

Before the  
STATE OF CALIFORNIA  
STATE WATER RESOURCES CONTROL BOARD  
1001 I Street, 22nd Floor  
Sacramento, CA 95814

In the Matter of Petition: )  
 )  
City of Laguna Niguel for Review of Action by the )  
California Regional Water Quality Control Board, ) Water Code § 13320(a)  
San Diego Region, in Adopting Order No. R9- ) 23 C.C.R. § 2050 *et seq.*  
2013-0001, NPDES Permit No. CAS0109266 )  
 )  
 )

To: Jeannette L. Bashaw, Legal Analyst  
For transmission to: Office of Chief Counsel

**PETITION FOR REVIEW**

**CITY OF LAGUNA NIGUEL**

Terry E. Dixon  
*City Attorney*

City of Laguna Niguel  
30111 Crown Valley Parkway  
Laguna Niguel, California 92677  
tdixon@cityoflagunaniguel.org  
(949) 362-4300

June 7, 2013

This Petition for Review is submitted on behalf of the City of Laguna Niguel ("Petitioner") pursuant to California Water Code Section 13320 and California Code of Regulations ("CCR") Title 23, Section 2050, for review of Order No. R9-2013-0001, NPDES Permit No. CAS0109266, which was adopted by the California Regional Water Quality Control Board, San Diego Region ("Regional Board") on May 8, 2013.

**I. Names, Addresses and Telephone Numbers of Petitioner**

Petitioner is the City of Laguna Niguel ("City"). All written correspondence and other communications regarding this matter should be addressed as follows:

- 1) Rod Foster, City Manager  
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Laguna Niguel, California 92677  
  
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Email: [rfoster@cityoflagunaniguel.org](mailto:rfoster@cityoflagunaniguel.org)
  
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With a copy to Petitioner's counsel:

- 4) Terry E. Dixon, City Attorney  
30111 Crown Valley Parkway  
Laguna Niguel, California 92677  
  
Telephone: 949-362-4300  
Email: [tdixon@cityoflagunaniguel.org](mailto:tdixon@cityoflagunaniguel.org)

**II. Specific Action or Inaction of the Regional Board for Which Review Is Sought**

Petitioner requests the State Water Resources Control Board ("State Board") to review the Regional Board's Order No. R9-2013-0001 issuing NPDES Permit No. CAS0109266 ("Permit"). A copy of the Regional Board's Order is attached as Exhibit A.

**III. Date of the Regional Board's Action**

The Regional Board adopted the Permit on May 8, 2013.

**IV. Statement of Reasons the Action Was Inappropriate or Improper**

**A. Preliminary Statement**

The Petitioner wishes to note that the Permit, while adopted as a final action by the Regional Board on May 8, 2013, is not presently applicable to the Petitioner. The Petitioner currently is subject to Order R9-2009-0002 ("2009 Permit"), which is applicable only to the South Orange County Permittees.<sup>1</sup> The 2009 Permit expires on or about December 16, 2014, and under its terms, the Petitioner is required to file a Report of Waste Discharge ("ROWD") as an application for a new NPDES permit covering discharges from the municipal separate storm sewer systems ("MS4") operated by the Petitioner. The Petitioner may voluntarily elect to be subject to the Permit prior to the expiration of the 2009 Permit pursuant to Provision F.6 of the Permit.

The Petitioner, in its ROWD, has the full right to request changes in all or any part of the Permit, or to seek coverage under a specific Orange County permit. The Petitioner nevertheless reserves its right to request such changes or such coverage in the filing of the ROWD.

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<sup>1</sup> The South Orange County Permittees are the City of Aliso Viejo, the City of Dana Point, the City of Laguna Beach, the City of Laguna Hills, the City of Laguna Niguel, the City of Laguna Woods, the City of Lake Forest, the City of Mission Viejo, the City of Rancho Santa Margarita, the City of San Clemente, the City of San Juan Capistrano, the County of Orange and the Orange County Flood Control District.

Nevertheless, because the adoption of the Permit is a final action of the Regional Board pursuant to Water Code § 13320(a), the Petitioner brings this Petition.

**B. Issues of Concern**

The Regional Board failed to act in accordance with relevant governing law, and acted arbitrarily and capriciously in violation of state and federal law. Specifically, but without limitation, the Regional Board acted inappropriately and improperly by adopting the Permit because:

1. The Regional Board did not have authority to adopt a region-wide Permit covering the Petitioner;
2. The Permit is inconsistent with the Maximum Extent Practicable ("MEP") standard, unlawfully requires compliance with numeric standards, and contains no Receiving Water Limitation compliance mechanism;
3. The Permit's hydromodification and low impact development requirements are in conflict with applicable federal and state laws;
4. The Permit improperly deletes categories of exempt non-stormwater discharges;
5. The Permit does not require the discharge of all pollutants from the MS4 be subject to MEP;
6. The Permit unlawfully presumes that discharges from MS4s always contain pollutants;
7. The Permit unlawfully classifies natural waters as part of the MS4 and that a MS4 can be classified as both a MS4 and receiving water;
8. The Permit unlawfully shifts all responsibility to the MS4s for all discharges not prohibited;

9. The Permit Is More Stringent Than Federal Law and does not contain the required economic analysis and the current economic analysis is inadequate;
10. The Regional Board has no Legal Ability to Determine Whether a Particular Mandate is Unfunded;
11. The Permit unlawfully requires the reduction or elimination of all non-stormwater discharges;
12. The Permit improperly intrudes on local land use authority in violation of 10<sup>th</sup> Amendment and the State Constitution;
13. The Permit improperly incorporates Total Maximum Daily Load wasteload allocations;
14. The Permit's action level requirements violate federal and state law;
15. The Permit's retrofitting requirement imposes potentially significant costs without any corresponding gains in water quality;
16. The Permit does not allow exemptions for flood control projects; and
17. The Petitioner was not afforded basic constitutional due process.

These issues were brought to the Regional Board's attention in writing and oral comments provided to the Board during the Focused Meeting Workshops, written comments submitted during the Permit adoption process, and through oral testimony at the hearing.

These comments are attached as exhibits to the Petitions for Review filed by the County of Orange, the Orange County Flood Control District and other South County Permittees. The written comments filed by Petitioner City of Laguna Niguel is attached hereto as Exhibit B.<sup>2</sup>

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<sup>2</sup> Petitioners include as additional issues requiring review by the State Board those issues raised in Petitioner's written comments, but not specifically mentioned herein, to the extent that such comments were not addressed by the Regional Board in post-release modifications to the Permit.

**V. How the Petitioner Is Aggrieved**

Petitioner is a permittee under the Permit. It, along with the other permittees, are responsible for compliance with the Permit. Failure to comply with the Permit exposes Petitioner to liability under the federal Clean Water Act ("CWA") and the California Porter-Cologne Water Quality Control Act ("Porter-Cologne" or "Water Code"), and subjects it to potential administrative violations and lawsuits by the Regional Board, State Board and/or third parties. The Petitioner moreover is aggrieved through being forced to divert scarce resources to comply with various Permit requirements that, as alleged herein, have no basis in fact or law, have not been examined for their financial and other impacts under the Porter-Cologne Act, and which will reduce the Petitioner's ability to work toward compliance with the requirements of the CWA and the Porter-Cologne Act. Finally, the Petitioner is aggrieved because in certain aspects, the Permit's provisions could in some cases lead to worse water quality results due to the mandating of ineffective BMPs, diversion of resources and other issues.<sup>3</sup>

**VI. Action Petitioner Requests the State Water Board to Take**

At this time, the Petitioner requests that this Petition be placed into abeyance, pursuant to 23 Cal. Code Reg. § 2050.5(d). This request is based on the fact that the issues raised in this Petition may be resolved or rendered moot by subsequent actions and administration of the Permit by the Regional Board, and/or developments in other jurisdictions. If, however, Petitioner requests that the Petition be taken out of abeyance, the Petitioner will request the State Board address some or all of the issues raised in the Petition, and that the State Board hold a

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<sup>3</sup> Petitioner may provide the State Board with additional information concerning the manner in which it has been aggrieved by the Regional Board's action in adopting the Permit. Any such additional information will be submitted to the State Board as an amendment to this Petition.

public hearing on such issues and amend the Permit to address the deficiencies raised in the Petition and supplemental pleadings.

**VII. A Statement in Support of Legal Issues Raised in the Petition**

Petitioner, for its Statement of Points and Authorities in support of the legal issues raised in this petition and the issues raised in Section IV above, incorporates by reference as though set forth herein in this Petition the Memorandum of Points and Authorities in Support of Petition for Review filed by the County of Orange and the Orange County Flood Control District in support of their Petition for Review of California Regional Water Quality Control Board, San Diego Region, Order No. R9-2013-0001, NPDES Permit No. CAS0109266, which was adopted by the Regional Board on May 8, 2013. A copy of the Points and Authorities is attached hereto as Exhibit C.

Petitioner reserves the ability to submit a supplemental statement of Points and Authorities to the State Board at such time as the Petitioner may request that the State Board take the Petition out of abeyance and review and act on the Petition. Furthermore, a copy of the record and a complete transcript of the hearing was not available at the time this Petition was filed, and therefore, the Petitioner reserves the right to file a supplemental Memorandum of Points and Authorities once the full record and transcript of the hearings to adopt the Permit become available.<sup>4</sup>

**VIII. Notice to Regional Board**

A true and correct copy of this petition was delivered by electronic mail to the Regional

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<sup>4</sup> Petitioner may also provide the State Board with additional reasons why the Permit is inappropriate and/or improper. Any such additional reasons will be submitted to the State Board as an amendment to this Petition. Petitioner also may dispute certain findings that form the basis of the Permit, which similarly will be detailed in any amendment to this Petition.

Board on June 7, 2013. A true and correct copy of this petition was also mailed via Federal Express on June 7, 2013 to the Regional Board.

**IX. Issues Previously Raised**

All of the substantive issues and objections raised herein were presented to the Regional Board during the 2012 Focused Meeting Workshops and the period for public comment on the Permit. Petitioner submitted formal written comments on January 11, 2013.

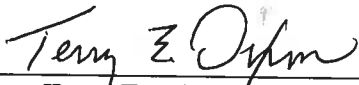
Petitioner presented testimony before the Regional Board during public hearings on April 10-11, 2013 and May 8, 2013.

Also, the South County Permittees provided extensive written comments on January 11, 2013, March 21, 2013, and March 26, 2013. South County Permittees submitted written correspondence to the Regional Board throughout the 2012 Focused Meeting Workshops. South County Permittees presented testimony before the Regional Board during Regional Board Workshops on November 13, 2012, and December 11, 2012, and at public hearings on April 10-11, 2013, and May 8, 2013.

**X. Conclusion**

For the reasons stated herein, and to be submitted in supplemental pleadings, Petitioner has been aggrieved by the Regional Board's action in adopting the Permit. Accordingly, until such time as Petitioner requests the State Board to consider this Petition, Petitioner requests the State Board hold this Petition in abeyance.

Respectfully submitted,

  
\_\_\_\_\_  
Terry E. Dixon



PROOF OF SERVICE BY EMAIL

I am over 18 years of age, not a party to this action and employed in Orange County, California at 30111 Crown Valley Parkway, Laguna Niguel, California 92677.

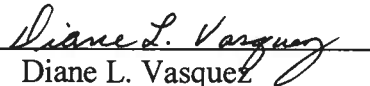
On June 7, 2013, at approximately 3:15 p.m., I served by email a copy of:

**PETITION FOR REVIEW  
RE: CITY OF LAGUNA NIGUEL FOR REVIEW OF ACTION  
BY THE CALIFORNIA REGIONAL WATER QUALITY  
CONTROL BOARD, SAN DIEGO REGION, IN ADOPTING  
ORDER NO. R9-2013-0001, NPDES PERMIT NO. CAS0109266  
(With Permit) and EXHIBIT C, COUNTY OF ORANGE AND  
ORANGE COUNTY FLOOD CONTROL DISTRICT  
MEMORANDUM OF POINTS AND AUTHORITIES IN  
SUPPORT OF PETITION FOR REVIEW**

on the following:

State Water Resources Control Board  
Office of Chief Counsel  
Jeannette L. Bashaw, Legal Analyst  
1001 "T" Street, 22nd Floor  
Sacramento, CA 95814  
Email: [jbashaw@waterboards.ca.gov](mailto:jbashaw@waterboards.ca.gov)

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 June 7, 2013.

  
Diane L. Vasquez

PROOF OF SERVICE

I am over 18 years of age, not a party to this action and employed in Orange County, California at 30111 Crown Valley Parkway, Laguna Niguel, California 92677.

I am readily familiar with the practice of this office for collection and processing of correspondence for next business day delivery by Federal Express, and correspondence is deposited with Federal Express that same day in the ordinary course of business.

Today I served the attached:

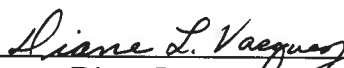
**PETITION FOR REVIEW  
RE: CITY OF LAGUNA NIGUEL FOR REVIEW OF ACTION  
BY THE CALIFORNIA REGIONAL WATER QUALITY  
CONTROL BOARD, SAN DIEGO REGION, IN ADOPTING  
ORDER NO. R9-2013-0001, NPDES PERMIT NO. CAS0109266  
and MEMORANDUM OF POINTS AND AUTHORITIES IN  
SUPPORT OF PETITION FOR REVIEW (With Exhibits)**

by causing a true and correct copy of the above to be delivered by Federal Express from Laguna Niguel, California in sealed boxes with all fees prepaid, addressed as follows:

State Water Resources Control Board  
Office of Chief Counsel  
Jeannette L. Bashaw, Legal Analyst  
1001 "I" Street, 22nd Floor  
Sacramento, CA 95814

Mr. David W. Gibson  
Executive Officer  
California Regional Water Quality Control Board  
San Diego Region  
9174 Sky Park Court, Suite 100  
San Diego, CA 92123

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 June 7, 2013.

  
\_\_\_\_\_  
Diane L. Vasquez

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

**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**

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	

After the San Diego Water Board receives and considers the Orange County Copermittees' Report of Waste Discharge and makes any necessary changes to this Order, the Orange County Copermittees in [Table 1b](#) will become subject to waste discharge requirements set forth in this Order after expiration of Order No. R9-2009-0002, NPDES No. CAS0108740 on or after December 16, 2014.

**Table 1b. Orange County Copermittees**

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 Lake Forest	Orange County Flood Control District
City of Mission Viejo	

After the San Diego Water Board receives and considers the Riverside County Copermittees' Report of Waste Discharge and makes any necessary changes to this Order, the Riverside County Copermittees in Table 1c will become subject to waste discharge requirements set forth in this Order after expiration of Order No. R9-2010-0016, NPDES No. CAS0108766 on or after November 10, 2015.

**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 Orange County Copermittees and Riverside County Copermittees may become subject to the requirements of this Order at a date earlier than the expiration date of their current Orders subject to the conditions described in Provision F.6 of this Order if the Copermittees in the respective county receive a notification of coverage from the San Diego Water Board.

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>
This Order will become effective on:	<b>June 27, 2013</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.

  
 David W. Gibson  
 Executive Officer

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Attachment B - Standard Permit Provisions and General Provisions .....B-1

Attachment C - Acronyms, Abbreviations and Definitions ..... C-1

Attachment D - Jurisdictional Runoff Management Program Annual Report Form ..... D-1

Attachment E - Specific Provisions for Total Maximum Daily Loads Applicable to  
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Attachment F - Fact Sheet / Technical Report for Order No. R9-2013-0001 .....F-1

## 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 Copermittees 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 Copermittees and San Diego Water Board.

The federal regulations make it clear that the Copermittees 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 Copermittees 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.
- 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 adopted by the San Diego Water Board and approved by USEPA as of the time this Order is issued. 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 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 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 April 21, 2005 and it became effective on February 14, 2006. 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.

**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.

#### 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 Orange County and Riverside County Copermittees are not immediately covered by the waste discharge requirements in this Order. The San Diego Water Board understands that each municipality is unique although the Counties share watersheds and/or geographical boundaries. The Order will continue to use the Report of Waste Discharge process prior to initially making Orange County or Riverside County Copermittees subject to the requirements of this Order.

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. This requirement is set forth in the Orange County Copermittees' and Riverside County Copermittees' currently effective permits at Provisions K.2.b and K.2.c, respectively. The Orange County Permit, Order No. R9-2009-0002 (NPDES No. CAS0108740) expires on December 16, 2014 and the Riverside County MS4 Permit, Order No. R9-2010-0016 (NPDES No. CAS0108766) expires on November 10, 2015.

Unless the Orange County or Riverside County Copermittees apply for and receive early coverage under this Order, the Orange County Copermittees' and the Riverside County Copermittees' respective permits will be superseded by this Order upon expiration of their respective permits, subject to any necessary revisions to the requirements of this Order made after the San Diego Water Board considers their respective Reports of Waste Discharge through the public process provided in 40 CFR Part 124.

**29. 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.

**30. 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.

**31. 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.

**32. 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

**33. 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.

**34. Special Conditions for Areas of Special Biological Significance.** 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. State Water Board Resolution No. 2012-0012 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. The Special Protections contained in Attachment B to Resolution No. 2012-0012, applicable to these discharges, are hereby incorporated into this Order as if fully set forth herein.

#### *ADMINISTRATIVE FINDINGS*

**35. 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.

**36. 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.

**37. 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.

- 38. Public Notice.** In accordance with State and federal laws and regulations, the San Diego Water Board notified the Copermitees, 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.
- 39. Public Hearing.** 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. Details of the public hearing are provided in the Fact Sheet.
- 40. Effective Date.** This Order serves as an NPDES permit pursuant to CWA section 402 or amendments thereto, and becomes effective fifty (50) days after the date of its adoption, provided that the Regional Administrator, USEPA, Region IX, does not object to this Order.
- 41. 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, et seq. The State Water Board must receive the petition by 5:00 p.m., 30 days after the San Diego Water Board action, except that if the thirtieth day following the action 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.

**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. 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 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>1</sup>
  - (4) Priority pollutant criteria promulgated by the USEPA through the following:
    - (a) National Toxics Rule (NTR)<sup>2</sup> (promulgated on December 22, 1992 and amended on May 4, 1995), and
    - (b) California Toxics Rule (CTR).<sup>3,4</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>1</sup> State Water Board Resolution No. 68-16

<sup>2</sup> 40 CFR 131.36

<sup>3</sup> 65 Federal Register 31682-31719 (May 18, 2000), adding Section 131.38 to 40 CFR

<sup>4</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>5</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>5</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.

PROVISION A: PROHIBITIONS AND LIMITATIONS

A.4. Compliance with Discharge Prohibitions and Receiving Water Limitations

## 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<sup>1</sup></li> <li>- City of Dana Point<sup>1</sup></li> <li>- City of Laguna Beach<sup>1</sup></li> <li>- City of Laguna Hills<sup>1</sup></li> <li>- City of Laguna Niguel<sup>1</sup></li> <li>- City of Laguna Woods<sup>1</sup></li> <li>- City of Lake Forest<sup>1</sup></li> <li>- City of Mission Viejo<sup>1</sup></li> <li>- City of Rancho Santa Margarita<sup>1</sup></li> <li>- City of San Clemente<sup>1</sup></li> <li>- City of San Juan Capistrano<sup>1</sup></li> <li>- County of Orange<sup>1</sup></li> <li>- Orange County Flood Control District<sup>1</sup></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 Murrieta<sup>2</sup></li> <li>- City of Temecula<sup>2</sup></li> <li>- City of Wildomar<sup>2</sup></li> <li>- County of Riverside<sup>2</sup></li> <li>- County of San Diego<sup>3</sup></li> <li>- Riverside County Flood Control and Water Conservation District<sup>2</sup></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. The Orange County Copermittees will be covered under this Order after expiration of Order No. R9-2009-0002, or earlier if the Orange County Copermittees meet the conditions in Provision [F.6](#).
2. The Riverside County Copermittees will be covered under this Order after expiration of Order No. R9-2010-0016, or earlier if the Riverside County Copermittees meet the conditions in Provision [F.6](#).
3. The County of San Diego is not required to implement the requirements of Provision [B](#) for its jurisdiction within the Santa Margarita River Watershed Management Area until the Riverside County Copermittees have been notified of coverage under this Order. The County of San Diego is required to implement the requirements of Provisions [D](#), [F.3.b](#), and [Attachment E](#) until the Riverside County Copermittees have been notified of coverage under this Order.



## 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, 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>6</sup> into the Water Quality Improvement Plan. Numeric goals must be used to support 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

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<sup>6</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](#).

incorporate the following numeric goals in the Water Quality Improvement Plan:

- (a) Final numeric goals must be based on measurable 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 measurable 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 approval 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.\(2\)](#). 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.

#### **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](#).
- 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:

- PROVISION B: WATER QUALITY IMPROVEMENT PLANS
- B.3. Water Quality Improvement Goals, Strategies and Schedules
- B.4. Water Quality Improvement Monitoring and Assessment Program
- B.5. Iterative Approach and Adaptive Management Process

**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.

**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>7</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>8</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>7</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>8</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 <a href="#">Table C-3</a>			

## 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:

- Based on a minimum of not less than five samples for any 30-day period.
- The NAL is reached if more than 10 percent of total samples exceed 400 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” 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 <a href="#">Table C-3</a>			

## Abbreviations/Acronyms:

AMAL – average monthly action level  
 BP – Basin Plan water quality objective  
 COLD – cold freshwater habitat beneficial use  
 NTU – Nephelometric Turbidity Units  
 mg/L – milligrams per liter

MDAL – maximum daily action level  
 WARM – warm freshwater habitat beneficial use  
 MBAS – Methylene Blue Active Substances  
 MPN/100 ml – most probable number per 100 milliliters  
 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 Copermitttees; 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 Copermitttees 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>9</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>10</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>9</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>10</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 Copermitees 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>11</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>11</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)

## **D. MONITORING AND ASSESSMENT PROGRAM REQUIREMENTS**

The purpose of this provision is for the Copermitees to monitor and assess the impact on the conditions of receiving waters caused by discharges from the Copermitees' MS4s under wet weather and dry weather conditions. The goal of the monitoring and assessment program is to inform the Copermitees 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 Copermitees 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 Copermitees 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 Copermitees and the monitoring requirements of this Order may be utilized by the Copermitees. The Copermitees 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 Copermitees 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;
- (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 Copermittees 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 Copermittees 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>12</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>13</sup> and
  - (iii) Freshwater algae samples must be collected in accordance with the SWAMP Standard Operating Procedures for Collecting Algae Samples.<sup>14</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>15</sup> and

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<sup>12</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>13</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>14</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>15</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 (i.e. current and updated/new) methods must be used, or historical IBIs must be recalculated with the updated or new calculation method.

- (ii) An IBI for algae for each monitoring station where bioassessment monitoring was conducted, when a calculation method is developed.<sup>16</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>17</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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<sup>16</sup> When a calculation method is developed, IBIs must be calculated for all available and appropriate historical data.

<sup>17</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.

