to local agencies any time the Legislature or a state agency requires the local agency to implement a new program or provide a higher level of service under an existing program.

<sup>15</sup> U.S. Const. Amends. IV and XIV; see also *Lavan v. City of Los Angeles* (9th Cir. 2012) 693 F.3d 1022, 1032; *Joyce v. City and County of San Francisco* (N.D. Cal. 1994) 846 F.Supp. 843, 863.

<sup>16</sup> See, e.g., *Jones v. City of Los Angeles* (9th Cir. 2006) 444 F.3d 1118, *vacated after settlement* by 505 F.3d 1006.

The purpose of Section 6 “is to preclude the state from shifting financial responsibility for carrying out governmental functions to local agencies, which are ‘ill equipped’ to assume increased financial responsibilities because of the taxing and spending limitations that articles XIII A and XIII B impose.”<sup>17</sup> The section “was designed to protect the tax revenues of local governments from state mandates that would require expenditure of such revenues.”<sup>18</sup>

Government Code section 17556 identifies seven exceptions to the subvention requirement of Section 6, including statutes or executive orders that impose a requirement mandated by a federal law or regulation, which results in costs mandated by the federal government.<sup>19</sup> When considering this exception, California’s Supreme Court determined that requirements which are “animated” by flexible federal laws and regulations do not constitute federal requirements unless, perhaps, the requirements constitute “the only means by which the [flexible] standard could be implemented[.]”<sup>20</sup> To demonstrate the applicability of this exemption, “the party claiming the applicability of an exception bears the burden of demonstrating that it applies.”<sup>21</sup>

The Draft Order constitutes a new program or higher level of service by requiring the City to submit a notice stating: (1) whether the City will implement Track 1 or Track 2; (2) how the City will coordinate with Caltrans to install, operate, and maintain full capture systems, multi-benefit projects, and other controls; and (3) for the cities of San Diego, Santee, El Cajon, La Mesa and the County of San Diego, how trash generated from transient encampments will be addressed. When incorporated into a future MS4 Permit, implementation of the Trash Amendments will also constitute a new program. The activities mandated by the Draft Order and implementation of the Trash Amendments through a future MS4 Permit are referred to in this letter as “Programs.”

The Programs are State mandates. According to the Draft Order, the Programs are required pursuant to state laws, policies and regulations: California’s Porter-Cologne Water Quality Control Act, including sections 13267 and 13383 of the California Water Code, State and Regional Water Quality Control Plans, and State Water Board policies and regulations.<sup>22</sup> The Draft Order also alleges it conforms to and implements “applicable state and federal regulations” and “relevant standards, criteria, and advisories adopted by other state and federal agencies.” No federal regulations, standards, criteria, or advisories are identified as mandating the new programs, however. There is no evidence in the Draft Order that the Programs constitute “the only means” by that the unnamed federal regulations, standards criteria, or advisories could be implemented.<sup>23</sup> Consistent with the Supreme Court’s decision, the Programs are state mandates.

<sup>17</sup> *County of San Diego v. State of California* (1997) 15 Cal.4th 68, 81; *County of Fresno v. State of California* (1991) 53 Cal.3d 482, 487.

<sup>18</sup> *County of Fresno v. State of California* (1991) 53 Cal.3d 482, 487; *Redevelopment Agency v. Commission on State Mandates* (1997) 55 Cal.App.4th 976, 984-985.

<sup>19</sup> Gov. Code, § 17556, subd. (c).

<sup>20</sup> *Dep’t of Finance v. Comm’n on State Mandates* (2016) 1 Cal.5th 749, 768.

<sup>21</sup> *Id.* at p. 769, citing *Simpson Strong-Tie Co., Inc. v. Gore* (2010) 49 Cal.4th 12, 23.

<sup>22</sup> Draft Order, Finding 1.

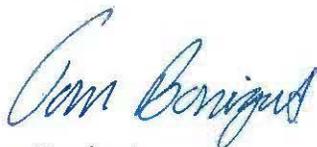
<sup>23</sup> *Dep’t of Finance v. Comm’n on State Mandates* (2016) 1 Cal.5th 749, 768.

The City does not have a source of funding to dedicate to the Programs and requests that the Regional Board not issue the Draft Order until a source of funding is provided or provide funding to implement the Programs.

#### **Conclusion**

The City takes the region's water quality seriously and appreciates the opportunity to provide comments on the Draft Order. Because the Trash Amendments establish a system that prioritizes trash controls through land use regulations, the City respectfully requests that the Regional Board consider the City's request to provide a means to fund implementation of the chosen Track, delay issuance of the Draft Order until after the State's guidelines and funding are available, and remove the Caltrans Requirements and Transient Encampment Requirements from the Draft Order.

Sincerely,

A handwritten signature in blue ink that reads "Tom Bonigut". The signature is written in a cursive, flowing style.

Tom Bonigut  
Deputy Public Works Director

**Transportation & Storm Water Department**  
Storm Water Division

December 14, 2016

VIA EMAIL TO: [sandiego@waterboards.ca.gov](mailto:sandiego@waterboards.ca.gov)

Ms. Christina Arias, PE  
Water Resource Control Engineer  
California Regional Water Quality Control Board  
San Diego Region  
2375 Northside Drive, Suite 100  
San Diego, CA 92108

Subject: City of San Diego Comments to Tentative Investigative Order No. R9-2016-0205; Reference 786088: Carias

Dear Ms. Arias:

The City of San Diego (City) appreciates the opportunity to provide comments on TENTATIVE INVESTIGATIVE ORDER NO. R9-2016-0205, AN ORDER DIRECTING THE OWNERS AND OPERATORS OF PHASE I MUNICIPAL SEPARATE STORM SEWER SYSTEMS (MS4s) DRAINING THE WATERSHEDS WITHIN THE SAN DIEGO REGION TO SUBMIT TECHNICAL AND MONITORING REPORTS PERTAINING TO THE CONTROL OF TRASH FROM PHASE I MS4s TO OCEAN WATERS, INLAND SURFACE WATERS, ENCLOSED BAYS AND ESTUARIES IN THE SAN DIEGO REGION released for public review on November 10, 2016 (referred to hereinafter as the "Tentative Investigative Order"). The City of San Diego is committed to reducing trash in our beaches, bays and creeks and offer three key suggestions to improve the efficiency of the City's implementation of the requirements in the Tentative Investigative Order.

The San Diego Water Board released the Tentative Investigative Order to meet the requirements of the Statewide Trash Amendments to the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California (ISWEBE Plan) and the Water Quality Control Plan for Ocean Waters of California (Ocean Plan). Namely, the Tentative Investigative Order is intended to meet the requirements of Chapter IV.A.5.a.(1).B of the ISWEBE Plan and Chapter III.L.4.a.(1).B of the Ocean Plan, which require the San Diego Water Board to issue an order pursuant to Water Code section 13267 or 13383 requiring the MS4 Permittees to submit, within three (3) months from receipt of the order, written notice stating the compliance option (Track 1 or Track 2) to be used to comply with the Statewide Trash Amendments. Per the Statewide Trash Amendments, MS4 Permittees selecting Track 2 must submit an Implementation Plan within 18 months of receiving the Tentative Investigative Order.

The Tentative Investigative Order appears to meet these requirements; however, the City requests that the San Diego Water Board address three key concerns that appear counter to the intent of the Statewide Trash Amendments:

1. *Several findings and provisions within the Tentative Investigative Order need to be clarified to ensure the requirements are directly related to the provisions in the Statewide Trash Amendments.* This typically involves better articulation with respect to Track 1 versus Track 2 requirements and clear differentiation between the two tracks. In some places, additional omitted language from the Statewide Trash Amendments should be included to ensure the findings and directives of the Tentative Investigative Order are consistent with the provisions in the Statewide Trash Amendments (see comments 2, 3, 4, 6, 8, and 9 in the attached table for specific examples). These clarifications will allow for implementation of the requirements of Tentative Investigative Order as envisioned in the State Trash Amendments, which will result in more streamlined, targeted and effective trash management programs.
2. *The approach to addressing transient encampments within the San Diego River Watershed is inappropriate for inclusion in a Tentative Investigative Order issued solely to MS4 Permittees, and should be removed from this Tentative Investigative Order.* While trash from transient encampments is an issue impacting the San Diego River, this specific source of trash is nonpoint source in nature, as has been recognized by the State and other Regional Water Boards across California. Historically, nonpoint sources have been better addressed through mechanisms other than an MS4 permit requirement, and transient encampments in particular require holistic programs that involve multiple responsible parties. A more effective regulatory approach would include a separate Investigative Order, specific Waste Discharge Requirements or a conditional waiver that includes all responsible parties that own property where encampments are an issue. This approach has been successful in other regions (e.g., Ventura River Estuary). Furthermore, as there are often no MS4s within the areas of the river where transient encampments exist, the MS4 Permittees would not be able to utilize the TRACK 1 compliance option to address these sources. The City will continue to support the San Diego Water Board in developing appropriate solutions to address nonpoint sources of trash related to transient encampments. However, the City believes the implementation actions that address trash already included in the San Diego River Water Quality Improvement Plan (WQIP) are a more appropriate and effective response from the MS4 Permittees that can be built upon to address this specific source.
3. *The City's recommendation is to include its implementation approach to the Statewide Trash Amendments within the City's Jurisdictional Runoff Management Plan (JRMP), rather than Water Quality Improvement Plans (WQIPs).* The Tentative Investigative Order requires the City to incorporate the requirements of the Statewide Trash Amendments into the WQIPs. While this seems practical given the emphasis placed on the WQIPs in the MS4 Permit, the Statewide Trash Amendments were written specific to individual jurisdictions. As such, incorporation of the City's compliance approach, whether Track 1 or Track 2, would be challenging to include within the WQIPs because the City is involved in six plans across the region. This presents particular problems with a Track 2 approach, as the Full Capture System Equivalency value, and approach to meeting this value, is developed on a jurisdictional basis. Dividing the requirements across the six watersheds is not practical and is counter to the intent of the Statewide Trash Amendments, which direct MS4 Permittees to focus on trash generating priority land uses within their jurisdiction, independent of watershed boundaries. The MS4 Permittees raised this concern at the public meeting with San Diego Water Board staff on December 1, 2016. San Diego Water Board staff acknowledged that cities in multiple watersheds will need to focus efforts more in some watersheds than others and were open to the possibility of including the

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Ms. Christina Arias, PE

December 14, 2016

implementation plan as an appendix to the WQIP or the JRMP. Upon doing so, the Tentative Investigative Order, and ultimately the re-issued MS4 Permit, should clearly state that MS4 Permittees are in compliance with the trash discharge prohibition and any receiving water limitations resulting from the narrative trash water quality objectives, provided the MS4 Permittees fully implement either the Track 1 or Track 2 compliance option under their JRMP.

To further expand these key points, specific suggestions to address these and other concerns are included in the attached comment table as Attachment 1. Overall, the City supports the approach the San Diego Water Board has proposed, but requests several important revisions to the Tentative Investigative Order as described herein.

If you have questions, please contact Clement Brown at (858) 541-4336 or at [CMBrown@sandiego.gov](mailto:CMBrown@sandiego.gov).

Sincerely,



Drew Kleis  
Deputy Director

DK/cb

Enclosure: Comment Table: Tentative Investigative Order No. R9-2016-0205

cc: Paz Gomez, Deputy Chief Operating Officer, Infrastructure/Public Works  
Alejandra Gavaldon, Director of Federal Government Affairs and Water Policy  
Kris McFadden, Director, Transportation & Storm Water Department  
Mario X. Sierra, Director, Environmental Services Department  
Davin Widgerow, Deputy City Attorney, City Attorney's Office  
Gene Matter, Assistant Deputy Director, Transportation & Storm Water Department  
Roger Wammack, Program Manager, Transportation & Storm Water Department  
Clement Brown, Program Manager, Transportation & Storm Water Department

CITY OF SAN DIEGO COMMENTS - TENTATIVE INVESTIGATIVE ORDER R9-2016-0205, REGIONAL BOARD 9 — SAN DIEGO REGION			
Comment #	Tentative Order Location	Reason for Proposed Changes/Comments	Comments/Proposed Changes
1	General Comment	<ul style="list-style-type: none"> <li>The Tentative Order provides narrative water quality objectives (WQOs) and a trash discharge prohibition in Finding 5 and Finding 6, respectively. To comply with the WQOs and the trash discharge prohibition, the MS4 Permittees are required to implement either the Track 1 or Track 2 compliance option. However, the Tentative Order does not indicate that meeting the trash discharge prohibition requirements (via implementing Track 1 or Track 2) would also mean the MS4 Permittees are in compliance with receiving water limitations (i.e., meeting the WQOs).</li> </ul>	<ul style="list-style-type: none"> <li>Add language to the Tentative Order indicating the MS4 Permittees are in compliance with the receiving water limitations (i.e., meeting the WQOs), so long as they are fully implementing Track 1 or Track 2.</li> </ul>
2	Finding 7, Page 3	<ul style="list-style-type: none"> <li>Finding 7 of the Tentative Order presents the Track 1 and Track 2 compliance options detailed in the Statewide Trash Amendments. However, the Track 2 language in the Tentative Order omits some of the Track 2 language in the Statewide Trash Amendments: <i>“The MS4 permittee may determine the locations or land uses within its jurisdiction to implement any combination of controls.”</i></li> <li>Finding 7 also presents the requirement for the MS4 Permittees, which choose Track 2 as their compliance option, to submit an Implementation Plan. However, there is no language in the Tentative Order that provides information regarding the Regional Board’s review and approval of the Track 2 Implementation Plans. Having an understanding of the review and approval process would provide the MS4 Permittees a clearer picture of implementation expectations, which would allow for better water quality protection/watershed planning.</li> </ul>	<ul style="list-style-type: none"> <li>Add the omitted language from the Statewide Trash Amendments to the Tentative Order <i>“Track 2: Install, operate, and maintain any combination of full capture systems, multi-benefit projects, other treatment controls, and/or institutional controls within either the jurisdiction of the MS4 permittee or within the jurisdiction of the MS4 permittee and contiguous MS4 permittees. The MS4 permittee may determine the locations or land uses within its jurisdiction to implement any combination of controls. The MS4 permittee shall demonstrate that such combination achieves full capture system equivalency. The MS4 permittee may determine which controls to implement to achieve compliance with full capture system equivalency. It is, however, the State Water Board’s expectation that the MS4 permittee will elect to install full capture systems where such installation is not cost-prohibitive.”</i></li> <li>Clarify the review and approval process for the Track 2 Implementation Plans.</li> </ul>
3	Finding 9.a, Page 5	<ul style="list-style-type: none"> <li>Finding 9.a of the Tentative Order details the Priority Land Uses defined by the Statewide Trash Amendments that are to be addressed for controlling trash discharges. However, Finding 9.a does not state that the Priority Land Uses are the land use types to be addressed via the Track 1 compliance option. Per the Statewide Trash Amendments, the Track 2 compliance option is valid for all land uses within each MS4 Permittees jurisdiction they have “Regulatory Control” over. That is, under the Track 2 compliance option, the MS4 Permittees can implement a suite of best management practices (BMPs) throughout their jurisdictions to control trash discharges, not just in the Priority Land Uses.</li> </ul>	<ul style="list-style-type: none"> <li>Clarify the Priority Land Uses are for the Track 1 compliance option <i>“Land Uses and Locations Requiring Trash Controls. The Trash Amendments define land uses and locations that are to be controlled for trash discharges by MS4 permittees using the Track 1 compliance option.”</i></li> </ul>

<p>4</p>	<p>Finding 9.b, Page 5</p>	<ul style="list-style-type: none"> <li>• Finding 9.b does not contain the full language from the Equivalent Land Use Provisions in the Statewide Trash Amendments. Finding 9.b omits <i>“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 or greater than the total trash generated from the priority land uses for which substitution is requested.”</i> The Statewide Trash Amendments included this language because the identification of the Priority Land Uses was done on a state level and the State Board recognized there is variability in trash generation between the same land use types based on local conditions. Omitting this language reduces the flexibility the MS4 Permittees have to define the priority land uses within their jurisdictions using local trash-generation information.</li> <li>• Finding 9.b is really a subset of Finding 9.a, which could be confusing since it is listed as an individual Finding.</li> </ul>	<ul style="list-style-type: none"> <li>• Add the omitted language from the Statewide Trash Amendments to Finding 9.b <i>“An MS4 permittee with regulatory authority over priority land uses may issue a request to the San Diego Water Board that the MS4 permittee be allowed to substitute a land use identified above with an alternate land use within the MS4 permittee’s jurisdiction that generates rates of trash that is equivalent to or greater than the priority land use being substituted. <u>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 or greater than the total trash generated from the priority land uses for which substitution is requested.</u> 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 “Keeping America Beautiful Visible Litter Survey”; or other information as required by the San Diego Water Board.</i></li> <li>• Change Finding 9.b to Finding 9.a.i to clarify that the Equivalent Alternative Land Uses Finding is really a subset of the Priority Land Uses Finding.</li> </ul>
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Comment #	Tentative Order Location	Reason for Proposed Changes/Comments	Comments/Proposed Changes
5	Finding 9.d, Page 6	<ul style="list-style-type: none"> <li>Finding 9.d contains a determination that transient encampments in the San Diego River Watershed Management Area (WMA) are generating substantial trash in amounts that adversely affect the beneficial uses or cause nuisance in the San Diego River. Finding 9.d also requires the MS4 Permittees in the San Diego River WMA to develop plans to address trash runoff from the relevant areas of land affected by the transient encampments through the Track 1 or Track 2 compliance options.</li> <li>While the Tentative Order provides the information sources that led to the determination that transient encampments in the San Diego River WMA are generating substantial trash in amounts that adversely affect the beneficial uses or cause nuisance in the San Diego River, the Tentative Order does not provide access to or justification as to the inclusion of the Finding.</li> <li>Although the Statewide Trash Amendments provide the Regional Board the authority to require the MS4 Permittees to implement trash controls for other land uses or specific locations this language is specific to areas subject to the MS4 NPDES permit. Other areas or facilities that may generate trash, such as high usage campgrounds, picnic areas, beach recreation areas, parks not subject to a MS4 permit, marinas, etc., are discussed under the section for "Other Dischargers" and there is no language stating trash sources originating in, or directly discharging to, receiving waters should be addressed by MS4 Permittees. According to the San Diego River Park Foundation's 2016 <i>State of the San Diego River Report</i>, transient encampments within the San Diego River riverbed account for 89 percent of the trash found in the riverbed, by volume.<sup>1</sup> The Statewide Trash Amendments require MS4 Permittees to install full capture systems in their MS4s or implement a suite of BMPs focusing on the land areas serviced by their MS4s that they have "Regulatory Control" over. The Statewide Trash Amendments did not intend for the MS4 Permittees to address trash sources within receiving waters, which they do not have "Regulatory Control" over.</li> <li>Transient encampments are nonpoint sources of trash and should not be included in the Tentative Investigative Order. Transient encampments would be more effectively regulated under individual Waste Discharge Requirements (WDR) Permits or Conditional Waivers of WDR<sup>2</sup> that are inclusive of all responsible parties with land use authority or ownership in those areas identified as problematic.</li> <li>Furthermore, as there are often no MS4s within the areas surrounding the receiving waters where transient encampments exist, the MS4 Permittees would not be able to utilize the Track 1 compliance option to address these areas. The Tentative Order should refer to Track 1 or Track 2 as they are compliance options specific to point source discharges and are not applicable to nonpoint sources, such as transient encampments.</li> </ul>	<ul style="list-style-type: none"> <li>The issue of transient encampments should be addressed in a separate regulatory action that is more appropriate to nonpoint sources and more inclusive of all responsible parties. For this reason, all language regarding encampments should be removed from the Tentative Investigative Order.</li> <li>If the Regional Board decides to keep this issues within the Tentative Investigative Order, the following modifications are recommended:             <ul style="list-style-type: none"> <li>Provide justification and specific locations regarding the inclusion of the finding that transient encampments in the San Diego River WMA are generating substantial trash in amounts that adversely affect the beneficial uses or cause nuisance in the San Diego River.</li> <li>Revise the second paragraph of Finding 9.d <i>"The San Diego Water Board has evaluated the San Diego River Park Foundation's 2013, 2014, and 2015 State of the River reports, and information received in regard to Item 5 on the May 14, 2014 Board meeting agenda pertaining to trash generated by transient encampments in the San Diego River watershed and related water quality issues. Based on this information the San Diego Water Board has determined that transient encampments in the San Diego River watershed are generating substantial trash in amounts that adversely affect beneficial uses or cause nuisance in the San Diego River. This Order requires MS4 permittees in the San Diego River watershed to coordinate with other entities within the watershed, as appropriate, to address trash associated with transient encampments from areas under their jurisdiction. Coordination may be implemented through another regulatory mechanism such as a Conditional Waiver of Waste Discharge Requirements, which would be separate from the NPDES permit for the MS4 permittees, through Track 1 or Track 2 controls as stipulated in the Trash Amendments (Ocean Plan Chapter III.L.2.d and ISWEEB Plan Chapter IV.A.3.d)."</i></li> <li>The City believes the implementation actions addressing trash already included in the San Diego River Water Quality Improvement Plan are a more appropriate and effective response from the MS4 Permittees that can be built upon to address this specific source. The MS4 Permittees in the San Diego River WMA are open to collaborative efforts to address trash in the relevant areas of land affected by the transient encampments, but those efforts should be developed under another regulatory construct, that includes all parties, and is not tied to compliance with the MS4 Permit or with the Statewide Trash Amendments.</li> </ul> </li> </ul>

Comment #	Tentative Order Location	Reason for Proposed Changes/Comments	Comments/Proposed Changes
6	Finding 11, Page 6	<ul style="list-style-type: none"> <li>Finding 11 does not provide adequate information related to the monitoring and reporting requirements specific to the Track 1 and Track 2 compliance options as detailed in the Statewide Trash Amendments. Finding 11 simply states: "The MS4 permittees will be required to provide reports to the San Diego Water Board on an annual basis to monitor progress toward achieving full compliance with the trash discharge prohibition. The monitoring and reporting requirements are dependent on the measures elected to be implemented by a MS4 permittee." By not providing the specific requirements for the Track 1 and Track 2 compliance options, the Tentative Order leaves the monitoring and reporting requirements ambiguous and could cause unnecessary monitoring and/or reporting by the MS4 Permittees.</li> </ul>	<ul style="list-style-type: none"> <li>Revise language under Finding 11 "The MS4 permittees will be required to provide reports to the San Diego Water Board on an annual basis to monitor progress toward achieving full compliance with the trash discharge prohibition. The monitoring and reporting requirements are dependent on the measures elected to be implemented by a MS4 permittee."                         <ul style="list-style-type: none"> <li>MS4 permittees that elect to comply with the Statewide Trash Amendments via the Track 1 compliance option shall provide a report to the 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.</li> <li>MS4 permittees that elect to comply with the Statewide Trash Amendments via the Track 2 compliance option 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. Monitoring reports shall be provided 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 MS4 permittee.</li> </ul> </li> </ul>

<sup>1</sup> See the San Diego River Park Foundation's Web Viewer for locations of current and historical transient encampments: <http://www.immappler.com/sandiego16/>.

<sup>2</sup> See State Water Board Response to Comments on page F-31 explaining that transient encampments are a nonpoint source that should be addressed through a WDR or conditional waiver of WDR and requirement on page 12 of the 2007 Ventura River Estuary Trash TMDL Staff Report for precedent that direct disposal (e.g. trash from transient encampments) is a nonpoint source that is addressed through a Conditional Waiver.

Comment #	Tentative Order Location	Reason for Proposed Changes/Comments	Comments/Proposed Changes
7	Finding 13, Page 7	<ul style="list-style-type: none"> <li>Finding 13 states that the Regional Board intends for the MS4 Permittees to incorporate the requirements of the Statewide Trash Amendments into the Water Quality Improvement Plans (WQIPs) after renewal of the Regional MS4 Permit. The implementation measures, interim milestones, and compliance schedules for Track 1 and Track 2 of the Statewide Trash Amendments shall be incorporated into the WQIPs to be implemented by the MS4 Permittees as part of the adaptive management process. A watershed approach is not the best implementation mechanism for the trash programs and is counter to the intent of the State Board. The WQIP is based around defining a highest priority watershed condition. While addressing trash is important, it may not be the highest priority condition within every watershed. The trash requirements are more aligned with requirements in the jurisdictional runoff management programs and could easily be incorporated into these plans without potentially causing a shift to trash being a highest priority in every watershed. Additionally, watershed scale implementation presents particular challenges with respect to the determination of full capture system equivalency, which is developed on a jurisdictional basis independent of watershed boundaries, and demonstration of attainment. Since both are performed on a jurisdictional scale, it is not practical or necessary to revise compliance approaches to make them fit into watershed plans.</li> </ul>	<ul style="list-style-type: none"> <li>Rather than include the trash compliance approaches within the WQIPs, the City recommends that the Track 1 or Track 2 approach be included within the City's Jurisdictional Runoff Management Plan (JRMP). In order to do so, Finding 13 should be completely revised to address appropriate inclusion within the JRMP.</li> </ul>
8	Finding 14, Page 9	<ul style="list-style-type: none"> <li>Finding 14 states that the technical and monitoring reports are needed to provide information "regarding (a) the measures each MS4 permittee is electing to implement (i.e. Track 1 or Track 2) within its jurisdiction to comply with the trash discharge prohibition, (b) the plan that will be implemented by each MS4 permittee to comply with the trash discharge prohibition, (c) the interim milestones that each MS4 permittee will achieve within its jurisdiction, (d) the schedules to achieving the interim milestones, and full compliance with the trash discharge prohibition, and (e) the monitoring and reporting that will be implemented to demonstrate progress toward achieving full compliance with the trash discharge prohibition." However, Finding 14 does not specify which of the items relate to MS4 Permittees complying via Track 1 or Track 2. By not providing the specific requirements for the Track 1 and Track 2 compliance options, the Tentative Order leaves the monitoring and reporting requirements ambiguous and could cause unnecessary monitoring and/or reporting by the MS4 Permittees.</li> </ul>	<ul style="list-style-type: none"> <li>Revise language in Finding 14 to specify which of the items relate to Track 1 and Track 2 "Water Code section 13267 provides that the San Diego Water Board may require dischargers, past dischargers, or suspected dischargers to furnish those technical or monitoring reports as the San Diego Water Board may specify, provided that the burden, including costs, of these reports, must bear a reasonable relationship to the need for the reports and the benefits to be obtained from the reports. The technical and monitoring reports required under this Investigative Order are needed to provide information to the San Diego Water Board regarding (a) the measures each MS4 permittee is electing to implement (i.e. Track 1 or Track 2) within its jurisdiction to comply with the trash discharge prohibition (Track 1 and Track 2), (b) the plan that will be implemented by each MS4 permittee to comply with the trash discharge prohibition (Track 2), (c) the interim milestones that each MS4 permittee will achieve within its jurisdiction (Track 1 and Track 2), (d) the schedules to achieving the interim milestones, and full compliance with the trash discharge prohibition (Track 1 and Track 2), and (e) the monitoring (Track 2) and reporting (Track 1 and Track 2) that will be implemented to demonstrate progress toward achieving full compliance with the trash discharge prohibition.</li> </ul>

Comment #	Tentative Order Location	Reason for Proposed Changes/Comments	Comments/Proposed Changes
9	Directive A.2, Pages 9-10	<ul style="list-style-type: none"> <li>• Directive A.2 states that “Each MS4 permittee electing to comply with Track 2 must submit, no later than eighteen (18) months from the date of this Order <u>[INSERT DATE]</u>, an implementation plan for each Watershed Management Area described in Table 1 in Finding 13 above....” However, the Statewide Trash Amendments clearly identify individual jurisdictions, and specific land uses within the individual jurisdictions, as the implementation locations. As discussed in Comment #7, requiring implementation on a watershed-scale could affect the MS4 Permittees’ implementation approaches and implementation schedules as trash generation is site-specific and varies between jurisdictions.</li> <li>• In addition, Directive A.2.a contains a footnote that states “Controls include, but are not limited to, treatment controls and institutional controls, as defined in the Appendix D to the California Ocean Plan and Appendix E of the Inland Surface Waters, Enclosed Bays, and Estuaries of California.” The footnote does not provide adequate information regarding the types of controls allowed.</li> <li>• Furthermore, Directive A.2.e incorrectly links Priority Land Uses with the Track 2 compliance option. Directive A.2.e states “Requests by MS4 permittees, if any, for authorization to substitute a Priority Land Use described in Finding 9 above with an Equivalent Alternate Land Use that generates rates of trash equivalent to, or greater than, the Priority Land Use being substituted. The MS4 permittees must provide data or information which establishes that trash generation rates from the Alternate Land Use(s) are greater than the Priority Land Use(s) being substituted.” Priority Land Uses/Equivalent Alternate Land Uses are only relevant if a MS4 Permittee selects the Track 1 compliance option.</li> <li>• Finally, Directive A.2.f states the Track 2 implementation plan should include “A compliance time schedule based on the shortest practicable time to achieve full compliance with the trash discharge prohibition, including interim milestones (such as average load reductions of ten percent per year) and a final compliance date. The final compliance date must not be later than fifteen (15) years from the effective date of the Trash Amendments (i.e. December 2, 2030).” However, the Statewide Trash Amendments do not include any language where the compliance time schedule must be based on the shortest practicable time to achieve full compliance with the trash discharge prohibition. The Statewide Trash Amendments state compliance must be achieved ten years from the effective date of the first implementing permit and not longer than fifteen years from the effective date of the Statewide Trash Amendments.</li> </ul>	<ul style="list-style-type: none"> <li>• Consistent with Comment #7, revise Directive A.2 “Each MS4 permittee electing to comply with Track 2 must submit, no later than eighteen (18) months from the date of this Order <u>[INSERT DATE]</u>, an implementation plan, <u>which shall also be incorporated into the applicable Jurisdictional Runoff Management Plan after renewal of the Regional MS4 Permit, for each Watershed Management Area described in Table 1 in Finding 13 above that describes....”</u></li> <li>• Revise the footnote in Directive A.2.a “Controls include, but are not limited to, <u>full capture systems, multi-benefit projects, other treatment controls, and/or institutional controls-treatment controls and institutional controls</u>, as defined in <u>the Appendix D to the Water Quality Control Plan for Ocean Waters of California California Ocean Plan and Appendix E of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California.</u>”</li> <li>• Delete Directive A.2.e “<u>Requests by MS4 permittees, if any, for authorization to substitute a Priority Land Use described in Finding 9 above with an Equivalent Alternate Land Use that generates rates of trash equivalent to, or greater than, the Priority Land Use being substituted. The MS4 permittees must provide data or information which establishes that trash generation rates from the Alternate Land Use(s) are greater than the Priority Land Use(s) being substituted.</u>”</li> <li>• Revise Directive A.2.f “A compliance time schedule <u>based on the shortest practicable time to achieve full compliance with the trash discharge prohibition, including interim milestones (such as average load reductions of ten percent per year) and a final compliance date. The final compliance date must not be later than fifteen (15) years from the effective date of the Trash Amendments (i.e. December 2, 2030).</u>”</li> </ul>

Comment #	Tentative Order Location	Reason for Proposed Changes/Comments	Comments/Proposed Changes
10	Directive A.4, Page 10	<ul style="list-style-type: none"> <li>Directive A.4 states “MS4 permittees discharging to the San Diego River watershed (Cities of San Diego, Santee, El Cajon, La Mesa, and County of San Diego), must submit, no later than eighteen (18) months from the date of this Order [INSERT DATE], a description of how trash generated from transient encampments in the San Diego River Watershed Management Area will be addressed.” The title of Directive A.4 omits “watershed” after “San Diego River”.</li> <li>In addition, as detailed above (see Comment #5) regarding Finding 9.d, there are several issues related to addressing transient encampments. Specifically, many transient encampments are nonpoint sources located in areas outside of the MS4. As such, clarification is required to ensure developing plans to address trash runoff from the relevant areas of land affected by the transient encampments are independent of the MS4 Permit and the Statewide Trash Amendments and not tied to compliance.</li> </ul>	<ul style="list-style-type: none"> <li>The City believes the implementation actions addressing trash already included in the San Diego River Water Quality Improvement Plan are a more appropriate and effective response from the MS4 Permittees that can be built upon to address this specific source. The MS4 Permittees in the San Diego River WMA are open to collaborative efforts to address trash in the relevant areas of land affected by the transient encampments, but those efforts should be developed under another regulatory construct, that includes all parties, and is not tied to compliance with the MS4 Permit or with the Statewide Trash Amendments. For these reasons, the City recommends that the Regional Board remove references to the regulation of transient encampments from the Tentative Investigative Order.</li> <li>However, should the transient encampment issue remain in the Tentative Order, the following revisions are recommended for Directive A.4:             <ul style="list-style-type: none"> <li>Revise the title of Directive A.4 “<i>Transient Encampments in the San Diego River Watershed</i>”</li> <li>Revise Directive A.4 “<i>MS4 permittees discharging to the San Diego River watershed (Cities of San Diego, Santee, El Cajon, La Mesa, and County of San Diego), must submit, no later than eighteen (18) months from the date of this Order [INSERT DATE], collaborate with other entities in the watershed as appropriate to a description of how address trash generated from transient encampments in the San Diego River Watershed Management Area. These efforts may be implemented under another regulatory mechanism, such as a Conditional Waiver of Waste Discharge Requirements, that would be separate from the NPDES permit for the MS4 permittees.</i></li> </ul> </li> </ul>



Sent via email to: [sandiego@waterboards.ca.gov](mailto:sandiego@waterboards.ca.gov)

Attn: Christina Arias

December 14, 2016

Christina Arias, PE - Water Resource Control Engineer  
California Regional Water Quality Control Board - San Diego Region  
2375 Northside Drive, Suite 100  
San Diego, CA 92108

Subject: Comments – Tentative Order No.R9-2016-0205

Dear Ms. Arias:

The City of Carlsbad appreciates the opportunity to comment on Tentative Investigative Order R9-2016-0205, An Order Directing the Owners and Operators of Phase I Municipal Separate Storm Sewer Systems (MS4s) draining the Watersheds within the San Diego Region to submit Technical and Monitoring Reports Pertaining to the Control of Trash in Discharges from Phase I MS4s to Ocean Waters, Inland Surface Waters, Enclosed Bays, and Estuaries in the San Diego Region (Tentative Order). The issuance of the Tentative Order and opportunity for comment demonstrates the collaborative approach of the San Diego Regional Water Quality Control Board (Regional Board) when issuing new regulation.

The County of San Diego prepared and submitted a detailed comment letter in which they identified key issues of the Tentative Order that should be addressed. The City of Carlsbad generally agrees with the comments submitted by the County of San Diego and requests the Regional Board review and include these comments in a revised Tentative Order.

If you have questions, please contact James Wood at 760-602-2799 or [james.wood@carlsbadca.gov](mailto:james.wood@carlsbadca.gov). Thank you for your time and consideration.

Sincerely,

A handwritten signature in blue ink that reads "James Wood".

James Wood  
Acting Environmental Manager



*City of  
Encinitas*

December 14, 2016

Christina Arias, PE  
Water Resource Control Engineer  
San Diego Regional Water Quality Control Board  
2375 Northside Drive, Suite 100

Electronic Submission: [sandiego@waterboards.ca.gov](mailto:sandiego@waterboards.ca.gov)

RE: COMMENTS ON TENTATIVE INVESTIGATIVE ORDER – NO. R9-2016-0205  
REFERENCE 786088: CARIAS

Ms. Arias,

Thank you for the opportunity to comment on Tentative Investigative Order R9-2016-0205, Investigative Order Directing the Owners and Operators of Phase I Municipal Separate Storm Sewer Systems (MS4s) draining the Watersheds within the San Diego Region to Submit Technical and Monitoring Reports Pertaining to the Control of Trash from Phase I MS4s to Ocean Waters, Inland Surface Waters, Enclosed Bays and Estuaries in the San Diego Region. Additionally, thank you for holding a meeting on December 1, 2016 to allow for helpful dialogue on this matter.

The City of Encinitas has collaborated with the San Diego Region Stormwater Copermittees in review of Tentative Investigative Order No. R9-2016-0205, and by this correspondence offers formal support and concurrence with the comment letter, received under separate cover, submitted by the County of San Diego, dated December 14, 2014. The City of Encinitas would like to request your careful consideration of the comments and recommendations provided by the County of San Diego, including specific language changes.

Please feel free contact me with any questions or to discuss this matter in more detail.

Sincerely,

Erik Steenblock  
Environmental Programs Manager



December 14, 2016

VIA EMAIL TO: [sandiego@waterboards.ca.gov](mailto:sandiego@waterboards.ca.gov)

Ms. Christina Arias, PE  
Water Resource Control Engineer  
California Regional Water Quality Control Board  
San Diego Region  
2375 Northside Drive, Suite 100  
San Diego, CA 92108

Subject: Letter of Support for County of San Diego Comments on Tentative  
Investigative Order No. R9-2016-0205--Reference 786088: CArias

Dear Ms. Arias:

The City of Vista (City) appreciates the opportunity to comment on Tentative Investigative Order R9-2016-0205 (Tentative Order). In doing so, the City broadly supports the comments and recommendations prepared by the County of San Diego (attached), who is a responsible party in most of the region's watersheds, as well as in the two watersheds in which Vista participates: Carlsbad and San Luis Rey.

Of particular concern to the City is delineating in the Tentative Order the clear distinctions between Track 1 and Track 2 that are identified in the Trash Amendments, i.e., compliance methodology, timelines, as well as reporting and monitoring requirements. Given the immediate and ongoing resources that will be required to implement either track, it is important to clearly define and thereby distinguish them so that agencies can make reasonable compliance decisions and commitments. Related to track selection, the City also supports the County's recommendation to allow agencies to change their initial track selection—with proper justification. Like the County, the City may be inclined to choose Track 1 because of the seeming compliance clarity of this regulatory pathway. However, the feasibility of this choice will not be fully known by the compliance selection deadline in early 2017.

Again, the City appreciates the opportunity to comment on Investigative Order No. R9-2016-0205 to ensure consistency with the Trash Amendments.

Sincerely,

Cheryl Filar  
Storm Water Program Manager

Attachment

RB9 001998



# County of San Diego

**RICHARD E. CROMPTON**  
DIRECTOR

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December 14, 2016

Christina Arias, PE  
Water Resource Control Engineer  
San Diego Regional Water Quality Control Board  
2375 Northside Drive, Suite 100  
San Diego, CA 92108-2700

Electronic submission: [sandiego@waterboards.ca.gov](mailto:sandiego@waterboards.ca.gov)

Dear Ms. Arias:

**COMMENTS ON TENTATIVE INVESTIGATIVE ORDER - NO. R9-2016-0205  
REFERENCE 786088: CARIAS**

The County of San Diego (County) appreciates the opportunity to comment on Tentative Investigative Order R9-2016-0205, An Order Directing the Owners and Operators of Phase I Municipal Separate Storm Sewer Systems (MS4s) draining the Watersheds within the San Diego Region to submit Technical and Monitoring Reports Pertaining to the Control of Trash in Discharges from Phase I MS4s to Ocean Waters, Inland Surface Waters, Enclosed Bays, and Estuaries in the San Diego Region (Tentative Order). The County acknowledges that the San Diego Regional Water Quality Control Board released the Tentative Investigative Order to meet the requirements of the Statewide Trash Amendments to the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California (ISWEBE Plan) and the Water Quality Control Plan for Ocean Waters of California (Ocean Plan) (referred to hereafter as "Trash Amendments"). With this in mind, the County respectfully submits the following comments to reflect our concerns with the Tentative Order as drafted and to propose improvements to the revised Order.

The County has identified eight key areas of concern within the Tentative Order as described in the detailed comments below. For each area of concern, a recommendation is included. Related detailed suggestions for modifications to the Tentative Order are included in "redline/strikeout" form in Attachment A.

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***Issue #1 – Clear Definition of Track 1 and Track 2 Requirements and Consistency with Trash Amendments***

***(Findings 7, 8, 9.a, 9.b, 11, 14; Directives A.2.e, A.3.f)***

The Trash Amendments provide jurisdictions with two tracks for compliance. The tracks differ in terms of compliance methodology, timelines, and reporting and monitoring requirements. Selecting which track to follow is one of the first decisions the County and other jurisdictions will face, and this choice will guide future implementation efforts. Moreover, because the Tentative Order will be issued prior to incorporation of the Trash Amendments into the Regional MS4 Permit, it will be the regulatory document that most directly defines the minimum requirements for complying with a Track 1 or Track 2 approach. It is therefore essential that the Tentative Order's findings and directives clearly define the requirements for Track 1 and 2 and the differences between them.

In addition, the County requests revisions to the Tentative Order to ensure that its language is consistent with language from the Trash Amendments. Statewide consistency is a stated goal of the State Water Resources Control Board (State Water Board) in developing the Trash Amendments. There are several portions of the Tentative Order, such as Findings 7 and 9, where Amendment language has been incompletely incorporated. These omissions reduce needed flexibility that will help ensure effective and efficient trash reduction over the long-term.

***Recommendations (with specific language suggestions provided in Attachment A):***

1. ***Finding 7. Under a Track 2 approach, implementation actions are not limited to the priority land use areas. Add language from the Trash Amendments.***
2. ***Finding 8 presents the definition for Full Capture System Equivalency. However, the definition omits some of the language from the Trash Amendments that provides flexibility to the MS4 Permittees. Add the omitted language from the Trash Amendments to the Tentative Investigative Order.***
3. ***Finding 9.a should clarify that the priority land uses only apply under a Track 1 approach.***
4. ***Finding 9.b should include all language from the Trash Amendments.***
5. ***Finding 11 needs to provide more clarity regarding the reporting requirements under Track 1 vs. Track 2. Add language from the Trash Amendments.***
6. ***Finding 14 should include clarifying language to specify which requirements apply to Track 1, Track 2, or both.***
7. ***Directive A.2.e incorrectly links Priority Land Uses and Equivalent Alternative Land Uses with a Track 2 approach. Suggest deletion of A.2.e.***
8. ***Directive A.2.f imposes a schedule based on the "shortest practicable time", which is not consistent with the schedule requirements within the Trash Amendments. Recommend deletion of "based on the shortest practicable time" to maintain consistency. Footnote 3 should also be revised for consistency with the Trash Amendments.***

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## **Issue #2 – Incorporation of Compliance Time Schedule in Implementing Permit**

### ***(Finding 10)***

The inclusion of an enforceable compliance schedule is not an appropriate subject to be addressed in an Investigative Order according to the statutory terms and conditions of Water Code Sections 13267 and 13383 combined. It is imperative that any compliance schedule be adopted directly into the MS4 Permit to ensure proper legal protection for permittees while they implement the plans and practices to meet the timeframes contained within the Trash Amendments.

***Recommendation:** Revise language from the Compliance Time Schedule finding (Finding 10) to state the Regional MS4 Permit reissued after June 27, 2018 will be the first implementing permit and will contain a compliance time schedule consistent with the requirements of the Trash Amendments.*

## **Issue #3 – Incorporation into the Water Quality Improvement Plan**

### ***(Finding 13, Directive A.2)***

The Trash Amendments were developed to focus on trash originating from the combinations of land uses and landscape features which are unique to every jurisdiction. By offering the track choices, the State Water Board has shown its desire to develop a tool that is functional for the particular characteristics of each jurisdiction founded on the premise that different kinds of land uses “produce” trash at different rates and each jurisdiction has different combinations and locations of those land uses. For this reason, the Amendments do not fit well into a watershed-based regulatory context, as they are designed for use on a jurisdiction-by-jurisdiction basis. For example, under Track 2, a jurisdiction’s Full Capture System Equivalency value is developed based on its own combination of Priority Land Uses and is a value specific only to that jurisdiction.

The County is a Copermitee in eight watersheds within the San Diego region, and will develop compliance approaches based on its own jurisdictional responsibilities, which reflect the characteristics of the unincorporated portions of San Diego County at large, not based on watershed boundaries. For this reason, the County feels that Finding 13 of the Tentative Order should provide flexibility for jurisdictions by including the option of incorporating Amendment compliance language into the Water Quality Improvement Plans or the Jurisdictional Runoff Management Plan (JRMP) or a combination of the Water Quality Improvement Plans and JRMP. Jurisdictions would then have the choice of determining which method best meets their situation. As discussed with Regional Board staff during a meeting on December 1, 2016, it is possible that over time, trash could be raised to the highest priority water quality condition in a particular watershed. If this happens, then a goal based on watershed or sub-watershed scale implementation may be appropriate.

***Recommendation:** Delete Finding 13 and Revise Finding 12 to allow the flexibility for agencies to include their approach for compliance with the Trash Amendments, whether Track 1 or Track 2, within the Water Quality Improvement Plans or their respective JRMPs or in a combination of the Water Quality Improvement Plans and JRMPs. The options should also be supported with revisions to the language in Directive A.2.*

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**Issue #4 – Compliance through Implementation of a Track 1 or Track 2 Approach and Approval of Track 2 Implementation Plan**

***(Finding 7)***

The County requests a modification to the Tentative Order to clarify that the timely and complete implementation of an approved Track 1 or 2 compliance approach will meet the narrative water quality objective and constitute compliance with the trash discharge prohibitions. Revisions to Finding 7 of the Tentative Order should be made to reflect these needed clarifications. In addition, in order to better understand the process through which the required implementation plans under Track 2 will be approved by the Regional Water Board, language outlining the milestones and timing for approval involved should be added to Finding 7.

*Recommendation: Include language in Finding 7 describing the Regional Board's approval process for Implementation Plans developed under a Track 2 approach. Add language indicating that timely and complete implementation under a Track 1 or Track 2 approach will meet the narrative water quality objective (Finding 5) and constitute compliance with the trash discharge prohibitions (Finding 6).*

**Issue #5 – Clarification of a Jurisdiction's Ability to Change Compliance Tracks with Supporting Justification**

***(Finding 7)***

Jurisdictions should be provided with the ability to change their initial determination of which compliance track to pursue. Implementation of the Trash Amendments will surely involve many lessons learned and efficiencies to be gained along the way. The State Water Board has clearly expressed its expectation "that the MS4 permittee will elect to install full capture systems where such installation is not cost-prohibitive". The County may be inclined to pursue Track 1 because of the simplicity of the approach and the compliance certainty it provides. However, with an MS4 that includes nearly 4,000 storm drain inlets within high priority land use areas; there may be some limited number of locations where installation of full capture systems is either not possible or cost-prohibitive. We will not know whether this is the case by the time we are required to submit our choice of compliance track, thus potentially forcing us to select Track 2. Allowing jurisdictions to change tracks during the implementation period, with sufficient supporting justification, is reasonable and would provide jurisdictions with much needed flexibility to implement this 10-year program. It will also likely encourage more jurisdictions to take a full capture approach, which appears to be the intent of the State Water Board.

*Recommendation: Add language to Finding 7 stating MS4 permittees may change tracks, provided they submit sufficient supporting justification. In addition, this language should be added to the first implementing permit (Regional MS4 Permit reissued after June 27, 2018).*

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**Issue #6 – Transient Encampments in the San Diego River Watershed**

***(Finding 9.d, Directive A.4)***

The County supports CASQA's December 14, 2016 comment letter on the Tentative Order, which refers to the State Water Board's Responses to Comments on transient encampments during consideration of the Trash Amendments. Clearly, the intent of the Trash Amendments was not to address transient encampments.

The County has two key concerns with the methods proposed to address transient encampments within the San Diego River Watershed. First, transient encampments are by their nature a non-point source of trash and should be regulated as such. Therefore, they should not be regulated within an MS4 Permit which is a point source permit. As noted in their Response to Comments for the Trash Amendments, the State Water Board intended for the Trash Amendments to apply to NPDES Permits issued pursuant to Federal Clean Water Act Section 402(p) (see response 10.6), with other sources addressed through Waste Discharge Requirements (WDRs) or waivers of WDRs (see response 34.2). As has been found in other regions (e.g., Ventura River Estuary), only addressing MS4 sources of trash, when the problem stems from transient encampments, has little effect on the overall levels of trash. The transient encampments simply pick up and move, at least temporarily, to another part of the watershed. Further, Copermitees often do not have effective "regulatory control" over properties where transient encampments are common, i.e., private, state, and federal properties. The request for the Permittees to "address trash runoff from the relevant areas of land affected by transient encampments" via the MS4 Permit is inappropriate as it is the wrong mechanism for controlling this type of discharge. In order to effectively address the issue, participation from all land owners and key responsible parties, particularly those beyond the control of the MS4 permit, will be needed. Further, it will be necessary to involve other agencies to holistically address the transient problems within the watershed (e.g., social services, law enforcement) to ensure that the issue is not simply transferred from one portion of the region to another.

Second, the requirement to address trash from transient encampments for an entire watershed under the Trash Amendments limits the ability of the permittee to be in compliance with Track 1 or Track 2. To implement a Track 1 approach, consistent with the intent of the Amendments, full capture devices would only treat MS4 discharges from priority land use areas, not other non-priority land uses or receiving waters where many transient encampments occur. To implement a Track 2 approach, "transient encampments" would have to be identified as a "land use" and a "full capture equivalency" would need to be demonstrated. Such an approach is cumbersome, certainly not the intent of the Amendments, and may be counterproductive to actually solving the problem.

***Recommendations:*** *Finding 9.d and Directive A.4 should be removed. The San Diego Board should maintain consistency with the State Water Board and other Regional Boards in addressing trash generated from transient encampments as non-point in nature. In order to effectively address this particular source, the Regional Board could issue a separate Conditional Waiver of Waste Discharge Requirement to all land owners/responsible parties where trash from transient encampments has been determined to be a problem. However, if the San Diego Board does not remove Finding 9.d and Directive A.4, then consider the revision proposed in redline/strikeout that requests that the MS4s coordinate with entities under their jurisdiction to address trash from transient encampments.*

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**Issue #7 – Coordination with Caltrans**

**(Directive A.3)**

The County requests a modification to the Tentative Order to be consistent with the Trash Amendments and with the MS4 Permit with respect to coordination with Caltrans. The Amendments and the MS4 Permit already require coordination with Caltrans, as applicable, but neither requires a submittal to the Regional Board describing these efforts. In general, the County and Copermitees have established a good working relationship with Caltrans through the Water Quality Improvement Plans. As this coordination continues, it will include implementation of the requirements under the Trash Amendments as appropriate for Caltrans and for the MS4 Permittees to be compliant. Coordination should not necessitate a new reporting requirement for the Copermitees.

Recommendation: *Require coordination with Caltrans, as applicable, to effectively implement the requirements of the Amendments, but remove the requirement to describe this coordination in a separate submittal to the Regional Board.*

**Issue #8 - Clarification of the Monitoring and Reporting requirements of the 13267 Order**

**(Finding 11, New Directive)**

Finding 11 does not provide adequate information related to the monitoring and reporting requirements specific to the Track 1 and Track 2 compliance options as detailed in the Trash Amendments. By not providing the specific requirements for the Track 1 and Track 2 compliance options, the Tentative Order leaves the monitoring and reporting requirements ambiguous and could cause unnecessary monitoring and/or reporting by the MS4 Permittees. Furthermore, including the monitoring requirements as a finding rather than a directive is also problematic. Including the monitoring and reporting requirements as a directive would clearly indicate what the MS4 Permittees are responsible for.