**(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

### PROVISION D: MONITORING AND ASSESSMENT PROGRAM REQUIREMENTS

- D.1. Receiving Water Monitoring Requirements
- D.2. MS4 Outfall Discharge Monitoring Requirements



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**

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> <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>18</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 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

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<sup>18</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.

- (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 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 Copermittees must monitor the wet weather MS4 outfall discharge monitoring stations in the Watershed Management Area at least once (1) per year. The Copermittees 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 Copermittees are listed responsible parties under the TMDLs in [Attachment E](#) to this Order,
  - (iv) Applicable SAL constituents, and
  - (v) The Copermittees may adjust the analytical monitoring required for the Watershed Management Area, if the Copermittees 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 Copermittees' MS4s 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 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 Copermittees; and
  - [c] Identify modifications necessary to increase the effectiveness of the water quality improvement strategies implemented by the Copermittees 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 Copermittees 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 Copermittees 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 Copermittees' 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 Copermittees 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 Copermittees 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.

## **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:

- (1) Discharges of non-storm water to the MS4 from the following categories must be addressed as illicit discharges unless the discharge has coverage under NPDES Permit No. CAG919001 (Order No. R9-2007-0034, or subsequent order) for discharges to San Diego Bay, or NPDES Permit No. CAG919002 (Order No. R9-2008-0002, or subsequent order) for discharges to surface waters other than San Diego Bay:
  - (1) Uncontaminated pumped ground water;
  - (2) Discharges from foundation drains;<sup>19</sup>
  - (3) Water from crawl space pumps; and
  - (4) Water from footing drains.<sup>19</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. CAG 679001 (Order No. R9-2010-0003 or subsequent order). 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>19</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>20</sup> and
  - (h) Discharges from footing drains.<sup>20</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 source of pollutants to receiving waters, must be addressed, at a minimum, as follows:

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<sup>20</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.

(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>21</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;
- (f) Minimization of soil compaction to landscaped areas;
- (g) Disconnection of impervious surfaces through distributed pervious areas;

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<sup>21</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.



- (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 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 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 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>22</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>23</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:

- (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>24</sup>

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<sup>22</sup> See "Managing Wet Weather with Green Infrastructure – Municipal Handbook: Green Streets" (USEPA, 2008).

<sup>23</sup> Ibid.

<sup>24</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

- (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>25</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;
  - [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.

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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>25</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.

- (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.\(4\)](#).

(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.\(2\)](#), provided that the Water Quality Improvement Plan includes the optional Watershed Management Area Analysis described in Provision [B.3.b.\(4\)](#). 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) 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.\(2\)](#) 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.\(2\)](#);
- (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.\(2\)](#);
- (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.

(b) 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) onsite, and is subject to the requirements described in Provisions E.3.c.(3)(a)(ii)-(viii).

(c) 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.

(d) 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). 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>26</sup> pursuant to Provision [F.2.b](#). Until the Copermittee has updated its BMP Design Manual with the

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<sup>26</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.

requirements of Provisions [E.3.a-c](#), the Copermittee must continue implementing its current BMP Design Manual. Unless directed otherwise by the San Diego Water Board, the Copermittee must implement the BMP Design Manual within 180 days of completing the update. The update of the BMP Design Manual 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 for all Priority Development Project applications that have not received prior lawful approval by the Copermittee by the time the BMP Design Manual is updated pursuant to Provision E.3.d, the requirements of Provision E.3 are implemented. For project applications that have received prior lawful approval before the BMP Design Manual is updated pursuant to Provision E.3.d, the Copermittee may allow previous land development requirements to apply.
- (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 2012-0006-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>27</sup>
    - (ii) Roads, streets, and highways;
    - (iii) Parking facilities;
    - (iv) Municipal airfields;
    - (v) Parks and recreation facilities;
    - (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;

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<sup>27</sup> The inventory may refer to the MS4 map required to be maintained pursuant to Provision [E.2.b.\(1\)](#).

- (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>28</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)

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<sup>28</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).

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
- (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
- (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 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 [Nonfilers\\_R9@waterboards.ca.gov](mailto:Nonfilers_R9@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.

## PROVISION E: JURISDICTIONAL RUNOFF MANAGEMENT PROGRAMS

## E.7. Public Education and Participation

## E.8. Fiscal Analysis

## **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) Subsequent updates to the BMP Design Manual 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) Updated BMP Design Manuals must be made available on the Regional Clearinghouse required pursuant to Provision [F.4](#) within 30 days of completing the update.

**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>29</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:
  - (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

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<sup>29</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.

- (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>30</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;
  - (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;

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<sup>30</sup> The Copermittees may develop, update and maintain the clearinghouse(s) of other Copermittees or agencies.

- (6) Monitoring data collected pursuant to Provision D for each Watershed Management Area must be uploaded to CEDEN,<sup>31</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>31</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

- a. The Orange County Copermittees and the Riverside County Copermittees are required to submit a complete Report of Waste Discharge pursuant to the requirements of their current Orders. The San Diego Water Board will review and consider the Reports of Waste Discharge to determine whether modification to this Order, pursuant to the requirements of Provision H, will be required prior to the Orange County Copermittees and/or Riverside County Copermittees obtaining coverage under this Order. The current Orders for the Orange County Copermittees and Riverside County Copermittees are rescinded upon the date of effective coverage under this Order except for enforcement purposes.
- b. 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:
  - (1) Names and addresses of the Copermittees;
  - (2) Names and titles of the primary contacts of the Copermittees;
  - (3) Proposed changes to the Copermittees' Water Quality Improvement Plans and the supporting justification;
  - (4) Proposed changes to the Copermittees' jurisdictional runoff management programs and the supporting justification;
  - (5) Any other information necessary for the re-issuance of this Order;
  - (6) Any information to be included as part of the Report of Waste Discharge pursuant to the requirements of this Order; and
  - (7) Any other information required by federal regulations for NPDES permit reissuance.

## 6. Application for Early Coverage

- a. The Orange County Copermittees, collectively, or Riverside County Copermittees, collectively, may apply for early coverage under this Order by submitting a Report of Waste Discharge [Form 200](#), with a written request for early coverage under this Order.
- b. The San Diego Water Board will review the application for early coverage. A notification of coverage under this Order will be issued to the Copermittees in the



respective county by the San Diego Water Board upon completion of the early coverage application requirements. The effective coverage date will be specified in the notification of coverage. The Copermittees in the respective county are authorized to have MS4 discharges pursuant to the requirements of this Order starting on the effective coverage date specified in the notification of coverage. The existing Order for the respective county is rescinded upon the effective coverage date specified in the notification of coverage except for enforcement purposes.

## **7. 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. The State Water Board determines that revisions are warranted, and the San Diego Water Board concurs that revisions are necessary to those provisions of the Order addressing compliance with water quality standards in the receiving water and/or those provisions of the Order establishing an iterative process for implementation of management practices to assure compliance with water quality standards in the receiving water;
  - b. An application for early coverage under this Order is received pursuant to Provision [F.6](#);
  - c. 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;
  - d. 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
  - e. 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.

5. The San Diego Water Board, after opportunity for public comment and a public hearing, will re-open and consider modifications to this Order when the Orange County Copermittees or the Riverside County Copermittees submit a complete Report of Waste Discharge pursuant to the requirements of their current Orders.

## **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**

### **Special Protections for Areas of Special Biological Significance, 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 firefighting 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 the reduction is the effective date of the Exception. The baseline for these determinations is the effective date of the Exception, and the

reductions must be achieved and documented within four (4) 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 using LID practices to infiltrate, use, or evapotranspire storm water runoff on-site.
- 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) Compliance with this section does not excuse violations of any term, prohibition, or condition 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 one year from the effective date of the Exception, the discharger shall submit a 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 time schedule to implement appropriate non-structural and structural controls (implementation schedule) to comply with these special conditions for inclusion in the discharger's SWMP or SWPPP, as appropriate to permit type.
- 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 four (4) 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 four (4) 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.

## **B. NONPOINT SOURCE DISCHARGES**

*[NOT INCLUDED]*

*[PROVISIONS FOR NONPOINT SOURCE DISCHARGES NOT APPLICABLE]*

## **II. ADDITIONAL REQUIREMENTS FOR PARKS AND RECREATION FACILITIES**

*[NOT INCLUDED]*

*[ADDITIONAL REQUIREMENTS FOR PARKS AND RECREATION FACILITIES NOT APPLICABLE]*

## **III. ADDITIONAL REQUIREMENTS – WATERFRONT AND MARINE OPERATIONS**

*[NOT INCLUDED]*

*[ADDITIONAL REQUIREMENTS FOR WATERFRONT AND MARINE OPERATIONS NOT APPLICABLE]*

## **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 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 analyzed during the same storm as receiving water samples 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 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 analyzed during the same storm as receiving water samples 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 analyzed during the same storm as receiving water samples 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 analyzed during the same storm as receiving water samples 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 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 at approximately the same time prior to (pre-storm) and during (or immediately after) the same storm (post storm). Reference water quality shall also be sampled and analyzed for the same constituents pre-storm and post-storm, during the same storms 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. 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 when annual 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.

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## 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 and NPDES permit becomes effective on the 50<sup>th</sup> day after 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. R9-2007-0001 upon the effective date of this Order, and supersedes Order Nos. R9-2009-0002 and R9-2010-0016 upon their expiration or earlier notice of coverage.
- (2) *Expiration.* This Order and NPDES permit expires five years after its 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.

**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 Copermitee;  
[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 Copermitee 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 Copermitee 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 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. (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 hard copy and one electronic copy of each report required under this Order to the San Diego Water Board, and one electronic copy to the USEPA.
- (5) The Copermittees must submit reports and provide notifications as required by this Order to the following:

EXECUTIVE OFFICER  
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

## 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 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 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.

**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, 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 bike lane 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 Copermitttees 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).

**ATTACHMENT D**

**JURISDICTIONAL RUNOFF MANAGEMENT PROGRAM  
ANNUAL REPORT FORM**

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**JURISDICTIONAL RUNOFF MANAGEMENT PROGRAM  
ANNUAL REPORT FORM  
FY \_\_\_\_\_**

<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   
NO

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   
NO

	Municipal	Commercial	Industrial	Residential
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   
NO

Has the Copermittee implemented a public participation program component that complies with Order No. R9-2013-0001? YES   
NO

**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   
NO

**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**

These provisions implement load allocations (LAs) and wasteload allocations (WLAs) of the Total Maximum Daily Loads (TMDLs) adopted by the San Diego Water Board and approved by 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)

## 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.\(3\)\(a\)](#):

**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 Copermittee 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 Copermittee 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 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 Copermitttee'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 Copermitttee 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 Copermitttees continue to implement the BMPs required under Specific Provision [3.b.\(2\)\(c\)](#), AND
  - (v) The Responsible Copermitttees 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 Copermitttee 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 Copermitees 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 Copermitees 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 Copermitee'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 Copermitee's MS4 outfalls; OR
- (c) There are no exceedances of the final effluent limitations under Specific Provision 4.b.(2)(b) at the Responsible Copermitee's MS4 outfalls; OR
- (d) The Responsible Copermitees 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 Copermitees continue to implement the BMPs required under Specific Provision 4.b.(2)(c), AND
  - (v) The Responsible Copermitees 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*

Watershed Management Area	Water Body	Segment or Area	Responsible Copermittees
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 Final Effluent Limitation	Wet Weather Final Effluent Limitation
Total Coliform	0.86x10 <sup>9</sup> MPN/day	3,254x10 <sup>9</sup> MPN/30days
Fecal Coliform	0.17x10 <sup>9</sup> MPN/day	112x10 <sup>9</sup> MPN/30days
<i>Enterococcus</i>	0.03x10 <sup>9</sup> MPN/day	114x10 <sup>9</sup> 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 Final Effluent Limitation	Wet Weather Final Effluent Limitation
Total Coliform	0 MPN/day	198x10 <sup>9</sup> MPN/30days
Fecal Coliform	0 MPN/day	8x10 <sup>9</sup> MPN/30days
<i>Enterococcus</i>	0 MPN/day	26x10 <sup>9</sup> MPN/30days

- (iii) Indicator bacteria percent load reductions from the Responsible Copermitees' 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 Copermitees' 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 Copermitee's 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 Copermitee's 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 Copermitee's 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 Copermitee 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>32</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>33</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>32</sup> Commonly referred to as AB 411 monitoring

<sup>33</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	-City of Aliso Viejo -City of Laguna Beach -City of Laguna Woods -County of Orange -Orange County Flood Control District
	Pacific Ocean Shoreline	Laguna Beach at Ocean Avenue	
		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	

**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	
		Can 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	

## 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>San Diego River</b>  Mission San Diego HSA (907.11) and Santee HSA (907.12)	Forrester Creek	lower 1 mile	-City of El Cajon -City of Santee -County of San Diego
	San Diego River	lower 6 miles	-City of El Cajon -City of La Mesa -City of San Diego -City of Santee -County of San Diego
	Pacific Ocean Shoreline	at San Diego River mouth at Dog Beach	-City of La Mesa -City of Lemon Grove -City of San Diego -County of San Diego - San Diego Unified Port District
<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
Fecal Coliform		
<i>Enterococcus</i>		

(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:

- During wet weather days, only the single sample maximum receiving water limitations are required to be achieved.
- During dry weather days, the single sample maximum and 30-day geometric mean receiving water 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.

**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:

- During wet weather days, only the single sample maximum receiving water limitations are required to be achieved.
- During dry weather days, the single sample maximum and 30-day geometric mean receiving water 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 Basin Plan.
- 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 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
<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	April 4, 2016	April 4, 2021
		at Heisler Park - North		
	Pacific Ocean Shoreline	at Main Laguna Beach	April 4, 2016	April 4, 2021
		Laguna Beach at Ocean Avenue		
		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	April 4, 2016	April 4, 2021
	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
		Aliso Creek Mouth		
<b>South Orange County</b>  Dana Point HSA (901.14)	Pacific Ocean Shoreline	Aliso Beach at West Street	April 4, 2016	April 4, 2021
		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
		Salt Creek Beach at Strand Road	April 4, 2017	April 4, 2021



**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
	San Juan Creek	lower 1 mile	April 4, 2018	April 4, 2021
	San Juan Creek Mouth	at mouth	April 4, 2016	April 4, 2021
<b>South Orange County</b> San Clemente HA (901.30)	Pacific Ocean Shoreline	at Poche Beach	April 4, 2016	April 4, 2021
		Ole Hanson Beach Club Beach at Pico Drain	April 4, 2016	April 4, 2021
		San Clemente City Beach at El Portal Street Stairs	April 4, 2017	April 4, 2021
		San Clemente City Beach at Mariposa Street		
		San Clemente City Beach at Linda Lane	April 4, 2016	April 4, 2021
		San Clemente City Beach at South Linda Lane	April 4, 2018	April 4, 2021
		San Clemente City Beach at Lifeguard Headquarters	April 4, 2017	April 4, 2021
		under San Clemente Municipal Pier		
		San Clemente City Beach at Trafalgar Canyon (Trafalgar Lane)	April 4, 2018	April 4, 2021
		San Clemente State Beach at Riviera Beach	April 4, 2016	April 4, 2021
San Clemente State Beach at Cypress Shores	April 4, 2017	April 4, 2021		
<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
<b>Carlsbad</b> San Marcos HA (904.50)	Pacific Ocean Shoreline	at Moonlight State Beach	April 4, 2016	April 4, 2021
<b>San Dieguito River</b> San Dieguito HU (905.00)	Pacific Ocean Shoreline	at San Dieguito Lagoon mouth	April 4, 2016	April 4, 2021

**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>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
<b>Mission Bay</b> Scripps HA (906.30)	Pacific Ocean Shoreline	La Jolla Shores Beach at El Paseo Grande	April 4, 2016	April 4, 2021
		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
	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

## (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	Water Body	Segment or Area	Interim Wet Weather Allowable Exceedance Frequencies		
			Total Coliform	Fecal Coliform	Enterococcus
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	38%	37%	39%
		at Heisler Park - North			
	Pacific Ocean Shoreline	at Main Laguna Beach			
		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	41%	41%	42%
	Aliso Creek	Entire reach (7.2 miles) and associated tributaries: - Aliso Hills Channel - English Canyon Creek - Dairy Fork Creek - Sulfur Creek - Wood Canyon Creek	41%	41%	42%
		Aliso Creek Mouth	at mouth	41%	41%
South Orange County  Dana Point HSA (901.14)	Pacific Ocean Shoreline	Aliso Beach at West Street	36%	36%	36%
		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> Scripps HA (906.30)	Pacific Ocean Shoreline	La Jolla Shores Beach at El Paseo Grande	37%	37%	37%	
		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) - Pacific Ocean Shoreline	7.20%	10.36%	41.74%	2.15%	0.73%	3.86%
Penasquitos	Miramar Reservoir HA (906.10) - Pacific Ocean Shoreline	48.25%	48.30%	49.71%	0.81%	1.00%	0.97%
Mission Bay	Scripps HA (906.30) - Pacific Ocean Shoreline	48.22%	48.21%	49.63%	8.16%	10.57%	9.41%
	Tecolote HA (906.50) - Tecolote Creek	47.26%	47.30%	49.47%	8.26%	10.24%	9.08% (9.04%)**
San Diego River	Mission San Diego HSA (907.11) and Santee HSA (907.12) - Pacific Ocean Shoreline - Forrester Creek (lower 1 mile) - San Diego River (lower 6 miles)	37.02%	34.72%	46.98%	19.07%	26.61%	21.37% (21.24%)**
San Diego Bay	Chollas HSA (908.22) - Chollas Creek	46.03%	46.08%	49.23%	8.91%	12.42%	10.73% (10.68%)**

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 Copermitttee'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>34</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 identification methods must be implemented to identify the sources

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<sup>34</sup> Commonly referred to as AB 411 monitoring

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>35</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.

(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

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<sup>35</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)].

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>36</sup> during the rainy season (i.e. October 1 through April 30).
- (iii) Samples collected from receiving water monitoring stations must be analyzed for fecal coliform and *Enterococcus* indicator bacteria.

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<sup>36</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)].

- (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;
  - [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 Copermitttee 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.

**ATTACHMENT F**

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

**FACT SHEET / TECHNICAL REPORT**

**FOR**

**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**

**MAY 8, 2013**

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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). 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 the Tentative Order 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 files applicable to the issuance of Order No. R9-2013-0001 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.swrcb.ca.gov/rwqcb9/water\\_issues/programs/stormwater/index.shtml](http://www.swrcb.ca.gov/rwqcb9/water_issues/programs/stormwater/index.shtml)

The documents referenced in this Fact Sheet and in Order No. R9-2013-0001 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****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

**Riverside County Copermittees**

- County of Riverside
  - City of Murrieta
  - City of Temecula
  - City of Wildomar
- Riverside County Flood Control and Water Conservation District

**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:

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 Copermitees, 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.

#### **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 Copermitees additional flexibility in addressing and managing storm water discharges. The First Term Permits contained the essentials of the 1990 regulations, and required the Copermitees 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 Copermitees 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 Copermittees 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 Copermittees 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 Copermittee 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, or current MS4 permits, began with the adoption of Order No. R9-2007-0001 issued to the Copermittees of San Diego County in January 2007. Order Nos. R9-2009-0002 and R9-2010-0016 were subsequently issued to the Copermittees of Orange County and Riverside County. The Fourth Term Permits continued to include more detailed requirements to be implemented by each Copermittee's jurisdictional runoff management program. The Fourth Term Permits also include 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 Copermittees. 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 Copermittee's jurisdiction and within the watersheds of the San Diego Region.

The Fourth Term Permits include 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 and Riverside County Permits will expire in December 2014 and November 2015, respectively. Issuing the Fifth Term Permits within five years for three counties under three different permits would require 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 has 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 Copermittees 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 Copermittees. The Third Term Permits began to become more specific about the minimum level of implementation required by the Copermittees. The Fourth Term Permits, or current 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 Copermittees. 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 Copermittees 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 Copermittees 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 must then expend much of its limited resources on reviewing more than 50 voluminous reports submitted annually by the Copermittees. The information currently reported by the Copermittees is 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 is further complicated by the inconsistencies among the requirements issued to the Orange County, San Diego County, and Riverside County Copermittees under three separate MS4 permits.

Under the Fourth Term Permits, the Copermittees must 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 must expend most of its limited resources reviewing reports, and developing permits instead of working directly with the Copermittees to identify solutions to problems causing impacts to water quality. This is an unsustainable course that will continue to demand more resources from the Copermittees and the San Diego Water Board, and would continue 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 Copermitees within the San Diego Region; and, 2) provide an MS4 permit with requirements that will allow the Copermitees 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 Copermitees in accordance with what they have identified as their highest priority water quality conditions. In other words, the Copermitees 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 Copermitees are given the responsibility of identifying their highest priority water quality conditions that they intend to address. The Copermitees will develop goals that can be used to measure and demonstrate progress or improvements toward addressing those priorities. In addition to the goals, the Copermitees 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 Copermitees 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 Copermitees 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 Copermitees 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 Copermitees will 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 will 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 the requirements of this Order. This Order also does not require the Copermittees to

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<sup>2</sup> LARWQCB, 2003. Review and Analysis of Budget Data Submitted by the Permittees for Fiscal Years 2000-2003. P. 2.

fully implement all requirements within a single permit term. Where appropriate, the Board has provided the Copermitees 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 Angeles Water Board estimated that average per household cost to implement the MS4 program in Los Angeles County was \$12.50.<sup>5</sup>

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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.

<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.

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 Diego Region to quantify the added value that surface waters with healthy water quality can provide.

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<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.

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 municipal separate storm sewer systems (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 exist 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 September 15, 2009. The Office of Administrative Law approved it on March 10, 2010. On October 8, 2010, USEPA approved the 2009 Ocean Plan. 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. The State Water Board Resolution No. 2012-0012 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. The Special Protections contained in Attachment B to State Water Board Resolution No. 2012-0012 applicable to these discharges are hereby incorporated in this Order as if fully set forth herein. 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 until it is demonstrated that any change in quality will be consistent with maximum benefit to the people of the State, will not unreasonably affect beneficial uses, and will not result in water quality less than that described in the San Diego Water Boards' policies. State Water Board Resolution No. 68-16 requires that discharges of waste be regulated to meet best practicable treatment or control to assure that pollution or nuisance will not occur and the highest water quality consistent with the maximum benefit to the people of the State be maintained.

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. Many of the water bodies within the area covered by this Order are of high quality. The Order requires the Copermitees to meet best practicable treatment or control to meet water quality standards. As required by 40 CFR 122.44(a), the Copermitees must comply with the "maximum extent practicable" technology-based standard set forth in CWA section 402(p) for discharges of pollutants in storm water from the MS4s.

Many of the waters within the area covered by this Order are impaired and 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 requires the Copermitees 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 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.

#### Anti-Backsliding Requirements

CWA sections 402(o) and 303(d)(4) and 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. All effluent limitations and other conditions in this Order are at least as stringent as the effluent limitations in the previous permits issued to the San Diego County Copermitees, the Orange County Copermitees and the Riverside County Copermitees.

#### 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 six (6) 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)). CWA 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 Copermitees 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 nonstormwater 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 discharges. Compliance is achieved through an iterative approach of continuous

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<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.”