Recommendation: *Revise Finding 11 language and add a new Directive A.3 to describe the specific monitoring and reporting requirements applicable to each track.*

Thank you for your time and consideration of these comments offered in an effort to improve the Tentative Order and ensure consistency with the Trash Amendments. If you have questions or require additional information, please contact Jo Ann Weber, Planning Manager, at (858) 495-5317 or e-mail at [JoAnn.Weber@sdcounty.ca.gov](mailto:JoAnn.Weber@sdcounty.ca.gov).

Sincerely,



TODD E. SNYDER, Manager  
Watershed Protection Program

Attachment: County of San Diego Recommended Redline-Strikeout of Tentative Order

ATTACHMENT A – County of San Diego Recommended Redline-Strikeout of Tentative Order

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
SAN DIEGO REGION**

**TENTATIVE INVESTIGATIVE ORDER NO. R9-2016-0205**

**AN ORDER DIRECTING THE OWNERS AND OPERATORS OF  
PHASE I MUNICIPAL SEPARATE STORM SEWER SYSTEMS (MS4s)  
DRAINING THE WATERSHEDS WITHIN THE SAN DIEGO REGION**

**TO SUBMIT TECHNICAL AND MONITORING REPORTS PERTAINING TO  
THE CONTROL OF TRASH IN DISCHARGES FROM PHASE I MS4s  
TO OCEAN WATERS, INLAND SURFACE WATERS,  
ENCLOSED BAYS, AND ESTUARIES  
IN THE SAN DIEGO REGION**

The California Regional Water Quality Control Board, San Diego Region (hereinafter San Diego Water Board) finds:

- 1. Legal and Regulatory Authority.** This Order conforms to and implements policies and requirements of the Porter-Cologne Water Quality Control Act (division 7 of the Water Code, commencing with Section 13000) including (1) sections 13267 and 13383; (2) applicable state and federal regulations; (3) all applicable provisions of statewide Water Quality Control Plans adopted by the State Water Resources Control Board (State Water Board) and the *Water Quality Control Plans for the San Diego Basin* (Basin Plan) adopted by the San Diego Water Board including beneficial uses, water quality objectives, and implementation plans; (4) State Water Board policies and regulations, including Resolution No. 68-16 (Statement of Policy with Respect to Maintaining High Quality of Waters in California); and (5) relevant standards, criteria, and advisories adopted by other state and federal agencies.
- 2. Trash Amendments.** On April 7, 2015, the State Water Board adopted Resolution No. 2015-0019, amending the *Water Quality Control Plan for Ocean Waters of California* (Ocean Plan) and the *Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (ISWEBE Plan) to address the impacts of trash to the surface waters of California (referred to hereafter as the Trash Amendments). The effective date of the Trash Amendments is December 2, 2015.
- 3. Trash Amendments Implementation.** The Trash Amendments establish a statewide narrative water quality objective and implementation requirements to control trash, including a prohibition against the discharge of trash to ocean waters, inland surface waters, enclosed bays, and estuaries in California. Within eighteen (18) months of the effective date (i.e. by June 2, 2017), for each MS4 that has been issued a National Pollutant Discharge Elimination System (NPDES) permit by the San Diego Water Board with regulatory authority over priority land uses in the San Diego Region, the San Diego Water Board is required to modify, re-issue, or adopt an applicable MS4 permit, or issue an order pursuant to Water Code section 13267 or 13383 to implement the Trash Amendments.

**4. Persons Responsible for the Discharges of Trash.** The owners and operators of Phase I MS4s are responsible for discharges of waste, including trash, from land uses and locations within their jurisdictions through their MS4s to ocean waters, inland surface waters, enclosed bays, and estuaries in the San Diego Region. In the San Diego Region, owners and operators of Phase I MS4s (herein referred to as MS4 permittees) include the following entities:

- County of Orange
  - City of Aliso Viejo
  - City of Dana Point
  - City of Laguna Beach
  - City of Laguna Hills
  - City of Laguna Niguel
  - City of Laguna Woods
- County of Riverside
  - City of Menifee<sup>2</sup>
  - City of Murrieta
  - City of Temecula
  - City of Wildomar
- County of San Diego
  - City of Carlsbad
  - City of Chula Vista
  - City of Coronado
  - City of Del Mar
  - City of El Cajon
  - City of Encinitas
  - City of Escondido
  - City of Imperial Beach
  - City of La Mesa
  - City of Lemon Grove
- City of Lake Forest<sup>1</sup>
- City of Mission Viejo
- City of Ranch Santa Margarita
- City of San Clemente
- City of San Juan Capistrano
- Orange County Flood Control District
- Riverside County Flood Control and Water Conservation District
- City of National City
- City of Oceanside
- City of Poway
- City of San Diego
- City of San Marcos
- City of Santee
- City of Solana Beach
- City of Vista
- San Diego County Regional Airport Authority
- San Diego Unified Port District

**5. Water Quality Standards.** The Trash Amendments established the following statewide narrative water quality objectives for trash in ocean waters, inland surface waters, enclosed bays, and estuaries in California.

<sup>1</sup> On February 10, 2015, the San Diego Water Board and the Santa Ana Water Board entered into an agreement, pursuant to Water Code section 13228, regarding MS4 discharges within the City of Lake Forest geographically located in the San Diego Region. According to the agreement, the City of Lake Forest must participate in preparation and implementation of the Water Quality Improvement Plan for the Aliso Creek Watershed Management Area. The requirements of the Trash Amendments will be incorporated into the Regional MS4 Permit during reissuance which may require an update to the Water Quality Improvement Plan.

<sup>2</sup> On October 26, 2015, the San Diego Water Board and the Santa Ana Water Board entered into an agreement, pursuant to Water Code section 13228, regarding MS4 discharges within the City of Menifee geographically located in the San Diego Region. According to the agreement, the City of Menifee must participate in preparation and implementation of the Water Quality Improvement Plan for the Santa Margarita River Watershed Management Area. The requirements of the Trash Amendments will be incorporated into the Regional MS4 Permit during reissuance which may require an update to the Water Quality Improvement Plan.

- a. The Trash Amendments established the following narrative water quality objective for trash in Chapter II.C.5 of the Ocean Plan:

*"Trash shall not be present in ocean waters, along shorelines or adjacent areas in amounts that adversely affect beneficial uses or cause nuisance."*

- b. The Trash Amendments established the following narrative water quality objective or trash in Chapter III.A of the ISWEBE Plan:

*"Trash shall not be present in inland surface waters, enclosed bays, estuaries, and along shorelines or adjacent areas in amounts that adversely affect beneficial uses or cause nuisance."*

Meeting these narrative water quality objectives for trash will be protective and supportive of numerous beneficial uses for the ocean waters, inland surface waters, enclosed bays, and estuaries in the San Diego Region, including but not limited to, wildlife habitat (WILD), marine habitat (MAR), preservation of rare and endangered species (RARE), fish migration (MIGR), navigation (NAV), and water contact and non-contact recreation (REC1 and REC2).

6. **Trash Discharge Prohibition.** The Trash Amendments established the following discharge prohibition in Chapter III.I.6 of the Ocean Plan and Chapter IV.A.2 of the ISWEBE Plan:

*"The discharge of trash to surface waters of the State or the deposition of trash where it may be discharged into surface waters of the State is prohibited."*

7. **MS4 Permit Implementation of the Trash Amendments.** The Trash Amendments are required to be implemented through the incorporation of the trash narrative water quality objectives and discharge prohibition into NPDES MS4 permits. The NPDES MS4 permit then will require the MS4 permittees to comply with the trash narrative water quality objectives and discharge prohibition through the implementation of one of two measures to be selected by the MS4 permittees.

To comply with the trash narrative water quality objectives and discharge prohibition, the MS4 permittees are required to implement either of the following measures:

*Track 1:* Install, operate, and maintain full capture systems for all storm drains that capture runoff from the priority land uses in their jurisdictions; or

*Track 2:* Install, operate, and maintain any combination of full capture systems, multi-benefit projects, other treatment controls, and/or institutional controls within either the jurisdiction of the MS4 permittee or within the jurisdiction of the MS4 permittee and contiguous MS4 permittees. The MS4 permittee may determine the locations or land uses within its jurisdiction to implement any combination of controls. The MS4 permittee shall demonstrate that such combination achieves full capture system equivalency. The MS4 permittee may determine which controls to implement to achieve compliance with full capture system equivalency. It is, however, the State Water Board's expectation that the MS4 permittee will elect to

install full capture systems where such installation is not cost-prohibitive.

Within three (3) months of the effective date of the first implementing permit, or the receipt of an order issued by the San Diego Water Board pursuant to Water Code section 13267 or 13383, each MS4 permittee is required to provide written notice to the San Diego Water Board stating whether the MS4 permittee elects to comply with the trash discharge prohibition by implementing Track 1 or Track 2. MS4 permittees that elect to implement Track 2 are also required to submit an implementation plan to the San Diego Water Board within eighteen (18) months of the effective date of the first implementing permit, or the receipt of the order issued pursuant to Water Code section 13267 or 13383. The implementation plan is required to describe: (i) the combination of controls selected by the MS4 permittee and the rationale for the selection, (ii) how the combination of controls is designed to achieve full capture system equivalency, and (iii) how full capture equivalency will be demonstrated. The implementation plan is subject to approval by the San Diego Water Board. Track 2 Implementation Plans will be deemed approved by the San Diego Water Board ninety (90) days after submission unless otherwise directed in writing by the San Diego Water Board Executive Officer. MS4 permittees may elect to change tracks through their adaptive management process during the 10-year implementation period, provided they submit sufficient, supporting justification to the San Diego Water Board. MS4 permittees fully complying with Track 1 or Track 2 are deemed to be in compliance with the trash discharge prohibition and narrative water quality objectives incorporated into the MS4 permit.

**8. Full Capture System Equivalency.** The Trash Amendments define full capture system equivalency as follows:

*“Full capture system equivalency is 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 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."*

**9. Land Uses and Locations Requiring Trash Controls.** The Trash Amendments define land uses and locations that are to be controlled for trash discharges by MS4 permittees using the Track 1 compliance option:

- a. **Priority Land Uses:** Those developed sites, facilities, or land uses (i.e. not simply zoned land uses) within a MS4 permittee's jurisdiction from which discharges of trash are regulated by the Ocean Plan or ISWEBE Plan as follows:
- High-density residential: all land uses with at least ten (10) developed dwelling units/acre.
  - 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).
  - 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.).
  - Mixed urban: land uses where high-density residential, industrial, and/or commercial land uses predominate collectively (i.e., are intermixed).
  - Public transportation stations: facilities or sites where public transit agencies' vehicles load or unload passengers or goods (e.g., bus stations and stops).
- b. **Equivalent Alternative Land Uses:** An MS4 permittee with regulatory authority over priority land uses may issue a request to the San Diego Water Board that the MS4 permittee be allowed to substitute a land use identified above with an alternate land use within the MS4 permittee's jurisdiction that generates rates of trash that is equivalent to or greater than the priority land use 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 or greater than the total trash generated from the priority land uses 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 "Keeping America Beautiful Visible

Litter Survey"; or other information as required by the San Diego Water Board.

- c. *Coordination with California Department of Transportation (Caltrans)*. The Trash Amendments (Ocean Plan Chapter III.L.2.b and ISWEBE Plan Chapter IV.A.3.b) require that Caltrans and MS4 permittees coordinate their efforts to install, operate, and maintain full capture systems, multi-benefit projects, other treatment controls, and/or institutional controls in significant trash generating areas and/or priority land uses.
- d. *Specific Land Uses or Locations Determined by the San Diego Water Board*: The Trash Amendments (Ocean Plan Chapter III.L.2.d and ISWEBE Plan Chapter IV.A.3.d) provide the San Diego Water Board with the authority to determine that specific land uses or locations generate substantial amounts of trash in addition to the priority land uses defined above. In the event the San Diego Water Board makes that determination, the San Diego Water Board may require the MS4 permittees to comply with the requirements of the Trash Amendments with respect to such land uses or locations.

[Note: The County of San Diego requests the removal of this paragraph, but if Regional Board must keep, then recommended edits are shown] The San Diego Water Board has evaluated the San Diego River Park Foundation's 2013, 2014, and 2015 State of the River reports, and information received in regard to Item 5 on the May 14, 2014 Board meeting agenda pertaining to trash generated by transient encampments in the San Diego River watershed and related water quality issues. Based on this information the San Diego Water Board has determined that transient encampments in the San Diego River watershed are generating substantial trash in amounts that adversely affect beneficial uses or cause nuisance in the San Diego River. ~~This Order requires MS4 permittees in the San Diego River Watershed Management Area to develop plans to address trash runoff from the relevant areas of land affected by transient encampments through Track 1 or Track 2 controls as stipulated in the Trash Amendments (Ocean Plan Chapter III.L.2.d and ISWEBE Plan Chapter IV.A.3.d)~~ This Order requires MS4 permittees in the San Diego River watershed to coordinate with other entities within the watershed, as appropriate, to address trash associated with transient encampments from areas under their jurisdiction. Because this may involve entities not subject to the MS4 Permit, the coordination may be implemented through another regulatory mechanism, such as a Conditional Waiver of Waste Discharge Requirements, or cooperative agreements which would be separate from the NPDES permit for the MS4 permittees.

**10. Compliance Time Schedule.** ~~The Trash Amendments require the implementing permit to state that full compliance with the trash discharge prohibition shall occur within ten (10) years of the effective date of the first implementing permit. In addition, the implementing permit must require the MS4 permittees to demonstrate achievements of interim milestones. In no case may the final compliance date be later than fifteen (15) years from the effective date of the Trash Amendments (i.e. December 2, 2030).~~ The current Regional MS4 Permit (Order R9-2013-0001, as amended by Orders R9-2015-0001 and R9-2015-0100) will expire on June 27, 2018. The Regional MS4 Permit reissued after June 27, 2018 will be the first implementing permit and will contain a compliance time schedule consistent with the requirements of the Trash Amendments.

~~Full compliance with the Trash Amendments will be within 10 years of the effective date of the re-issued Regional MS4 Permit.~~

**11. Monitoring and Reporting.** The Trash Amendments require the implementing permit to include monitoring and reporting requirements. The MS4 permittees will be required to provide reports to the San Diego Water Board on an annual basis to monitor progress toward achieving full compliance with the trash discharge prohibition. ~~The monitoring and reporting requirements are dependent on the measures elected to be implemented by a MS4 permittee.~~

**12. Regional MS4 Permit and Incorporation into Copermitee Planning Documents.** On May 8, 2013, the San Diego Water Board adopted Order No. R9-2013-0001, NPDES No. CAS0109266, National Pollutant Discharge Elimination System (NPDES) Permit and Waste Discharge Requirements for Discharges from the Municipal Separate Storm Sewer Systems (MS4s) Draining the Watersheds within the San Diego Region (Regional MS4 Permit). The Regional MS4 Permit initially only incorporated the owners and operators of Phase I MS4s in San Diego County (San Diego County MS4 permittees). The Regional MS4 Permit was subsequently amended in 2015 to incorporate the owners and operators of the Phase I MS4s in south Orange County (Orange County MS4 permittees) and in southwest Riverside County (Riverside County Copermitees). The San Diego Water Board intends to incorporate the requirements of the Trash Amendments into the Regional MS4 Permit after it expires (June 27, 2018). The renewed Regional MS4 Permit will be the first implementing permit of the Trash Amendments for the MS4 permittees.

The Regional MS4 Permit requires the MS4 Copermitees to develop and implement Water Quality Improvement Plans for ten (10) Watershed Management Areas (WMAs) designated in Table B-1 of the Permit. Each jurisdiction is also required to develop and implement a Jurisdictional Runoff Management Plan (JRMP) that describes how specific strategies in the Water Quality Improvement Plans are implemented as well as how other agency specific permit requirements are met. While the JRMPs are not explicitly part of the Water Quality Improvement Plan, reporting related to JRMP programs is accomplished through the Water Quality Improvement Plan Annual Reporting Process.

Compliance with the Trash Amendments is based on implementation of specific measures to control trash within a jurisdiction. There may be synergy to be gained through implementation of watershed scale efforts to mitigate trash impacts also. The implementation measures, interim milestones, and compliance schedules for Track 1 or Track 2 of the Trash Amendments shall be incorporated into the Water Quality Improvement Plans for the watershed, into the jurisdictional specific JRMPs, or a combination of the two, to be implemented by the MS4 permittees as part of the adaptive management process.

Through the issuance of this Order pursuant to Water Code section 13267, the San Diego Water Board intends the MS4 permittees to incorporate the requirements of the Trash Amendments into the Water Quality Improvement Plans, into the Jurisdictional Runoff Management Plans, or a combination of the two, after renewal of the Regional MS4 Permit. Reporting on implementation of measures to comply with the Trash Amendments will be provided through JRMP Annual Report forms, which are submitted as part of the WQIP Annual Reports.

**13. Water Quality Improvement Plans.** The Regional MS4 Permit requires the MS4 permittees to develop and implement Water Quality Improvement Plans for ten (10) Watershed Management Areas, designated in the Regional MS4 Permit as shown in Table 1 below:

**Table 1. San Diego Region Watershed Management Areas**

Hydrologic Unit(s)	Watershed-Management Area	Major Surface Water Bodies	Responsible-MS4 permittees
San Juan (901.00)	South Orange County	- Aliso Creek - San Juan Creek - San Mateo Creek - Pacific Ocean - Heisler Park ASBS	- City of Aliso Viejo - City of Dana Point - City of Laguna Beach - City of Laguna Hills <sup>1</sup> - City of Laguna Niguel - City of Laguna Woods <sup>3</sup> - City of Lake Forest <sup>2</sup> - City of Mission Viejo - City of Rancho Santa Margarita - City of San Clemente - City of San Juan Capistrano - County of Orange - Orange County Flood Control District - City of Menifee <sup>3</sup> - City of Murrieta <sup>4</sup> - City of Temecula - City of Wildomar <sup>4</sup> - County of Riverside - County of San Diego - Riverside County Flood Control and Water Conservation District
Santa Margarita (902.00)	Santa Margarita River	- Murrieta Creek - Temecula Creek - Santa Margarita River - Santa Margarita Lagoon - Pacific Ocean	- City of Oceanside - City of Vista - County of San Diego
San Luis Rey (903.00)	San Luis Rey River	- San Luis Rey River - San Luis Rey Estuary - Pacific Ocean	- City of Carlsbad - City of Encinitas - City of Escondido - City of Oceanside - City of San Marcos - City of Solana Beach - City of Vista - County of San Diego
Carlsbad (904.00)	Carlsbad	- Loma Alta Slough - Buena Vista Lagoon - Agua Hedionda Lagoon - Batiquitos Lagoon - San Elijo Lagoon - Pacific Ocean	- City of Del Mar - City of Escondido - City of Poway - City of San Diego - City of Solana Beach - County of San Diego
San Dieguito (905.00)	San Dieguito River	- San Dieguito River - San Dieguito Lagoon - Pacific Ocean	- City of Del Mar - City of Escondido - City of Poway - City of San Diego - City of Solana Beach - County of San Diego
Penasquitos (906.00)	Penasquitos	- Los Penasquitos Lagoon - Pacific Ocean	- City of Del Mar - City of Poway - City of San Diego - County of San Diego

**Table 1. San Diego Region Watershed Management Areas**

Hydrologic Unit(s)	Watershed-Management Area	Major Surface Water Bodies	Responsible-MS4 permittees
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	Mission Bay	-Mission Bay -Pacific Ocean -San Diego Marine Life Refuge ASBS	-City of San Diego
San Diego (907.00)	San Diego River	-San Diego River -Pacific Ocean	-City of El Cajon -City of La Mesa -City of San Diego -City of Santee -County of San Diego
Pueblo San Diego (908.00) Sweetwater (909.00) Otay (910.00)	San Diego Bay	-Sweetwater River -Otay River -San Diego Bay -Pacific Ocean	-City of Chula Vista -City of Coronado -City of Imperial Beach -City of La Mesa -City of Lemon Grove -City of National City -City of San Diego -County of San Diego -San Diego County Regional Airport Authority -San Diego Unified Port District
Tijuana (911.00)	Tijuana River	-Tijuana River -Tijuana Estuary -Pacific Ocean	-City of Imperial Beach -City of San Diego -County of San Diego

Notes:

- By agreement dated February 10, 2016, pursuant to Water Code section 13228, the Phase I MS4 discharges within the jurisdiction of the City of Laguna Hills and the City of Laguna Woods located in the Santa Ana Region are regulated by San Diego Water Board Order No. R9-2013-0001 as amended by Order No. R9-2015-0001, upon the later effective date of Order No. R9-2016-0001 or Santa Ana Water Board Tentative Order No. R9-2015-0001. The City of Laguna Hills and Laguna Woods must also comply with the requirements of the San Diego Creek/Newport Bay TMDL in section XVIII of Santa Ana Water Board Order No. R9-2016-0001.
- By agreement dated February 10, 2016, pursuant to Water Code section 13228, Phase I MS4 discharges within the City of Lake Forest located within the San Diego Water Board Region are regulated by the Santa Ana Water Board Order No. R9-2015-0001 (NPDES No. CAS618030) upon the later effective date of this Order or Santa Ana Water Board Tentative Order No. R9-2015-0001. In accordance with the terms of the agreement between the San Diego Water Board and the Santa Ana Water Board, the City of Lake Forest must implement the requirements of the Bacteria TMDL in Attachment 5 of this Order, participate in preparation and implementation of the Water Quality Improvement Plan for the Aliso Creek Watershed Management Area as described in Provision B of this Order and continue implementation of its over-irrigation discharge prohibition in its City Ordinance, Title 15, Chapter 15, section 14.030, List (b).
- By agreement dated October 26, 2016, pursuant to Water Code section 13228, Phase I MS4 discharges within the City of Menifee located within the San Diego Water Board Region are regulated by the Santa Ana Water Board Order No. R9-2010-0033 as it may be amended or reissued (NPDES No. CAS618033) upon the later effective date of this Order. In accordance with the terms of the agreement between the San Diego Water Board and the Santa Ana Water Board, the City of Menifee must participate in preparation and implementation of the Water Quality Improvement Plan for the Santa Margarita River Watershed Management Area as described in Provision B of this Order.
- By agreement dated October 26, 2016, pursuant to Water Code section 13228, the Phase I MS4 discharges within the jurisdiction of the City of Murietta and the City of Wildomar located in the Santa Ana Region are regulated by San Diego Water Board Order No. R9-2013-0001 as amended by Order No. R9-2015-0001 and R9-2015-0100. The City of Murietta and City of Wildomar must also comply with the requirements of the Lake Elmore/Canyon Lake Nutrient TMDLs in section VI.D.2 of Santa Ana Water Board Order No. R9-2010-0033, or corresponding section as it may be amended or reissued.

The Water Quality Improvement Plans include the following: (a) identification of priority water quality conditions that need to be addressed to improve the water quality in each Watershed Management Area; (2) numeric goals for the highest priority water quality conditions to be achieved that will demonstrate discharges from the MS4s are not causing or contributing to exceedances of applicable water quality objectives, or water quality objectives are being attained in receiving waters; (3) a description of the water quality improvement strategies that will be and may be implemented to achieve the numeric goals; and (4) schedules for implementing the water quality improvement strategies and achieving the numeric goals.

The Regional MS4 Permit also requires incorporation of implementation plans for applicable Total Maximum Daily Loads (TMDLs) and Areas of Special Biological Significance (ASBS), which include interim and final water quality-based effluent limitations, compliance strategies, and compliance schedules, into the Water Quality Improvement Plans. The implementation measures, interim milestones, and compliance schedules for Track 1 or Track 2 of the Trash Amendments shall also be incorporated into the Water Quality Improvement Plans to be implemented by the MS4 permittees as part of the adaptive management process.

Through the issuance of this Order pursuant to Water Code section 13267, the San Diego Water Board intends the MS4 permittees to incorporate the requirements of

~~the Trash Amendments into the Water Quality Improvement Plans after renewal of the Regional MS4 Permit.~~

**14.13. Basis for Requiring Technical and Monitoring Reports.** Water Code section 13267 provides that the San Diego Water Board may require dischargers, past dischargers, or suspected dischargers to furnish those technical or monitoring reports as the San Diego Water Board may specify, provided that the burden, including costs, of these reports, must bear a reasonable relationship to the need for the reports and the benefits to be obtained from the reports. The technical and monitoring reports required under this Investigative Order are needed to provide information to the San Diego Water Board regarding (a) the measures each MS4 permittee is electing to implement (i.e. Track 1 or Track 2) within its jurisdiction to comply with the trash discharge prohibition (Track 1 and Track 2), (b) the plan that will be implemented by each MS4 permittee to comply with the trash discharge prohibition (Track 2 only), (c) the interim milestones that each MS4 permittee will achieve within its jurisdiction (Track 1 and Track 2), (d) the schedules to achieving the interim milestones, and full compliance with the trash discharge prohibition (Track 1 and Track 2), and (e) the monitoring (Track 2 only) and reporting (Track 1 and Track 2) that will be implemented to demonstrate progress toward achieving full compliance with the trash discharge prohibition.

**15.14. California Environmental Quality Act.** Adoption of this Order is for the protection of the environment and is exempt from the provisions of the California Environmental Quality Act (CEQA) (Public Resources Code section 21000 et seq.) in accordance with section 15308, Chapter 3, Title 14 of the California Code of Regulations (CCR). This action is also exempt from the provisions of CEQA in accordance with section 15061(b)(3) of Chapter 3, Title 14 of the CCR because it can be seen with certainty that there is no possibility that the activity in question may have a significant effect on the environment.

**IT IS HEREBY ORDERED**, pursuant to California Water Code section 13267, that the MS4 Permittees must comply with the following directives:

#### **A. TECHNICAL AND MONITORING REPORTS**

1. **Written Notices.** Each MS4 permittee must submit to the San Diego Water Board, **no later than three (3) months from the date of this Order** INSERT DATE, a written notice stating whether the MS4 permittee will implement Track 1 or Track 2 to comply with the trash discharge prohibition in the Ocean Plan and ISWEBE Plan.
2. **Track 2 Implementation Plans.** Each MS4 permittee electing to comply with Track 2 must submit, **no later than eighteen (18) months from the date of this Order** INSERT DATE, an implementation plan, which shall also be incorporated into the applicable Water Quality Improvement Plan or Jurisdictional Runoff Management Plan, or combination of the two, after renewal of the Regional MS4 Permit, for each Watershed Management Area described in Table 1 in Finding 13 above that describes:

- a. The combination of controls<sup>3</sup> selected by the MS4 permittee and the rationale for each 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. How the trash implementation plans will be monitored and assessed ~~in Water Quality Improvement Plan Annual Reports;~~
  - e. ~~Requests by MS4 permittees, if any, for authorization to substitute a Priority Land Use described in Finding 9 above with an Equivalent Alternate Land Use that generates rates of trash equivalent to, or greater than, the Priority Land Use being substituted. The MS4 permittees must provide data or information which establishes that trash generation rates from the Alternate Land Use(s) are greater than the Priority Land Use(s) being substituted;~~
  - f. A compliance time schedule ~~based on the shortest practicable time~~ to achieve full compliance with the trash discharge prohibition, including interim milestones (such as average load reductions of ten percent per year) and a final compliance date. The final compliance date must not be later than fifteen (15) years from the effective date of the Trash Amendments (i.e. December 2, 2030).
3. Monitoring and Reporting. Upon adoption of the implementing MS4 Permit, the MS4 permittees are required to provide reports to the San Diego Water Board on an annual basis to demonstrate progress toward achieving full compliance with the trash discharge prohibition. The monitoring and reporting requirements are dependent on the compliance track selected by a MS4 permittee. Reporting may be performed using the Jurisdictional Urban Runoff Management Plan form, submitted with the Water Quality Improvement Plan Annual Report.
- a. MS4 permittees that elect to comply with the Statewide Trash Amendments via the Track 1 compliance option shall provide a report to the 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 as part of the JRMP reporting form within the Water Quality Improvement Plan Annual Report.
  - b. MS4 permittees that elect to comply with the Statewide Trash Amendments via the Track 2 compliance option 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. Monitoring reports shall be provided on an annual basis as part of the JRMP reporting form within the Water Quality Improvement Plan Annual Report 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 MS4 permittee.

4. **Coordination with Caltrans.** Each MS4 permittee subject to this Order must submit, ~~no later than eighteen (18) months from the date of this Order [INSERT DATE], a description of how MS4 permittees will~~ coordinate their efforts to install, operate, and maintain full capture systems, multi-benefit projects, and other controls with Caltrans in significant trash generating areas and/or priority land uses, as applicable.
  
5. **[Note: The County of San Diego requests removal of this paragraph, if Regional Board keeps in then recommended edits presented.]** **Transient Encampments in the San Diego River Watershed.** MS4 permittees discharging to the San Diego River watershed (Cities of San Diego, Santee, El Cajon, La Mesa, and County of San Diego), must submit, ~~no later than eighteen (18) months from the date of this Order [INSERT DATE], a description of how~~ coordinate with other entities in the watershed, as appropriate, to address trash generated from transient encampments in areas under their jurisdiction in the San Diego River Watershed Management Area will be addressed. These efforts may be implemented under another regulatory mechanism, such as a Conditional Waiver of Waste Discharge Requirements, or non-regulatory cooperative agreements, separate from the NPDES permit for the MS4 permittees.

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<sup>3</sup> **Controls include, but are not limited to, full capture systems, multi-benefit projects, other treatment controls, and/or institutional controls ~~treatment controls and institutional controls~~, as defined in the Appendix D to the Water Quality Control Plan for Ocean Waters of California ~~California Ocean Plan~~ and Appendix E of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California.**

**B. PROVISIONS**

1. **Signatory Requirements.** All documents submitted to the San Diego Water Board must be signed and certified.

a. All reports required by this Order must be signed as follows:

- (1) For a corporation, by a principal executive officer of at least the level of vice-president;
- (2) For a partnership or sole proprietorship, by a general partner or the proprietor, respectively;
- (3) For a municipality, state, federal or other public agency, by either a principal executive or ranking elected official.
- (4) By a duly authorized representative of the person designated above (B.6.a.(1), B.6.a.(ii), or B.6.(a)(iii)). A person is a duly authorized representative only if:

(a) The authorization is made in writing by a person described in paragraph B.6.a above;

(b) The authorization specifies either an individual or position having responsibility for the overall operation of the regulated facility or activity; and

(c) The written authorization is submitted to the San Diego Water Board.

b. Any person signing a document required by this Order 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."*

2. **Submittal of Documents.** All documents submitted to the San Diego Water Board in compliance with this Order must be submitted in electronic format (compact disk (CD-ROM or CD) in a Portable Document Format (PDF), unless otherwise directed. All electronic format documents required under this Order must be submitted to:

Executive Officer  
 California Regional Water Quality Control Board  
 San Diego Region  
 2375 Northside Drive, Suite 100  
 San Diego, CA 92108  
 Attn: Laurie Walsh, PE, Storm Water Management Unit

3. **Changes to Order.** This Order may be amended, rescinded, or updated by the Executive Officer. The MS4 permittees may propose changes or alternatives to the requirements in this Order if a valid rationale for the changes is shown. The filing of a request by a MS4 permittees for amending, rescinding, or updating this Order, or notification of planned changes or anticipated noncompliance does not stay any condition of this Order.

### C. NOTIFICATIONS

1. **Enforcement Discretion.** The San Diego Water Board reserves its right to take any enforcement action authorized by law for violations of the terms and conditions of this Order.
2. **Requesting Administrative Review by the State Water Board.** Any aggrieved person may petition the State Water Board regarding this Order in accordance with Water Code section 13320 and the 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 following the date of this Order. Copies of the laws and regulations applicable to filing petitions may be found on the State Water Board website at [http://www.waterboards.ca.gov/public\\_notices/petitions/water\\_quality](http://www.waterboards.ca.gov/public_notices/petitions/water_quality) or will be provided upon request.

For instructions on how to file a petition for review, see the State Water Board website at:

[http://www.waterboards.ca.gov/public\\_notices/petitions/water\\_quality/wqpetition\\_instr.shtml](http://www.waterboards.ca.gov/public_notices/petitions/water_quality/wqpetition_instr.shtml)

Ordered By: \_\_\_\_\_

David W. Gibson  
 EXECUTIVE OFFICER  
 Date





December 14, 2016

Christina Arias, PE  
California Regional Water Quality Control Board, San Diego Region

**Subject: Comment – Tentative Order No. R9-2016-0205 (786088 C.Arias)**

Dear Ms. Arias:

On behalf of the California Stormwater Quality Association (CASQA), thank you for the opportunity to provide comments on Tentative Order No. R9-2016-0205, Investigative Order Directing the Owners and Operators of Phase I Municipal Separate Storm Sewer Systems (MS4s) Draining the Watersheds within the San Diego Region to Submit Technical and Monitoring Reports Pertaining to the Control of Trash From Phase I MS4s to Ocean Waters, Inland Surface Waters, Enclosed Bays and Estuaries in the San Diego Region, which was distributed for public review on November 10, 2016 (referred to hereinafter as the “Tentative Investigative Order”).

CASQA understands the California Regional Water Quality Control Board, San Diego Region (Regional Water Board) released the Tentative Investigative Order to meet the requirements of the Statewide Trash Amendments to the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California (ISWEBE Plan) and the Water Quality Control Plan for Ocean Waters of California (Ocean Plan) (referred to hereafter as “Statewide Trash Amendments”). Since the Tentative Investigative Order is the first such Order implementing the Statewide Trash Amendments for municipalities in California and could be precedent setting, we greatly appreciate the opportunity to comment and the intent of Regional Water Board staff to provide written responses to “significant” comments received.

CASQA recognizes that issuance of a Tentative Investigative Order is consistent with Chapter IV.A.5.a.(1).B of the ISWEBE Plan and Chapter III.L.4.a.(1).B of the Ocean Plan that require the Regional Water Board to issue an investigative order pursuant to Water Code section 13267 or 13383 requiring the MS4 Permittees to submit, within three (3) months from receipt of a final investigative order, written notice stating the compliance option (Track 1 or Track 2) that the permittee chooses to follow to comply with the Statewide Trash Amendments. The Tentative Investigative Order would also require MS4 Permittees, which choose the Track 2 compliance option, to submit an Implementation Plan within 18 months of receiving a final investigative order.

CASQA generally supports the intent of the Tentative Investigative Order to the extent that it is necessary to implement the Statewide Trash Amendments. We provide comments and suggested revisions to address certain issues of particular concern for CASQA and its members with respect to the Tentative Investigative Order as issued, and subsequent incorporation of the Statewide Trash Amendment provisions into MS4 permits. These issues include:

1. Purpose and intent of the Tentative Investigative Order;
2. Clarifications to ensure that the findings and directives within the Tentative Investigative Order are consistent with the Statewide Trash Amendments (especially as they pertain to the differences between Track 1 and Track 2 compliance), including clarification that compliance with either Track 1 or Track 2 provides a compliance pathway for the trash discharge prohibition and meeting water quality objectives; and
3. Utilization of a different approach to address transient encampments.
4. Other recommendations related to technical and monitoring reports and coordination with Caltrans.

Our recommendations are based on lessons learned in other areas of the state with trash management. The order of presentation of our recommendations is based on sequential location of each issue in the Tentative Investigative Order.

### **Issue #1 – Purpose and Intent of Tentative Investigative Order**

As a preliminary matter, CASQA comments to clarify and understand the intent and purpose of the Tentative Investigative Order, and how information submitted in compliance with the order will subsequently be used by the Regional Water Board to further revise the existing MS4 Permit. Based on our review of the Tentative Investigative Order, it appears that the Regional Water Board is seeking to obtain information regarding: (1) which track permittees seek to follow; (2) development of implementation plans if following track 2; (3) how coordination with Caltrans would occur; and, (4) how transient encampments might be addressed. In general, the information sought (except as commented on further below) appears to be appropriately subject to the statutory terms and conditions of Water Code sections 13267 and 13383 combined.

However, CASQA wants to be certain that the Tentative Investigative Order, and plans prepared pursuant to the Tentative Investigative Order, will not be used subsequently to implement the Statewide Trash Amendment provisions without actually revising an implementing permit. For example, Hereby Ordered Directive A.2.f indicates that the Track 2 implementation plan should include a compliance time schedule based on the shortest practicable time to achieve compliance with the trash discharge prohibition. It is imperative that any compliance schedule be adopted directly into the MS4 permit to ensure proper legal protection for permittees while they implement the plans and practices to meet the timeframes contained within the Statewide Trash Amendments.

As indicated in Finding 10, the Statewide Trash Amendments require an implementing permit to require compliance within ten (10) years of the effective date of the implementing permit, but no later than 15 years from the effective date of the Statewide Trash Amendments. Thus, by this language, it is clear that compliance schedule provisions need to be incorporated into the implementing permit, and cannot be implemented through a 13267/13383 order.

In other words, CASQA seeks clarification with respect to the process that the Regional Water Board will undertake after it receives the information requested pursuant to the Tentative

Investigative Order, and how the Regional Water Board will then proceed to implement the Statewide Trash Amendments.

## **Issue #2 – Revisions to Findings to Ensure Consistency with Trash Amendments**

The State Water Resources Control Board (State Water Board) made it clear that one of the primary reasons for developing and adopting Statewide Trash Amendments was to ensure a consistent approach across the state:

*“A consistent statewide approach is needed to control trash discharges into surface waters of the state.”<sup>1</sup>*

*“There is a strong need for a statewide consistency within the Water Boards regarding trash control.”<sup>2</sup>*

*“Waters continue to be impaired by trash, the regulatory control approaches vary, and there is a need for statewide uniformity to control trash.”<sup>3</sup>*

In its Alternatives Analysis, Substitute Environmental Documentation, the State Water Board noted<sup>4</sup>:

*“State Water Board regulations require this draft SED to contain an analysis of range of reasonable alternatives to the project and reasonably foreseeable methods of compliance that could feasibly meet the project objectives and to avoid or substantially reduce any potentially significant adverse environmental impacts. (23 CCR §3777, subd. (b)(3))”*

One of the alternatives analyzed by the State Water Board was the “Regional Water Board Alternative.” Among the reasons the State Water Board determined this was not the preferred approach were:

*“There is, however, the potential that the individual regional water boards would develop different trash water quality objectives and implementation provisions, resulting in a continued lack of statewide consistency. Furthermore, it would be an inefficient use of staff time (and corresponding costs) to develop up to eight different approaches to trash-control in state waters.”*

Following are Findings in the Tentative Investigative Order that are inconsistent with the Statewide Trash Amendments, descriptions of the inconsistencies, and CASQA Recommendations for making the Findings consistent with the Statewide Trash Amendments.

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<sup>1</sup> Agenda Item 8, April 7, 2015 State Water Board Meeting.

<sup>2</sup> Proposed Final Staff Report and proposed Final Trash Amendments, April 7, 2015.

<sup>3</sup> Resolution 2015-0019, Amendment to the Water Quality Control Plan for Ocean Waters of California to Control Trash and Part 1 Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California, Whereas #6, State Water Board, April 7, 2015.

<sup>4</sup> Revised Proposed Final Staff Report for Trash Amendments, including the Substitute Environmental Documentation, March 26, 2015.

### **Findings 5 and 6: Trash Water Quality Objectives and Discharge Prohibition**

Finding 5 recites the water quality objective for trash and Finding 6 recites the trash discharge prohibition contained within the Statewide Trash Amendments, however the Findings do not include language identifying a compliance pathway as is provided for within the Amendments. In addition, Finding 7 states that the narrative water quality objectives and the discharge prohibitions will be incorporated into the permit, but does not clearly state that the MS4 will be in compliance with those prohibitions and water quality objectives through implementation of Track 1 or Track 2.

**CASQA Recommendation:** Include compliance pathway language that links Finding 6 to Finding 7 and clearly states that permittees in full compliance with Track 1 or Track 2 are deemed to be in compliance with the discharge prohibition and narrative water quality objectives as incorporated into the MS4 Permit.

***Trash Discharge Prohibition.*** *The Trash Amendments established the following discharge prohibition in Chapter III.I.6 of the Ocean Plan and Chapter IV.A.2 of the ISWEBE Plan:*

*The discharge of trash to surface waters of the State or the deposition of trash where it may be discharged into surface waters of the State is prohibited*

*MS4 permittees in full compliance with Track 1 or Track 2 are deemed to be in compliance with the trash discharge prohibition and narrative water quality objectives incorporated into the MS4 permit.*

### **Finding 7: MS4 Permit Implementation of the Trash Amendments**

Finding 7 presents the Track 1 and Track 2 compliance options detailed in the Statewide Trash Amendments. However, the Track 2 language omits some of the Track 2 language within the Statewide Trash Amendments.

Finding 7 also identifies that those MS4 Permittees that choose Track 2 as their compliance option need to submit an Implementation Plan “*subject to approval by the San Diego Water Board.*” However, there is no language that identifies what the process and timing are for the Regional Water Board’s review and approval of the Track 2 Implementation Plans.

**CASQA Recommendations:** Add the omitted language (underlined below) from the Statewide Trash Amendments to the Tentative Investigative Order.

*Track 2: Install, operate, and maintain any combination of full capture systems, multi-benefit projects, other treatment controls, and/or institutional controls within either the jurisdiction of the MS4 permittee or within the jurisdiction of the MS4 permittee and contiguous MS4 permittees. The MS4 permittee may determine the locations or land uses within its jurisdiction to implement any combination of controls. The MS4 permittee shall demonstrate that such combination achieves full capture system equivalency. The MS4 permittee may determine which controls to implement to achieve compliance with full capture system*

*equivalency. It is, however, the State Water Board's expectation that the MS4 permittee will elect to install full capture systems where such installation is not cost-prohibitive.*

In addition, clarify the review and approval process and timeline for the Track 2 Implementation Plans.

### **Finding 8: Full Capture System Equivalency**

Finding 8 presents the definition for Full Capture System Equivalency. However, the definition omits some of the language within the Statewide Trash Amendments.

**CASQA Recommendation:** Add the omitted language (underlined below) from the Statewide Trash Amendments to the Tentative Investigative Order.

*Examples of such approaches include, but are not limited to, the following:*

### **Finding 9.a: Land Uses and Locations Requiring Trash Controls – Priority Land Uses**

Finding 9.a details the Priority Land Uses that are to be addressed for controlling trash discharges. However, the language does not clarify that the “Priority Land Uses” are the land use types to be addressed via the Track 1 compliance option.

Pursuant to the Statewide Trash Amendments, the Track 2 compliance option is valid for all land uses within each MS4 Permittee’s jurisdiction over which they have “regulatory control” – “*The MS4 permittee may determine the locations of land uses within its jurisdiction to implement any combination of controls.*” That is, under the Track 2 compliance option, the MS4 Permittees can implement a suite of full capture systems, multi-benefit projects, other treatment controls, or institutional controls throughout their jurisdictions to control trash discharges; they are not constrained by the Priority Land Use definition.

**CASQA Recommendation:** Clarify that the Priority Land Use definition applies to the Track 1 compliance option.

- a. **Priority Land Uses (Track 1 Compliance Option):** 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 the Ocean Plan or ISWEBE Plan as follows:*

### **Finding 9.b: Land Uses and Locations Requiring Trash Controls – Equivalent Alternative Land Uses**

Finding 9.b does not contain the full language from the Equivalent Land Use Provisions in the Statewide Trash Amendments. Finding 9.b omits “*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 or greater than the total trash generated from the priority land uses for which substitution is requested.*” The Statewide Trash Amendments

included this language because the State Water Board recognized there is variability in trash generation within the same land use type based on local conditions. Omitting this language reduces the flexibility MS4 Permittees have to define the priority land uses within their jurisdictions using local trash-generation information.

In addition, pursuant to the Trash Amendments, the Equivalent Alternate Land Uses are directly linked and apply to the Priority Land Uses. As a result, Finding 9.b needs to be a subset of Finding 9.a.

**CASQA Recommendations:** Add the omitted language (underlined below) from the Statewide Trash Amendments to the Tentative Investigative Order.

*An MS4 permittee with regulatory authority over priority land uses may issue a request to the San Diego Water Board that the MS4 permittee be allowed to substitute one or more ~~a~~ land uses identified above with ~~an~~ 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 or greater than the total trash generated from the priority land uses 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 "Keeping America Beautiful Visible Litter Survey"; or other information as required by the San Diego Water Board.*

In addition, the numbering for Finding 9.b should be changed to Finding 9.a.i to clarify that the Equivalent Alternative Land Uses Finding is really a subset of the Priority Land Uses Finding.

### **Finding 11: Monitoring and Reporting**

Finding 11 is inconsistent with the differences in the monitoring and reporting requirements for the two tracks as provided for in the Statewide Trash Amendments. By not including the specific requirements for the Track 1 and Track 2 compliance options, the Tentative Investigative Order leaves the monitoring and reporting requirements ambiguous which could cause unnecessary monitoring and/or reporting by the MS4 Permittees.

**CASQA Recommendation:** Add the omitted language (underlined below) from the Statewide Trash Amendments to the Tentative Investigative Order.

*The MS4 permittees will be required to provide reports to the San Diego Water Board on an annual basis to monitor progress toward achieving full compliance with the trash discharge prohibition. The monitoring and reporting requirements are dependent on the measures elected to be implemented by a MS4 permittee.*

- a. MS4 permittees that elect to comply with the Track 1 compliance option shall provide a report to the 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.
- b. MS4 permittees that elect to comply with the Track 2 compliance option 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. Monitoring reports shall be provide 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 MS4 permittee.

### **Issue #3: Utilization of a Different Approach to Address Transient Encampments.**

Litter or trash is virtually ubiquitous and its sources and transport to receiving waters are well beyond that which happens to enter and exit a MS4 or over which MS4 permittees have control. That is why in adopting the Statewide Trash Amendments, the State Water Board recognized:

*“Implementation of the proposed Trash Amendments will occur through National Pollution [sic] Discharge Elimination System Storm Water Permits (municipal separate storm sewer system phase I and phase II permits, California Department of Transportation permit, industrial general permit, and construction general permit), waste discharge requirements (WDRs), and waivers of WDRs.”<sup>5</sup>*

*“The water quality objective shall be implemented through the prohibition of discharge and other implementation requirements through permits issued pursuant to section 402, subsection (p), of the Clean Water Act, waste discharge requirements, or waivers of waste discharge requirements.”<sup>6</sup>*

### **Finding 9.d: Specific Land Uses or Locations Determined by the San Diego Water Board**

Although Finding 9.d recognizes that the Regional Water Board can determine that other specific land uses or locations generate substantial amounts of trash, it does not recognize that some of the sources may be nonpoint sources, which would be addressed through other regulatory mechanisms such as Waste Discharge Requirements (WDRs) or conditional waivers of WDRs. In fact, the State Water Board recognized this within its response to comments to the Statewide Trash Amendments in response to a request to add requirements to address homeless encampments [Emphasis added]:

<sup>5</sup> Agenda Item 8, April 7, 2015 State Water Board Meeting.

<sup>6</sup> Resolution 2015-0019, Amendment to the Water Quality Control Plan for Ocean Waters of California to Control Trash and Part 1 Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California, Whereas #12, State Water Board, April 7, 2015.

Response 6.5 - Although the implementation provisions for compliance with the prohibition of discharge focus on trash discharge via storm water, it is well recognized that trash is transported to surface waters via both point and non-point sources. Statewide nonpoint source discharges of trash cause less of an impact to state water than point sources; however, at the local or regional level nonpoint sources can be a substantial source of trash. These areas may include high usage campgrounds, picnic areas, beach recreation areas, and marinas, which can be subject to waste discharge requirements (WDRs) or conditional waivers of WDRs. These types of areas would be assessed by the Water Boards to determine if trash controls are necessary for compliance with the proposed Trash Amendments. For such areas determined to require trash controls within a WDR or waiver of a WDR, management practices could include enforcement of litter laws, education, recycling programs, more or better placement of trash receptacles, and/or more frequent servicing of trash receptacles. (Ocean Plan Amendment at III.L.3; Part I ISWEBE at IV.A.4.). The Trash Amendments are more land-use focused, and in the future the State Water Board could address non-point source trash in a more focused program as suggested by the commenter.

Response 10.6 - Statewide the transport of trash through storm water systems to receiving waters is a substantial source of trash. The Trash Amendments specify provisions for NPDES permits issued pursuant to Federal Clean Water section 402(p). Statewide, nonpoint source discharges of trash cause less of an impact to state water than do point sources. However, at the local or regional level, nonpoint sources can be a substantial source of trash. “Dischargers without NPDES permits, WDRs, or waivers of WDRs must comply with [the] prohibition of discharge.” (Ocean Plan Amendment at III.I.6.d; Part I ISWEBE at IV.A.2.d.) .....

Response 34.2 - Although the implementation provisions for compliance with the prohibition of discharge focus on trash discharge via storm water, it is well recognized that trash is transported in surface waters via both point and non-point sources. .... Additionally, the permitting authority has the discretion to determine other land use or locations generate substantial amounts of trash and require trash controls. The permitting authority may also issue WDRs or waivers of WDRs to the land owner for other trash generating areas or facilities to address trash.

CASQA fails to see how the findings provide justification for requiring plans to address transient encampments. The language of the finding references information in general regarding trash generated at transient encampments, but it does not explain or justify why the MS4 permittees should be responsible for such trash. CASQA recommends that Finding 9.d and Directive A.4 (see below) be removed from the Tentative Investigative Order for the following reasons:

- Transient encampments are non-point sources of trash and should not be included in the Regional MS4 Permit that addresses point sources. Nonpoint sources should, instead, be regulated under individual Waste Discharge Requirements (WDR) or Conditional Waivers of WDR.

- The Statewide Trash Amendments did not intend for the MS4 Permittees to address trash sources within receiving waters, which they do not have “Regulatory Control” over.
- MS4 permittees often do not have access to properties needed to do cleanups of transient encampments; thus, all of the land-owners and key responsible parties would need to be involved<sup>7</sup>.
- There are legal, social, and political complications in managing/cleaning up areas with transient encampments that necessarily require the involvement of a number of other agencies (social services, police, health care, etc.)<sup>8</sup>.
- The Tentative Investigative Order did not provide a robust technical analysis demonstrating why the specific land use or location needed to be regulated, nor did it identify the responsible parties who have regulatory control over the range of land uses<sup>9</sup>.

### **CASQA Recommendations:**

Add the omitted language from the Statewide Trash Amendments to the Tentative Investigative Order.

*The Trash Amendments (Ocean Plan Chapter III.L.2.d and ISWEBE Plan Chapter IV.A.3.d) provide the San Diego Water Board with the authority to determine that specific land uses or locations (e.g. parks, stadia, schools, campuses, or roads leading to landfills) generate substantial amounts of trash in addition to the priority land uses defined above. In the event the San Diego Water Board makes that determination, the San Diego Water Board may require the MS4 permittees to comply with the requirements of the Trash Amendments with respect to such land uses or locations.*

Delete Finding 9.d from the Tentative Investigative Order and, instead issue a WDR or a Conditional Waiver of a WDR, to the appropriate land owner(s).