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 Copermittees to establish the legal authority which authorizes or enables the Copermittees to prohibit illicit discharges to the MS4s. The federal regulations (40 CFR 122.26(d)(2)(vi)(B)(1)) require the Copermittees to “*implement and enforce an ordinance, order or similar means*” to prevent non-storm water discharges to their MS4s. Thus, the Copermittees 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 Copermittees’ MS4s is provided under the discussion for Provision [E.2](#).

Provision [A.1.d](#) was included to be consistent 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 Copermittees’ 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 Copermitttees 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>

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<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, as 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 Copermitee 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 Copermitees have the necessary storm water management programs and controls in place, and that they are modified by the Copermitees 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 Copermitees 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 Copermitees 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 Copermitees 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.

## B. Water Quality Improvement Plans

**Purpose:** Since 1990, the Copermitees 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 Copermitees 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 Copermitees 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 Copermitees 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 Copermitees. The Water Quality Improvement Plans will be implemented in the Watershed Management Area by the Copermitees 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 Copermitees' 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 Copermitees 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 Copermitees 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 are expected to be phased in as their respective NPDES municipal storm water permits expire. Because Order No. R9-2007-0001 expired in January 2012, the San Diego County Copermittees are covered under the Regional MS4 Permit on the effective date of the Order.

After San Diego Water Board receives and considers the Reports of Waste Discharge required to be submitted by the Orange County Copermittees and Riverside County Copermittees pursuant to the requirements of their current permits, and make any necessary changes to the Order, the Orange County Copermittees and Riverside County Copermittees will be covered under the Regional MS4 Permit after Order No. R9-2009-0002 expires in November 2014, and Order No. R9-2010-0016 expires in December 2015, respectively.

The Orange County Copermittees and Riverside County Copermittees also have the option to obtain coverage under the Regional MS4 Permit earlier than their respective permit expiration dates. The process to apply for early coverage is described Provision [F.6](#).

Because the Santa Margarita River Watershed Management Area includes Copermittees from both San Diego County and Riverside County, a footnote to Table [B-1](#) has been included to specify that the requirements of Provision [B](#) are not required to be implemented by the County of San Diego until the Riverside County Copermittees have received a notice of coverage under the Order. Until the Riverside County Copermittees are notified of coverage under the Order, the County of San Diego is subject to the prohibitions and limitations under Provision [A](#), responsible for continuing to implement its existing jurisdictional runoff management program, and responsible for implementing the transitional monitoring and assessment requirements of Provision [D](#), the transitional annual reporting requirements of Provision [F.3.b](#), and the TMDL requirements of [Attachment E](#) to the Order.

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 source 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 any 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 of 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

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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.

Management Area Analysis; however, they must provide the supporting rationale to support all claims for exemptions.

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.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>

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<sup>23</sup> 40 CFR 130.7(b)(1)

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. 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>

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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

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 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 Copermitees’ 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 Copermitees 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 Copermitees’ 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 Copermitees 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.

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<sup>27</sup> CWA section 502(19)



## 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 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 measurable 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 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

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<sup>28</sup> Data used to develop SAL were obtained from <http://rpitt.eng.ua.edu/Research/ms4/mainms4.shtml>

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 Copermitees 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 Copermitees 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 Copermitees 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 Copermitees 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 Copermitees to use third party data to meet receiving water monitoring requirements where feasible. Allowing the Copermitees 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 Copermitees 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 Copermitees are required to conduct receiving water monitoring according to the requirements of Provisions [D.1.b-e](#).

Provision [D.1.b](#) requires each Copermitee 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 Copermitees. 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 Copermitees 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 Copermitees to locate the long term receiving water monitoring station at one of these existing receiving water monitoring stations to provide the Copermitees 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 Copermitees 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 Copermitees 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. Copermitees are required to sample storm 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 Copermitees participate in and/or conduct other types of receiving water monitoring. As recommended and requested by the Copermitees, Provision [D.1.e\(1\)](#) requires the Copermitees 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.

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 monitoring 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 currently 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 Copermittee.

As each Copermittee 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 Copermittee 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 Copermittee 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 Copermittees 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 Copermittees 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 Copermittees in each Watershed Management Area to assess and report the progress of the Copermittees’ 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 Copermittee.

As the Copermittees 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 Copermittees 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 Copermittees 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.

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 Penasquitos Lagoon Sedimentation/Siltation TMDL Technical Report**

The Los Penasquitos 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 Penasquitos 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 Penasquitos 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 Copermittees 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 Copermittees 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 Copermittee’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 Copermittee.

Consistent with 40 CFR 122.26(d)(2)(iv)(B) and 122.26(d)(2)(iv)(B)(1), each Copermittee 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 Copermittee 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 Copermittee 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 Copermittee 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 Copermittee, and include locations of all known inlets, connections with other MS4s, and outfalls to the Copermittee’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 Copermitttee 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 Copermitttee 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 Copermitttee pursuant to Provision E.1.

Provision E.3 (Development Planning) requires each Copermitttee 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 Copermitttee 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.

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

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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.



*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.

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>

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<sup>32</sup> USEPA, 2007. Reducing Stormwater Costs through Low Impact Development (LID) Strategies and Practices, December 2007.

<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>)

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 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).

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<sup>34</sup> [www.lowimpactdevelopment.org](http://www.lowimpactdevelopment.org)



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 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

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<sup>35</sup> “Managing Wet Weather with Green Infrastructure – Municipal Handbook: Green Streets” (USEPA, 2008).

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.

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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.

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 Orange County and Riverside County municipal storm water permits (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 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.

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<sup>37</sup> Ventura Countywide Stormwater Management Program. 2011. Ventura Technical Guidance Manual, Manual Update, 2011.

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 pervious (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 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 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 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*

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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.

*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 quality benefit for the Watershed Management Area than fully implementing structural BMPs onsite. 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](#).

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](#).

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.

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 Copermitttee 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 Copermitttee 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, Copermitttees are expected to implement the requirements seamlessly, with minimal changes to their existing construction management programs. The Copermitttees, 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 Copermitttee 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 construction 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>39</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>40</sup> the US Forest Service,<sup>41</sup> the University of California,<sup>42</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

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<sup>39</sup> USEPA, 2006. Environmentally Sensitive Maintenance for Dirt and Gravel Roads. Gesford and Anderson, USEPA-PA-2005.

<sup>40</sup> Ibid

<sup>41</sup> US Forest Service, 1996. Forest Service Specifications for Construction of Roads & Bridges. EM-7720-100. Revised August 1996.

<sup>42</sup> University of California Division of Agriculture and Natural Resources, 2007. Rural Roads: A Construction and Maintenance Guide of California Landowners. Publication 8262.

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 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>43</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

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<sup>43</sup> National Association of Flood and Stormwater Management Agencies. 2006. *Guidance for Municipal Stormwater Funding*. Prepared under a grant provided by the USEPA.

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>44</sup>

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<sup>44</sup> State Water Board, 2005. NPDES Stormwater Cost Survey.

## F. Reporting

**Purpose:** Provision F includes the requirements for the documents and reports that the Copermitees must prepare and provide to the San Diego Water Board. The documents prepared by the Copermitees and provided to the San Diego Water Board and made available to the public will provide the documentation that the Copermitees are complying with the requirements of the Order.

**Discussion:** Provision F requires the Copermitees 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 Copermitees 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 Copermitees 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 Copermitees 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 Copermitees 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 Copermitees can consider during the development of the Water Quality Improvement Plans.

The San Diego Water Board recognizes, however, that the Copermitees 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.

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 incorporated 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.

Because the Orange County and Riverside County Copermittees will not be subject to the requirements of this Order until they are notified of coverage, Provision [F.5.a](#) describes the process of submitting their Reports of Waste Discharge pursuant to the requirements of their current permits to obtain coverage under this Order.

For the Copermittees subject to the requirements of this Order, Provision [F.5.b](#) requires the Copermittees to submit a Report of Waste Discharge 180 days in advance of the expiration of this Order. Provision [F.5.b](#) 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.

Provision F.6 (Application for Early Coverage) describes the process that would allow the Orange County and/or Riverside County Copermittees to obtain coverage under this Order earlier than the expiration of their current Orders.

If the Orange County and/or Riverside County Copermittees choose to obtain coverage under this Order earlier than the expiration of their current Orders, the preparation and submittal of a Report of Waste Discharge, as required by the Fourth Term Permits, will not be necessary. The existing Order for the respective county will be rescinded upon the effective coverage date under this Order, except for enforcement purposes.

## **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 may occur.

**Discussion:** Provision H allows for modifications to Order No. R9-2013-0001. Minor modifications may be made by the San Diego Water Board Executive Officer without a public notice or public hearing. Minor modifications are defined under 40 CFR 122.63. Minor modifications under 40 CFR 122.63 potentially applicable to this Order are the following:

- Correcting typographical errors;
- Requiring more frequent monitoring or reporting by the Copermittees;
- Changing an interim compliance date in a schedule of compliance, provided the new date is not more than 120 days after the date specified in the existing permit and does not interfere with attainment of the final compliance date requirement.

Modifications that are not one of the above minor modifications will require re-opening the Order, 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. Modifications of the Order that are not minor require a draft Order with the proposed modifications made available for public review, a public notice and comment period, and a public hearing. 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 State Water Board determines revisions to Provision A are warranted, an application for early coverage under the Order is received pursuant to Provision F.6, 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.

Provision H.5 was included to specify that the San Diego Water Board will re-open and consider modifications to this Order when the Orange County Copermittees or the Riverside County Copermittees submit a complete Report of Waste Discharge pursuant to the requirements of their current Orders

## 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. 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 Applicable to Order No. R9-2013-0001

[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>45</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>46</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>47</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

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<sup>45</sup> 40 CFR 122.44(d)(1)(vii)(B)

<sup>46</sup> 40 CFR 122.44(k)(2) and 40 CFR 122.44(k)(3)

<sup>47</sup> November 12, 2010 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 TMDL 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 TMDL pursuant to the requirements of Provision [H.4](#) of the Order as soon as possible.

**EXHIBIT B**

**CITY OF LAGUNA NIGUEL, CALIFORNIA**

**January 11, 2013**

**COMMENTS – TENTATIVE ORDER NO. R9-2013-0001,  
REGIONAL MS4 PERMIT, PLACE ID: 786088Wchiu**







## CITY of LAGUNA NIGUEL

Public Works/Engineering

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## CITY COUNCIL

Laurie Davies  
Linda Lindholm  
Jerry McCloskey  
Robert Ming  
Jerry Slusiewicz

January 11, 2013

Dave Gibson, Executive Director  
Regional Water Quality Control Board  
9174 Sky Park Court, Suite 100  
San Diego, CA 92123

Wayne Chiu  
Regional Water Quality Control Board  
9174 Sky Park Court  
San Diego CA 92123-4340

### **COMMENTS - TENTATIVE ORDER NO. R9-2013-0001, REGIONAL MS4 PERMIT, PLACE ID: 786088Wchiu**

Dear Mr. Gibson:

The City of Laguna Niguel appreciates this opportunity to comment on the draft Regional MS4 Permit for the San Diego Region (Tentative Order No. R9-2013-0001 – NPDES No. CAS0109266). The City is generally very supportive of the proposed re-organization of the Permit and the consolidation of programs within the Water Quality Improvement Plan framework. Your staff is to be commended for their extensive re-writing and outreach efforts.

However, there are still significant unresolved issues, and the City continues to believe that the Draft Permit should be considered a work in progress. The County of Orange, as the Principal Permittee for South Orange County, is addressing key issues in a letter being forwarded separately, and is providing detailed redline text edits. The City of Laguna Niguel has reviewed the legal, technical and monitoring comments being submitted by the County of Orange as Lead Permittee. The City of Laguna Niguel concurs with, adopts and incorporates into this letter the comments, concerns, and recommended deletions and modifications to the Draft Permit that are being submitted by the County of Orange.

#### ***New Bacteria Data and Implications***

As Laguna Niguel's urban runoff program manager, I have actively participated as South Orange County's representative to the San Diego Region's Beaches & Creeks Bacteria TMDL Stakeholder Advisory Group (SAG) since 2002. I would like to bring to your attention the fact that **some critical new information, specifically related to the Bacteria TMDLs provisions, has become available in the last two weeks.** The new information strongly supports the understandings reached through 10 years of workshops, hearings, drafts and re-drafts of the Bacteria TMDL I for Beaches and Creeks, and for the Bacteria TMDL Implementation Provisions, both of which have been formally incorporated as Basin Plan Amendments. Your staff, the Permittees, the environmental groups, the Federal EPA, and the Regional Board put extensive work into negotiating specific ideas and delicately-phrased language into the Basin Plan Amendment (BPA), to

which all parties could commit. **The new information demonstrates the wisdom and prescience of the existing Basin Plan Amendment language.**

Our concern is that the TMDL Provisions in Attachment E of the Draft Regional Permit do not honor that hard-won consensus, and instead are contrary, in critical ways, to the Board-approved assumptions and requirements of the Basin Plan Amendments. In essence, **Attachment E sets several bars in wrong places.** If the language is not corrected, the net results are highly likely to be:

- It will be infeasible for us as Permittees to get or stay in compliance with the TMDLs.
- We will violate Numeric Effluent Limitations, which have been built into the Draft MS4 Permit as Water Quality Based Effluent Limitations.
- Under Porter-Cologne, local city governments will therefore be subject to potentially enormous Mandatory Minimum Penalties, and the Regional Board may not have discretionary authority to circumvent the situation.

Some parties have questioned whether these assertions, which have already been raised in several workshops, have been more melodramatic than technically accurate. Much of the quandary surrounds the question of whether it is or is not, in fact, reasonably feasible for Permittees to achieve the indicator bacteria concentration objectives as consistently as the Draft Permit requires (i.e., 100% of the time in dry weather, and at least 78% of the time in wet weather). Fortunately, within the last two weeks, new sets of bacteria data have become available that help answer this question, specifically for San Diego Region creeks. In short, the answer is: no.

Attached to this letter is a copy of the Year 1 Data Summary from the San Diego Regional Stream Reference Study. This study, which is still in progress, is being conducted, compiled and analyzed by the highly-respected non-partisan scientific organization, the Southern California Coastal Waters Research Project (SCCWRP), in cooperation with the Permittees, the Regional Board, and Federal EPA. The Study was undertaken as a direct procedural outcome of provisions incorporated into the Bacteria TMDL I and Implementation Provisions Basin Plan Amendments (BPAs), both of which stipulate that *“it is not the intent of these bacteria TMDLs to require treatment of natural sources of indicator bacteria”*; the BPA-defined purpose of the Study was to find out whether, how often, and by how much *“natural sources cause exceedances of indicator bacteria water quality [concentration] objectives on their own, without contributions from anthropogenic sources.”* **The preliminary Study data demonstrated that natural bacteria exceedance frequencies in creeks were up to 71% in dry weather (versus the 0% required in the Draft Permit), and up to 100% in wet weather (versus the 22% allowed in the Draft Permit). Natural creek bacteria concentrations jump around a lot, ranging up to 15 times higher than the concentration objectives in both wet and dry weather.** In other words, the indicator bacteria concentration objectives and “allowable” exceedance frequencies currently proposed in the Draft Permit are *unnatural* for San Diego Region creeks. Requiring Permittees to achieve them is asking

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us to do battle with Mother Nature herself. It would be a battle we would almost certainly lose.

***Waste Loads vs. Concentrations***

Understanding this reality provides insight into why determining impacts or compliance through concentration objectives, as proposed in the Draft Permit, is not feasible: such an approach only takes into account how many bacteria might happen to be caught in a random sampling vial, regardless of whether there is only a trickle of water or a flood. The Waste Load Allocations in the TMDLs Basin Plan Amendments, in contrast, describe the total number of *controllable anthropogenic* bacteria that are allowed to be discharged from an MS4 over the course of a specified time period (i.e. monthly for dry weather, and annually for wet weather). The Waste Load Allocations are determined as a function of total flow volume and bacteria concentrations that *on average overall* meet the concentration objectives.

***Compliance Determination***

For an MS4 manager trying to stay in compliance with the Permit, the difference between being judged on grab-sample concentrations and Waste Load Allocations is really insurmountable. Aside from the inherent jumpiness and high exceedance frequency of *natural* bacteria populations that the Permittees (pursuant to the Basin Plan Amendments) aren't supposed to have to control, the International Stormwater BMP Database, which compares the performance of various stormwater BMP types in achieving wet-weather effluent concentrations of indicator bacteria, identifies *no* BMPs that can achieve the effluent bacteria concentrations required for creeks under the draft Permit. The Database does, however, identify several stormwater BMPs that could feasibly achieve significantly more than the currently-required -22% as a bacteria *load* reduction in treated stormflows from individual sites. With respect to dry weather, several Permittee-implemented projects have demonstrated the ability to achieve 90% or greater reductions in anthropogenic dry weather bacteria *loads* through a combination of BMP treatments and flow reduction techniques; but none are consistently perfect in terms of bacteria concentrations. Achieving the implementation of Waste Load Allocations through appropriately-designed and appropriately-distributed systems of prevention, treatment and volume reduction BMPs targeting overall anthropogenic flow volumes and bacteria sources over time will be really the only feasible way for Cities to comply with the TMDLs – and is exactly what was envisioned in the approved Basin Plan Amendments. TMDL compliance determination needs to be based on load reductions achieved through BMP programs.

***Water Quality Based Effluent Limits***

The calculated TMDL Waste Load Allocations were incorporated directly into the TMDL Basin Plan Amendments. Federal law requires that Water Quality Based Effluent Limits set forth in an MS4 Permit, which make the TMDLs enforceable, have to be consistent with any available TMDL Waste Load Allocations. By leaving the Waste

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Load Allocations out of the Draft Permit and instead defining bacteria concentrations as Water Quality Based Effluent Limits, the Draft Permit contradicts Federal law, and establishes the concentrations as Numeric Effluent Limits under Porter-Cologne. **Exceedance of a Numeric Effluent Limit established in an MS4 Permit triggers Mandatory Minimum Penalties under Porter-Cologne.** Because natural bacterial exceedances and BMP performance limitations mean that the bacteria objective concentrations cannot feasibly be attained with adequate consistency, the **Permittees are being set up for failure and exposure to Mandatory Minimum Penalties, which the Regional Board would not have discretion to modulate.** Mandatory Minimum Penalties, which could easily run into hundreds of thousands of dollars daily, serve no good purpose for MS4s Permittees, the Board or the environment. Even the State Water Board's own Blue Ribbon Panel has concluded that incorporating Numeric Effluent Limits in MS4 Permits is *not feasible*. The WQBELs need to be *load-based*, and compliance needs to be based on implementing BMPs that achieve *load reductions*.

*Provision for Re-Opener*

When the Board approved the Bacteria TMDL Basin Plan Amendment in 2009, it committed specifically to a 5 year re-opener. The Board made that commitment because it recognized the TMDL had inherent flaws, principally because there were large gaps in the data used to inform the TMDL calculations. The plan was, that the Permittees would use the 5 years to do research to flesh out the local data, do some number-crunching, and bring back more locally appropriate Waste Load Allocations and exceedance frequency targets. With the re-opener, the updated allocations and frequencies would re-set the bar that Permittees would have to jump over – whether it was higher or lower. The Permittees are doing their part: we put funding together and started the research last winter to close the data gap, in conjunction with the Southern California Coastal Waters Research Project. Already, we have preliminary data demonstrating just how necessary that re-setting of the bar is likely to be. But the Permit, as currently drafted, doesn't keep the Board's part of the bargain, and doesn't recognize the course-correction that this Board had agreed was appropriate and necessary. An explicit commitment to the re-opener is needed.

*Baseline for Improvement*

Adding to the problem, the Draft Permit changes our starting line for measuring dry weather compliance. The Bacteria TMDL BPA specifically states that the *“available historical monitoring data from the years 1996-2002 shall be used to calculate the “existing” dry weather exceedance frequency of the 30-day geometric mean REC-1 WQOS for each watershed.*” The Draft Permit proposes changing the baseline to between 2002 and 2011. The Permittees have already spent millions of dollars between 2002 and 2011 on efforts to reduce anthropogenic bacteria waste loads. In some cases, Permittees are already close to achieving the final percent waste load reductions defined as numeric targets in the TMDLs, and some Permittees have attained 303(d) de-listings as a result of their efforts. Think about the math of it: if the final load reduction target was set at 75% in the approved TMDL BPA, and a Permittee had achieved a 70% bacteria load reduction

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prior to 2011, changing the starting date to 2011 would effectively change the overall load reduction needed from 75% to 92.5% - which would be a huge amount of unjustified additional work. Permittees have spent the last 2 years developing Bacteria Load Reduction Plans, based on the percent reductions that were agreed to in the TMDL Basin Plan Amendments. The Draft Permit needs to honor the agreed-upon starting date.

In summary: the City of Laguna Niguel requests correction of all the Attachment E TMDL provisions in the Draft Permit that are inconsistent with Federal law, contrary to the intent of the Basin Plan Amendments, and will result in non-discretionary Mandatory Minimum Penalties. The necessary corrections are all delineated in the redline/strike-out Permit text that the County of Orange is attaching to its comment letter on behalf of the Co-Permittees.

Thank you for the opportunity to provide comments. I would be happy to meet with you to discuss any of these issues. I can be reached at (949)362-4384 or [npalmer@cityoflagunaniguel.org](mailto:npalmer@cityoflagunaniguel.org).

Sincerely,



Nancy R. Palmer  
City Landscape Architect/Environmental Programs Manager

Attachment: San Diego Regional Stream Reference Study – Monitoring Progress  
Report #3 and Year 1 Data Summary (October 2011 through November  
2012)

**SAN DIEGO REGIONAL STREAM REFERENCE STUDY  
 MONITORING PROGRESS REPORT #3 AND YEAR 1 DATA SUMMARY  
 OCTOBER 2011 THROUGH NOVEMBER, 2012**

This Monitoring Progress Report is a summary of work completed from October 1, 2011 to November 31, 2012. A data summary is provided and represents results based on calculation of Year 1 data. These will change as Year 2 data are included and are considered to be preliminary.

**1 QAPP Approval and Amendment**

The QAPP was submitted to the San Diego Regional Board in October 2011 and approved in December 2011.

A QAPP amendment was submitted and approved by the San Diego Regional Board in February 2012.

The QAPP was amended to reflect the following changes:

- Laboratories and responsibilities (i.e. mobile lab)
- Updated sites including Prima Deschecha sediment basin and storm drain study
- Toxicity sampling approach
- Analyte list
- Sample volumes

**2 Summary of Wet Weather Monitoring Activities:**

Site installations were completed at all selected wet weather monitoring locations in late-January 2012 and as of February 2012, the project team was prepared for mobilization. To mobilize for a storm, AMEC reviews National Weather Service (NWS) San Diego, Los Angeles and other weather predictions and communicates with SCCWRP to assist in a go-no-go decision to mobilize. Additional site reconnaissance was conducted during the December and March timeframe to gain a better understanding of flow conditions at a particular site.

Six wet weather locations were finalized for stream monitoring (Table 1). Two of the original wet weather monitoring locations were rejected due to access issues: (1) San Clemente Canyon located within the Rose Canyon Watershed and (2) Cedar Creek located within the San Diego River Watershed. Two additional locations in the Prima Deschecha subwatershed will be monitored during wet weather only to isolate potential inputs to Cristianitos Creek.

**Table 1 – Monitoring Locations. IM – Igneous/Metamorphic, SED – Sedimentary; Size: S – Small, M – Medium, and L – Large**

Station Code	Stream Name	Watershed	Size	Geology	County
LCC	Long Canyon Creek	Tributary to Kitchen Creek	S	IM	San Diego
KC	Kitchen Creek	Kitchen Creek-Cottonwood Creek	M	IM	San Diego
SJC	San Juan Creek	Upper San Juan Creek	L	IM	Orange
BCC-1	Bell Canyon Creek-1	Middle San Juan Creek	S	SED	Orange
JC	Jardine Creek	San Onofre Creek	M	SED	Orange
CCCP	Cristianitos Creek	Lower San Mateo Creek	L	SED	Orange

**2.1 Summary of Monitored Wet Weather Events**

Since the inception of sampling, four storm events (February 13, 2012, March 17, 2012, March 25, 2012, April 26, 2012) have met the mobilization criteria and project field crew mobilized for each event. Cumulatively, since the program began in December 2010, project staff have monitored one wet weather event 1 at 3 sites (Cristianitos Creek+Prima Deschecha Golf Course+ Sediment Basin, San Juan Creek, and Long Canyon Creek). This section provides a summary of the monitored events, false-start events, and hydrographs for each monitored event.

Table 2 provides a summary of the wet weather event data including site, event date, total rainfall, flow, and total number of primary samples collected per site. The event hydrographs for Cristianitos Creek, Prima Deschecha, Golf Course, and Prima Deschecha, Sediment Basin and San Juan Creek are provided in Figures 1-5, respectively.

Table 2: Wet Weather Event Monitoring Summary

Date	Event Number	Site	Total Event Rainfall (inches)	Flow (cfs)	Flow Start Time (MM/DD/YYYY hh:mm)	Flow End Time (MM/DD/YYYY hh:mm) <sup>(1)</sup>	Storm Size Category	Season	Total Primary Samples	Comment
2/13/2012	False Start	KC	0.56	N/A	N/A	N/A	Medium	Late	0	Forecast rain resulted in snow. Due to safety concerns, field crews stood-down. Rainfall data as measured at Cameron Fire Station. Accuracy of rainfall total may have been affected by snow melt.
2/13/2012	False Start	LCC	0.56	N/A	N/A	N/A	Medium	Late	0	Forecast rain resulted in snow. Due to safety concerns, field crews stood-down. Rainfall data as measured at Cameron Fire Station. Accuracy of rainfall total may have been affected by snow melt.
2/14/2012	Recon.	JC	N/A	N/A	N/A	N/A	N/A	Late	0	Post storm reconnaissance conducted.
2/14/2012	Recon.	CCCP	N/A	N/A	N/A	N/A	N/A	Late	0	Post storm reconnaissance conducted.
2/14/2012	Recon.	BCC-1	N/A	N/A	N/A	N/A	N/A	Late	0	Post storm reconnaissance conducted.
3/17/2012	Wet Event 1	CCCP	0.81	17,392.876	3/17/2012 13:38	3/18/2012 09:43	Medium	Late	9	Successfully completed.
3/17/2012	Wet Event 1	PDGC	0.81	57,079	3/17/2012 08:23	3/18/2012 10:31	Medium	Late	1	Successfully completed. AMEC needs to verify concurrent sampling approach with CCCP.
3/17/2012	Wet Event 1	PDSB	0.81	394,277	3/17/2012 07:32	3/18/2012 09:42	Medium	Late	1	Successfully completed. AMEC needs to verify concurrent sampling approach with CCCP.
3/17/2012	False Start	SJC	2.15	N/A	N/A	N/A	Large	Late	0	Equipment Malfunction – SCCWRP was not charged for this event.
3/17/2012	False Start and Recon.	JC	1.21	N/A	N/A	N/A	Large	Late	0	Creek was dry, therefore a sample could not be collected. Post storm reconnaissance conducted.
3/17/2012	False Start	BCC-1	1.63	N/A	N/A	N/A	Large	Late	0	Creek did not have sufficient flow within approximately 16 hours of mobilization. SCCWRP and AMEC agreed to stand-down. Additional verification from Starr Ranch and visual observation recon.
3/25/2012	Wet Event 1	SJC	1.05	892,288	3/25/2012 16:08	3/29/2012 08:49 <sup>(2)</sup>	Large	Late	13	Successfully completed.
4/26/2012	False Start	KC	0.46	N/A	N/A	N/A	Medium	Late	0	Creek did not have sufficient increase in stage to initiate sampling.
4/26/2012	Wet Event 1	LCC	0.46	226,095	4/26/2012 00:20	4/29/2012 09:20	Medium	Late	11	Successfully completed.

Note:  
 Flow stop time based upon completion of sampling event when storm flow returned to approximately 25% above pre-storm base flow.  
 Storm Category: Trigger 0.1-0.2 inches of rainfall; Medium 0.2-1 inch of rainfall; Large >1 inch of rainfall.

Season: Early (before December) or Late (after December).

N/A = Flow data not generated for false start events.

Recon. = Reconnaissance.

Site IDs: BCC-1-Bell Canyon Creek, CCCP- Cristitanitos Creek, JC Jardine Creek, KC-Kitchen Creek, LCC-Long Canyon Creek, PDGC -Prima Deschecha Golf Course, and PDSB -Prima Deschecha Sediment Basin



Figure 1: Cristianitos Creek (CCCP) – Wet Weather Event 1 Hydrograph (March 17 – 20, 2012)

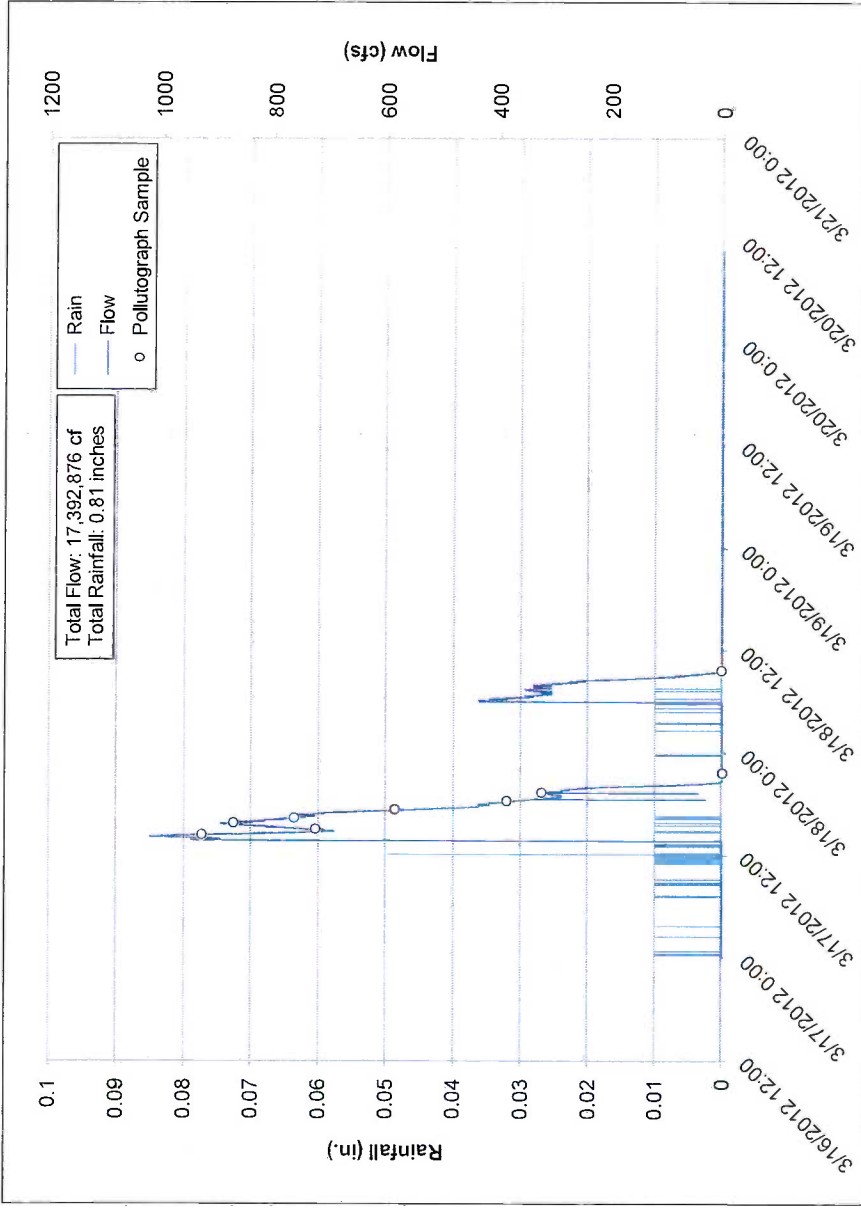




Figure 2: Prima Deschecha Golf Course Outlet (PDGOC) – Wet Weather Event 1 (March 17, 2012)

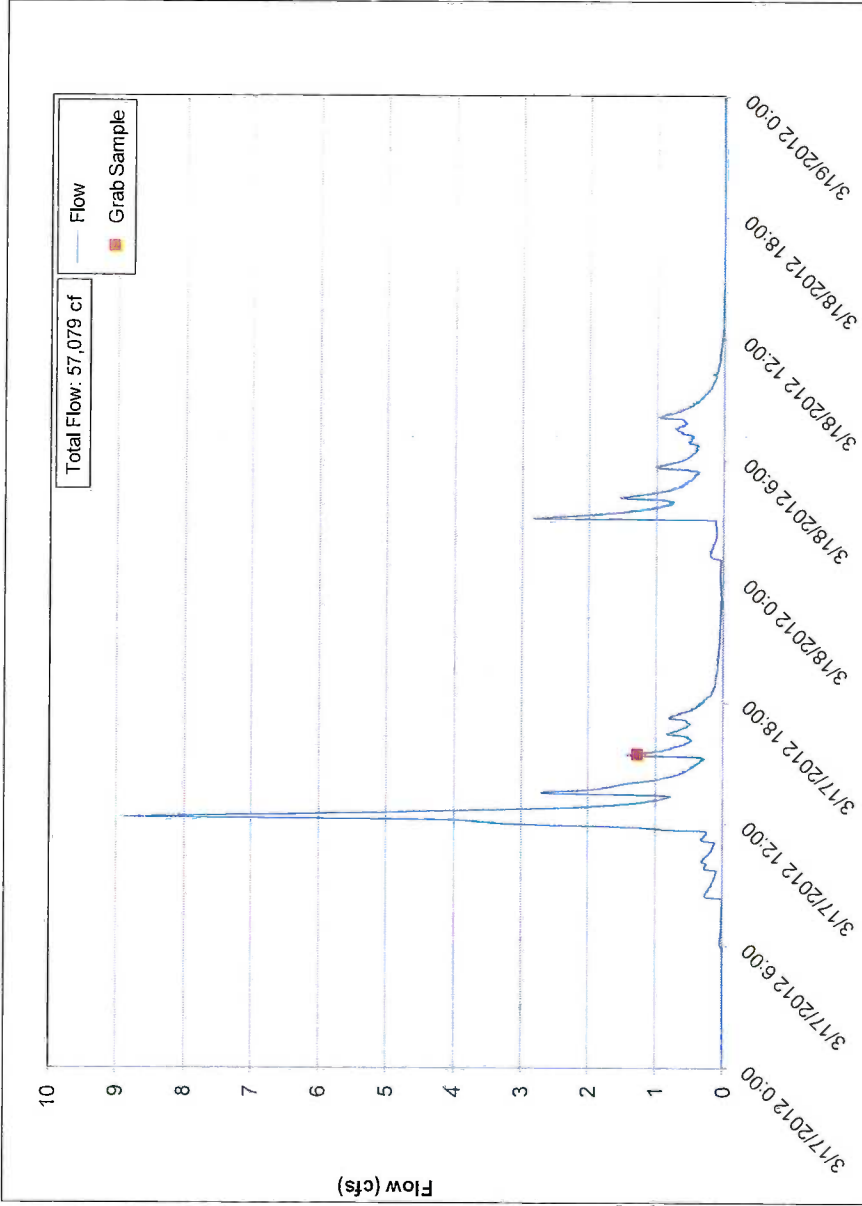


Figure 3: Prima Deschecha Sediment Basin (PDSB) – Wet Weather Event 1 Hydrograph (March 17, 2012)

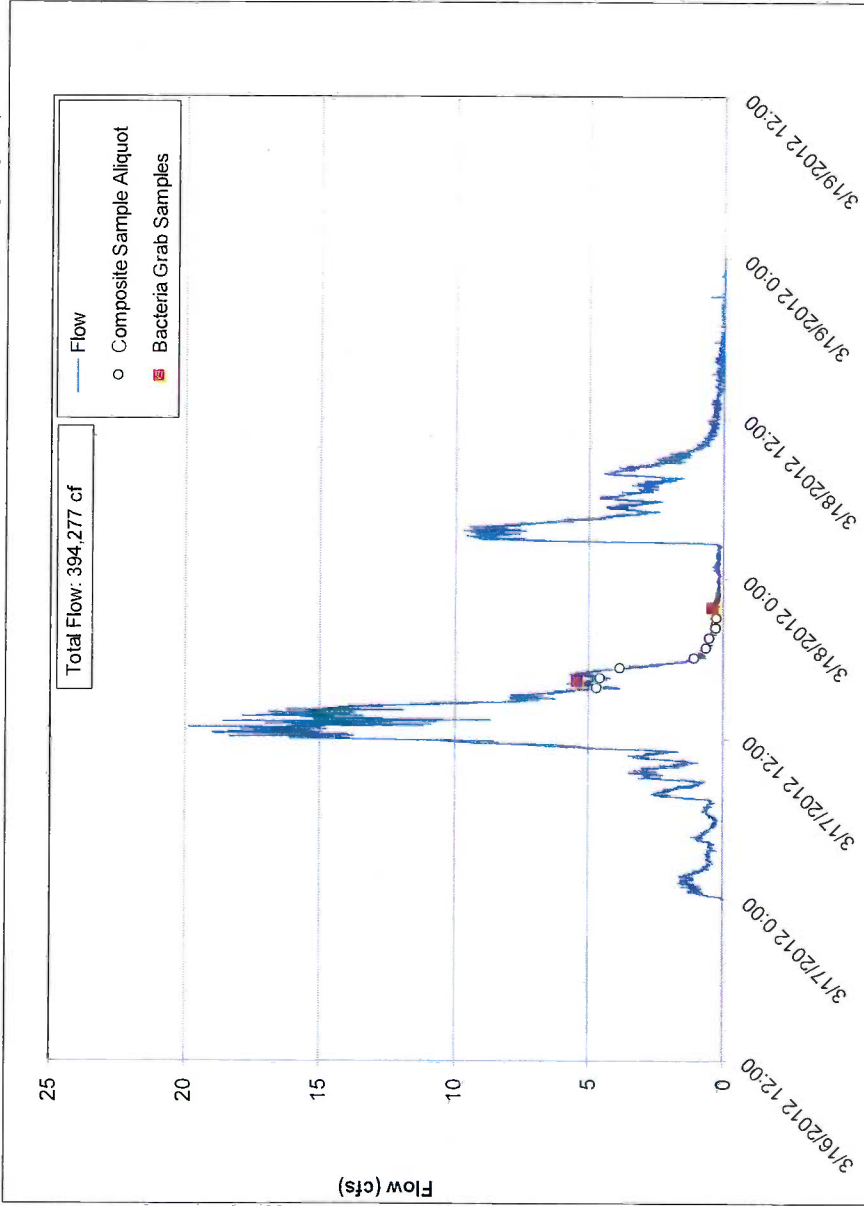


Figure 4: San Juan Creek (SJC) – Wet Weather Event 1 (March 25 – 28, 2012)

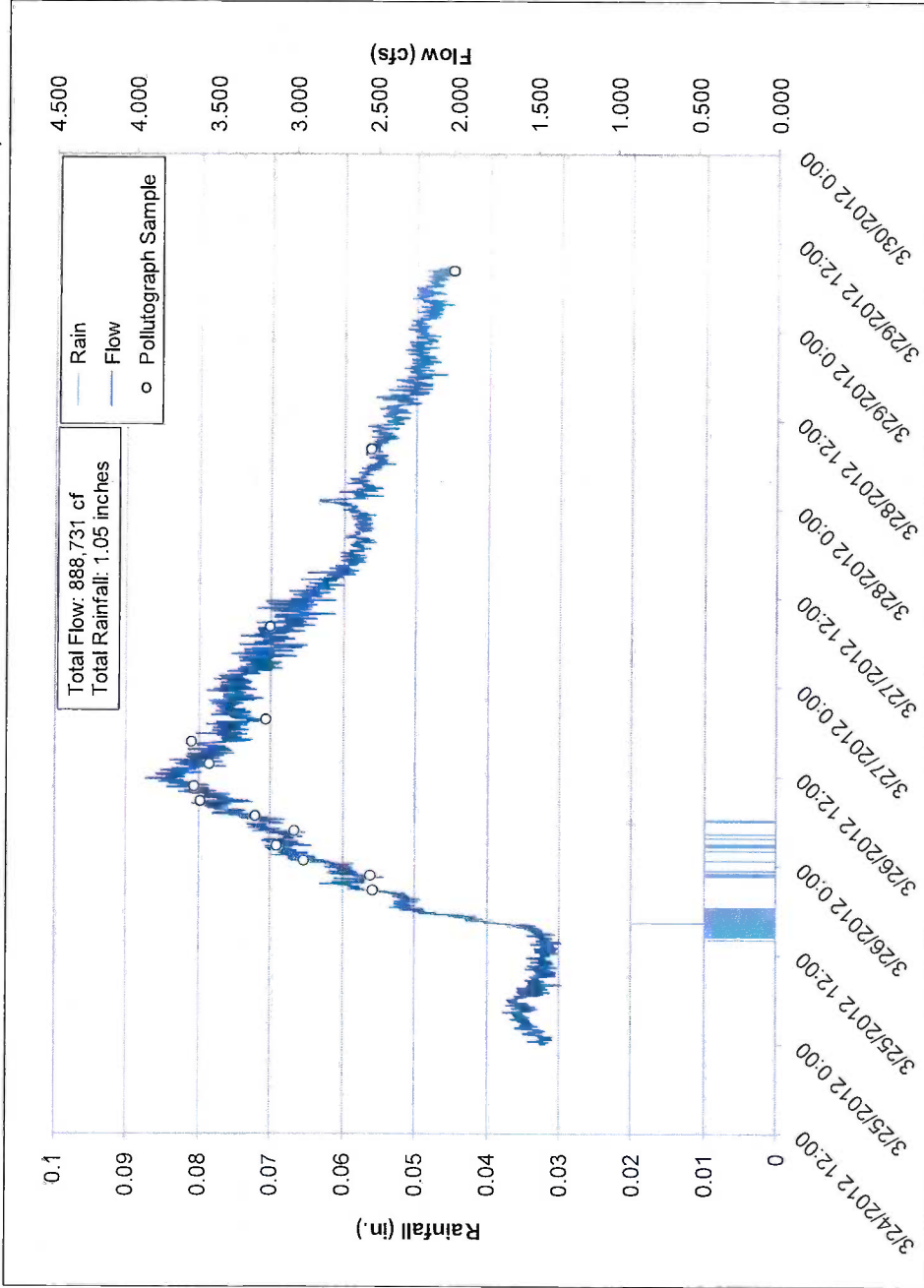
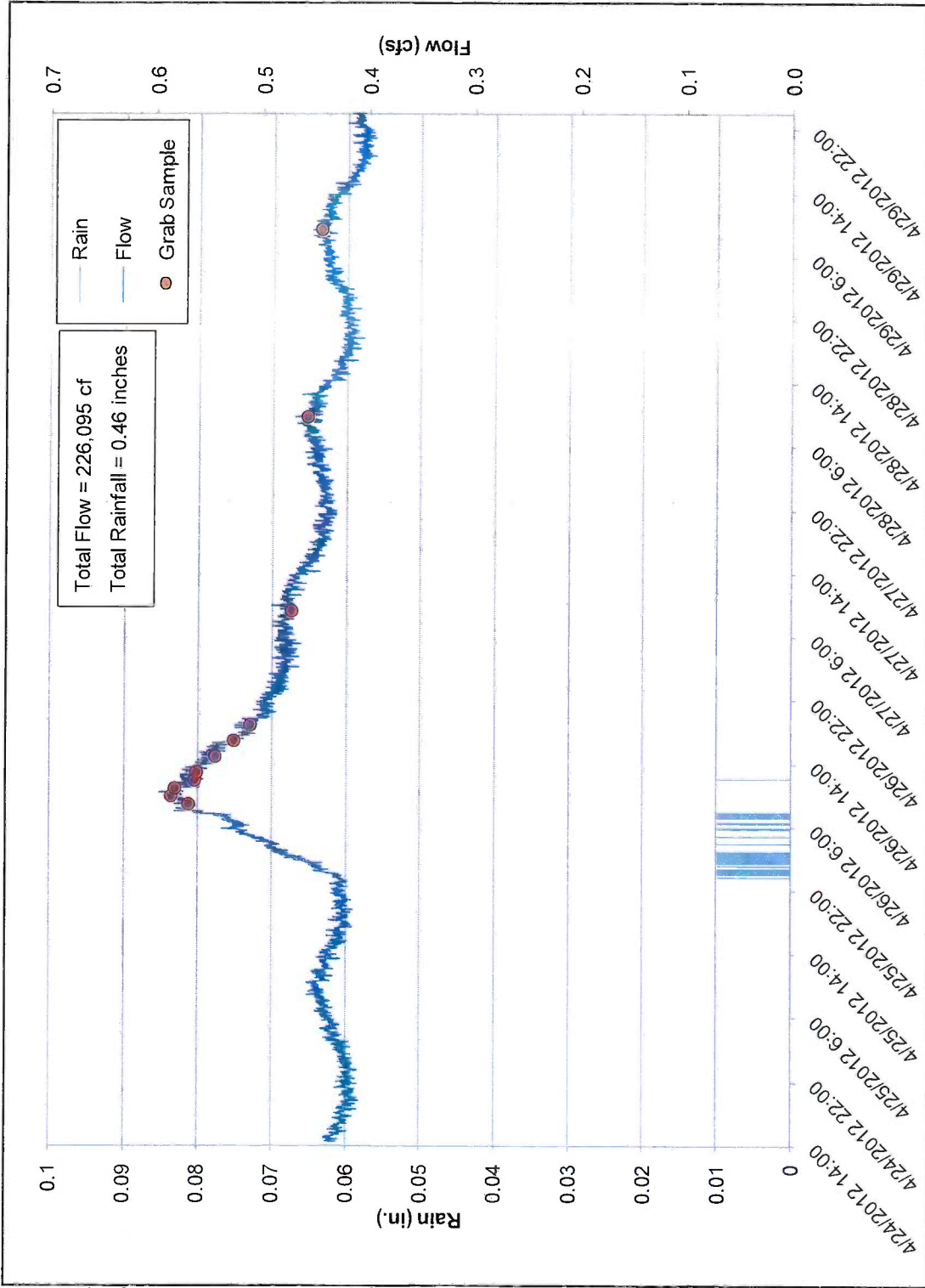


Figure 5: Long Canyon Creek (LCC) – Wet Weather Event 1 Hydrograph (April 26 – 29 2012)



### 3 Summary of Dry Weather Monitoring Activities and Events

#### 3.1 Sampling Sites

Recon of dry weather sites selected in Fall 2011 began in March 2012. Of these initial set of sites, 6 were dry and 3 were considered not to be reference because of evidence of human disturbance (Table 3). The sites that were dry will be observed beginning next fall and sampling reinitiated if flow returns.