*~~Specific Land Uses or Locations Determined by the San Diego Water Board: The Trash Amendments (Ocean Plan Chapter III.L.2.d and ISWEBE Plan Chapter IV.A.3.d) provide the~~*

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<sup>7</sup> MS4 permittees in the Los Angeles Region that have addressed trash associated with transient encampments have done so under TMDLs as a non-point source in conjunction with the other landowners and non-point sources in the vicinity of the waterbody. Programs implemented solely by the MS4 were ineffective at addressing the trash associated with transient encampments because of the lack of access to all areas and the inability of the MS4 to address underlying issues on those properties that encouraged transient populations (e.g., vegetation that provided shelter).

<sup>8</sup> Trash associated with transient populations is usually considered private property. Notice must be provided prior to cleaning up trash and law enforcement is generally required to remove transients prior to cleaning up trash to ensure what is picked up is not personal property. Depending on the location, it may not be possible to require transients to leave the area, thereby preventing trash removal.

<sup>9</sup> In fact, it is unclear what data and/or information from the San Diego River Park Foundation’s 2013, 2014, and 2015 State of the River Reports and Executive Officer Summary Report (May 14, 2014) was used to make this determination.

~~San Diego Water Board with the authority to determine that specific land uses or locations generate substantial amounts of trash in addition to the priority land uses defined above. In the event the San Diego Water Board makes that determination, the San Diego Water Board may require the MS4 permittees to comply with the requirements of the Trash Amendments with respect to such land uses or locations. The San Diego Water Board has evaluated the San Diego River Park Foundation's 2013, 2014, and 2015 State of the River reports, and information received in regard to Item 5 on the May 14, 2014 Board meeting agenda pertaining to trash generated by transient encampments in the San Diego River watershed and related water quality issues. Based on this information the San Diego Water Board has determined that transient encampments in the San Diego River watershed are generating substantial trash in amounts that adversely affect beneficial uses or cause nuisance in the San Diego River. This Order requires MS4 permittees in the San Diego River Watershed Management Area to develop plans to address trash runoff from the relevant areas of land affected by transient encampments through Track 1 or Track 2 controls as stipulated in the Trash Amendments (Ocean Plan Chapter III.L.2.d and ISWEBE Plan Chapter IV.A.3.d).~~

#### **Hereby Ordered Directive A.4: Transient Encampments in the San Diego River**

Directive A.4 requires the MS4 permittees discharging to the San Diego River Watershed to submit a description how the trash generated from transient encampments will be addressed. For the reasons mentioned above for Finding 9.d, CASQA recommends deleting this Directive.

#### **CASQA Recommendations:**

Delete Directive A.4:

~~Transient Encampments in the San Diego River. MS4 permittees discharging to the San Diego River watershed (Cities of San Diego, Santee, El Cajon, La Mesa, and County of San Diego), must submit, no later than eighteen (18) months from the date of this Order [INSERT DATE], a description of how trash generated from transient encampments in the San Diego River Watershed Management Area will be addressed.~~

#### **Issue #4: Other Recommendations**

#### **Finding 14: Basis for Requiring Technical and Monitoring Reports**

Finding 14 states that the technical and monitoring reports are needed to provide information, however, the language does not specify which of the items relate to Track 1 and/or Track 2. Without the specific requirements, the Tentative Investigative Order leaves the monitoring and reporting requirements ambiguous and could cause unnecessary monitoring and/or reporting by the MS4 Permittees.

**CASQA Recommendation:** Revise language in Finding 14 to specify which items relate to Track 1 and/or Track 2.

*The technical and monitoring reports required under this Investigative Order are needed to provide information to the San Diego Water Board regarding (a) the measures each MS4 permittee is electing to implement (i.e. ~~Track 1 or Track 2~~) within its jurisdiction to comply with the trash discharge prohibition (Track 1 and Track 2), (b) the plan that will be implemented by each MS4 permittee to comply with the trash discharge prohibition (Track 2), (c) the interim milestones that each MS4 permittee will achieve within its jurisdiction (Track 1 and Track 2), (d) the schedules to achieving the interim milestones, and full compliance with the trash discharge prohibition (Track 1 and Track 2), and (e) the monitoring (Track 2) and reporting (Track 1 and Track 2) that will be implemented to demonstrate progress toward achieving full compliance with the trash discharge prohibition.*

### **Hereby Ordered Directive A.2: Track 2 Implementation Plans**

Directive A.2.a contains a footnote (Footnote 3) that is inconsistent with the Statewide Trash Amendments.

Directive A.2.e incorrectly links Priority Land Uses with the Track 2 compliance option. Priority Land Uses/Equivalent Alternate Land Uses are only relevant if a MS4 Permittee selects the Track 1 compliance option. Pursuant to the Statewide Trash Amendments, the Track 2 compliance option is valid for all land uses within each MS4 Permittees jurisdiction over which they have “regulatory control” (see also the comments provided under Finding 9.a and Finding 9.b).

#### **CASQA Recommendations:**

Revise Footnote 3 in Directive A.2.a:

*~~Controls include, but are not limited to, full capture systems, multi-benefit projects, other treatment controls, and/or institutional controls treatment controls and institutional controls, as defined in the Appendix D to the Water Quality Control Plan for Ocean Waters of California California Ocean Plan and Appendix E of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California.~~*

Delete Directive A.2.e:

*~~Requests by MS4 permittees, if any, for authorization to substitute a Priority Land Use described in Finding 9 above with an Equivalent Alternate Land Use that generates rates of trash equivalent to, or greater than, the Priority Land Use being substituted. The MS4 permittees must provide data or information which establishes that trash generation rates from the Alternate Land Use(s) are greater than the Priority Land Use(s) being substituted.~~*

### **Hereby Ordered Directive A.3: Coordination with Caltrans**

Directive A.3 requires each MS4 permittee to submit, no later than eighteen (18) months from the date of the Tentative Investigative Order, a description of how the permittee will coordinate their efforts to install, operate, and maintain full capture systems, multi-benefit projects, and

other controls with Caltrans. Instead of requiring a separate submittal, it is recommended that the coordination efforts be included within the annual reports.

**CASQA Recommendations:**

Revise Directive A.3:

*Each MS4 permittee subject to this Order must submit, as a part of the annual report ~~no later than eighteen (18) months from the date of this Order~~ [INSERT DATE], a description of how MS4 permittees will coordinate their efforts to install, operate, and maintain full capture systems, multi-benefit projects, and other controls with Caltrans in significant trash generating areas and/or priority land uses, as applicable.*

Lastly, in order to allow for more robust public input, CASQA recommends that the San Diego Regional Water Board hold a public hearing prior to the adoption of the Order to discuss the comments received and corresponding modifications.

Thank you again for the opportunity to comment on Tentative Investigative Order No. R9-2016-0205. If you have any questions, please contact CASQA Executive Director Geoff Brosseau at (650) 365-8620.

Sincerely,



Jill Bicknell, Chair  
California Stormwater Quality Association

cc: Jonathan Bishop, State Water Board  
Gayleen Perreira, State Water Board  
Leo Cosentini, State Water Board  
Bill Hereth, State Water Board  
CASQA Board of Directors  
CASQA Executive Program Committee  
CASQA Policy and Permitting Subcommittee

**From:** [lyris@swrcb18.waterboards.ca.gov](mailto:lyris@swrcb18.waterboards.ca.gov)  
**To:** [Arias\\_Christina@Waterboards](mailto:Arias_Christina@Waterboards)  
**Subject:** Update: Implementation of Statewide Trash Amendments  
**Date:** Thursday, February 23, 2017 3:50:19 PM  
**Attachments:** [image003.jpg](#)

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 This is a message from the California Regional Water Quality Control Board, San Diego Region (9).

Dear Regional MS4 Permit stakeholders,

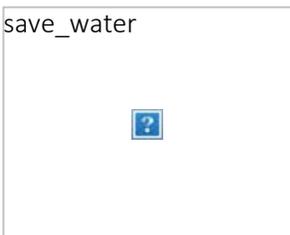
In April 2015, the State Water Resources Control Board adopted amendments to the Water Quality Control Plan for Ocean Waters of California (Ocean Plan) and the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California (ISWEBE Plan) addressing the impacts of trash to the surface waters of California (collectively referred to hereafter as the [Trash Amendments](#)). Pursuant to the Trash Amendments, in November, 2016, the San Diego Water Board released for public comment Tentative Order No. R9-2016-0205, *Investigative Order Directing the Owners and Operators of Phase I Municipal Separate Storm Sewer Systems (MS4s) Draining the Watersheds within the San Diego Region to Submit Technical and Monitoring Reports Pertaining to the Control of Trash From Phase I MS4s to Ocean Waters, Inland Surface Waters, Enclosed Bays and Estuaries in the San Diego Region*.

**The issuance of a final San Diego Water Board Investigative Order implementing the Trash Amendments has been deferred pending consultation with the State Water Resources Control Board and other Regional Water Boards regarding a consistent statewide approach. The San Diego Water Board will resume issuance of an Investigative Order, including responses to comments, once this occurs.**

Comments received on Tentative Order No. R9-2016-0205 can be viewed here:  
[http://www.waterboards.ca.gov/sandiego/water\\_issues/programs/stormwater/trash\\_amendments.shtml](http://www.waterboards.ca.gov/sandiego/water_issues/programs/stormwater/trash_amendments.shtml)

Please contact me for further questions regarding the San Diego Water Board's implementation of the Trash Amendments.

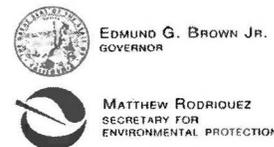
*Christina Arias, PE*  
Water Resource Control Engineer  
San Diego Regional Water Quality Control Board  
2375 Northside Drive, Suite 100  
San Diego, CA 92108  
Tel. (619) 521-3361  
[Christina.Arias@waterboards.ca.gov](mailto:Christina.Arias@waterboards.ca.gov)



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You are currently subscribed to reg9\_orangeco\_ms4permit as:  
[Christina.Arias@waterboards.ca.gov](mailto:Christina.Arias@waterboards.ca.gov).

To unsubscribe click here: [leave-6421507-4299338.1d2647fe57e573e5b4901ec0370fb575@swrcb18.waterboards.ca.gov](mailto:leave-6421507-4299338.1d2647fe57e573e5b4901ec0370fb575@swrcb18.waterboards.ca.gov)

EDMUND G. BROWN JR.  
GOVERNORMATTHEW RODRIGUEZ  
SECRETARY FOR  
ENVIRONMENTAL PROTECTION

## California Regional Water Quality Control Board, San Diego Region

TO: David W. Gibson  
Executive Officer

In reply refer to:  
786088:carias

A handwritten signature in blue ink that reads "David T. Barker".

FROM: David T. Barker, P.E.  
Supervising Water Resource Control Engineer  
Surface Water Protection Branch

DATE: May 23, 2017

SUBJECT: **Order No. R9-2017-0077, An Order Directing the Owners and Operators of Phase I Municipal Separate Storm Sewer Systems (MS4s) Draining the Watersheds within the San Diego Region to Submit Reports Pertaining to the Control of Trash in Discharges From Phase I MS4s to Ocean Waters, Inland Surface Waters, Enclosed Bays, and Estuaries in the San Diego Region**

The subject Order No. R9-2017-0077 (Order) has been developed to address regional implementation of the statewide amendments to the *Water Quality Control Plan for Ocean Waters of California* (Ocean Plan) and *Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (ISWEBE Plan) to control the impacts of trash in State surface waters (collectively referred to the Trash Amendments).<sup>1</sup> Staff requests that you approve and issue the Order on or before June 2, 2017.

The Trash Amendments require regional water boards to take certain steps towards implementing the trash narrative water quality objective and trash discharge prohibition by June 2, 2017 through requirements incorporated into MS4 permits or through monitoring and reporting orders issued pursuant to Water Code section 13267 or 13383. The San Diego Water Board will not be amending the Regional MS4 Permit within the time frame specified by the Trash Amendments and staff has therefore prepared the Order for issuance in accordance with Water Code section 13383. Staff intends to incorporate the requirements of the Trash Amendments into the Regional MS4 Permit during its next reissuance in Fiscal Year 2018-19.

The Order requires owners and operators of Phase I MS4s (MS4 permittees) to submit written notice indicating whether Track 1 or Track 2 control measures will be used to

<sup>1</sup> The Trash Amendments can be accessed for review on the State Water Board website: [http://www.waterboards.ca.gov/water\\_issues/programs/trash\\_control/documentation.shtml](http://www.waterboards.ca.gov/water_issues/programs/trash_control/documentation.shtml)

comply with the trash discharge prohibition as described in the Trash Amendments within three months of the date of the Order. If Track 1 is selected, the Order requires MS4 permittees to submit, within eighteen months of the date of the Order, a jurisdictional map indicating 1) priority land uses, 2) the MS4 permittees' storm drain network, and 3) proposed locations for installation of full capture devices and associated drainage areas. If Track 2 is selected, the Order requires MS4 permittees to submit, within eighteen months of the date of the Order, a trash reduction implementation plan. In either case, MS4 permittees must also submit implementation time schedules consistent with the Trash Amendments.

Order No. R9-2017-0077 is the finalized version of Tentative Order No. R9-2016-0205, which was released to MS4 permittees and other stakeholders for review and comment on November 10, 2016. The San Diego Water Board provided public notice of the Tentative Order by e-mail to MS4 permittees and lyris list subscribers, and by posting the Tentative Order on the San Diego Water Board website at the link below:

[http://www.waterboards.ca.gov/sandiego/board\\_decisions/tentative\\_orders/](http://www.waterboards.ca.gov/sandiego/board_decisions/tentative_orders/).

The 34-day public comment period closed on December 14, 2016. The San Diego Water Board received 22 comment letters from MS4 permittees, the California Stormwater Quality Association (CASQA), and the California Manufactures & Technology Association. The Board did not receive any comment letters from environmental non-governmental organizations. Staff has considered and responded to all of the comments received in finalizing the Tentative Order. Comment letters are posted on the San Diego Water Board's website at the link below:

[http://www.waterboards.ca.gov/rwqcb9/water\\_issues/programs/stormwater/trash\\_amendments.shtml](http://www.waterboards.ca.gov/rwqcb9/water_issues/programs/stormwater/trash_amendments.shtml).

Enclosed for your review are the following documents:

1. Transmittal letter;
2. A final signature version of a conformed copy of Order No. R9-2017-0077;
3. Tentative Order No. R9-2016-0205 showing changes made in response to comments received in red-underline for added text and strikeout for deleted text;  
*and*
4. Staff Response to Comments Report.

If you have any questions or concerns regarding this matter, please see Christina Arias, the lead staff person for the development of the Order.

EDMUND G. BROWN, JR.  
GOVERNORMATTHEW RODRIGUEZ  
SECRETARY FOR  
ENVIRONMENTAL PROTECTION

## State Water Resources Control Board

JUN 01 2017

Shaila Chowdhury, Chief Environmental Engineer  
Division of Environmental Analysis  
California Department of Transportation  
P.O. Box 942873, MS-27  
Sacramento, California 94273-0001

Dear Ms. Chowdhury:

### **WATER CODE SECTION 13383 ORDER TO SUBMIT METHOD TO COMPLY WITH STATEWIDE TRASH PROVISIONS; CALIFORNIA DEPARTMENT OF TRANSPORTATION**

On April 7, 2015, the State Water Resources Control Board (State Water Board) adopted statewide Trash Provisions<sup>1</sup> to address pervasive impacts trash has on the beneficial uses of our surface waters. Throughout the state, trash is typically generated on land and transported to surface water, predominantly through storm water discharges. Storm water and non-storm water discharges from the California Department of Transportation (Department) transportation system and facilities are regulated through the Statewide Storm Water Permit (Permit)<sup>2</sup> pursuant to section 402(p) of the Federal Clean Water Act.

The Trash Provisions require issuance of an Order to the Department by June 2, 2017, in accordance with Water Code section 13383,<sup>3</sup> to initiate compliance with the Trash Provisions through submittal of planning information as described below.

The Trash Provisions establish a statewide water quality objective for trash<sup>\*4,5</sup> and a prohibition of the discharge of trash to surface waters of the State or the deposition of trash where it may be discharged into surface waters of the State.<sup>6</sup>

<sup>1</sup> 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). Documents may be downloaded from our website at [http://www.waterboards.ca.gov/water\\_issues/programs/trash\\_control/documentation.shtml](http://www.waterboards.ca.gov/water_issues/programs/trash_control/documentation.shtml).

<sup>2</sup> National Pollutant Discharge Elimination System (NPDES) Statewide Storm Water Permit for Waste Discharge Requirements for State of California, Department of Transportation, Order 2012-0011-DWQ, NPDES No. CAS000003.

<sup>3</sup> Specified in Chapter IV.A.5.b.1 of the ISWEBE Plan and Chapter III.L.4.b.1 of the Ocean Plan

<sup>4</sup> Water quality objectives specified in Chapter III.A of the ISWEBE Plan and Chapter II.C.5 of the Ocean Plan

<sup>5</sup> All terms marked with an asterisk "\*" are defined in the *Trash Provisions Glossary* enclosure provided with this letter.

<sup>6</sup> Prohibition of discharge specified in Chapter IV.A.2 of the ISWEBE Plan and Chapter III.I.6 of the Ocean Plan

The Trash Provisions require the Department to comply with the prohibition of discharge by installing, operating, and maintaining any combination of full capture systems,\* multi-benefit projects,\* other treatment controls,\* and/or institutional controls\* for all storm drains that captures trash from significant trash generating areas.\* The Department is required to demonstrate that the selected combination achieves full capture system equivalency.\* Furthermore, the Department and MS4 permittees are directed to coordinate their efforts to install, operate, and maintain full capture systems, multi-benefit projects, other treatment controls, and/or institutional controls in applicable areas.<sup>7</sup>

The implementation requirements of the Trash Provisions are expected to be incorporated into the Permit at the time of next reissuance of the Permit. The Trash Provisions require the Department to demonstrate full compliance with the requirements within 10 years of the effective date of the reissued Permit, along with achievements of interim milestones such as average load reductions of 10 percent per year. In no case may the final compliance date be later than December 3, 2030, 15 years from the effective date of the Trash Provisions.<sup>8</sup>

This 13383 Order is issued to order the Department to submit an implementation plan that anticipates the above requirements by setting out (1) the specific locations of significant trash generating areas, (2) the combination of controls selected by the Department and the rationale for the selections, and (3) how the Department will demonstrate full capture system equivalency.

The implementation plan is being required through this Order in accordance with Water Code section 13383, as specified in the Trash Provisions, and as further authorized by Clean Water Act section 308(a) and 40 Code of Federal Regulations part 122.41(h).

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 the Department 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 Department 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).) Accordingly, this Order is issued to implement federal law. Consistent with the Trash Provisions, this Order nevertheless allows the Department flexibility in the specific actions it proposes to meet the federal requirements.

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<sup>7</sup> Provisions from Chapter IV.A.3.b of the ISWEBE Plan and Chapter III.L.2.b of the California Ocean Plan

<sup>8</sup> Provisions from Chapter IV.A.5.b.2 of the ISWEBE Plan and Chapter III.L.4.b.2 of the California Ocean Plan

Ms. Shaila Chowdhury

Pursuant to California Water Code section 13383, **IT IS HEREBY ORDERED THAT** the Department shall:

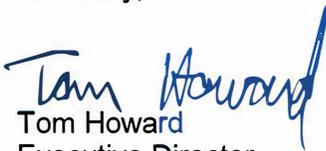
1. By **December 1, 2018**, submit an implementation plan to the State Water Board Executive Director that includes the following:
  - i. Geographic Information System- mapped information identifying specific locations of significant trash generating areas;
  - ii. The combination of full capture systems, multi-benefit projects, other treatment controls, and/or institutional controls selected by the Department and the rationale for the selections; and
  - iii. The Department's method for demonstrating full capture system equivalency.
  
2. Signed and certified information with supporting documentation required by this Order must be submitted electronically to SMARTS<sup>9</sup> by the same Legally Responsible Person identified for the Department's Permit deliverables. The Legally Responsible Person signing any letter, technical report, or document required by this Order must include 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."*

Failure to comply with this Order for submittal of information, 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 the requirements of this Order or any requests for assistance should be directed to Ms. Ariana Villanueva at (916) 341-5586 or [ariana.villanueva@waterboards.ca.gov](mailto:ariana.villanueva@waterboards.ca.gov).

Sincerely,

  
Tom Howard  
Executive Director

Enclosure: Trash Provisions Glossary

cc: (next page)

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<sup>9</sup> Storm Water Multiple Application and Report Tracking System (SMARTS) is an online database for dischargers to electronically file storm water permit documents.

cc: (via email)

Matthias St. John  
North Coast Regional Water Quality Control Board  
[matt.st.john@waterboards.ca.gov](mailto:matt.st.john@waterboards.ca.gov)

Bruce H. Wolfe  
San Francisco Bay Regional Water Quality Control Board  
[bruce.wolfe@waterboards.ca.gov](mailto:bruce.wolfe@waterboards.ca.gov)

John M. Robertson  
Central Coast Regional Water Quality Control Board  
[john.robertson@waterboards.ca.gov](mailto:john.robertson@waterboards.ca.gov)

Samuel Unger  
Los Angeles Regional Water Quality Control Board  
[samuel.unger@waterboards.ca.gov](mailto:samuel.unger@waterboards.ca.gov)

Pamela Creedon  
Central Valley Regional Water Quality Control Board  
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Patty Kouyoumdjian  
Lahontan Regional Water Quality Control Board  
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Jose Angel  
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Kurt Berchtold  
Santa Ana Regional Water Quality Control Board  
[kurt.berchtold@waterboards.ca.gov](mailto:kurt.berchtold@waterboards.ca.gov)

David Gibson  
San Diego Regional Water Quality Control Board  
[david.gibson@waterboards.ca.gov](mailto:david.gibson@waterboards.ca.gov)



RB9 002041  
Enclosure  
Trash Provisions Glossary

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:  $Q = C \times I \times A$ , 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

\* Defined within this document.

land uses, facilities, or areas within the relevant areas of land over time to identify specific 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:

- (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.

\* Defined within this document.

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

**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.

## California Regional Water Quality Control Board, San Diego Region

June 2, 2017

San Diego County MS4 Permittees  
Orange County MS4 Permittees  
Riverside County MS4 Permittees

Sent Via Email  
**In reply refer to:**  
786088:CArias

**SUBJECT: Order No. R9-2017-0077, An Order Directing the Owners and Operators of Phase I Municipal Separate Storm Sewer Systems (MS4s) Draining the Watersheds within the San Diego Region to Submit Technical and Monitoring Reports Pertaining to the Control of Trash From Phase I MS4s to Ocean Waters, Inland Surface Waters, Enclosed Bays and Estuaries in the San Diego Region**

The California Regional Water Quality Control Board, San Diego Region (San Diego Water Board) is hereby issuing Order No. R9-2017-0077 (Order) to the following MS4 permittees:

County of Orange	County of Riverside	County of San Diego	
City of Aliso Viejo	City of Murrieta	City of Carlsbad	City of Oceanside
City of Dana Point	City of Temecula	City of Chula Vista	City of Poway
City of Laguna Beach	City of Wildomar	City of Coronado	City of San Diego
City of Laguna Hills	Riverside County Flood Control and Water Conservation District	City of Del Mar	City of San Marcos
City of Laguna Niguel		City of El Cajon	City of Santee
City of Laguna Woods		City of Encinitas	City of Solana Beach
City of Lake Forest		City of Escondido	City of Vista
City of Mission Viejo		City of Imperial Beach	San Diego County Regional Airport Authority
City of Rancho Santa Margarita		City of La Mesa	San Diego Unified Port District
City of San Clemente		City of Lemon Grove	
Orange County Flood Control District		City of National City	

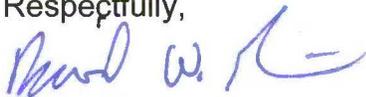
This Order implements specific statewide requirements to address the impacts of trash discharges to surface waters of California. These requirements were adopted in 2015 when the State Water Resources Control Board amended the Water Quality Control Plan for Ocean Waters of California (Ocean Plan) and the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California (ISWEBE Plan)

(collectively referred to hereafter as the Trash Amendments).<sup>1</sup> Pursuant to the Trash Amendments, the Order requires MS4 permittees to submit written notice indicating whether Track 1 or Track 2 control measures will be used to comply with the trash discharge prohibition within three months of the date of this letter. If Track 1 is selected, the Order requires MS4 permittees to submit a jurisdictional map indicating 1) priority land uses, 2) the MS4 permittees' storm drain network, and 3) proposed locations for installation of full capture devices and associated drainage areas. If Track 2 is selected, the Order requires MS4 permittees to submit a trash reduction implementation plan. In either case, MS4 permittees must also include implementation time schedules consistent with the Trash Amendments. Jurisdictional maps and implementation plans must be submitted to the San Diego Water Board within eighteen months of the date of this letter.

Order No. R9-2017-0077 is the finalized version of Tentative Order No. R9-2016-0205, which was released to MS4 permittees and other stakeholders for review and comment on November 10, 2016. The San Diego Water Board received 22 comment letters during the comment solicitation period. The responses to significant comments received, Tentative Order No. R9-2016-0205 showing revisions, and a conformed copy of the final Order are included as attachments to this letter. These documents along with the comment letters are also posted on the San Diego Water Board's website: [http://www.waterboards.ca.gov/sandiego/water\\_issues/programs/stormwater/trash\\_amendments.shtml](http://www.waterboards.ca.gov/sandiego/water_issues/programs/stormwater/trash_amendments.shtml).