Dry weather sampling was initiated the first week of April 2012 at seven reference streams located in both Orange and San Diego counties (Table 4). Further site reconnaissance was conducted during the April - May timeframe to target additional reference streams that met the San Diego Reference Stream monitoring program criteria. During this reconnaissance, two new streams located in San Diego, CA were added to the dry weather sampling regime (Agua Caliente Creek and Conejos Creek located in the El Capitan Reservoir) (Table 4). **No additional sedimentary sites were found within the study area.** Dry weather sampling commenced the third week of May at Conejos Creek and the fourth week of May at Agua Caliente Creek.

Reconnaissance on additional sedimentary and replacement dry weather sites have been conducted outside of the current study area. The decision on whether to add these sites to dry weather sampling was discussed with stakeholders in a meeting held September 26, 2012. During this meeting four streams were accepted to be added to the dry weather sampling regime: Fremont Canyon Creek and Santiago Creek in Orange County, Aliso Canyon Creek in Riverside and Dazur Creek in San Diego, CA. (Table 5).

#### 3.2 Sampling Activities

For dry weather sampling, a site was eligible for sampling if it had not received measurable rainfall for at least 24 h and flow was no more than 20% above baseflow. Weekly sampling continued as long as there was measurable stream flow. For intermittent streams (i.e. Conejos Creek), sampling was suspended once the stream was too low to sample or ceased flowing (i.e. dry creek bed). Based on these criteria, the duration of sampling at the six reference sites and 3 non-reference sites has ranged from 4 to 19 weeks.

Currently, weekly dry-season bacteria and bi-weekly sampling for nutrients, trace metals and conventional constituents (i.e. total suspended solids (TSS)) has ceased at all sites; Table 6). Six to 18 weekly primary FIB samples were collected, 2 to 9 bi-weekly nutrient, trace metals, and conventional samples were collected, and 1 to 2 algal assessments have been measured at each natural stream with an overall total of 129, 58 and 9 primary samples collected respectively (Table 6). Mean stream flow during the sampling period for all sites combined was  $0.013 \pm .009$  SD (Table 6).

Table 3: Original Dry Weather Reference Stream Monitoring Locations

Station Code	Stream Name	HUC_12_ Watershed	Latitude	Longitude	Area (Km2)	Size	Geology	Types	County
BCC-1 <sup>a</sup>	Bell Canyon Creek-1	Middle San Juan Creek	33.6359	-117.5558	18.2	S	SED	Wet/dry	Orange
ATC <sup>b</sup>	Arroyo Trabuco	Arroyo Trabuco	33.6745	-117.5469	31.0	S	SED	Dry	
JC <sup>a</sup>	Jardin Creek	San Onofre Creek	33.39991	-117.4983	33.0	M	SED	Wet/dry	Orange
BCC-2 <sup>a</sup>	Bell Canyon Creek-2	Middle San Juan Creek	33.56420	-117.5640	48.8	M	SED	Dry	Orange
BCC-3 <sup>a</sup>	Bell Canyon Creek-3	Middle San Juan Creek	33.54489	-117.5613	52.2	M	SED	Dry	Orange
ASC <sup>a</sup>	Arroyo Seco Creek	Arroyo Seco Creek	33.45752	-116.9708	33.6	M	IM	Dry	Riverside
CCCP <sup>a</sup>	Cristianitos Creek	Lower San Mateo Creek	33.42739	-117.5698	80.0	L	SED	Wet/dry	Orange
SJC <sup>b</sup>	San Juan Creek	Upper San Juan Creek	33.58799	-117.5165	96.9	L	IM	Wet/dry	
LPC <sup>b</sup>	La Posta Creek	La Posta Creek	32.7002	-116.4801	115.3	L	IM	Dry	

- (a) Six streams (BCC-1, JC, BCC-2, BCC-3, ASC & CCCP) were dry prior to the onset of dry season sampling in April 2012.  
 (b) Three locations (ATC, SJC and LPC) were considered not to be reference because of evidence of human disturbance (HWY 74 repaved) and/or grazing, however, sampling was initiated & continued at these sites to verify the validity of this assessment.

**Table 4. April - July 2012 Dry Weather Monitoring Locations. IM – Igneous/Metamorphic, SED – Sedimentary; Size: S – Small, M – Medium, and L – Large**

Site Code	Stream Name	Watershed	Size	Geology	County
USJ	Upper San Juan Creek	Upper San Juan Creek	S	IM	Orange
LCC	Long Canyon Creek	Tributary to Kitchen Creek	S	IM	San Diego
KC	Kitchen Creek	Kitchen Creek-Cottonwood Creek	M	IM	San Diego
PVC	Pine Valley Creek	Upper Pine Valley Creek	M	IM	San Diego
ACC	Agua Caliente Creek	Laguna Creek/ San Luis Rey River	M	IM	San Diego
LPC	La Posta Creek	La Posta Creek	L	IM	San Diego
CONC	Conejos Creek	San Diego River	L	IM	San Diego
SJC	San Juan Creek	Upper San Juan Creek	L	IM	Orange
ATC	Arroyo Trabuco Creek	Arroyo Trabuco	S	SED	Orange

**Table 5. Additional Sedimentary and Replacement Dry Weather Monitoring Locations Accepted by Stakeholders in September 2012. IM – Igneous/Metamorphic, SED – Sedimentary; Size: S – Small, M – Medium, and L – Large**

Site Code	Stream Name	Watershed	Size	Geology	County
SANT	Santiago Creek	Santiago Canyon Creek	S	SED	Orange
FCC	Fremont Canyon Creek	Fremont Canyon Creek	M	SED	Orange
ALIS	Aliso Canyon Creek	Aliso Canyon Creek	M	SED	Riverside
DULZ	Dulzura Creek	Otay River	L	IM	San Diego

Table 6. Dry season (2012) event monitoring summary including site, sampling start and end dates, total number of primary fecal indicator bacteria (FIB), trace metals, nutrients, conventionals (i.e. total suspended solids) and total number of algal assessments collected per site.

Site Code	Dry Weather Sampling Start Date	Dry Weather Sampling End Date	Total Sampling Weeks/yr	Total Bacteria Samples Collected	Total Nutrient, Trace Metals and Conventional Samples Collected	Total No. Algal Assessments	Mean flow (m <sup>3</sup> /sec)	Comment
LCC	4/2/2012	7/30/2012	18	19	9	2	0.0159	
LPC	4/2/2012	7/30/2012	18	19	9	0	0.0264	Evidence of grazing observed at site
KC	4/2/2012	6/25/2012	13	15	6	2	0.0369	
PVC	4/2/2012	7/2/2012	14	17	7	2	0.0242	
ACC	5/22/2012	6/12/2012	4	6	2	1	0.0013	
CONC	5/16/2012	6/14/2012	5	6	2	2	0.0006	
USJ	4/30/2012	7/3/2012	10	11	5	0	0.0024	
SJC	4/2/2012	7/31/2012	18	18	9	0	0.0032	Road repaved, sampling suspended
ATC	4/2/2012	7/31/2012	18	18	9	0	0.0066	Evidence anthropogenic disturbance
<b>Overall Total</b>			<b>18</b>	<b>129</b>	<b>58</b>	<b>9</b>	<b>0.0131 ± 0.0087</b>	<b>Mean ± SD</b>



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### 4 Quality Assurance/Quality Control (QA/QC) of Year 1 Monitoring Data

The primary goal of the quality assurance/quality control (QA/QC) effort was to ensure that the sediment chemistry, nutrient and bacteria data generated by the three study participants were complete and met common data quality objectives (DQOs) for criteria pertaining to sensitivity, accuracy, and precision.

#### 4.1 Reporting Limits

To achieve study goals, minimum target reporting limits (RLs) for each analyte were set forth in the San Diego Regional Reference Stream QAPP (Table 6-1). These RLs were set to achieve the Surface Waters Ambient Monitoring Program (SWAMP) target thresholds. Overall, participant-specific minimum RLs were lower than the target RLs, indicating that the analyses performed provided adequate sensitivity.

#### 4.2 QA/QC Goals and Success

The sample storage conditions and maximum hold time requirements and success achieved are summarized in Table 7. Except for 25 grain size samples, all participating labs performed their analyses within the specified holding times.

The remaining criteria and corresponding DQOs, along with the degree of project success in attaining these goals, are summarized in Tables 8-9. Of the 125 samples delivered to the laboratories, over 97% of the samples were analyzed and data reported attaining our completeness DQO of 90%. Of the 85 laboratory analyses run for chemical contamination, approximately 99% had no detectable chemical measurements in blank samples. Of the remaining samples with detectable blanks values, no batch had a value more than three times the detection limit. Laboratories also attained success in accuracy DQOs for blank spiked samples (100.0% for trace metals and nutrients), matrix spiked samples (100% for trace metals and nutrients), and CRMs (96.0% for trace metals and 98.5% for nutrients). Finally, laboratories attained success in precision DQOs for laboratory duplicate samples (97.4% for trace metals, 98.0% for nutrients, and 100% for bacteria, TOC, TDS and TSS) and matrix spike duplicate samples (98.5% for trace metals and 97.6% for nutrients).

Overall, the majority of QA/QC criteria were met with greater than 90% success and completeness. For those few instances where specific criteria were not met, deviations did not impart additional uncertainty in the measurements and therefore did not warrant removal or exclusion of any data from the study database. All of these deviations, however, were noted in the study database for individual users to make their own decisions regarding data quality.

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**Table 7: Achievement of sample storage conditions and maximum holding time criteria.**

Parameter	Storage Condition	Maximum Holding Time	Actual Hold Times (days)	Percent Success
Alkalinity (Total Alkalinity as CaCO <sub>3</sub> )	< 6°C and store in the dark	14 days	3-14	100%
Chloride		28 days	3-25	100%
Hardness (Total Hardness as CaCO <sub>3</sub> )		6 months	3-25	100%
Sulfate		28 days	3-25	100%
TDS		7 days	3-30	94%
TSS		7 days	3-30	94%
<i>Enterococcus</i>		< to 6°C in the dark <sup>(b)</sup>	8 hours <sup>(a)</sup>	8
<i>E. coli</i>	8			100%
Total Coliform	8			100%
<i>Bacteroides</i>	8			100%
<i>M. smithii</i>	8			100%
Bacteria community	8			100%
Nitrate + Nitrite (as N)	Cool to 4°C, store in the dark, filter and freeze at -20°C	48 hours; 28 days if frozen	10-26	100%
Ammonia (as N)		48 hours; 28 days frozen	10-26	100%
Total Dissolved Nitrogen	Cool to 4°C and store in the dark, filter and freeze at -20°C	28 days if frozen	10-26	100%
Orthophosphate (dissolved; Soluble Reactive Phosphorus)	Cool to 4°C and store in the dark	48 hours	48 hours	100%
TDP		28 days	10-26	100%
Particulate Nitrogen & Carbon (PN, POC)	Keep at 4°C, dark, but must filter within 24 hours, freeze until dried	12 months after drying at 80°C for 24 hours	10-26	100%
Particulate Phosphorus (PP)	Keep at 4°C, dark, but must filter within 24 hrs, freeze until dried	12 months after drying at 80°C for 24 hours	10-26	100%
Dissolved Organic Carbon (DOC)	< to 6°C and store in the dark	28 days	10-26	100%
Trace Metals	< 6°C; Acidify to pH<2 with pre-tested nitric acid (HNO <sub>3</sub> ) w/in 48 h	6 months at room temperature following acidification	7-26	100%

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**Table 8: Summary of performance-based QC criteria and project success in performing within those criteria for trace metals and nutrients.**

Quality Control Parameter	Trace Metals		Nutrients	
	DQO	Success	DQO	Success
<b><u>Completeness</u></b>	100%	100.0%	100%	100%
<b><u>Blanks</u></b>				
Frequency	10% of total samples	100%	10% of total samples	100%
Accuracy	< RL	100%	< RL	100%
Precision	RPD<25%	100%	RPD<25%	100%
<b><u>Spiked Blanks</u></b>				
Frequency	10% of total samples	100%	10% of total samples	100%
Accuracy	Recovery within 75-125%	100%	Recovery within 80-120%	100%
Precision	RPD<25%	98.0%	RPD<25%	98.0%
<b><u>CRM<sup>1</sup></u></b>				
Frequency	10% of total samples	100%	10% of total samples	100%
Accuracy	within lab specified limits	96.0%	within lab specified limits	98.5%
<b><u>Matrix Spikes</u></b>				
Frequency	10% of total samples	100%	10% of total samples	100%
Accuracy	Recovery within 75-125%	100%	Recovery within 80-120%	100%
Precision	Within $\pm$ 25% RPD <sup>2</sup>	98.5%	RPD<25%	96.7%
<b><u>Sample Duplicates</u></b>				
Frequency	10% of total samples	100%	10% of total samples	100%
Precision	Within $\pm$ 25% RPD	97.4%	Within $\pm$ 25% RPD	98.0%

<sup>1</sup>N/A=no DQO set, data are for evaluation purposes only as part of ongoing QA/QC efforts

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**Table 9: Summary of performance-based QC criteria and project success in performing within those criteria for bacteria, total dissolved and total suspended solids (TDS/TSS).**

Quality Control Parameter	Bacteria		TDS/TSS	
	DQO	Success	DQO	Success
<b><u>Completeness</u></b>	100%	100%	100%	100%
<b><u>Blanks</u></b>				
Frequency	10% of total samples	100%	10% of total samples	100%
Accuracy	Positive control within 80-120% recovery; Negative control = no growth on filter	100%	NA <sup>1</sup>	NA <sup>1</sup>
Precision	Lab Replicate RPD<25%	100%	Lab Replicate RPD<25%	100%
<b><u>Spiked Blanks</u></b>				
Frequency	NA <sup>1</sup>	NA <sup>1</sup>	NA <sup>1</sup>	NA <sup>1</sup>
Accuracy	NA <sup>1</sup>	NA <sup>1</sup>	NA <sup>1</sup>	NA <sup>1</sup>
Precision	NA <sup>1</sup>	NA <sup>1</sup>	NA <sup>1</sup>	NA <sup>1</sup>
<b><u>CRM<sup>1</sup></u></b>				
Frequency	NA <sup>1</sup>	NA <sup>1</sup>	NA <sup>1</sup>	NA <sup>1</sup>
Accuracy	NA <sup>1</sup>	NA <sup>1</sup>	NA <sup>1</sup>	NA <sup>1</sup>
<b><u>Matrix Spikes</u></b>				
Frequency	-	-	-	-
Accuracy	NA <sup>1</sup>	NA <sup>1</sup>	NA <sup>1</sup>	NA <sup>1</sup>
Precision	NA <sup>1</sup>	NA <sup>1</sup>	NA <sup>1</sup>	NA <sup>1</sup>
<b><u>Sample Duplicates</u></b>				
Frequency	-	-	-	-
Precision	10% of total samples Within ± 25% RPD	100%	10% of total samples Within ± 25% RPD	100%

<sup>1</sup>N/A=no DQO set, data are for evaluation purposes only as part of ongoing QA/QC efforts

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### 5 Preliminary Data Summary

A summary of exceedances are given for provided for bacterial indicators, trace metals, and nutrients for Year 1 sampling.

#### 5.1 Wet Weather Data Summary

Table 10 provides a comparison of median constituent event mean concentration (EMCs) at open space sites during the 1983 Nationwide Urban Runoff Program (NURP, U.S. EPA 1983a), to the 1990 National Stormwater Quality Database (NSQD, Pitt et al. 2003) monitoring study, the San Diego Regional Reference Stream Study 2011-2012 wet season results and to the San Diego Regional Water Quality Control Board (SD RWQCB) Basin Plan. Comparison of bacteria, trace metals and nutrient concentrations in stormwater from reference streams from this study reveal overall median *E. coli*, total cadmium, copper, lead, nickel and zinc, nitrate + nitrite, total nitrogen and total phosphorus EMCs that are lower to current U.S. averages reported in the NSQD and SD RWQCB Basin Plan. The exception is that median constituent values from Cristianitos Creek are substantially higher than those observed in the rest of the U.S. Table 11 provides a comparison of exceedences of single sample maximum standards at reference stream sites for the three storms.

Figures 6-8 show the results of FIB pollutographs for each of the three storms captured during the 2011-2012 wet season.

#### 5.2 Dry Weather Data Summary

##### 5.2.1 Fecal Indicator Bacteria

Two analyses were used to characterize FIB levels from natural streams. First the 30-d geomeans, variances, and ranges of concentrations, were calculated to provide an estimate of expected baseline bacterial levels. Second, dry weather FIB concentrations were compared with the state of CA standards for single-sample and 30-d geomean maximum allowable densities (Table 12). Cumulative density frequency plots (CDFs) were produced to compare observed bacterial concentrations to the CA quantitative standards and to calculate accumulated relative exceedance percentages.

A total of 36.3% of the indicator bacteria dry season samples (for all three indicators) from the natural sites exceeded daily (single sample) water quality standards. Approximately 34.1% of enterococci exceeded the daily threshold of 104 MPN/100 ml (Figure 9). The average enterococci level of these exceedances was 141 MPN/100 ml, with a maximum of 1553 MPN/100 ml (La Posta Creek) and a minimum of 2 MPN/100 ml (Arroyo Trabuco Creek). For *E. coli*, 4.2% of the measurements exceeded the single sample standard of 235 MPN/100 ml with a maximum and a minimum of 727 MPN/100 ml

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and 1 MPN/100 ml, respectively (La Posta Creek; both Kitchen and Long Canyon Creeks). For total coliforms, no sites exceeded the single sample standard of 10,000 MPN/100 ml.

A total of 71.0% of enterococci samples from the natural sites exceeded the 30-d geomean water quality standard of 33 MPN/100 ml. The average enterococci level of these exceedances was 107 MPN/100 ml, with a maximum of 843 MPN/100 ml and a minimum of 7.2 MPN/100 ml (Table 13; Appendix A1). For *E. coli*, approximately 3.3% exceeded the 30-d geomean threshold of 126 MPN/100 ml with a maximum and a minimum of 261 MPN/100 ml and 2 MPN/100 ml, respectively (Table 12; Appendix A2). For total coliforms, 61.3% exceeded the 30-d geomean of 1000 MPN/100 ml with a maximum and a minimum of 2419.6 MPN/100 ml and 345 MPN/100 ml, respectively (Table 13; Appendix A3).

Water temperature varied by about 5-10°C at each of the sites, increasing during the summer months reaching a mean of 17.3°C and a maximum of 19°C on warm sunny afternoons (Figure 10a). A negative correlation was observed between dissolved oxygen and stream temperature (Figure 10a and Appendix B, Table B1). Bacteria levels for all three indicators were substantially higher during the month of July than during all other months (Figures 10-13). For example, 30-d geomeans for enterococci at Long Canyon Creek were near the water quality standard in April 2012 with levels approximately 28.7 MPN/100 ml  $\pm$  3.2 SD, increased substantially during the summer, exceeding the criterion, peaking in July at 311.7 MPN/100 ml  $\pm$  3.1 SD as streams stopped flowing (Figure 10b). Similar enterococci exceedance patterns were observed for all streams with the exception of Upper San Juan Creek (Figure 8). Observed *E. coli* concentrations responded similarly to enterococci however none of the streams sampled showed exceedances for *E. coli* during the summer months (Figure 12). A similar exceedance pattern was observed for total coliforms (Figure 13).

### 5.2.2 Trace Metals Results

Metals occurred predominantly in the dissolved phase during the 2012 dry season, although the dissolved fraction varied by metal (Figure 14). Upper San Juan Creek had the highest mean dissolved copper concentration at 4.0  $\mu\text{g/L} \pm .06$  followed by Arroyo Trabuco and Pine Valley at 0.38  $\pm .05$  and 0.36  $\pm .01$   $\mu\text{g/L}$  respectively (Figure 14). Mean total and dissolved metals concentrations for each reference stream are provided in Appendix C. Reference stream metals concentrations varied considerably both spatially and temporally. Results indicate that for copper reference stream mean dissolved concentrations were substantially higher in April (0.3  $\pm .1$   $\mu\text{g/L}$ ) than during the other three sampling events (Figure 15). Mean dissolved copper for all reference streams for the entire 2012 dry season was 0.3  $\pm .1$   $\mu\text{g/L}$ .

Comparison of reference stream samples to standards can be instructive in estimating the likelihood that inherent variability of reference concentrations may result in periodic exceedences. The concentrations of metals from filtered storm water and dry season samples were evaluated using the California State Water Quality Standards for Surface Waters (Federal Register, EPA Part III, 40 CFR Part 131). Toxicity of many metals is dependent upon the hardness of the water. Hardness of each water

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sample was calculated from its calcium and magnesium concentrations and, using the calculated hardness, calculations for chronic toxicity of the sampled metals were then done. Equations for calculating hardness and chronic toxicity criteria are as follows (Federal Register, EPA Part III, 40 CFR Part 131):

- **Hardness:**  
using the values for calcium (mg/L) and magnesium (mg/L):  $\text{Hardness} = (2.497 * \text{Ca}) + (4.1189 * \text{Mg})$ .
- **Chronic toxicity criteria:**  
$$\text{Copper} \leq (.960)(e^{(.8545(\ln(\text{hardness}))-1.702)}) \text{ Freshwater}$$
$$\leq (.830)(e^{(.8545(\ln(\text{hardness}))-1.702)}) \text{ Saltwater}$$
  
$$\text{Lead} \leq (.791)(e^{(1.237(\ln(\text{hardness}))-4.705)}) \text{ Freshwater}$$
$$\leq (.791)(e^{(1.237(\ln(\text{hardness}))-4.705)}) \text{ Saltwater}$$
  
$$\text{Zinc} \leq (.986)(e^{(0.8473(\ln(\text{hardness}))+0.884)}) \text{ Freshwater}$$
$$\leq (.946)(e^{(0.8473(\ln(\text{hardness}))+0.884)}) \text{ Freshwater}$$

Water Quality Standards; Establishment of Numeric Criteria for Priority Toxic Pollutants for the State of California; Rule. *Federal Register* Vol. 65, No. 97/ May 2000 Rules and Regulations.