In the subject line of any response, please include the requested **"In reply refer to:"** information located in the header of this letter. If you have any questions or comments, please contact Christina Arias at (619) 521-3361, or e-mail at [Christina.Arias@waterboards.ca.gov](mailto:Christina.Arias@waterboards.ca.gov).

Respectfully,



David W. Gibson  
Executive Officer

DWG: jgs:dtb:law:cma

Enclosure: Order No. R9-2017-0077  
Tentative Order No. R9-2016-0205 (with revisions shown in redline)  
Responses to Comments on Tentative Order No. R9-2016-0205

cc via email: San Diego County MS4 Permit Lyris List  
Riverside County MS4 Permit Lyris List  
Orange County MS4 Permit Lyris List

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<sup>1</sup> The Trash Amendments can be accessed for review on the State Water Board website: [http://www.waterboards.ca.gov/water\\_issues/programs/trash\\_control/documentation.shtml](http://www.waterboards.ca.gov/water_issues/programs/trash_control/documentation.shtml)

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**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
SAN DIEGO REGION**

**ORDER NO. R9-2017-0077**

**AN ORDER DIRECTING THE OWNERS AND OPERATORS OF  
PHASE I MUNICIPAL SEPARATE STORM SEWER SYSTEMS (MS4s)  
DRAINING THE WATERSHEDS WITHIN THE SAN DIEGO REGION**

**TO SUBMIT REPORTS PERTAINING TO THE CONTROL OF TRASH  
IN DISCHARGES FROM PHASE I MS4s  
TO OCEAN WATERS, INLAND SURFACE WATERS,  
ENCLOSED BAYS, AND ESTUARIES  
IN THE SAN DIEGO REGION**

The California Regional Water Quality Control Board, San Diego Region (hereinafter San Diego Water Board) finds:

- 1. Trash Amendments.** On April 7, 2015, the State Water Board adopted Resolution No. 2015-0019, amending the Water Quality Control Plan for Ocean Waters of California (Ocean Plan) and the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California (ISWEBE Plan) to address the impacts of trash to the surface waters of California (referred to hereafter as the Trash Amendments). The effective date of the Trash Amendments is December 2, 2015.
- 2. Regional MS4 Permit.** Throughout the State, trash is typically generated on land and transported to surface water, predominantly through storm water discharges from MS4s. These storm water discharges occur in part from Phase I MS4s in the San Diego Region regulated through a regional general permit adopted by the San Diego Water Board (Regional MS4 Permit) pursuant to section 402(p) of the Clean Water Act. The term Regional MS4 Permit refers to the San Diego Water Board's Order No. R9-2013-0001, as amended by Order Nos. R9-2015-0001 and R9-2015-0100, NPDES No. CAS0109266, *National Pollutant Discharge Elimination System (NPDES) Permit and Waste Discharge Requirements for Discharges from the Municipal Separate Storm Sewer Systems (MS4s) Draining the Watersheds within the San Diego Region*.
- 3. Trash Amendments Implementation.** The Trash Amendments establish a statewide narrative water quality objective and implementation requirements to control trash, including a prohibition against the discharge of trash to ocean waters, inland surface waters, enclosed bays, and estuaries in California. For Phase I MS4 permittees with regulatory authority over priority land uses, the Trash Amendments require the San Diego Water Board to take certain steps towards implementation of the narrative water quality objective and prohibition by June 2, 2017 through requirements incorporated into the Regional MS4 Permit or through a monitoring and reporting order issued pursuant to Water Code section 13267 or 13383. The San Diego Water Board will not be amending the Regional MS4 Permit within the time frame specified by the Trash Amendments; therefore, the initial steps in planning for the implementation of the Trash Amendments are being required through this Order in accordance with Water Code

section 13383. The San Diego Water Board intends to incorporate the requirements of the Trash Amendments into the Regional MS4 Permit during its next reissuance in Fiscal Year 2018-19.

**4. Persons Responsible for the Discharges of Trash.** The owners and operators of Phase I MS4s are responsible for discharges of waste, including trash, from land uses and locations within their jurisdictions through their MS4s to ocean waters, inland surface waters, enclosed bays, and estuaries in the San Diego Region. In the San Diego Region, owners and operators of Phase I MS4s subject to the requirements of this Order (herein referred to as MS4 permittees) include the following entities:

- County of Orange
    - City of Aliso Viejo
    - City of Dana Point
    - City of Laguna Beach
    - City of Laguna Hills
    - City of Laguna Niguel
    - City of Laguna Woods
  - City of Lake Forest
  - City of Mission Viejo
  - City of Rancho Santa Margarita
  - City of San Clemente
  - City of San Juan Capistrano
  - Orange County Flood Control District
- 
- County of Riverside
    - City of Murrieta
    - City of Temecula
    - City of Wildomar
  - Riverside County Flood Control and Water Conservation District<sup>1</sup>
- 
- County of San Diego
    - City of Carlsbad
    - City of Chula Vista
    - City of Coronado
    - City of Del Mar
    - City of El Cajon
    - City of Encinitas
    - City of Escondido
    - City of Imperial Beach
    - City of La Mesa
    - City of Lemon Grove
  - City of National City
  - City of Oceanside
  - City of Poway
  - City of San Diego
  - City of San Marcos
  - City of Santee
  - City of Solana Beach
  - City of Vista
  - San Diego County Regional Airport Authority
  - San Diego Unified Port District

**5. Water Quality Objectives.** The Trash Amendments established the following statewide narrative water quality objectives for trash in ocean waters, inland surface waters, enclosed bays, and estuaries in California.

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<sup>1</sup> Riverside County Flood Control and Water Conservation District (District) lacks regulatory authority over Priority Land Uses. As noted in Finding 9.d of this Order, the Trash Amendments (Appendix D of the Ocean Plan Chapter III.L.2.d and Appendix E of the ISWEBE Plan Chapter IV.A.3.d) provide the San Diego Water Board with the authority to investigate whether specific land uses or locations within the District's jurisdiction generate substantial amounts of trash and determine that compliance with Track 1 or Track 2 trash control measures for those land uses or locations is necessary.

- a. The Trash Amendments established the following narrative water quality objective for trash in Chapter II.C.5 of Appendix D of the Ocean Plan:

“Trash shall not be present in ocean waters, along shorelines or adjacent areas in amounts that adversely affect beneficial uses or cause nuisance.”

- b. The Trash Amendments established the following narrative water quality objective or trash in Chapter III.A of Appendix E of the ISWEBE Plan:

“Trash shall not be present in inland surface waters, enclosed bays, estuaries, and along shorelines or adjacent areas in amounts that adversely affect beneficial uses or cause nuisance.”

Meeting these narrative water quality objectives for trash will be protective and supportive of numerous beneficial uses for the ocean waters, inland surface waters, enclosed bays, and estuaries in the San Diego Region, including but not limited to, wildlife habitat (WILD), marine habitat (MAR), preservation of rare and endangered species (RARE), fish migration (MIGR), navigation (NAV), and water contact and non-contact recreation (REC1 and REC2).

- 6. Trash Discharge Prohibition.** The Trash Amendments established the following discharge prohibition in Chapter III.I.6 of Appendix D of the Ocean Plan and Chapter IV.A.2 of Appendix E of the ISWEBE Plan:

“The discharge of trash to surface waters of the State or the deposition of trash where it may be discharged into surface waters of the State is prohibited.”

- 7. Regional MS4 Permit Implementation of the Trash Amendments.** The Trash Amendments require the incorporation of the trash narrative water quality objectives and discharge prohibition into the Regional MS4 Permit. The Regional MS4 Permit then will require the MS4 permittees to comply with the trash narrative water quality objectives and discharge prohibition through the implementation of one of two measures to be selected by the MS4 permittees.

To comply with the trash narrative water quality objectives and discharge prohibition, the MS4 permittees are required to implement either of the following measures:

*Track 1:* Install, operate, and maintain full capture systems for all storm drains that capture runoff from the priority land uses in their jurisdictions; or

*Track 2:* Install, operate, and maintain any combination of full capture systems, multi-benefit projects, other treatment controls, and/or institutional controls within either the jurisdiction of the MS4 permittee or within the jurisdiction of the MS4 permittee and contiguous MS4 permittees. The MS4 permittee may determine the locations or land uses within its jurisdiction to implement any combination of controls. The MS4 permittee shall demonstrate that such combination achieves full capture system equivalency. The MS4 permittee may determine which controls to implement to achieve compliance with full capture system equivalency. It is,

however, the State Water Board's expectation that the MS4 permittee will elect to install full capture systems where such installation is not cost-prohibitive.

The Trash Amendments require that within three (3) months of the effective date of this Order, each MS4 permittee is required to provide written notice to the San Diego Water Board stating whether the MS4 permittee elects to comply with the trash discharge prohibition by implementing Track 1 or Track 2. MS4 permittees that elect to implement Track 2 are also required to submit an implementation plan to the San Diego Water Board within eighteen (18) months of receipt of this Order. The implementation plan is required to describe: (i) the combination of controls selected by the MS4 permittee and the rationale for the selection, (ii) how the combination of controls is designed to achieve full capture system equivalency, and (iii) how full capture equivalency will be demonstrated. The implementation plan is subject to approval by the San Diego Water Board. Track 2 implementation plans will be deemed accepted by the San Diego Water Board ninety (90) days after submission unless otherwise directed in writing by the San Diego Water Board Executive Officer. MS4 permittees may elect to change Tracks through their adaptive management process during the compliance time schedule described in Finding 10, provided they submit supporting justification to the San Diego Water Board.

**8. Full Capture System Equivalency.** The Trash Amendments define full capture system equivalency as follows:

"Full capture system equivalency is 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 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."*

**9. Land Uses and Locations Requiring Trash Controls.** The Trash Amendments define land uses and locations that are to be controlled for trash discharges by MS4 permittees:

- a. Priority Land Uses:** Those developed sites, facilities, or land uses (i.e. not simply zoned land uses) within a MS4 permittee's jurisdiction from which discharges of trash are regulated by the Ocean Plan or ISWEBE Plan as follows:
- High-density residential: all land uses with at least ten (10) developed dwelling units/acre.
  - 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).
  - 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.).
  - Mixed urban: land uses where high-density residential, industrial, and/or commercial land uses predominate collectively (i.e., are intermixed).
  - Public transportation stations: facilities or sites where public transit agencies' vehicles load or unload passengers or goods (e.g., bus stations and stops).
- b. Equivalent Alternative Land Uses:** An MS4 permittee with regulatory authority over priority land uses may issue a request to the San Diego Water Board that the MS4 permittee be allowed to substitute one or more land uses identified above with an alternate land use 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 “Keeping America Beautiful Visible Litter Survey”; or other information as required by the San Diego Water Board.

- c. *Coordination with California Department of Transportation (Caltrans).* The Trash Amendments (Appendix D of the Ocean Plan Chapter III.L.2.b and Appendix E of the ISWEBE Plan Chapter IV.A.3.b) require that Caltrans and MS4 permittees coordinate their efforts to install, operate, and maintain full capture systems, multi-benefit projects, other treatment controls, and/or institutional controls in significant trash generating areas and/or priority land uses.
- d. *Specific Land Uses or Locations Determined by the San Diego Water Board:* The Trash Amendments (Appendix D of the Ocean Plan Chapter III.L.2.d and Appendix E of the ISWEBE Plan Chapter IV.A.3.d) provide the San Diego Water Board with the authority to determine that specific land uses or locations (e.g., parks, stadia, schools, campuses, or roads leading to landfills) generate substantial amounts of trash. In the event the San Diego Water Board makes that determination, the Board may require the MS4 permittees to comply with the requirements of the Trash Amendments with respect to such land uses or locations.

**10. Compliance Time Schedule.** The Trash Amendments require the implementing permit (i.e. the Regional MS4 Permit) to state that full compliance with the trash discharge prohibition shall occur within ten (10) years of the effective date of the first implementing permit. In addition, the Regional MS4 Permit must require the MS4 permittees to demonstrate achievements of interim milestones such as average load reductions of ten percent (10%) per year or other progress to full implementation. In no case may the final compliance date, which will be included in the Regional MS4 Permit, be later than fifteen (15) years from the effective date of the Trash Amendments (i.e. December 2, 2030).

**11. Monitoring and Reporting.** The Trash Amendments require the implementing Regional MS4 Permit to include monitoring and reporting requirements to ensure adequate trash control. The MS4 permittees will be required to provide reports to the San Diego Water Board on an annual basis to describe progress toward achieving full compliance with the trash discharge prohibition. The monitoring and reporting requirements are dependent on the measures elected to be implemented by a MS4 permittee<sup>2</sup>.

**12. Water Quality Improvement Plans and Jurisdictional Runoff Management Plans.** The Regional MS4 Permit requires the MS4 permittees to develop and implement Water Quality Improvement Plans for ten (10) Watershed Management Areas, designated in the Regional MS4 Permit as shown in Table 1 below:

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<sup>2</sup> The minimum monitoring and reporting requirements that will be considered for inclusion in the Regional MS4 Permit reissuance are described in the Trash Amendments at Appendix D: Chapter III, section L.5 of the Ocean Plan and Appendix E: Chapter IV, section A.6 of the ISWEBE Plan.

**Table 1. San Diego Region Watershed Management Areas**

Hydrologic Unit(s)	Watershed Management Area	Major Surface Water Bodies	Responsible MS4 permittees
San Juan (901.00)	South Orange County	<ul style="list-style-type: none"> <li>- Aliso Creek</li> <li>- San Juan Creek</li> <li>- San Mateo Creek</li> <li>- Pacific Ocean</li> <li>- Heisler Park ASBS</li> </ul>	<ul style="list-style-type: none"> <li>- City of Aliso Viejo</li> <li>- City of Dana Point</li> <li>- City of Laguna Beach</li> <li>- City of Laguna Hills<sup>1</sup></li> <li>- City of Laguna Niguel</li> <li>- City of Laguna Woods<sup>1</sup></li> <li>- City of Lake Forest<sup>2</sup></li> <li>- City of Mission Viejo</li> <li>- City of Rancho Santa Margarita</li> <li>- City of San Clemente</li> <li>- City of San Juan Capistrano</li> <li>- County of Orange</li> <li>- Orange County Flood Control District</li> </ul>
Santa Margarita (902.00)	Santa Margarita River	<ul style="list-style-type: none"> <li>- Murrieta Creek</li> <li>- Temecula Creek</li> <li>- Santa Margarita River</li> <li>- Santa Margarita Lagoon</li> <li>- Pacific Ocean</li> </ul>	<ul style="list-style-type: none"> <li>- City of Menifee<sup>3</sup></li> <li>- City of Murrieta<sup>4</sup></li> <li>- City of Temecula</li> <li>- City of Wildomar<sup>4</sup></li> <li>- County of Riverside</li> <li>- County of San Diego</li> <li>- Riverside County Flood Control and Water Conservation District</li> </ul>
San Luis Rey (903.00)	San Luis Rey River	<ul style="list-style-type: none"> <li>- San Luis Rey River</li> <li>- San Luis Rey Estuary</li> <li>- Pacific Ocean</li> </ul>	<ul style="list-style-type: none"> <li>- City of Oceanside</li> <li>- City of Vista</li> <li>- County of San Diego</li> </ul>
Carlsbad (904.00)	Carlsbad	<ul style="list-style-type: none"> <li>- Loma Alta Slough</li> <li>- Buena Vista Lagoon</li> <li>- Agua Hedionda Lagoon</li> <li>- Baticuitos Lagoon</li> <li>- San Elijo Lagoon</li> <li>- Pacific Ocean</li> </ul>	<ul style="list-style-type: none"> <li>- City of Carlsbad</li> <li>- City of Encinitas</li> <li>- City of Escondido</li> <li>- City of Oceanside</li> <li>- City of San Marcos</li> <li>- City of Solana Beach</li> <li>- City of Vista</li> <li>- County of San Diego</li> </ul>
San Dieguito (905.00)	San Dieguito River	<ul style="list-style-type: none"> <li>- San Dieguito River</li> <li>- San Dieguito Lagoon</li> <li>- Pacific Ocean</li> </ul>	<ul style="list-style-type: none"> <li>- City of Del Mar</li> <li>- City of Escondido</li> <li>- City of Poway</li> <li>- City of San Diego</li> <li>- City of Solana Beach</li> <li>- County of San Diego</li> </ul>
Penasquitos (906.00)	Penasquitos	<ul style="list-style-type: none"> <li>- Los Penasquitos Lagoon</li> <li>- Pacific Ocean</li> </ul>	<ul style="list-style-type: none"> <li>- City of Del Mar</li> <li>- City of Poway</li> <li>- City of San Diego</li> <li>- County of San Diego</li> </ul>
	Mission Bay	<ul style="list-style-type: none"> <li>- Mission Bay</li> <li>- Pacific Ocean</li> <li>- San Diego Marine Life Refuge ASBS</li> </ul>	<ul style="list-style-type: none"> <li>- City of San Diego</li> </ul>
San Diego (907.00)	San Diego River	<ul style="list-style-type: none"> <li>- San Diego River</li> <li>- Pacific Ocean</li> </ul>	<ul style="list-style-type: none"> <li>- City of El Cajon</li> <li>- City of La Mesa</li> <li>- City of San Diego</li> <li>- City of Santee</li> <li>- County of San Diego</li> </ul>

**Table 1. San Diego Region Watershed Management Areas**

Hydrologic Unit(s)	Watershed Management Area	Major Surface Water Bodies	Responsible MS4 permittees
Pueblo San Diego (908.00) Sweetwater (909.00) Otay (910.00)	San Diego Bay	- Sweetwater River - Otay River - San Diego Bay - Pacific Ocean	- City of Chula Vista - City of Coronado - City of Imperial Beach - City of La Mesa - City of Lemon Grove - City of National City - City of San Diego - County of San Diego - San Diego County Regional Airport Authority - San Diego Unified Port District
Tijuana (911.00)	Tijuana River	- Tijuana River - Tijuana Estuary - Pacific Ocean	- City of Imperial Beach - City of San Diego - County of San Diego

**Notes:**

1. By agreement dated February 10, 2015, pursuant to Water Code section 13228, the Phase I MS4 discharges within the jurisdiction of the City of Laguna Hills and the City of Laguna Woods located in the Santa Ana Region are regulated by San Diego Water Board Order No. R9-2013-0001 as amended by Order No. R9-2015-0001, upon the later effective date of Order No. R9-2015-0001 or Santa Ana Water Board Tentative Order No. R8-2015-0001. The City of Laguna Hills and Laguna Woods must also comply with the requirements of the San Diego Creek/Newport Bay TMDL in section XVIII of Santa Ana Water Board Order No. R8-2015-0001.
2. By agreement dated February 10, 2015, pursuant to Water Code section 13228, Phase I MS4 discharges within the City of Lake Forest located within the San Diego Water Board Region are regulated by the Santa Ana Water Board Order No. R8-2015-0001 (NPDES No. CAS618030) upon the later effective date of this Order or Santa Ana Water Board Tentative Order No. R8-2015-0001. In accordance with the terms of the agreement between the San Diego Water Board and the Santa Ana Water Board, the City of Lake Forest must implement the requirements of the Bacteria TMDL in Attachment E of this Order, participate in preparation and implementation of the Water Quality Improvement Plan for the Aliso Creek Watershed Management Area as described in Provision B of this Order and continue implementation of its over-irrigation discharge prohibition in its City Ordinance, Title 15, Chapter 15, section 14.030, List (b).
3. By agreement dated October 26, 2015, pursuant to Water Code section 13228, Phase I MS4 discharges within the City of Menifee located within the San Diego Water Board Region are regulated by the Santa Ana Water Board Order No. R8-2010-0033 as it may be amended or reissued (NPDES No. CAS618033) upon the later effective date of this Order. In accordance with the terms of the agreement between the San Diego Water Board and the Santa Ana Water Board, the City of Menifee must participate in preparation and implementation of the Water Quality Improvement Plan for the Santa Margarita River Watershed Management Area as described in Provision B of this Order.
4. By agreement dated October 26, 2015, pursuant to Water Code section 13228, the Phase I MS4 discharges within the jurisdiction of the City of Murrieta and the City of Wildomar located in the Santa Ana Region are regulated by San Diego Water Board Order No. R9-2013-0001 as amended by Orders No. R9-2015-0001 and R9-2015-0100. The City of Murrieta and City of Wildomar must also comply with the requirements of the Lake Elsinore/Canyon Lake Nutrient TMDLs in section VI.D.2 of Santa Ana Water Board Order No. R8-2010-0033, or corresponding section as it may be amended or reissued.

The Water Quality Improvement Plans include the following: (a) identification of priority water quality conditions that need to be addressed to improve the water quality in each Watershed Management Area; (2) numeric goals for the highest priority water quality conditions to be achieved that will demonstrate discharges from the MS4s are not causing or contributing to exceedances of applicable water quality objectives, or water quality objectives are being attained in receiving waters; (3) a description of the water quality improvement strategies that will be and may be implemented to achieve the numeric goals; and (4) schedules for implementing the water quality improvement strategies and achieving the numeric goals.

The Regional MS4 Permit also requires incorporation of implementation plans for applicable Total Maximum Daily Loads (TMDLs) and Areas of Special Biological Significance (ASBS), which include interim and final water quality-based effluent limitations, compliance strategies, and compliance schedules, into the Water Quality Improvement Plans.

In addition to Water Quality Improvement Plan development, each MS4 permittee is also required to develop and implement a jurisdictional runoff management plan (JRMP) that describes how specific strategies in the Water Quality Improvement Plans will be implemented by each MS4 permittee. While the JRMPs are not explicitly part of the Water Quality Improvement Plan, reporting relating to JRMP programs is accomplished through the Water Quality Improvement Plan annual reporting process.

The implementation measures, interim milestones, and compliance schedules for Track 1 or Track 2 of the Trash Amendments shall also be incorporated into either the Water Quality Improvement Plans, the JRMPs, or a combination of the two, to be implemented by the MS4 permittees as part of the adaptive management process.

Compliance with the Trash Amendments is based on implementation of specific measures to control trash within a MS4 permittee's jurisdiction; however, inclusion of trash control strategies may be beneficial on a watershed scale. Through the issuance of this Order pursuant to Water Code section 13383, the San Diego Water Board intends the MS4 permittees to incorporate the requirements of the Trash Amendments into either the Water Quality Improvement Plans, the JRMPs, or a combination of the two, after reissuance of the Regional MS4 Permit. Reporting on implementation measures to comply with the Trash Amendments will be required through jurisdictional runoff management program annual report forms, which are submitted as part of the Water Quality Improvement Plan Annual Reports.

**13. Basis for Requiring Submittals from MS4 Permittees.** This Order is issued under federal authority. The water quality objectives established by the Trash Amendments described in Finding 5 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 the United States Environmental Protection Agency (USEPA) following adoption by the State Water Board and approval by the Office of Administrative Law. This Order requests information necessary for MS4 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 Amendments 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 MS4 permittees in response to this Order substitute for some or all 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)). Accordingly, this Order is issued pursuant to federal law. Consistent with the Trash Amendments, this Order nevertheless allows MS4 permittees flexibility in the specific actions they propose to meet the federal requirements.

**14. California Environmental Quality Act.** Issuance of this Order is not subject to CEQA in accordance with section 15061(b)(3) of Chapter 3, Title 14 of the CCR because it can be seen with certainty that there is no possibility that the required activities in question may have a significant effect on the environment.

**IT IS HEREBY ORDERED**, pursuant to California Water Code section 13383, that the MS4 permittees must comply with the following directives:

**A. REQUIRED SUBMITTALS<sup>3</sup>**

1. **Written Notices.** Each MS4 permittee identified in Finding 4 must submit to the San Diego Water Board, **no later than three (3) months from the date of this Order (September 5, 2017)**, a written notice stating whether the MS4 permittee will implement Track 1 or Track 2 to comply with the trash discharge prohibition in the Ocean Plan and ISWEBE Plan.
2. **Track 1 Jurisdictional Maps and Time Schedule.** Each MS4 permittee identified in Finding 4 electing to comply with Track 1 must submit the following information **no later than eighteen (18) months from the date of this Order (December 3, 2018)**:
  - a. A jurisdictional map identifying Priority Land Uses, the corresponding storm drain network including all storm drain inlets and drainage, proposed full capture system installation locations and associated drainage areas; *and*
  - b. A time schedule to achieve full compliance with the trash discharge prohibition, including interim milestones (such as average load reductions of ten percent per year or other progress) to full implementation. The final compliance date must not be later than fifteen (15) years from the effective date of the Trash Amendments (i.e. December 2, 2030).
3. **Track 2 Implementation Plans.** Each MS4 permittee identified in Finding 4 electing to comply with Track 2 must submit, **no later than eighteen (18) months from the date of this Order (December 3, 2018)**, an implementation plan that describes:
  - a. The combination of controls<sup>4</sup> selected by the MS4 permittee and the rationale for each 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. How the implemented controls identified in the trash implementation plans will be monitored and assessed in jurisdictional runoff management program or Water Quality Improvement Plan Annual Reports;
  - e. Proposals by MS4 permittees, if any, to substitute Priority Land Uses described in Finding 9 above with other locations or land uses, provided that the total trash

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<sup>3</sup> Directives A.1, A.2, A.3, and A.5 do not apply to the Riverside County Flood Control and Water Conservation District because it does not have land use authority over Priority Land Uses.

<sup>4</sup> Controls include full capture systems, multi-benefit projects, other treatment controls, and/or institutional controls, as defined in Appendix D of the Ocean Plan and Appendix E of the ISWEBE Plan.

generated in other locations or land uses is equivalent to, or greater than, the total trash generated in the Priority Land Use being substituted; *and*

- f. A time schedule to achieve full compliance with the trash discharge prohibition, including interim milestones (such as average load reductions of ten percent per year or other progress) to full implementation. The proposed final compliance date must not be later than fifteen (15) years from the effective date of the Trash Amendments (i.e. December 2, 2030).

**4. Identification of Substantial Trash Generating Land Uses or Locations Within Riverside County Flood Control and Water Conservation District's**

**Jurisdiction.** The Riverside County Flood Control and Water Conservation District (District) must submit, **no later than eighteen (18) months from the date of this Order (December 3, 2018)**, a report identifying land uses or locations within its jurisdiction including but not limited to, facilities, drainage structures, and easements that generate a substantial amount of trash.

- 5. Coordination with Caltrans.** Each MS4 permittee identified in Finding 4 must submit, **no later than eighteen (18) months from the date of this Order (December 3, 2018)**, a description of how MS4 permittees will coordinate their efforts to install, operate, and maintain full capture systems, multi-benefit projects, and other controls with Caltrans in significant trash generating areas and/or priority land uses, as applicable.

**B. PROVISIONS**

- 1. Signatory Requirements.** All documents submitted to the San Diego Water Board must be signed and certified.

a. All reports required by this Order must be signed as follows:

- (1) For a corporation, by a principal executive officer of at least the level of vice-president;
- (2) For a partnership or sole proprietorship, by a general partner or the proprietor, respectively;
- (3) For a municipality, state, federal or other public agency, by either a principal executive or ranking elected official.
- (4) By a duly authorized representative of the person designated above (B.1.a.(1), B.1.a.(ii), or B.1.(a)(iii)). A person is a duly authorized representative only if:

- (a) The authorization is made in writing by a person described in paragraph B.6.a above;

(b) The authorization specifies either an individual or position having responsibility for the overall operation of the regulated facility or activity; and

(c) The written authorization is submitted to the San Diego Water Board.

**b.** Any person signing a document required by this Order 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."*

**2. Submittal of Documents.** All documents submitted to the San Diego Water Board in compliance with this Order must be submitted in electronic format (compact disk (CD-ROM or CD) in a Portable Document Format (PDF), unless otherwise directed. All electronic format documents required under this Order must be submitted to:

Executive Officer  
California Regional Water Quality Control Board  
San Diego Region  
2375 Northside Drive, Suite 100  
San Diego, CA 92108  
Attn: Laurie Walsh, PE, Storm Water Management Unit

**3. Changes to Order.** This Order may be amended, rescinded, or updated by the Executive Officer. The MS4 permittees may propose changes or alternatives to the requirements in this Order if a valid rationale for the changes is shown. The filing of a request by a MS4 permittees for amending, rescinding, or updating this Order, or notification of planned changes or anticipated noncompliance does not stay any condition of this Order.

## C. NOTIFICATIONS

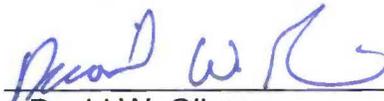
**1. Enforcement Discretion.** The San Diego Water Board reserves its right to take any enforcement action authorized by law for violations of the terms and conditions of this Order.

**2. Requesting Administrative Review by the State Water Board.** Any aggrieved person may petition the State Water Board regarding this Order in accordance with Water Code section 13320 and the 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 following the date of this Order. Copies of the laws and regulations applicable to filing petitions may be found on the State Water Board website at [http://www.waterboards.ca.gov/public\\_notices/petitions/water\\_quality](http://www.waterboards.ca.gov/public_notices/petitions/water_quality) or will be provided upon request.

For instructions on how to file a petition for review, see the State Water Board website at:  
[http://www.waterboards.ca.gov/public\\_notices/petitions/water\\_quality/wqpetition\\_instr.shtml](http://www.waterboards.ca.gov/public_notices/petitions/water_quality/wqpetition_instr.shtml)

Ordered By: \_\_\_\_\_



David W. Gibson  
EXECUTIVE OFFICER  
June 2, 2017

California Regional Water Quality Control Board  
San Diego Region

**Responses to Comments**

**Tentative Investigative Order No. R9-2016-0205**

*An Order Directing the Owners and Operators of Phase I  
Municipal Separate Storm Sewer Systems (MS4s) Draining the  
Watersheds Within the San Diego Region*

*To Submit Technical and Monitoring Reports Pertaining to the  
Control of Trash in Discharges From Phase I MS4s to Ocean  
Waters, Inland Surface Waters, Enclosed Bays, and Estuaries in  
the San Diego Region*

June 2, 2017

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
SAN DIEGO REGION**

2375 Northside Drive, Suite 100, San Diego, California 92108

Phone • (619) 516-1990 • Fax (619) 516-1994

<http://www.waterboards.ca.gov/sandiego>

Documents are available at: <http://www.waterboards.ca.gov/sandiego>

**California Regional Water Quality Control Board  
San Diego Region**

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Gary Strawn, *Vice Chair*  
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Tomás Morales  
Stefanie Warren  
Betty Olson  
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David W. Gibson, *Executive Officer*  
James G. Smith, *Assistant Executive Officer*

Catherine Hagan, *Senior Staff Counsel, Office of Chief Counsel*  
Adriana Nunez, *Staff Counsel, Office of Chief Counsel*

**This report was prepared under the direction of**

David T. Barker, P.E., *Supervising Water Resource Control Engineer*  
Laurie Walsh, P.E., *Senior Water Resource Control Engineer*

by

Christina Arias P.E., *Water Resource Control Engineer*

## Introduction

This report contains the California Regional Water Quality Control Board, San Diego Region (San Diego Water Board) responses to written comments received on Tentative Order No. R9-2016-0205, *An Order Directing the Owners and Operators of Phase I Municipal Separate Storm Sewer Systems (MS4s) Draining the Watersheds Within the San Diego Region to Submit Technical and Monitoring Reports Pertaining to the Control of Trash in Discharges From Phase I MS4s to Ocean Waters, Inland Surface Waters, Enclosed Bays, and Estuaries in the San Diego Region*. The San Diego Water Board provided public notice of the release of the Tentative Order on November 10, 2016 and provided a period of 34 days for public review and comment. The public comment period ended on December 14, 2016. Summaries of the written comments and San Diego Water Board responses are in the table that follows. The comments are organized according to related sections in Tentative Order No. R9-2016-0205. The table indicates if the Tentative Order was revised in response to the comment.

The San Diego Water Board received 22 comment letters during the comment solicitation period.

### List of Commenters:

1. California Manufacturers & Technology Association
2. California Stormwater Quality Association (CASQA)
3. City of Carlsbad
4. City of Coronado
5. City of Dana Point
6. City of Encinitas
7. City of Escondido
8. City of La Mesa
9. City of Lake Forest
10. City of Menifee
11. City of San Clemente
12. City of San Juan Capistrano
13. City of Santee
14. City of Solana Beach
15. City of Vista
16. City of San Diego

17. County of Orange (on behalf of itself and the Cities of Aliso Viejo, Dana Point, Laguna Hills, Laguna Niguel, Lake Forest, Mission Viejo, and Rancho Santa Margarita)
18. County of San Diego
19. Riverside County Flood Control and Water Conservation District
20. San Bernardino County
21. Unified Port of San Diego
22. Upper Santa Margarita River Copermittees (County of Riverside and Cities of Murrieta, Temecula, and Wildomar)

Abbreviations used in this document:

Caltrans	California Department of Transportation
CASQA	California Stormwater Quality Association
ISWEBE Plan	Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California
MS4	Municipal Separate Storm Sewer Systems
Ocean Plan	Water Quality Control Plan for Ocean Waters of California
Order	Order No. R9-2017-0077, the finalized version of Tentative Order No. R9-2016-0205
Regional MS4 Permit	Order No. R9-2013-0001, as amended by Order Nos. R9-2015-0001 and R9-2015-0100
San Diego Water Board	California Water Quality Control Board, San Diego Region
State Water Board	State Water Resources Control Board
Tentative Order	Tentative Order No. R9-2016-0205

Comment No.	Tentative Order Location/Subject	Comment Summary	Submitted By	San Diego Water Board Response
1	General Comment <i>Need for Public Hearing</i>	The San Diego Water Board should hold a public hearing prior to issuance of an Investigative Order.	<ul style="list-style-type: none"> <li>• CASQA</li> </ul>	The San Diego Water Board Executive Officer has reviewed the revised Tentative Order, written comments, and responses in this matter and made the determination to issue the final Order under his delegated authority.
2	General Comment <i>Compliance with Receiving Water Limitations</i>	The Tentative Order should indicate that meeting the trash discharge prohibition via Track 1 or Track 2 would also mean the MS4 permittees are in compliance with Receiving Water Limitations (i.e., meeting the water quality objectives).	<ul style="list-style-type: none"> <li>• City of San Diego</li> </ul>	The San Diego Water Board disagrees that the Tentative Order needs to stipulate that compliance with the trash discharge prohibition means compliance with the receiving water limitations. The Trash Amendments specifically state that MS4 permittees that are in full compliance with requirements for the control of trash, as specified in the implementing permit, shall be determined to be in compliance with the <i>discharge prohibition</i> . However, no such language is included in the Trash Amendments to indicate that full compliance with requirements for the control of trash would also mean an MS4 permittee would be in compliance with either receiving water limitations or water quality objectives. This was not an oversight; this was intended by the State Water Board (see responses to Comment Numbers 4.1 and 10.9 of Appendix F to the State Water Board's Final Staff Report for Trash Amendments dated April 7, 2015). <sup>1</sup>

<sup>1</sup> Appendix F of the State Water Board Final Staff Report on the Trash Amendments is available on the State Water Board website at [http://www.waterboards.ca.gov/water\\_issues/programs/trash\\_control/docs/trash\\_sr\\_040715.pdf](http://www.waterboards.ca.gov/water_issues/programs/trash_control/docs/trash_sr_040715.pdf) (as of May 17, 2016).

Comment No.	Tentative Order Location/Subject	Comment Summary	Submitted By	San Diego Water Board Response
3	General Comment <i>Unfunded Mandate</i>	The requirements associated with the Tentative Order are state-issued unfunded mandates for which funding has not been provided, and thus the requirements are subject to the provisions of Calif. Const. article XIII B, section 6. The Tentative Order should provide a funding source for these requirements.	<ul style="list-style-type: none"> <li>• City of Dana Point</li> <li>• City of Escondido</li> <li>• City of Lake Forest</li> <li>• City of San Clemente</li> <li>• City of San Juan Capistrano</li> <li>• City of Santee</li> <li>• County of Orange</li> <li>• San Bernardino County</li> </ul>	The San Diego Water Board disagrees that the requirements associated with the Tentative Order are state-issued unfunded mandates. The water quality objective established by the Trash Amendments 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 USEPA following adoption by the State Water Board and approval by the Office of Administrative Law. The final Order is issued under federal authority. The San Diego Water Board has included revisions to clarify the legal authority forming the basis for the final Order.
4	General Comment <i>State Guidelines Needed</i>	The Tentative Order should not be issued until State guidelines on Track 2 implementation (such as interjurisdictional matters including compliance monitoring when trash is discharged into a common MS4) are provided.	<ul style="list-style-type: none"> <li>• City of Lake Forest</li> <li>• City of San Clemente</li> <li>• City of San Juan Capistrano</li> <li>• City of Santee</li> <li>• San Bernardino County</li> </ul>	The San Diego Water Board disagrees that the Tentative Order should not be issued until State guidelines on Track 2 implementation are provided. The San Diego Water Board will issue the final Order in accordance with the timing requirements stipulated in the Trash Amendments. It is the San Diego Water Board's understanding that the State Water Board is not planning to provide guidance on compliance monitoring. However, the San Diego Water Board encourages the MS4 permittees to initiate dialogue with stakeholders, including the San Diego Water Board, to discuss trash reduction proposals. The San Diego

Comment No.	Tentative Order Location/Subject	Comment Summary	Submitted By	San Diego Water Board Response
				Water Board will assist MS4 permittees during Track 2 implementation plan development to clarify interpretation of the final Order requirements.
5	General Comment <i>Jurisdictional Liability</i>	The Tentative Order and implementing permit should include language clarifying that an MS4 permittee is not liable for any trash resulting from other MS4 permittees upstream.	<ul style="list-style-type: none"> <li>• Unified Port of San Diego</li> </ul>	The San Diego Water Board disagrees that the Tentative Order and implementing permit should include language clarifying that an MS4 permittee is not liable for any trash resulting from other MS4 permittees upstream. The purpose of the Order is to implement the statewide Trash Amendments. The requirements therein will be incorporated into the Regional MS4 Permit upon permit reissuance. Provision E.2.b.(6) of the Regional MS4 Permit states that “Each Copermittee must coordinate, when necessary, with upstream Copermittees and/or entities to prevent illicit discharges from upstream sources into the MS4 within its jurisdiction.” Therefore, the San Diego Water Board’s expectation is that MS4 permittees (identified as Copermittees in the Regional MS4 Permit) coordinate to prevent illicit discharges, including trash, as necessary. Downstream MS4 permittees may consider trash monitoring at jurisdictional boundaries to demonstrate that trash discharges originate from upstream areas, beyond their jurisdictional authority.
6	General Comment	The Tentative Order should not be issued until a list of “certified”	<ul style="list-style-type: none"> <li>• City of Dana Point</li> </ul>	The State Water Board will issue a list of “certified” full capture devices

Comment No.	Tentative Order Location/Subject	Comment Summary	Submitted By	San Diego Water Board Response
	<i>List of "Certified" Full Capture Devices and Demonstration of Full Capture Equivalency Needed</i>	full capture devices is made available, as well as guidance on topics such as demonstration of full capture equivalency. This is needed before MS4 permittees can make an informed decision on choosing Track 1 or Track 2.	<ul style="list-style-type: none"> <li>• City of Lake Forest</li> <li>• City of San Diego</li> <li>• City of San Juan Capistrano</li> <li>• San Bernardino County</li> <li>• Unified Port of San Diego</li> </ul>	simultaneously with their planned issuance of a Water Code section 13383 Order to Phase II MS4 permittees regarding implementation of the Trash Amendments. This will occur within the same general time frame as the issuance of the San Diego Water Board's Order to Phase 1 MS4 permittees in the San Diego Region. The State Water Board may provide limited guidance on demonstrating full capture equivalency. However, the San Diego Water Board encourages the MS4 permittees to initiate dialogue with stakeholders, including the San Diego Water Board, to discuss trash control proposals. The San Diego Water Board will assist with Track 2 implementation plan development as it pertains to interpretation of the requirements of the final Order.
7	General Comment <i>Review of Track 2 Implementation Plans</i>	As Track 1 is the State Board's preferred option for compliance with the Trash Amendments, Regional Boards should be cautious when reviewing Track 2 Implementation Plans to ensure that full capture system equivalency will be met. Adoption of local product ban ordinances is ineffective.	<ul style="list-style-type: none"> <li>• California Manufacturers &amp; Technology Association</li> </ul>	The San Diego Water Board appreciates the comment. The San Diego Water Board intends to closely review Track 2 implementation plans to ensure proposed strategies comply with the requirement to achieve full capture system equivalency. The definition of institutional controls in the Trash Amendments does not preclude the adoption of local product ban ordinances.
8	General Comment <i>Caltrans and Phase II MS4s</i>	Clear and consistent requirements should be applicable to all regulated parties	<ul style="list-style-type: none"> <li>• City of Dana Point</li> </ul>	The San Diego Water Board agrees that Caltrans and Phase II permittees should be required to address trash at the same time to promote cooperation and

Comment No.	Tentative Order Location/Subject	Comment Summary	Submitted By	San Diego Water Board Response
	<i>Should Have Same Requirements as Phase I Permittees</i>	at the same time to promote cooperation and coordination.		coordination. The State Water Board is the lead agency for issuance of requirements to both Caltrans and Phase II MS4 permittees pertaining to the Trash Amendments. In terms of timing, the Trash Amendments require that Regional Water Boards either modify, re-issue, or adopt an MS4 permit to implement the requirements of the Trash Amendments, or issue an Investigative Order pursuant to Water Code section 13267 or 13383 to implement the requirements of the Trash Amendments within eighteen months of the effective date. The San Diego Water Board has chosen to require the initial steps in planning for the implementation of the Trash Amendments through issuance of a final Order pursuant to Water Code section 13383 on or before June 2, 2017.
9	<i>Finding 4 Inclusion of City of Menifee</i>	The designation of the City of Menifee as an MS4 permittee in the Tentative Order incorrectly implies that all of the requirements of the Tentative Order are applicable to the City, which is inconsistent with Finding 29.b of the San Diego Regional MS4 Permit, which states that the City of Menifee is largely regulated by the Santa Ana Water Board. The Trash Amendments are to be implemented on a jurisdictional	<ul style="list-style-type: none"> <li>• City of Menifee</li> </ul>	The San Diego Water Board agrees that inclusion of the City of Menifee in the Tentative Order is not necessary because the City of Menifee is regulated by the Santa Ana Water Board under Order No. R8-2010-0033 (as it may be amended or reissued). The Santa Ana Water Board is the “permitting authority” with regulatory oversight over the City of Menifee’s jurisdictional runoff management program.

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		basis, and the City of Menifee reports jurisdiction-wide activities to the Santa Ana Water Board.		
10	Finding 4 and Directive A.1 <i>Inclusion of Riverside Co. Flood Control and Water Conservation District</i>	The Riverside County Flood Control and Water Conservation District (District) should not be included in the Tentative Order because the District does not have regulatory authority over priority land uses.	<ul style="list-style-type: none"> <li>• Riverside County Flood Control and Water Conservation District</li> </ul>	The San Diego Water Board concurs with the District that it lacks regulatory authority over Priority Land Uses and is not subject to the requirements of the Tentative Order to declare implementation of Track 1 or Track 2 compliance tracks, as required by Chapter IV.A.3.a of Appendix E of the ISWEBE Plan and Chapter III.L.2.a. of Appendix D of the Ocean Plan. Therefore a footnote was added to Directive A indicating that the requirements applicable to other dischargers described in Finding 4 do not apply to the District. However, the San Diego Water Board disagrees that the District should not be required to implement trash controls in land uses and locations within its jurisdiction that generate substantial amounts of trash. The Trash Amendments were intended to reduce discharges of trash to receiving waters from land uses or locations that generate substantial amounts of trash, not just Priority Land Uses. The District may have facilities, drainage structures, or easements within its jurisdiction that in fact do generate trash, therefore the revised Tentative Order has a new requirement specific to the District (Directive A.4) that requires such areas to

Comment No.	Tentative Order Location/Subject	Comment Summary	Submitted By	San Diego Water Board Response
				<p>be identified. In accordance with the Trash Amendments (Appendix E of the Ocean Plan Chapter III.L.2.d and Appendix D to the ISWEBE Plan Chapter IV.A.3.d), the San Diego Water Board has the authority to determine that specific land uses or locations generate substantial amounts of trash, and may require MS4 permittees to comply with the requirements of the Trash Amendments. The San Diego Water Board may use information submitted as required by Directive A.4 to require the District to comply with the requirements of the Trash Amendments upon Regional MS4 Permit reissuance.</p>
11	<p>Finding 7 <i>Compliance with Water Quality Objective and Trash Prohibition</i></p>	<p>The Tentative Order should clarify that timely and complete implementation of Track 1 or Track 2 will meet the narrative water quality objectives and constitute compliance with the trash discharge prohibition as described in the Trash Amendments.</p>	<ul style="list-style-type: none"> <li>• CASQA</li> <li>• City of Carlsbad</li> <li>• City of Coronado</li> <li>• City of Encinitas</li> <li>• City of Escondido</li> <li>• City of Solana Beach</li> <li>• City of Vista</li> <li>• County of San Diego</li> <li>• Unified Port of San Diego</li> </ul>	<p>The San Diego Water Board agrees that MS4 permittees in full compliance with the requirements to control trash as described in the Trash Amendments shall be determined to be in compliance with the trash discharge prohibition. The San Diego Water Board disagrees that a MS4 permittee meeting the discharge prohibition is to be deemed in compliance with either receiving water limitations or narrative water quality objectives (see Response to Comment 2). The San Diego Water Board has not modified the Tentative Order in response to this comment. Full compliance with such requirements (Appendix D, Chapter III, section I.6.a of the Ocean Plan and</p>

Comment No.	Tentative Order Location/Subject	Comment Summary	Submitted By	San Diego Water Board Response
				<p>Appendix E, Chapter IV, section A.2.a of the ISWBE Plan) is more than just fully implementing the requirements of Track 1 or Track 2—it also includes compliance with the requirements to meet the schedule, coordinate efforts with Caltrans, and monitor and report. The more appropriate location for describing compliance with trash control requirements is either the implementing Regional MS4 Permit or the associated fact sheet. The San Diego Water Board will consider adding language to the Regional MS4 Permit with respect to a compliance pathway with the discharge prohibition, that is consistent with language from the Trash Amendments, during re-issuance of the Regional MS4 Permit.</p>
12	<p>Finding 7 <i>Omission of Language Providing Flexibility</i></p>	<p>Finding 7 of the Tentative Order describing the Track 2 language omits some of the Track 2 language in the Trash Amendments. <i>“The MS4 permittee may determine the locations or land uses within its jurisdiction to implement any combination of controls.”</i></p>	<ul style="list-style-type: none"> <li>• CASQA</li> <li>• City of Carlsbad</li> <li>• City of Coronado</li> <li>• City of Encinitas</li> <li>• City of Escondido</li> <li>• City of Solana Beach</li> <li>• City of Vista</li> <li>• City of San Diego</li> </ul>	<p>The San Diego Water Board agrees that the Tentative Order omits some of the Track 2 language in the Trash Amendments and has modified the Tentative Order as suggested by the commenters in Finding 7.</p>

Comment No.	Tentative Order Location/Subject	Comment Summary	Submitted By	San Diego Water Board Response
			<ul style="list-style-type: none"> <li>• County of San Diego</li> <li>• County of Orange</li> <li>• Riverside County Flood Control and Water Conservation District</li> <li>• Unified Port of San Diego</li> <li>• Upper Santa Margarita River MS4 Permittees</li> </ul>	
13	<p>Finding 7 <i>Review and Approval Process for Track 2 Implementation Plans</i></p>	<p>The Tentative Order does not describe the San Diego Water Board’s review and approval process for Track 2 implementation plans. Language outlining the milestones and timing for approval should be added to Finding 7. This is needed to understand implementation expectations.</p>	<ul style="list-style-type: none"> <li>• CASQA</li> <li>• City of Carlsbad</li> <li>• City of Coronado</li> <li>• City of Encinitas</li> <li>• City of Escondido</li> <li>• City of Vista</li> <li>• City of San Diego</li> <li>• County of San Diego</li> <li>• Unified Port of San Diego</li> </ul>	<p>The San Diego Water Board agrees and added language to Finding 7 stating that “Track 2 implementation plans will be deemed accepted by the San Diego Water Board ninety (90) days after submission unless otherwise directed in writing by the San Diego Water Board Executive Officer.”</p>

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14	Finding 7 <i>Implementation Plan Submittal Should Correspond with Implementing MS4 Permit</i>	The due date for the Track 2 Implementation Plans should correspond with the language that is released in the next iteration of the MS4 permit (implementing permit). Otherwise, MS4 permittees will not have a clear understanding of trash related requirements in the implementing permit.	<ul style="list-style-type: none"> <li>• Unified Port of San Diego</li> </ul>	The San Diego Water Board intends to propose language, consistent with the requirements in the Trash Amendments, in the next iteration of the Regional MS4 Permit. The San Diego Water Board will assist during Track 2 implementation plan development to clarify interpretation of the final Order requirements.
15	Finding 7 <i>Ability to Change Compliance Tracks</i>	The Tentative Order should clearly state that MS4 permittees may change tracks, provided they submit sufficient supporting justification. MS4 permittees may wish to choose Track 1 because of simplicity and compliance certainty it provides, but find some locations where full capture system implementation is not possible and therefore need to switch to Track 2.	<ul style="list-style-type: none"> <li>• City of Carlsbad</li> <li>• City of Encinitas</li> <li>• City of Escondido</li> <li>• City of Lake Forest</li> <li>• City of San Clemente</li> <li>• City of San Juan Capistrano</li> <li>• City of Santee</li> <li>• City of Solana Beach</li> <li>• City of Vista</li> <li>• County of San Diego</li> <li>• Riverside County Flood Control and Water</li> </ul>	The San Diego Water Board agrees with this recommendation and has modified Finding 7 of the Tentative Order to clarify that MS4 permittees may change Tracks through the adaptive management process, provided they submit supporting justification to the San Diego Water Board.

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			Conservation District <ul style="list-style-type: none"> <li>• San Bernardino County</li> <li>• Unified Port of San Diego</li> <li>• Upper Santa Margarita River MS4 Permittees</li> </ul>	
16	Finding 7 <i>Credit for Existing Efforts</i>	The Tentative Order should clarify that existing controls may be used and monitored to achieve full capture system equivalency.	<ul style="list-style-type: none"> <li>• City of Solana Beach</li> </ul>	The San Diego Water Board agrees that MS4 permittees should evaluate existing controls to determine appropriateness of including such controls in Track 2 implementation plans. "Determining appropriateness" should include evaluation of existing BMP performance against performance standards of "certified" full capture devices. The San Diego Water Board is amenable to inclusion of existing controls in a MS4 permittee's implementation plan provided that rationale is included to support that determination. Since this analysis is done in the implementation plan (consistent with what is required in the Trash Amendments), no change to the Tentative Order was made.
17	Finding 8 <i>Full Capture System</i>	The definition for full capture system equivalency omits some language from the Trash Amendments that provides	<ul style="list-style-type: none"> <li>• CASQA</li> <li>• City of Carlsbad</li> </ul>	The San Diego Water Board agrees and has modified Finding 8 of the Tentative Order as suggested by the commenters.