Concentrations of dissolved copper, and zinc in reference streams were generally below the freshwater and saltwater chronic toxicity standards established under the California Toxics Rule (Figures 15 and 17). Of the 121 individual reference stream samples for each dissolved metal, four copper samples (2 dry weather; one in early April and one in early May; and 2 wet weather), and one dry weather zinc sample exceeded the CTR standards. Reference stream dissolved copper concentrations exceeded CTR standards in 4.1% and 11.2% of the wet and dry weather samples, respectively. In contrast, only 2.9% of dry weather reference stream samples exceeded CTR standards for zinc. No wet weather samples exceeded the CTR standards for zinc.

### 5.2.3 Total Solids Results

Increased levels of total dissolved solids (TDS) and/or suspended solids (TSS) can block out light and thus reduce photosynthetic activity and, depending on the amount of surface agitation (oxygenation), gradually decrease the amount of oxygen produced by the plants and lead to an increase in water temperature. Mean total dissolved solids exceeded the drinking water quality standard in June at both Arroyo Trabuco and La Posta creeks (548 and 564 mg/L, respectively; Figure 18). San Juan Creek had the highest TDS exceedance observed during the 2012 dry season (in July) with a concentration of 1066 mg/L. The source of this exceedance was probably due to soil erosion caused by the road construction

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on Ortega HWY above the sampling site. None of the reference stream sites exceeded the TSS water quality threshold of 100 mg/L (Table 12).

### 5.2.4 Nutrient Results

For this discussion total nitrogen (TN) and total phosphorus (TP) were selected as the factors representing the water quality of the reference streams. Based upon ninety samples collected between April and July 2012, the mean total phosphorus (TP) concentration in all reference streams was 0.03 mg/L and the mean total nitrogen (TN) concentration was 0.16 mg/L (Table 14). Exceedance frequency of SD RWQCB basin plan standards of 1 mg TN L-1 and 0.1 mg TP L-1 was 0% and 11% respectively. The mean TN:TP (by weight) was 7.6:1 (Table 14).

Similar to metals, nutrients occurred predominantly in the dissolved and particulate phase during the 2012 dry season, although the dissolved and particulate fraction varied by nutrient (Figures 19 and 20; Tables D1-D3).

There was a slight positive relationship between the concentration of total nitrogen and the concentration of total phosphorus in the rivers ( $r^2 = 0.3$ ) (Figure 21). Both TN and TP showed a negative relationship ( $r^2 = 0.6$  and  $0.2$ , respectively) when compared with proportion of underlying watershed geology (%) during the 2012 dry season (Figure 21).

Dissolved oxygen (DO) concentrations in reference streams averaged 7.9 mg/L. The mean value for Upper San Juan Creek was considerably less (5.3 mg/L) but higher than the minimal DO criteria of 5.0 mg/L established for class III (intermediate) waters.



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### 6 References

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**Table 10. Comparison of median event mean concentrations (EMCs) for Open/ Non-Urban Land Uses. ND = not detected; NA = not analyzed. Note that Cristianitos Creek (CCCP) results are not adjusted for inputs from Prima Deschecha and Golf Course storm drain inputs.**

Constituent	Reference Stream			Open/Non-Urban Land Use			SD RWQCB Basin Plan
	CCCP <sup>1</sup>	LCC <sup>2</sup>	SJC <sup>3</sup>	SDRS <sup>4</sup> Overall	NSQD <sup>5</sup>	NURP <sup>6</sup>	
	Median EMCs						
TSS (mg/L)	619	0.8	0.3	0.8	78	70	100
<b>Bacteria (MPN/100 mL)</b>							
<i>E. coli</i>	2,212	36	193	193	7,200	NA	235
Enterococi	8,577	124	314	314	NA	NA	104
Total coliforms	<b>24,176</b>	1163	1746	1746	NA	NA	10,000
<b>Trace Metals (mg/L)</b>							
Total Cadmium	<b>2.1</b>	ND	0.01	0.01	0.50	NA	0.05
Total Copper	<b>22</b>	0.5	0.8	0.8	5.3	NA	0.01
Total Lead	4.3	0.04	0.05	0.05	5.0	30	0.02
Total Nickel	25	0.2	0.4	0.4	ND	NA	0.10
Total Zinc	<b>169</b>	0.6	1.6	1.6	39	195	0.02
<b>Nutrients (mg/L)</b>							
Nitrate + Nitrite	0.57	0.06	0.00	0.06	0.60	0.54	10
Total Nitrogen	<b>1.1</b>	0.21	0.09	0.21	1.9	NA	1.0
Total Phosphorus	<b>0.18</b>	0.04	0.01	0.01	0.25	0.12	0.1

Reference Streams: <sup>1</sup>CCCP = Cristianitos Creek, <sup>2</sup>LCC = Long Canyon Creek, <sup>3</sup>SJC = San Juan Creek  
Source: <sup>4</sup>SDRS = San Diego Reference Stream study;

<sup>5</sup>NSQD = The National Storm water Quality Database, Pitt et al. (2003)

<sup>6</sup>NURP = Nationwide Urban Runoff Program (US EPA 1983)

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**Table 11. Comparison of exceedences of single sample maximum standards at reference stream sites for the three storms during the 2011-2012 wet season.**

Stream	% Exceedance		
	E. coli	Enterococci (MPN/100 ml)	Total Coliforms
Cristianitos Creek	89	100	100
Long Canyon Creek	33	89	0.0
San Juan Creek	7.1	71	0.0

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**Table 12. State of California water quality standards for fecal indicator bacteria, trace metals and nutrients as established in Assembly Bill 411, the California Basin Plan and SD RWQCB Basin plan biostimulatory objectives for flowing waters.**

Constituent	Reference Stream										CA Basin Plan/ Water Quality Threshold
	ACC <sup>1</sup>	ATC <sup>1</sup>	CONC <sup>1</sup>	KC <sup>1</sup>	LCC <sup>1</sup>	LPC <sup>1</sup>	PVC <sup>1</sup>	SJC <sup>1</sup>	USJ <sup>1</sup>		
Total Suspended Solids (mg/L)	0.7	2.5	2.2	1.5	4.5	1.2	1.2	1.2	10.6	9.7	100
Total Dissolved Solids (mg/L)	226	410	360	224	235	451	265	499	499	295	500
<b>Bacteria</b>											
E. coli	115	81	14	74	37	102	42	65	65	28	235
Enterococci	<b>283</b>	67	32	80	<b>169</b>	<b>298</b>	38	116	116	19	104
Total Coliforms	1,886	2,098	1,548	2,078	1,302	2,420	1,683	1,058	1,058	828	10,000
<b>Total Metals (ug/L)</b>											
Cadmium	nd <sup>2</sup>	0.03	nd <sup>2</sup>	nd <sup>2</sup>	nd <sup>2</sup>	0.02	nd <sup>2</sup>	0.06	0.06	0.03	5.0
Chromium	0.02	0.05	0.05	0.07	0.09	0.05	0.05	0.07	0.07	0.03	50
Copper	0.21	0.52	0.29	0.26	0.25	0.14	0.37	0.59	0.59	0.30	5.83
Iron	103	29.3	178	57.7	221	82.5	94.5	<b>596</b>	<b>596</b>	28.1	300
Lead	0.03	0.05	0.02	0.02	0.02	0.02	0.01	0.11	0.11	0.02	15
Manganese	14.3	2.3	<b>98.53</b>	5.25	44.7	32.6	9.52	<b>152</b>	<b>152</b>	0.74	50
Nickel	0.80	0.29	0.27	0.21	0.10	0.12	0.57	0.36	0.36	0.15	100
Selenium	0.10	1.1	0.15	0.07	0.04	0.19	0.18	0.20	0.20	0.42	50
Zinc	0.80	1.2	0.51	25.9	18.5	16.2	37.2	2.3	2.3	1.2	<b>16.91</b>
<b>Dissolved Metals (ug/L)</b>											
Copper	0.27	0.39	0.27	0.24	0.19	0.17	0.36	0.19	0.19	0.42	5.6
Zinc	0.46	0.53	0.29	<b>17.5</b>	15.9	<b>16.1</b>	<b>34.0</b>	0.64	0.64	0.86	16.0

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Table 12 continued.

Constituent	Reference Stream										SD RWQB Basin Plan/ Water Quality Threshold
	ACC <sup>1</sup>	ATC <sup>1</sup>	CONC <sup>1</sup>	KC <sup>1</sup>	LCC <sup>1</sup>	LPC <sup>1</sup>	PVC <sup>1</sup>	SJC <sup>1</sup>	USJ <sup>1</sup>		
	Mean Result										
<b>Nutrients (mg/L)</b>											
Total Nitrogen	0.19	0.04	0.29	0.15	0.11	0.27	0.24	0.07	0.05		1.0
Nitrate (as NO3)	1.3E-03	1.1E-02	1.9E-03	2.3E-03	1.1	1.2E-01	1.5E-03	6.2E-03	3.2E-03		45
Nitrate + Nitrite (sum as Nitrogen)	1.6E-03	1.1E-02	2.0E-03	2.4E-03	1.1	1.2E-01	1.7E-03	6.5E-03	3.6E-03		10
Nitrite (as Nitrogen)	3.0E-04	1.0E-04	8.8E-05	1.5E-04	4.9E-04	8.6E-04	2.3E-04	2.8E-04	4.0E-04		1.0
Total Phosphorus	0.03	0.01	0.02	0.08	0.02	0.10	0.01	0.02	0.01		0.1

<sup>1</sup> Agua Caliente Creek; Arroyo Trabuco; Conejos Creek; Kitchen Creek; Long Canyon Creek; La Posta Creek; Pine Valley Creek; San Juan Creek; Upper San Juan

<sup>2</sup> nd = not detected

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**Table 13. List of natural stream sampling sites, characteristics and their median monthly fecal indicator bacteria densities (MPN/100 ml). 30-d geomean exceedances are bolded.**

Site Name	Watershed	County	Catchment size (km <sup>2</sup> )	Mean flow (m <sup>3</sup> /sec)	Geomean					
					E. coli		Enterococci		Total coliforms	
					(MPN/100 ml)	SD	(MPN/100 ml)	SD	(MPN/100 ml)	SD
Long Canyon Creek	Tributary to Kitchen Creek	San Diego	23.3	0.0159	8.8	81.0	116.1	35.3	1,131.9	325.9
Kitchen Creek <sup>a</sup>	Kitchen Creek-Cottonwood Creek		39.9	0.0369	13.0	22.1	64.1	36.1	1,999.3	273.9
Pine Valley Creek <sup>a</sup>	Upper Pine Valley Creek	San Diego	43.1	0.0242	16.9	31.3	30.6	21.2	1,486.9	359.7
Agua Caliente Creek <sup>a</sup>	Laguna Creek/San Luis Rey River		46.1	0.0013	15.6	108.3	131.5	219.0	2,419.6	0.0
La Posta Creek	La Posta Creek	San Diego	115.3	0.0264	47.2	14.2	133.0	216.4	1,685.9	345.9
Conejos Creek <sup>a</sup>	San Diego River		116.0	0.0006	10.8	7.8	26.7	22.9	1,993.1	481.7
Upper San Juan Creek <sup>a</sup>	Upper San Juan Creek	Orange	19.3	0.0024	14.3	14.7	21.3	12.3	691.9	350.2
San Juan Creek	Upper San Juan Creek		96.9	0.0032	16.1	14.3	59.9	76.2	856.1	364.0
Arroyo Trabuco	Arroyo Trabuco	Orange	31.0	0.0066	30.5	92.7	37.9	92.1	1,392.4	342.6
<sup>a</sup> Intermittent stream		<b>Mean</b>	59.0	0.0130	19.3	42.9	69.0	81.3	1,517.4	316.0
		<b>SD</b>	39.2	0.0087	6.1	20.0	23.2	41.3	287.7	66.0
		<b>Overall Geomean</b>			18.0		56.9		1,231.2	
				SD	17.8		40.3		142.4	

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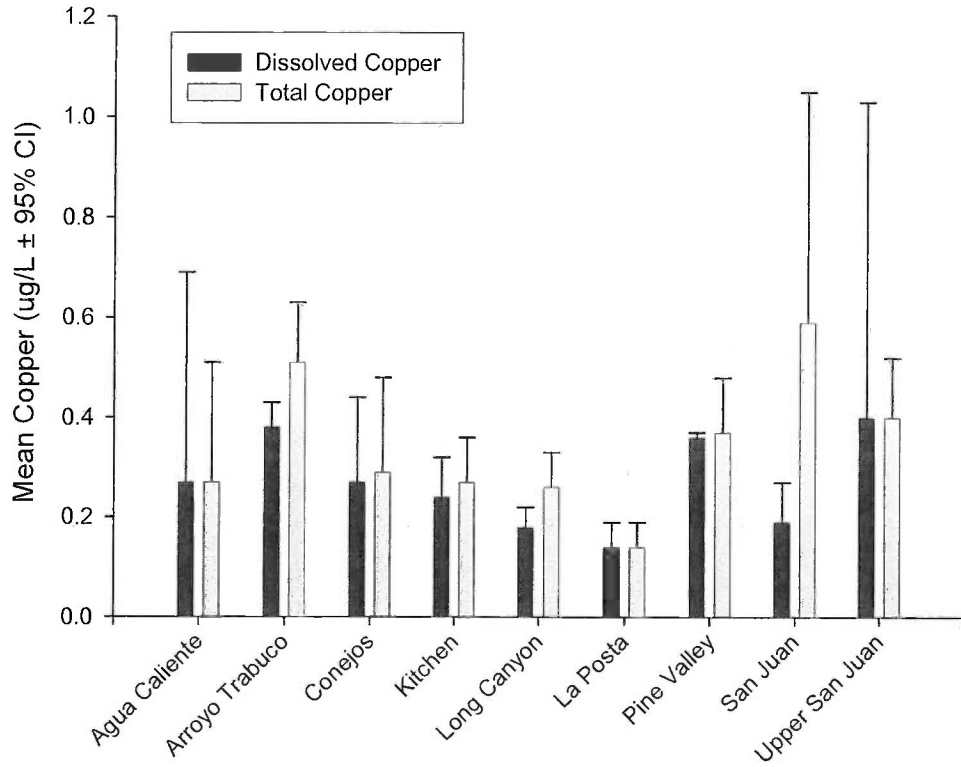


Figure 14. Comparison of dissolved and total copper concentrations in reference streams during the 2012 dry season, n = 68.

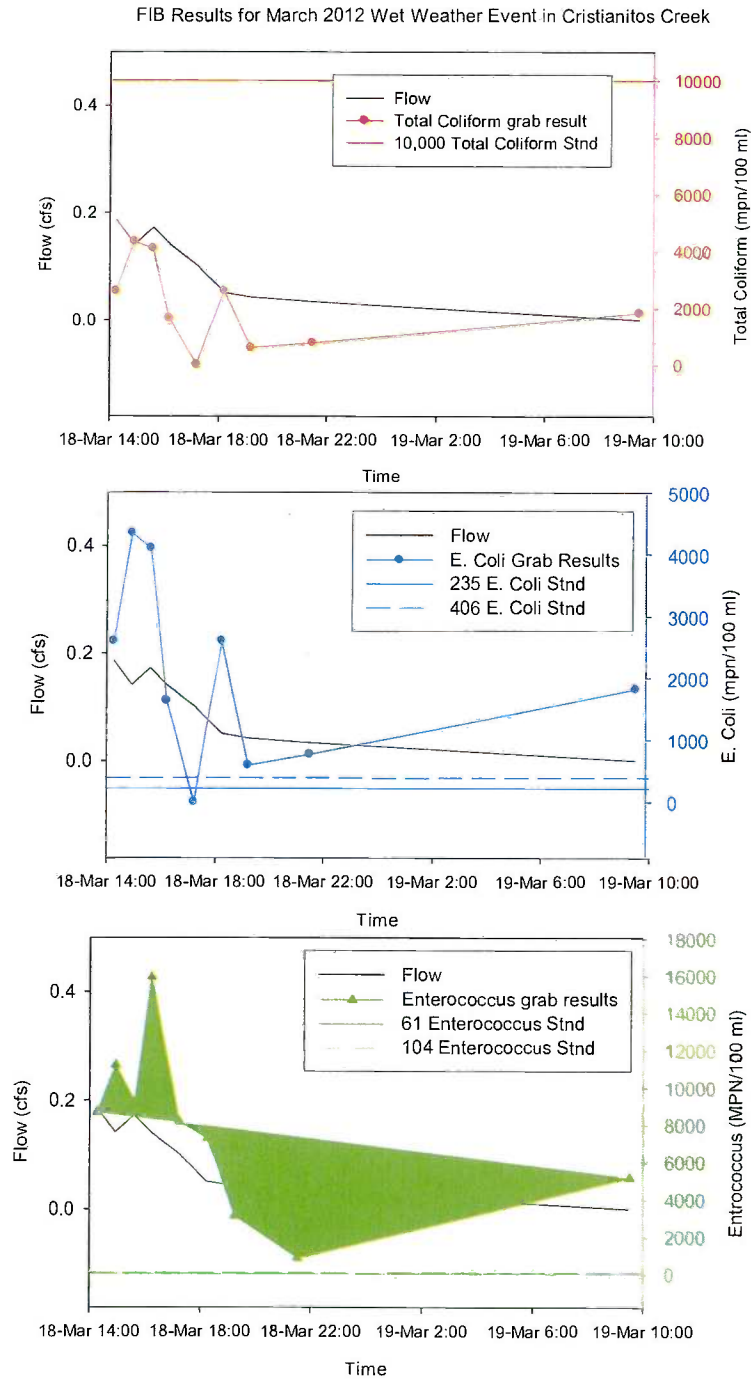
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**Table 14. Water quality results at reference streams during the 2012 dry season.**

Reference Stream	DO	TN	TP	TN:TP
	Mean (mg/L)			
Agua Caliente	8.2	0.19	0.03	6.3
Arroyo Trabuco	8.7	0.05	0.01	5.0
Conejos	6.4	0.29	0.02	15
Kitchen Creek	9.7	0.15	0.08	1.9
Long Canyon	9.0	0.11	0.02	5.5
La Posta	7.7	0.27	0.10	2.7
Pine Valley	8.5	0.24	0.01	24
San Juan	7.8	0.07	0.02	3.5
Upper San Juan	5.3	0.05	0.01	5.0
<b>Mean</b>	<b>7.9</b>	<b>0.16</b>	<b>0.03</b>	<b>7.60</b>

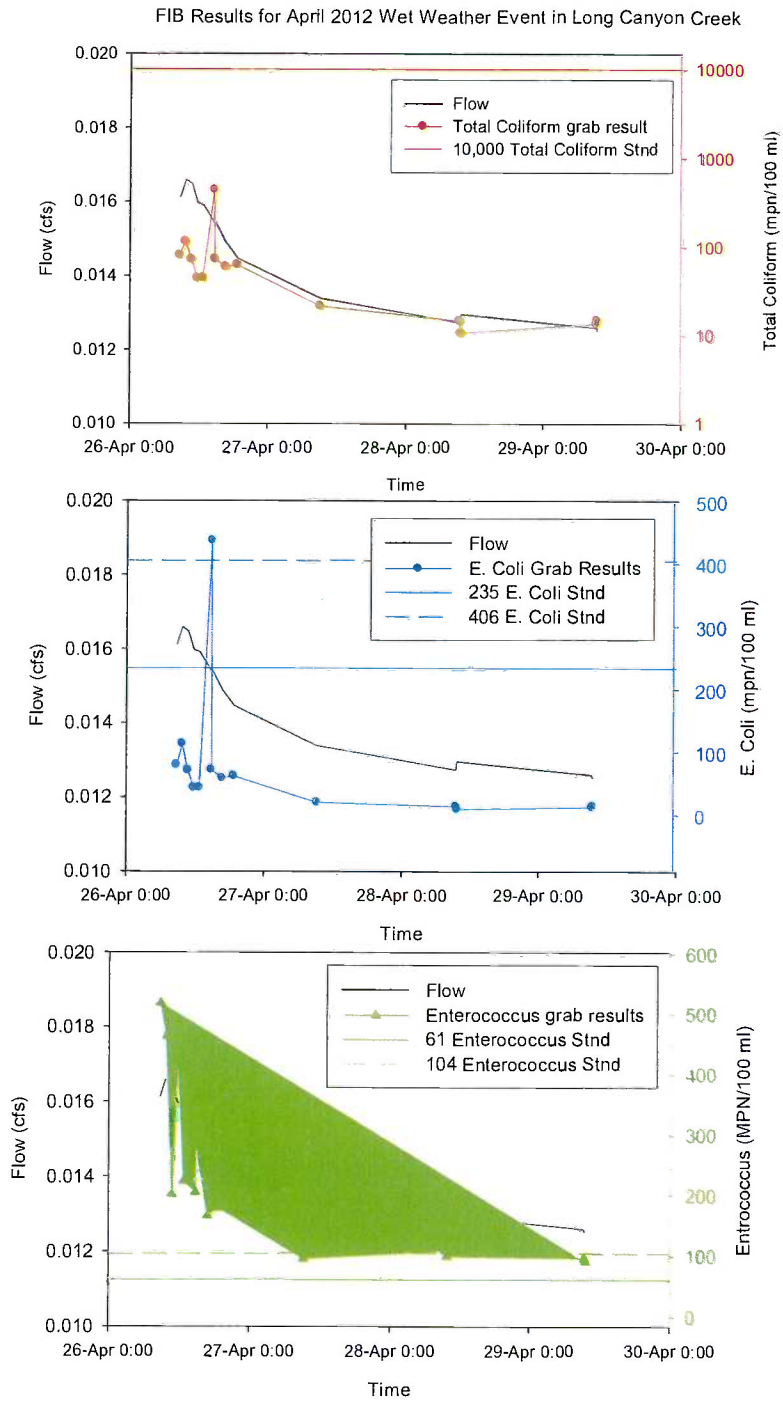


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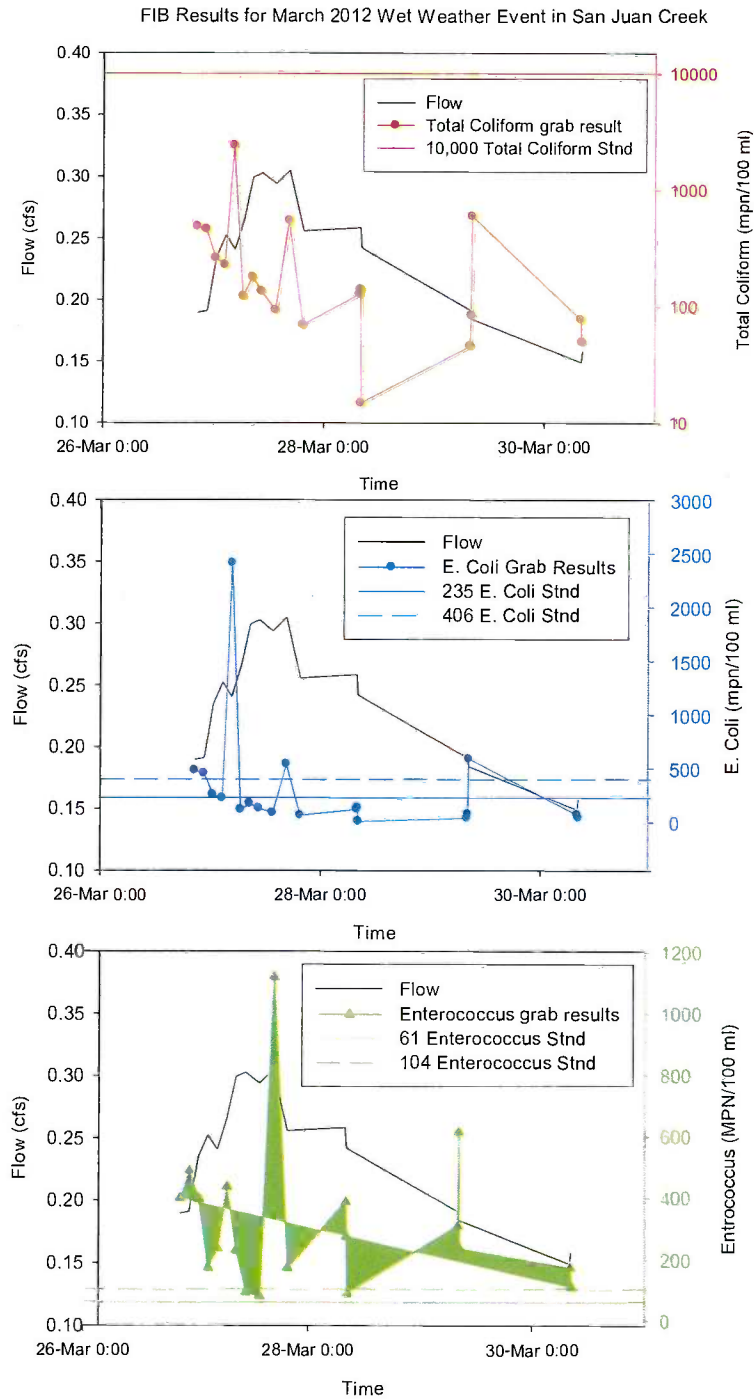
**Figure 6. Pollutagraph of flow and FIB grab sample results relative to California standards for single grab samples for Cristianitos Creek March 18, 2012 wet weather event.**