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	<i>Equivalency Definition</i>	needed flexibility to the MS4 permittees. The Tentative Order should read: “ <i>Examples of such approaches include, <u>but are not limited to</u>, the following...</i> ”	<ul style="list-style-type: none"> <li>• City of Encinitas</li> <li>• City of Escondido</li> <li>• City of Solana Beach</li> <li>• City of Vista</li> <li>• County of Orange</li> <li>• County of San Diego</li> <li>• Riverside County Flood Control and Water Conservation District</li> <li>• Unified Port of San Diego</li> <li>• Upper Santa Margarita River MS4 Permittees</li> </ul>	
18	<i>Finding 9.a Priority Land Use Application</i>	Finding 9.a should clarify that the Priority Land Use definition only applies to Track 1.	<ul style="list-style-type: none"> <li>• CASQA</li> <li>• County of Orange</li> <li>• City of Carlsbad</li> <li>• City of Encinitas</li> <li>• City of Escondido</li> <li>• City of Vista</li> </ul>	The San Diego Water Board disagrees that Finding 9 in the Tentative Order should clarify that the Priority Land Use definition only applies to Track 1. The term “priority land uses” was not meant to apply only to the Track 1 compliance option. Section 2.4.1 of the State Water Board’s Final Staff Report for Trash Amendments dated April 7, 2015, states that “ <i>Under the final Trash Amendments,</i>

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			<ul style="list-style-type: none"> <li>• City of San Diego</li> <li>• County of San Diego</li> <li>• Riverside County Flood Control and Water Conservation District</li> <li>• Unified Port of San Diego</li> <li>• Upper Santa Margarita River MS4 Permittees</li> </ul>	<p><i>MS4 Phase I and Phase II NPDES permittees with regulatory authority over land uses can comply with the prohibition of discharge of trash under a dual alternative compliance approach or “Tracks.” The Track requirements would be inserted into NPDES permits. <u>Both Tracks have permittees focus their trash control efforts on priority land uses...</u></i> (emphasis added). Further, the State Water Board’s Response to Comments (Appendix F to the Staff Report), Response to Comment 10.1, states that, <i>“The State Water Board recognizes that other land uses may generate higher rates of trash. To allow for these occurrences the Trash Amendments include a provision for a MS4 permittee to focus on “equivalent alternate land uses” under both Track 1 and Track 2. (See Ocean Plan Amendment and Part I ISWEBE, Definitions Section, for “priority land uses.”) Quantification measures such as street sweeping, mapping, and visual trash presence surveys can be used to prioritize these land uses for Track 1 or Track 2 controls”</i> (emphasis added). Finally, several of the State Water Board’s responses to comments with regards to source control strategies state that <i>“Regulatory source control was included in the proposed amendment as one of several treatment controls that could be utilized by MS4 permittees with</i></p>

Comment No.	Tentative Order Location/Subject	Comment Summary	Submitted By	San Diego Water Board Response
				<p><i>regulatory control over <u>priority land uses</u> to comply with the prohibition of trash under <u>Track 2</u></i> (emphasis added). Based on these citations of the State Water Board’s Final Staff Report, it is clear that that “priority land uses” was intended to apply to both Track 1 and Track 2 compliance tracks. In terms of substituting more appropriate areas or land uses than the “priority land uses” as defined in the Trash Amendments, the process for doing so is similar, but distinct for the two compliance tracks. An MS4 permittee choosing Track 1 must obtain San Diego Water Board approval for substituting “priority land uses” with “equivalent alternate land uses.” An MS4 permittee choosing Track 2 may propose controls in “locations or land uses” other than the “priority land uses” in their implementation plans, which are subject to San Diego Water Board approval. In either case, MS4 permittees must start with assessing trash generated in, and implementing controls in, areas with “priority land uses” first. Based on these considerations, no change to the Tentative Order was made.</p>
19	Finding 9.b	<p>The Tentative Order does not contain the full language from the equivalent land use provisions in the Trash Amendments: “<i>The land use area requested to substitute for a priority land use</i>”</p>	<ul style="list-style-type: none"> <li>• CASQA</li> <li>• County of Orange</li> <li>• City of Carlsbad</li> </ul>	<p>The San Diego Water Board agrees with the comment and modified Finding 9.b of the Tentative Order to include the suggested language.</p>

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		<p><i>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 or greater than the total trash generated from the priority land uses for which substitution is requested.</i>” Omitting this language reduces the flexibility the MS4 permittees have to define priority land uses within their jurisdictions using local trash-generation information.</p>	<ul style="list-style-type: none"> <li>• City of Coronado</li> <li>• City of Encinitas</li> <li>• City of Escondido</li> <li>• City of Solana Beach</li> <li>• City of Vista</li> <li>• City of San Diego</li> <li>• County of San Diego</li> <li>• Riverside County Flood Control and Water Conservation District</li> <li>• Unified Port of San Diego</li> <li>• Upper Santa Margarita River MS4 Permittees</li> </ul>	
20	<p>Finding 9.d; Directive A.4 <i>Requirement to Address Transient Encampments</i></p>	<ul style="list-style-type: none"> <li>• The Tentative Order requirement to address transient encampments exceeds the scope and intent of the Trash Amendments;</li> <li>• Full capture systems are not designed to capture trash generated within the receiving</li> </ul>	<ul style="list-style-type: none"> <li>• CASQA</li> <li>• City of Carlsbad</li> <li>• City of Coronado</li> <li>• City of Dana Point</li> </ul>	<p>The San Diego Water Board carefully reviewed the intent of the Trash Amendments and agrees that the Tentative Order proposed for issuance under Water Code section 13383 is meant to implement the requirements of the statewide Trash Amendments and is not the appropriate regulatory mechanism</p>

Comment No.	Tentative Order Location/Subject	Comment Summary	Submitted By	San Diego Water Board Response
		<p>water as they are usually installed in catch basins and pipes;</p> <ul style="list-style-type: none"> <li>• Transient encampments are nonpoint sources of trash, and the Trash Amendments will ultimately be included in the MS4 Permit issued to point source dischargers;</li> <li>• “Transient encampments in the San Diego River Watershed” are neither a <u>specific land use</u> nor <u>location</u> as discussed in the Trash Amendments;</li> <li>• Full capture systems/suite of BMPs are intended to be placed in areas where MS4 permittees have “regulatory control” over; MS4 permittees do not have effective “regulatory control” over private, state, or federal properties where encampments are common;</li> <li>• MS4 permittees face significant constitutional and statutory restraints on their ability to address trash from encampments;</li> <li>• The requirement to address transient encampments limits the ability of MS4 permittees to be in compliance with either Track 1 or Track 2 because</li> </ul>	<ul style="list-style-type: none"> <li>• City of Encinitas</li> <li>• City of Escondido</li> <li>• City of La Mesa</li> <li>• City of Lake Forest</li> <li>• City of San Clemente</li> <li>• City of San Diego</li> <li>• City of San Juan Capistrano</li> <li>• City of Santee</li> <li>• City of Vista</li> <li>• City of San Diego</li> <li>• County of San Diego</li> <li>• County of Orange</li> <li>• Riverside County Flood Control and Water Conservation District</li> <li>• San Bernardino County</li> </ul>	<p>for addressing trash impacts to the San Diego River generated by transient encampments. As a result, the requirement to describe how the MS4 permittees will address trash generated from transient encampments has been removed. Nevertheless, the San Diego Water Board is committed to finding solutions to the ongoing trash problem in the San Diego River watershed, including trash generated from transient encampments. The San Diego Water Board will continue to seek solutions to this issue with the MS4 permittees and other stakeholders in the watershed.</p>

Comment No.	Tentative Order Location/Subject	Comment Summary	Submitted By	San Diego Water Board Response
		<p>these compliance pathways will be ineffective at addressing a complex social issue;</p> <ul style="list-style-type: none"> <li>• The Tentative Order references information regarding trash generation at encampments but does not explain why MS4 permittees are responsible;</li> <li>• Encampments would be better regulated under WDRs, or waivers of WDRs inclusive of all responsible parties with land use authority or ownership in those areas.</li> </ul>	<ul style="list-style-type: none"> <li>• Unified Port of San Diego</li> <li>• Upper Santa Margarita River MS4 Permittees</li> </ul>	
21	Finding 10 <i>Compliance Schedule Inclusion in Tentative Order</i>	The inclusion of an enforceable compliance schedule is not appropriate for an Investigative Order according to Water Code Sections 13267 and 13383. It is more appropriate to include any compliance schedule directly into the implementing permit (Regional MS4 Permit).	<ul style="list-style-type: none"> <li>• CASQA</li> <li>• City of Carlsbad</li> <li>• City of Encinitas</li> <li>• City of Escondido</li> <li>• City of Vista</li> <li>• County of Orange</li> <li>• County of San Diego</li> <li>• Unified Port of San Diego</li> </ul>	The San Diego Water Board agrees that the appropriate location for an enforceable compliance schedule is within the implementing Regional MS4 Permit. That is why the Tentative Order does not include an enforceable compliance schedule, but rather describes the compliance schedule that <i>likely will be proposed</i> for inclusion in the Regional MS4 Permit. Nevertheless, language was added to Finding 10 to further explain that the final compliance <i>date</i> , in addition to the full compliance schedule, will be included in the Regional MS4 Permit.

Comment No.	Tentative Order Location/Subject	Comment Summary	Submitted By	San Diego Water Board Response
22	Finding 10 <i>Interim Milestone Language</i>	The Tentative Order omits language from the Trash Amendments applicable to Track 1 that is needed to demonstrate that interim milestones may take the form of load reductions or “other progress.” Additionally, add a footnote giving examples of interim milestones.	<ul style="list-style-type: none"> <li>• City of Solana Beach</li> </ul>	The San Diego Water Board agrees that additional language from the Trash Amendments pertaining to the forms of interim milestones should be added to the language in the Tentative Order. Therefore, Finding 10 was amended to include language from the Trash Amendments to describe interim milestones “such as average load reductions of ten percent (10%) per year or other progress.”
23	Findings 11 and 14 <i>Reporting Requirements</i>	The Tentative Order needs to provide clarity regarding the monitoring and reporting requirements under Track 1 vs. Track 2. Not doing so could cause unnecessary monitoring and reporting by the MS4 permittees. Language from the Trash Amendments should be added as provided by the commenters.	<ul style="list-style-type: none"> <li>• CASQA</li> <li>• City of Carlsbad</li> <li>• City of Coronado</li> <li>• City of Encinitas</li> <li>• City of Escondido</li> <li>• City of Solana Beach</li> <li>• City of Vista</li> <li>• City of San Diego</li> <li>• County of San Diego</li> <li>• County of Orange</li> <li>• Unified Port of San Diego</li> </ul>	The San Diego Water Board agrees the requirements regarding monitoring and reporting on an annual basis should be clarified in the Tentative Order. A footnote was added to Finding 11 describing the minimum monitoring and reporting requirements that will be considered for inclusion in the Regional MS4 Permit upon reissuance. The footnote references language from the Trash Amendments at Appendix D: Chapter III, section L.5 of the Ocean Plan and Appendix E: Chapter IV, section A.6 of the ISWEBE Plan.

Comment No.	Tentative Order Location/Subject	Comment Summary	Submitted By	San Diego Water Board Response
24	Finding 13 & Directive A.2 Watershed vs. Jurisdictional Approach	<ul style="list-style-type: none"> <li>• A watershed approach to implementing the Trash Amendments was not the intent of the State Water Board;</li> <li>• Trash may not be the most important priority in every watershed;</li> <li>• Watershed scale presents challenges with respect to the determination of Full Capture System Equivalency, which is determined on a jurisdictional basis using local land use trash generation rates;</li> <li>• Flexibility should be given to MS4 permittees to include requirements of Trash Amendments into Water Quality Improvement Plans, jurisdictional runoff management plans, or both.</li> </ul>	<ul style="list-style-type: none"> <li>• City of Carlsbad</li> <li>• City of Coronado</li> <li>• City of Encinitas</li> <li>• City of Escondido</li> <li>• City of Solana Beach</li> <li>• City of Vista</li> <li>• City of San Diego</li> <li>• County of San Diego</li> <li>• County of Orange</li> <li>• Riverside County Flood Control and Water Conservation District</li> <li>• Unified Port of San Diego</li> <li>• Upper Santa Margarita River MS4 Permittees</li> </ul>	The San Diego Water Board agrees with the commenters and modified the Tentative Order at Finding 13 and Directive A.2 (renumbered to Directive A.3) to allow MS4 permittees the option of including trash implementation plans and monitoring and reporting either in the Water Quality Improvement Plans, the MS4 permittees' jurisdictional runoff management plans (JRMPs), or both.
25	Directive A.2	The Tentative Order does not provide adequate information regarding the types of treatment	<ul style="list-style-type: none"> <li>• City of San Diego</li> </ul>	Appendices to both the Ocean Plan and ISWEBE Plan define terms, including "treatment controls" and "institutional

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	<i>Acceptable Types of Controls</i>	controls and institutional controls that would be acceptable for use.		controls.” Both definitions include examples of the types of controls that would be acceptable. Additionally, the State Water Board will issue a list of “certified” full capture devices that are treatment controls and considered acceptable for use.
26	Directive A.2.d <i>Assessment of Controls vs. Plans</i>	The Tentative Order implies that the monitoring and assessment of <i>implementation plans</i> is required rather than monitoring and assessment of efficacy of <i>implementation controls</i> .	<ul style="list-style-type: none"> <li>• City of Solana Beach</li> </ul>	The San Diego Water Board agrees and has modified Directive A.2.d (renumbered to A.3.d) of the Tentative Order as suggested by the commenter.
27	Directive A.2.e <i>Equivalent Alternate Land Uses</i>	The Tentative Order incorrectly links the equivalent alternate land uses with the Track 2 compliance option. Priority land uses/equivalent alternate land uses are only relevant if a MS4 permittee selects the Track 1 compliance option.	<ul style="list-style-type: none"> <li>• CASQA</li> <li>• City of Carlsbad</li> <li>• City of Encinitas</li> <li>• City of Escondido</li> <li>• City of Vista</li> <li>• City of San Diego</li> <li>• County of San Diego</li> <li>• County of Orange</li> <li>• Riverside County Flood Control and Water Conservation District</li> </ul>	The San Diego Water Board disagrees that the Tentative Order incorrectly links the equivalent alternative land uses with the Track 2 compliance option for the reasons cited in the Response to Comment 18, therefore, no change was made to the Tentative Order.

Comment No.	Tentative Order Location/Subject	Comment Summary	Submitted By	San Diego Water Board Response
			<ul style="list-style-type: none"> <li>• Unified Port of San Diego</li> <li>• Upper Santa Margarita River MS4 Permittees</li> </ul>	
28	<p>Directive A.2.f <i>Compliance Schedule Inconsistent with Trash Amendments</i></p>	<p>The Tentative Order includes language that MS4 permittees include a compliance time schedule based on the “shortest practicable time” to achieve full compliance with the discharge prohibition; however, the Trash Amendments do not include similar language. It is improper to require a compliance schedule through a 13267/13383 Order and it is more appropriately included in the implementing permit.</p>	<ul style="list-style-type: none"> <li>• CASQA</li> <li>• City of Carlsbad</li> <li>• City of Encinitas</li> <li>• City of Escondido</li> <li>• City of San Diego</li> <li>• City of Solana Beach</li> <li>• City of Vista</li> <li>• County of Orange</li> <li>• County of San Diego</li> <li>• Riverside County Flood Control and Water Conservation District</li> <li>• Unified Port of San Diego</li> <li>• Upper Santa Margarita</li> </ul>	<p>The San Diego Water Board disagrees that Directive A.2.f, requiring submission of a time schedule, should be removed from the Tentative Order (the word “compliance” has been deleted). A time schedule is described in Appendix D of the Ocean Plan at Chapter III section L.4.a.(2) and (3), and Appendix E of the ISWEBE Plan at Chapter IV Section A.5.a.(2) and (3). A schedule will be included in the implementing Regional MS4 Permit upon reissuance. MS4 permittees should include schedules during plan development in order to ensure interim milestones and the final compliance date, as specified in the Trash Amendments, are met. This requirement was added to the Track 1 compliance pathway (not just Track 2 implementation plans). The language to achieve full compliance with the discharge prohibition based on the “shortest practicable time” has been removed from the Order to be consistent with the language of the Trash Amendments.</p>

Comment No.	Tentative Order Location/Subject	Comment Summary	Submitted By	San Diego Water Board Response
			River MS4 Permittees	
29	Directive A.3 <i>Reporting of Coordination with Caltrans</i>	The requirement to coordinate with Caltrans should not necessitate a new reporting requirement.	<ul style="list-style-type: none"> <li>• City of Carlsbad</li> <li>• City of Coronado</li> <li>• City of Encinitas</li> <li>• City of Escondido</li> <li>• City of Lake Forest</li> <li>• City of San Clemente</li> <li>• City of San Juan Capistrano</li> <li>• City of Santee</li> <li>• City of Vista</li> <li>• County of San Diego</li> <li>• Riverside County Flood Control and Water Conservation District</li> <li>• San Bernardino County</li> <li>• Unified Port of San Diego</li> </ul>	The San Diego Water Board disagrees that MS4 permittees should not have to describe their plans to coordinate efforts to install, operate, and maintain full capture systems, multi-benefit projects, other treatment controls, and/or institutional controls in significant trash generating areas and/or priority land use areas. The San Diego Water Board recognizes that coordination with Caltrans may not be relevant for each permittee, therefore Directive A.3 (renumbered as Directive A.5) states that the description of plans to coordinate efforts must be included "as applicable." Permittees should coordinate as needed with Caltrans and other stakeholders to ensure compliance with the requirements of the Trash Amendments by the final compliance date.

Comment No.	Tentative Order Location/Subject	Comment Summary	Submitted By	San Diego Water Board Response
			<ul style="list-style-type: none"> <li>• Upper Santa Margarita River MS4 Permittees</li> </ul>	
30	New Directive related to Finding 11 <i>Monitoring and Reporting Clarification</i>	The Tentative Order should have a clear Directive describing the monitoring and reporting required by the MS4 permittees.	<ul style="list-style-type: none"> <li>• City of Carlsbad</li> <li>• City of Encinitas</li> <li>• City of Escondido</li> <li>• City of Vista</li> <li>• County of San Diego</li> <li>• Unified Port of San Diego</li> </ul>	The San Diego Water Board disagrees that the Tentative Order should describe annual monitoring and reporting requirements. The specific monitoring and reporting requirements will be considered for inclusion in the Regional MS4 Permit during the San Diego Water Board's process to reissue the Permit. The minimum requirements to be considered for inclusion are dependent on MS4 permittees' choice of compliance with Track 1 or Track 2, and are described in the Trash Amendments at Appendix D to the Ocean Plan, Chapter III, section L.5 and Appendix E to the ISWEBE Plan, Chapter IV section A.6.

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**Subject:** Order No. R9-2017-0077, Implementation of Trash Amendments  
**Date:** Friday, June 2, 2017 10:20:49 AM  
**Attachments:** [2017-0702 Final Trash Order R9-2017-0077.pdf](#)  
[2017-0522 Final Tentative Trash Order redline.pdf](#)  
[2017-0702 Trash Order Response to Comments.pdf](#)  
[2017-0702 Cvr Ltr Order R9-2017-0077.pdf](#)  
[E-submittal requirements.pdf](#)  
[image003.jpg](#)

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Dear San Diego Region MS4 Copermittees:

Today the San Diego Water Board is issuing **Order No. R9-2017-0077, *An Order Directing the Owners and Operators of Phase I Municipal Separate Storm Sewer Systems (MS4s) Draining the Watersheds Within the San Diego Region to Submit Reports Pertaining to the Control of Trash in Discharges from Phase I MS4s to Ocean Waters, Inland Surface Waters, Enclosed Bays, and Estuaries in the San Diego Region.*** Order No. 2017-0077 implements the statewide amendments made in April 2015 by the State Water Resources Control Board to the *Water Quality Control Plan for Ocean Waters of California* (Ocean Plan) and the *Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (ISWEBE Plan). The amendments to the Ocean Plan and ISWEBE Plan address the impacts of trash to the surface waters of California.

Order No. R9-2017-0077 is the finalized version of Tentative Order No. R9-2016-0205, which was released for public review and comment in November 2016. Please find attached the following 5 documents:

- Order No. R9-2017-0077;
- Transmittal Letter addressed to San Diego Region MS4 permittees;
- Revised Tentative Order with revisions shown in redline text;
- Response to Comments Report; and
- Electronic submittal instructions.

In short, Order No. R9-2017-0077 requires MS4 permittees to submit written notice indicating whether Track 1 or Track 2 control measures will be used to comply with the trash discharge prohibition within three months. If Track 1 is selected, the Order requires MS4 permittees to submit a jurisdictional map indicating 1) priority land uses, 2) the MS4 permittees' storm drain network, and 3) proposed locations for installation of full capture devices and associated drainage areas. If Track 2 is selected, the Order requires MS4 permittees to submit a trash reduction implementation plan. Jurisdictional maps and implementation plans must be submitted to the San Diego Water Board within eighteen months. The attached documents are also available on our website here:

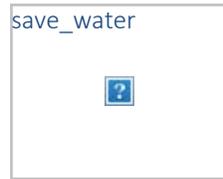
[http://www.waterboards.ca.gov/sandiego/water\\_issues/programs/stormwater/trash\\_amendments.shtml](http://www.waterboards.ca.gov/sandiego/water_issues/programs/stormwater/trash_amendments.shtml).

Thanks to everyone who submitted comments on the Tentative Order. Please feel free to contact me with any questions.

Sincerely,

*Christina Arias, PE*

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**To:** [Arias\\_Christina@Waterboards](mailto:Arias_Christina@Waterboards)  
**Subject:** San Diego Water Board issues Order implementing Trash Amendments  
**Date:** Friday, June 2, 2017 2:03:14 PM  
**Attachments:** [image003.jpg](#)  
[2017-0702 Final Trash Order R9-2017-0077.pdf](#)  
[2017-0702 Cvr Ltr Order R9-2017-0077.pdf](#)

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 This is a message from the California Regional Water Quality Control Board, San Diego Region (9).

Dear San Diego Region Storm Water Stakeholder:

Today the San Diego Water Board issued **Order No. R9-2017-0077, An Order Directing the Owners and Operators of Phase I Municipal Separate Storm Sewer Systems (MS4s) Draining the Watersheds Within the San Diego Region to Submit Reports Pertaining to the Control of Trash in Discharges from Phase I MS4s to Ocean Waters, Inland Surface Waters, Enclosed Bays, and Estuaries in the San Diego Region.** Order No. 2017-0077 implements the statewide amendments made in April 2015 by the State Water Resources Control Board to the *Water Quality Control Plan for Ocean Waters of California* (Ocean Plan) and the *Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (ISWEBE Plan). The amendments to the Ocean Plan and ISWEBE Plan address the impacts of trash to the surface waters of California.

Order No. R9-2017-0077 (attached with Transmittal Letter to the San Diego Region MS4 Permittees) is the finalized version of Tentative Order No. R9-2016-0205, which was released for public review and comment in November 2016.

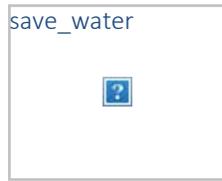
In short, Order No. R9-2017-0077 requires MS4 permittees to submit written notice indicating whether Track 1 or Track 2 control measures will be used to comply with the trash discharge prohibition within three months. If Track 1 is selected, the Order requires MS4 permittees to submit a jurisdictional map indicating 1) priority land uses, 2) the MS4 permittees' storm drain network, and 3) proposed locations for installation of full capture devices and associated drainage areas. If Track 2 is selected, the Order requires MS4 permittees to submit a trash reduction implementation plan. Jurisdictional maps and implementation plans must be submitted to the San Diego Water Board within eighteen months.

Order No. R9-2017-0077, the Transmittal Letter, revised Tentative Order R9-2016-0205, and a Response to Comments Report is available for download from our website here:  
[http://www.waterboards.ca.gov/sandiego/water\\_issues/programs/stormwater/trash\\_amendments.shtml](http://www.waterboards.ca.gov/sandiego/water_issues/programs/stormwater/trash_amendments.shtml).

Have a nice weekend and please contact me with any questions.

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You are currently subscribed to reg9\_sandiegoco\_ms4permit as: [Christina.Arias@waterboards.ca.gov](mailto:Christina.Arias@waterboards.ca.gov).

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**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.

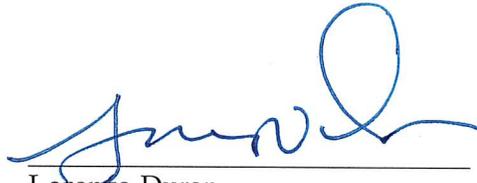
On January 30, I served the:

- **Administrative Record on Order No. R9-2017-0077, Sections A. 1, A. 3 and A. 5, California Regional Water Quality Control Board, San Diego Region**

*California Regional Water Quality Control Board, San Diego Region,  
Order No. R9-2017-0077, Sections A.1, A.3, and A.5, 17-TC-05  
City of San Juan Capistrano and County of San Diego, Claimants*

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 30, 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-05

**Matter:** California Regional Water Quality Control Board, San Diego Region, Order No. R9-2017-0077, Sections A.1, A.3, and A.5

**Claimants:** City of San Juan Capistrano  
County of San Diego

### 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.)

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