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**Figure 7. Pollutagraph of flow and FIB grab sample results relative to California standards for single grab samples for Long Canyon Creek April 26, 2012 wet weather event.**

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**Figure 8. Pollutagraph of flow and FIB grab sample results relative to California standards for single grab samples for San Juan Creek March 20, 2012 wet weather event.**

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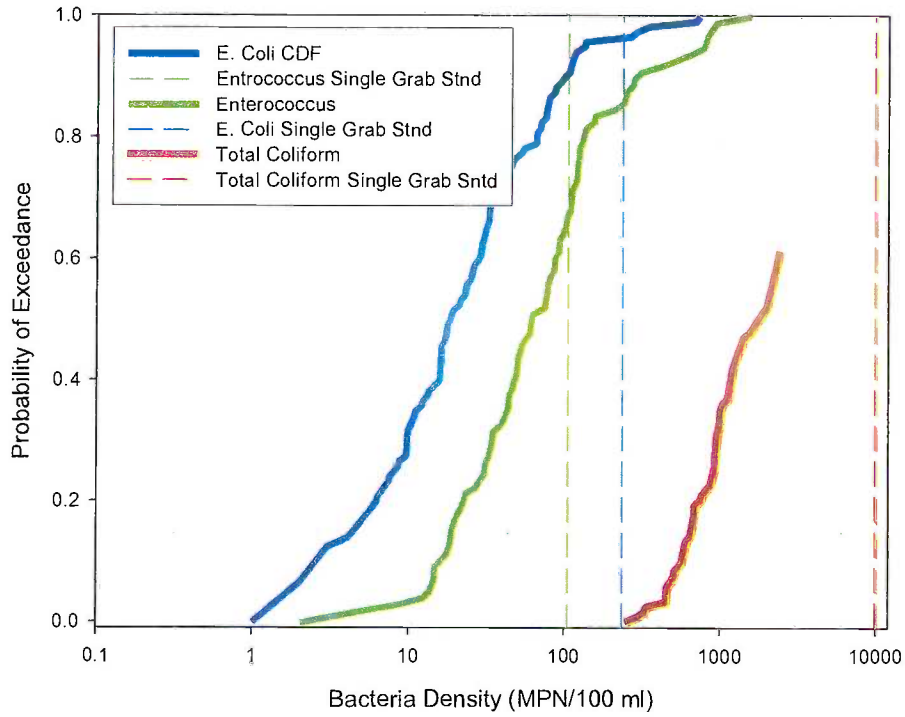
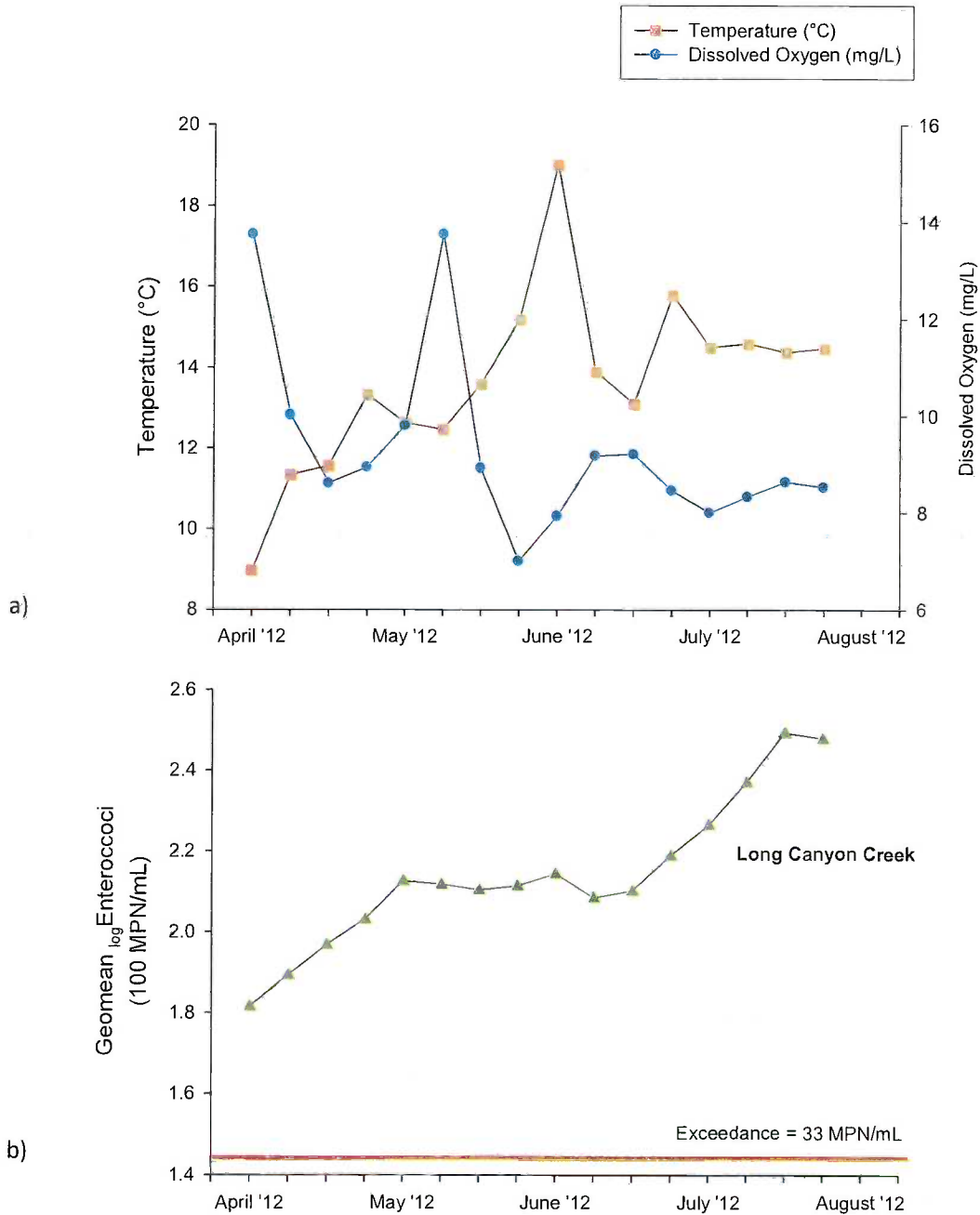


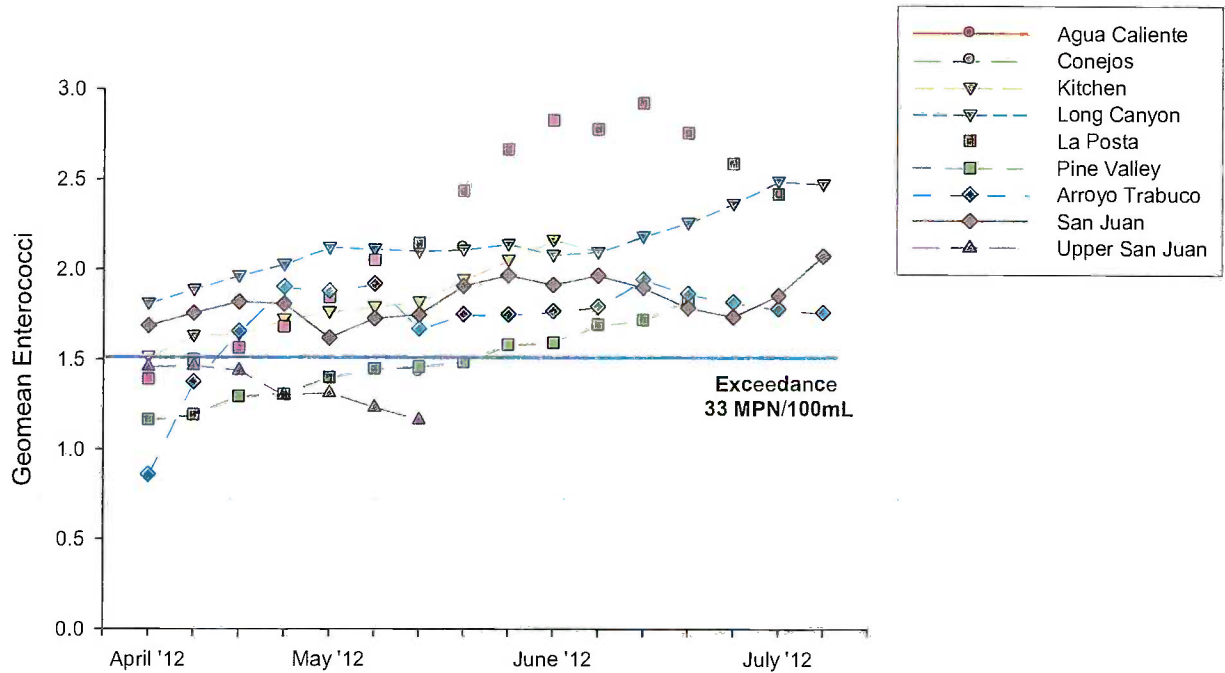
Figure 9. Cumulative density frequency plot (CDF) of dry weather FIB in natural streams relative to State of California marine water quality standards (dotted lines).

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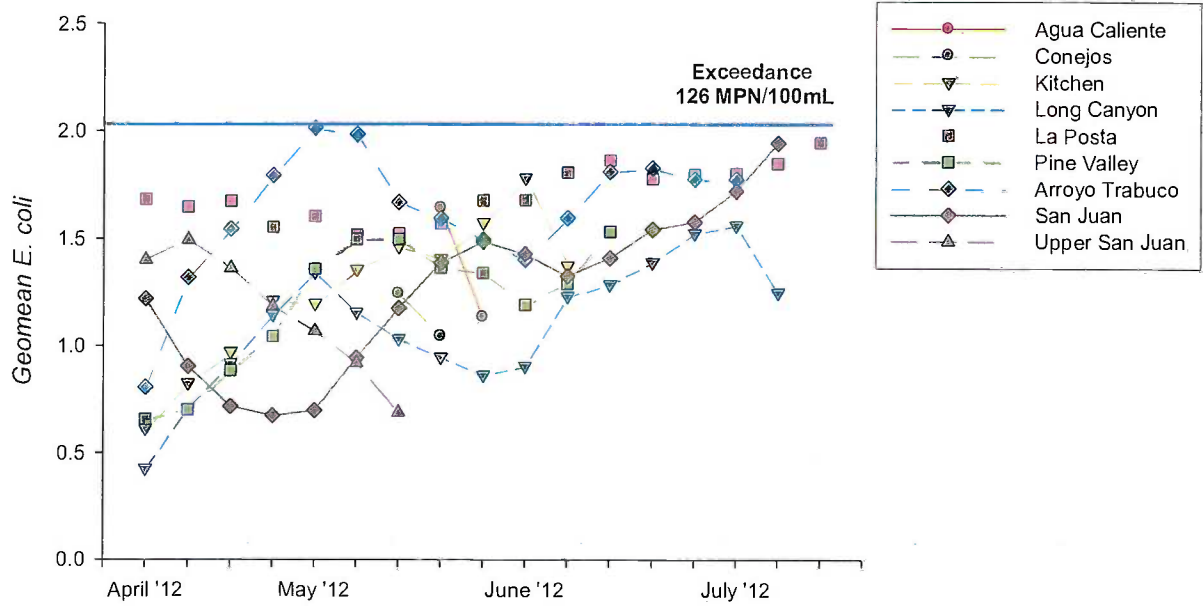
**Figure 10. Monthly temperature (°C) and dissolved oxygen (mg/L) comparison (top pane, (a)) and geomean enterococci densities in natural streams in southern California (bottom panel, (b)) between April 2012 and July 2012. May-July were substantially higher than April. The solid line indicates the 30-d geomean for enterococci equal to 33 MPN/100 mL. All points above the line represent bacteria water quality exceedances.**

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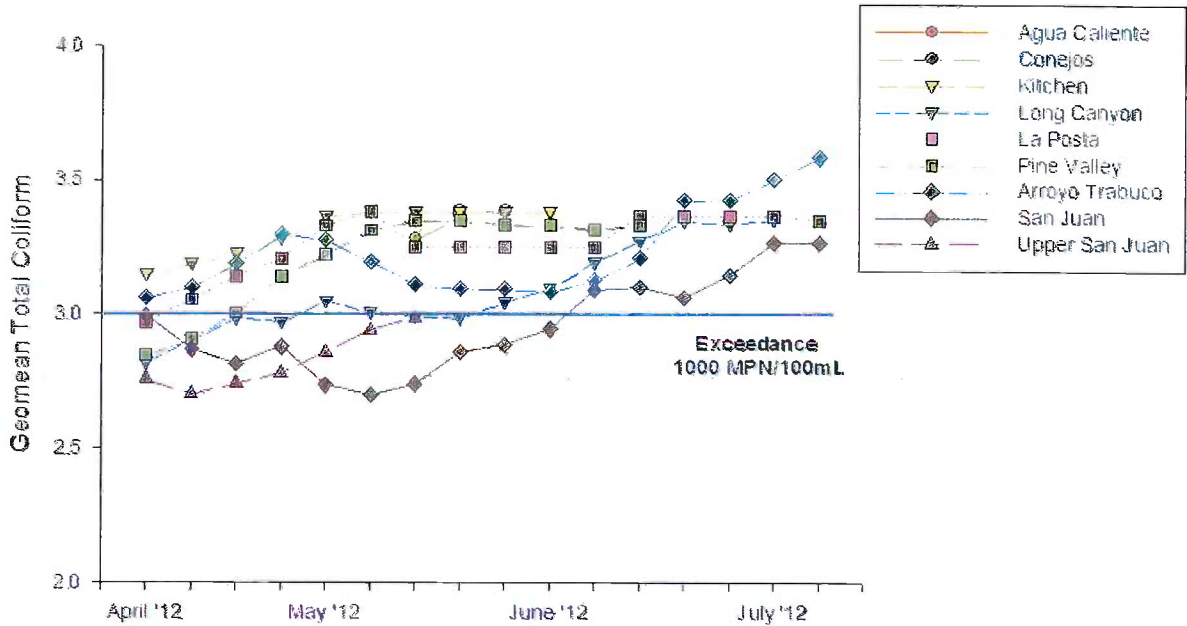
**Figure 11. Geomean enterococci densities in natural streams in southern California between April 2012 and July 2012. The solid line indicates the 30-d geomean for enterococci equal to 33 MPN/100 mL. All points above the line represent bacteria water quality exceedances.**

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**Figure 12. Geomean *E. coli* densities in natural streams in southern California between April 2012 and July 2012. None of the streams exceeded water quality standards. The solid line indicates the 30-d geomean for *E. coli* equal to 126 MPN/100 mL. All points above the line represent bacteria water quality exceedances.**

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**Figure 13. Geomean total coliform densities in natural streams in southern California between April 2012 and July 2012. The solid line indicates the 30-d geomean for total coliform equal to 1000 MPN/100 mL. All points above the line represent bacteria water quality exceedances.**



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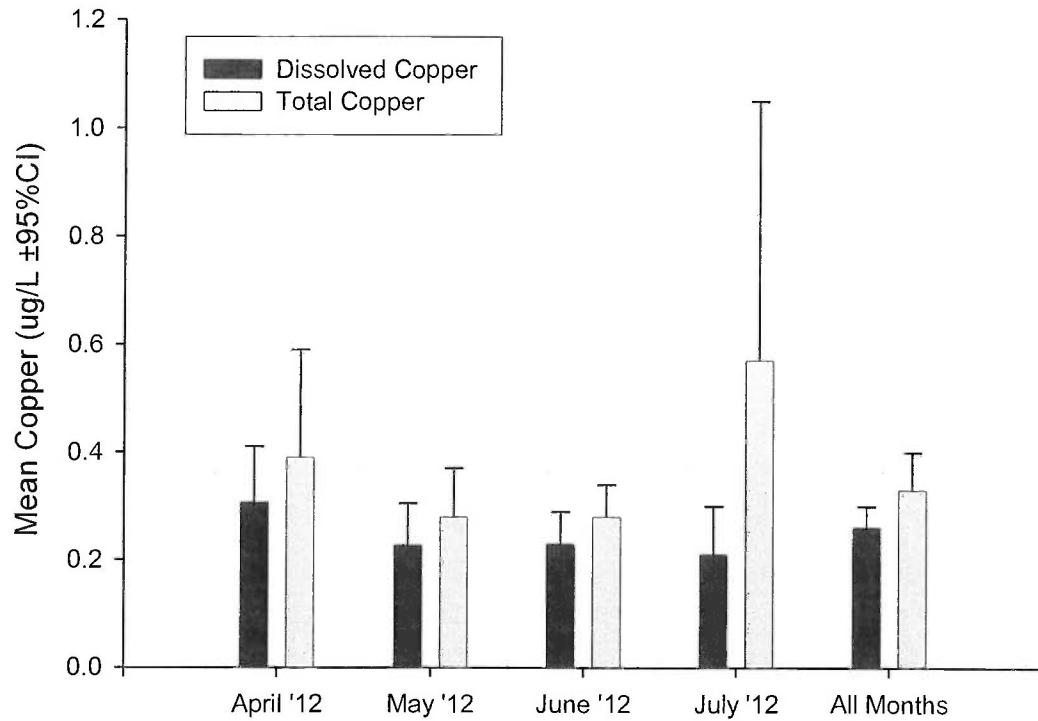


Figure 15. Inter-annual variability in copper concentrations in reference streams during the 2012 dry season. For the month of April n=12, May n=30, June n = 17, and July n=8.

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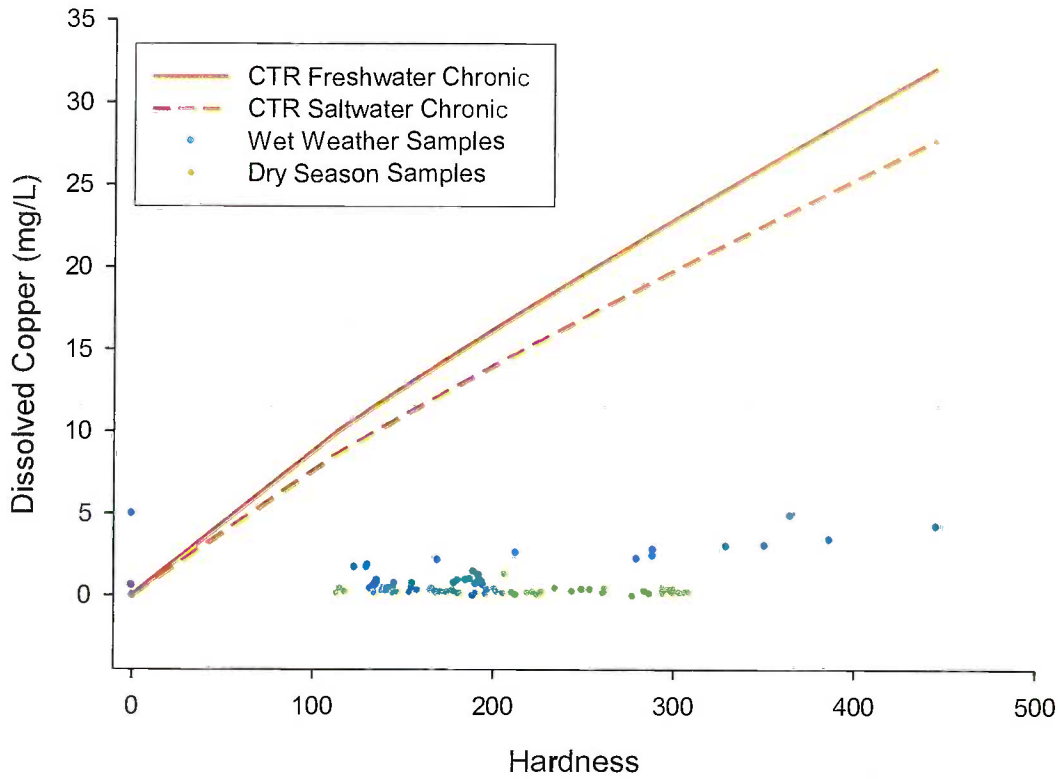


Figure 16. Comparison of reference stream dissolved copper concentrations to the California Toxics Rule (CTR). Concentrations relative to CTR standards for both wet weather and dry weather reference stream samples.

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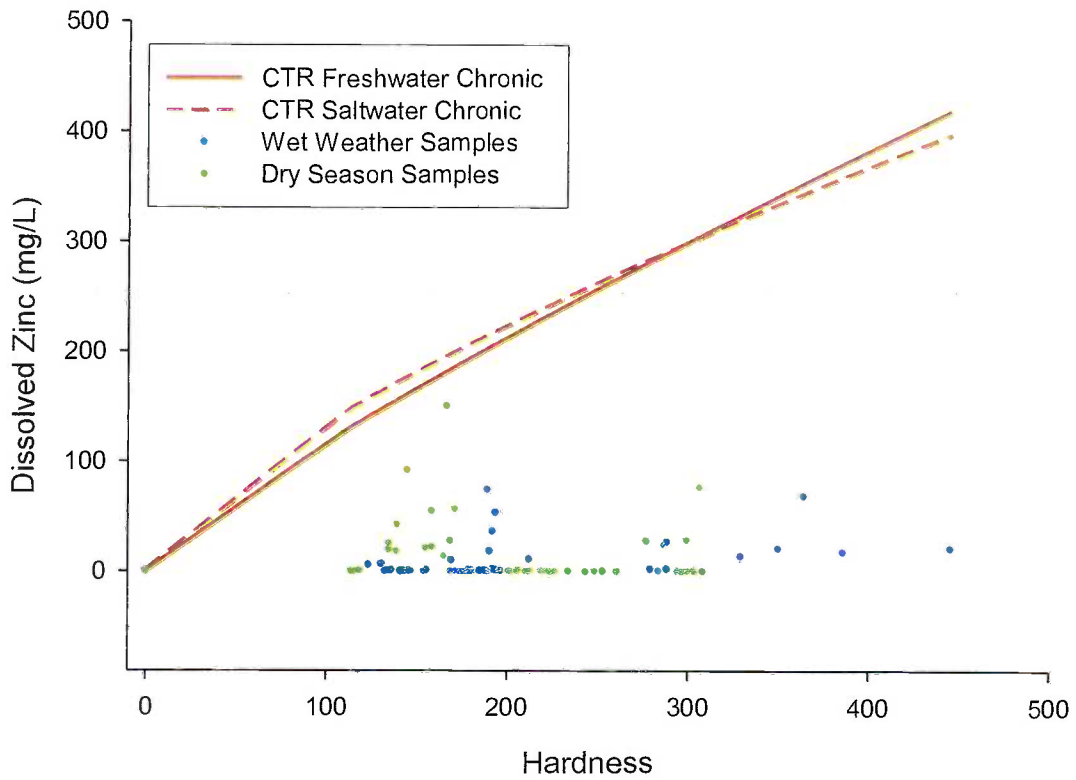
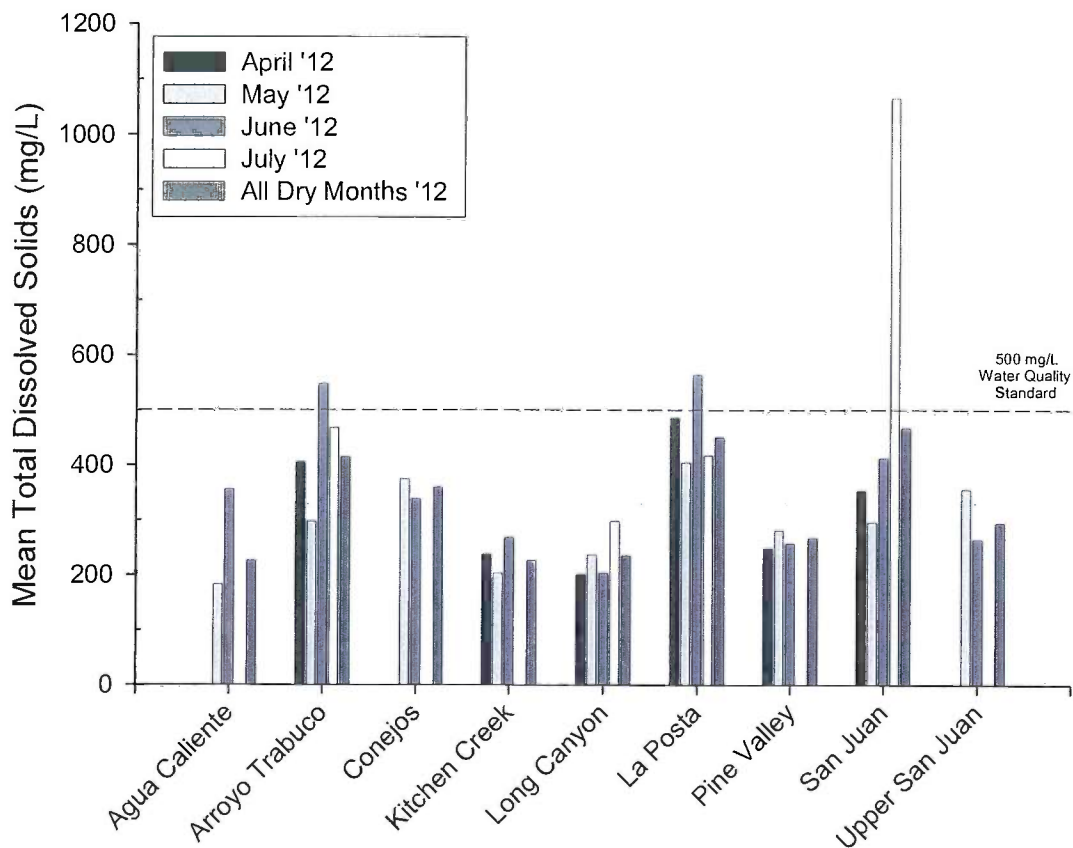


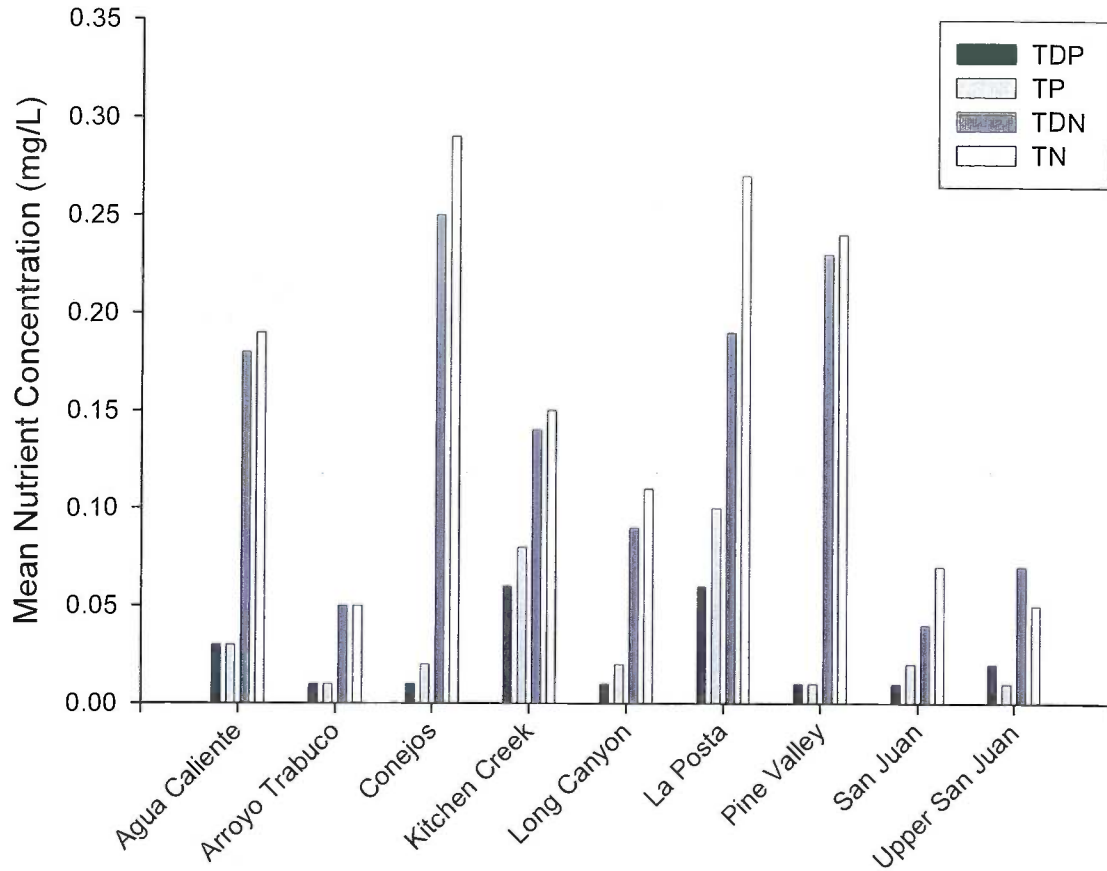
Figure 17. Comparison of reference stream dissolved zinc concentrations to the California Toxics Rule (CTR). Concentrations relative to CTR standards for both wet weather and dry weather reference stream samples.

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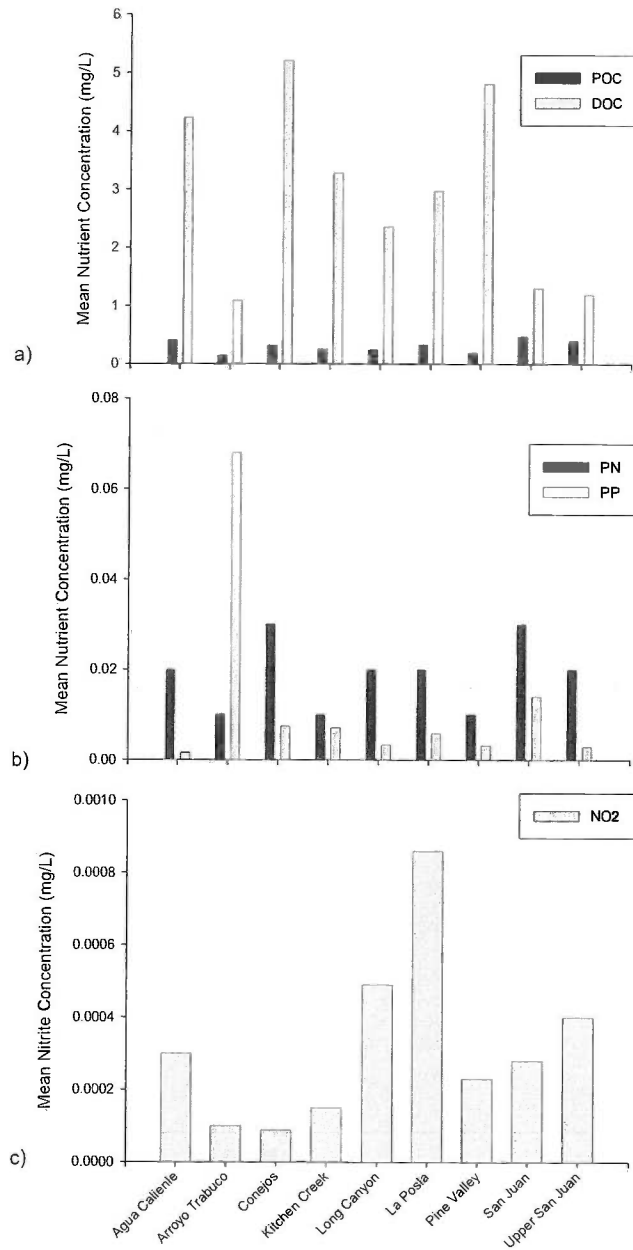


**Figure 18. Comparison of mean concentrations of reference stream total dissolved solids for the four dry season sampling months and all months combined in 2012. Units are in mg/l. For the month of April n=12, May n=30, June n = 17, and July n=8.**

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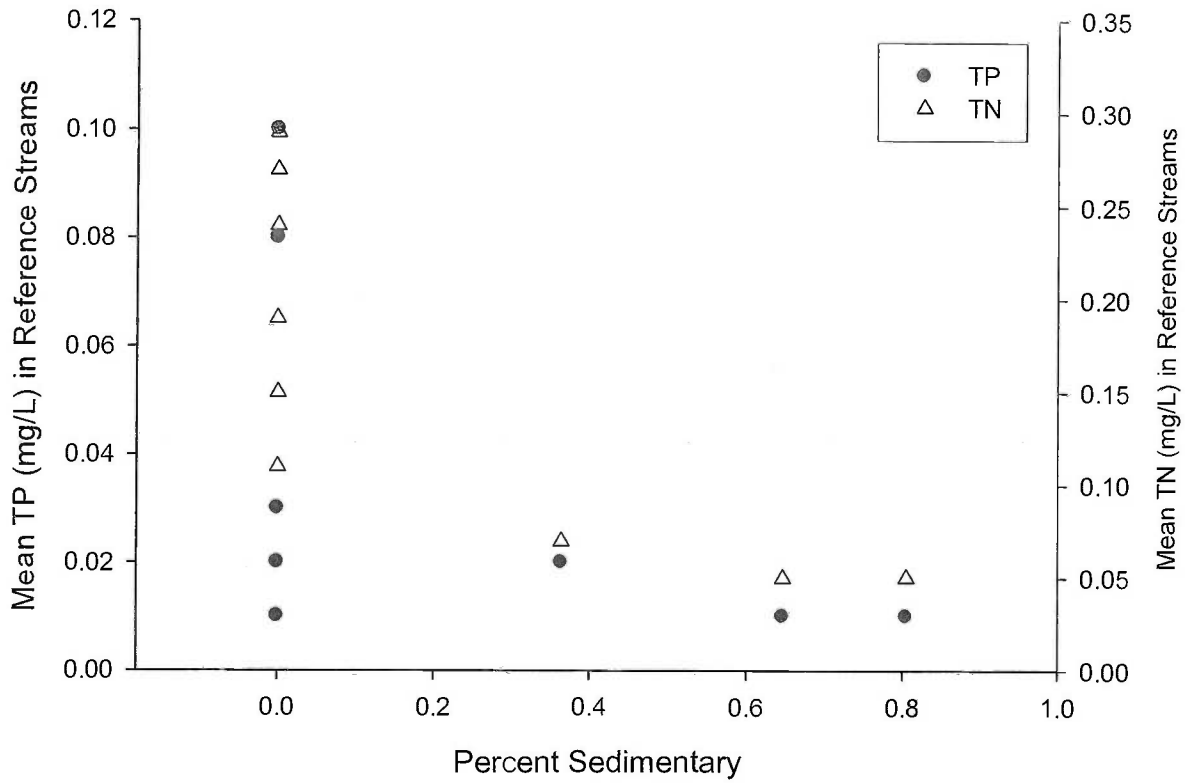


**Figure 19. Comparison of reference stream nutrient concentrations (total dissolved phosphorus (TDP), total phosphorus (TP), total dissolved nitrogen (TDN), and total nitrogen (TN)) during the 2012 dry season. Units are mg/L.**



**Figure 20. Comparison of reference stream nutrient concentrations a) particulate organic carbon (POC) and dissolved organic carbon (DOC); b) particulate nitrogen (PN) and particulate phosphorus (PP); and c) nitrite (NO<sub>2</sub>) during the 2012 dry season. Units are mg/L.**

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**Figure 21. Relationship between total nitrogen (TN) and total phosphorus (TP) to proportion (%) sedimentary geology in reference streams during the 2012 dry season. Units are mg/L.**

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**APPENDIX A - SUMMARY BACTERIA DATA FOR ALL REFERENCE STREAM SITE**



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**Table A1. Monthly Enterococci geomeans (MPN/100 ml) in natural streams during April 2012-July 2012 in southern California, USA. State of California water quality standards exceedances are bolded. <sup>a</sup> = intermittent stream. NA = not analyzed.**

Site Name	Watershed	County	Enterococci Geomean							
			April		May		June		July	
			(MPN/100 ml)	SD	(MPN/100 ml)	SD	(MPN/100 ml)	SD	(MPN/100 ml)	SD
Long Canyon Creek <sup>a</sup>	Tributary to Kitchen Creek		<b>72.3</b>	27.7	<b>127.0</b>	50.0	<b>133.7</b>	14.6	<b>291.1</b>	31.5
Kitchen Creek <sup>a</sup>	Kitchen Creek-Cottonwood Creek		<b>38.1</b>	26.1	<b>66.8</b>	36.9	<b>132.7</b>	96.5	NA	NA
Pine Valley Creek <sup>a</sup>	Upper Pine Valley Creek	San Diego	15.0	2.5	28.8	13.9	<b>52.7</b>	16.2	<b>195.6</b>	-
Agua Caliente Creek <sup>a</sup>	Laguna Creek/ San Luis Rey River		NA	NA	<b>150.8</b>	348.1	<b>100.0</b>	-	NA	NA
La Posta Creek	La Posta Creek		27.8	22.1	<b>140.6</b>	323.1	<b>843.0</b>	436.9	<b>315.9</b>	680.3
Conejos Creek <sup>a</sup>	San Diego River		NA	NA	<b>38.0</b>	57.2	21.1	15.9	NA	NA
Upper San Juan Creek <sup>a</sup>	Upper San Juan Creek		30.5	-	29.0	24.6	14.6	2.2	14.5	-
San Juan Creek	Upper San Juan Creek	Orange	<b>48.6</b>	222.5	<b>53.4</b>	12.4	<b>88.8</b>	88.3	<b>61.1</b>	73.9
Arroyo Trabuco	Arroyo Trabuco		7.2	15.8	<b>83.3</b>	282.2	<b>67.0</b>	38.9	<b>107.3</b>	197.7
<b>San Diego Geomean ± SD</b>			<b>32.7</b>	13.9	<b>74.2</b>	75.2	<b>121.5</b>	161.2	<b>277.8</b>	295.7
<b>Orange Co. Geomean ± SD</b>			<b>19.6</b>	112.1	<b>50.5</b>	95.1	<b>77.2</b>	37.3	<b>57.4</b>	83.3
<b>Overall Geomean ± SD</b>			<b>27.8</b>	35.8	<b>63.5</b>	58.6	<b>101.1</b>	107.1	<b>126.3</b>	153.4

**Table A2. Monthly *E. coli* geomeans (MPN/100 ml) in natural streams during April 2012-July 2012 in southern California, USA. State of California water quality standards exceedances are bolded; <sup>a</sup> = intermittent stream. NA = not analyzed.**

Site Name		Watershed	County	<i>E. coli</i> Geomean											
				April (MPN/100 ml)		May (MPN/100 ml)		June (MPN/100 ml)		July (MPN/100 ml)		SD			
Long Canyon Creek <sup>a</sup>		Tributary to Kitchen Creek		3.9	39.8	12.3	2.3	6.8	5.3	47.9	440.4				
Kitchen Creek <sup>a</sup>		Kitchen Creek-Cottonwood Creek		5.9	9.6	29.0	48.7	15.9	50.0	NA	NA				
Pine Valley Creek <sup>a</sup>		Upper Pine Valley Creek	San Diego	5.6	4.0	31.4	28.5	20.5	7.6	<b>261.3</b>	-				
Agua Caliente Creek <sup>a</sup>		Laguna Creek/ San Luis Rey River		NA	NA	22.0	8.8	11.1	224.0	NA	NA				
La Posta Creek		La Posta Creek		42.0	22.0	33.3	15.9	82.1	21.5	50.8	47.4				
Conejos Creek <sup>a</sup>		San Diego River		NA	NA	10.4	1.5	11.2	24.3	NA	NA				
Upper San Juan Creek <sup>a</sup>		Upper San Juan Creek		9.7	-	31.2	8.0	10.5	34.1	2.0	-				
San Juan Creek		Upper San Juan Creek	Orange	16.5	24.6	8.8	6.7	30.0	32.2	19.8	68.8				
Arroyo Trabuco		Arroyo Trabuco		6.4	12.7	96.5	260.8	33.4	20.9	70.9	268.1				
<b>San Diego Geomean ± SD</b>				8.56	13.5	22.6	12.4	27.0	31.4	62.6	182.6				
<b>Orange Co. Geomean ± SD</b>				10.2	15.7	29.8	91.8	18.8	16.7	20.8	107.4				
<b>Overall Geomean ± SD</b>				9.6	10.3	25.1	35.3	23.8	20.6	39.6	114.0				

**Table A3. Monthly total coliforms geomeans (MPN/100 ml) in natural streams during April 2012-July 2012 in southern California, USA. State of California water quality standards exceedances are bolded; <sup>a</sup> = intermittent stream. NA = not analyzed.**

Site Name	Watershed	County	Total Coliforms Geomean											
			April		May		June		July		SD			
			(MPN/100 ml)	SD	(MPN/100 ml)	SD	(MPN/100 ml)	SD	(MPN/100 ml)	SD	(MPN/100 ml)	SD		
Long Canyon Creek <sup>a</sup>	Tributary to Kitchen Creek		732.3	316.1	981.8	168.5	<b>1,418.3</b>	551.2	<b>2,419.6</b>	0.0	<b>2,419.6</b>	0.0		
Kitchen Creek <sup>a</sup>	Kitchen Creek-Cottonwood Creek		<b>1,550.1</b>	419.4	<b>2,419.6</b>	0.0	<b>2,419.6</b>	0.0	NA	NA	NA	NA		
Pine Valley Creek <sup>a</sup>	Upper Pine Valley Creek	San Diego	778.5	225.5	<b>2,236.0</b>	208.0	<b>2,086.7</b>	212.3	<b>2,419.6</b>	-	<b>2,419.6</b>	-		
Agua Caliente Creek <sup>a</sup>	Laguna Creek/ San Luis Rey River		NA	NA	<b>2,419.6</b>	0.0	<b>2,419.6</b>	0.0	NA	NA	NA	NA		
La Posta Creek	La Posta Creek		<b>1,094.2</b>	512.4	<b>1,776.5</b>	746.1	<b>2,419.6</b>	0.0	<b>2,265.6</b>	283.1	<b>2,265.6</b>	283.1		
Conejos Creek <sup>a</sup>	San Diego River		NA	NA	<b>1,753.4</b>	979.2	<b>2,265.6</b>	283.1	NA	NA	NA	NA		
Upper San Juan Creek <sup>a</sup>	Upper San Juan Creek		648.8	-	501.8	266.0	<b>1,098.2</b>	792.4	<b>1,524.6</b>	1,429.8	<b>1,524.6</b>	1,429.8		
San Juan Creek	Upper San Juan Creek	Orange	991.4	711.3	500.9	131.7	<b>1,038.0</b>	807.1	<b>1,540.2</b>	1,410.4	<b>1,540.2</b>	1,410.4		
Arroyo Trabuco	Arroyo Trabuco		<b>1,152.8</b>	326.5	<b>1,566.1</b>	767.8	<b>1,454.4</b>	721.9	579.4	-	579.4	-		
<b>San Diego Geomean ± SD</b>			991.6	225.0	<b>1,864.6</b>	259.1	<b>1,486.5</b>	260.2	<b>2,352.3</b>	121.3	<b>2,352.3</b>	121.3		
<b>Orange Co. Geomean ± SD</b>			<b>1,021.6</b>	354.3	732.9	400.0	876.4	418.0	<b>1,261.5</b>	771.1	<b>1,261.5</b>	771.1		
<b>Overall Geomean ± SD</b>			<b>1,001.0</b>	187.5	<b>1,313.7</b>	270.7	<b>1,233.6</b>	265.5	<b>1,814.4</b>	401.7	<b>1,814.4</b>	401.7		

EXHIBIT C

Before the  
STATE OF CALIFORNIA  
STATE WATER RESOURCES CONTROL BOARD  
1001 I Street, 22nd Floor  
Sacramento, CA 95814

In the Matter of:

County of Orange and Orange County Flood  
Control District for Review of Action by the  
California Regional Water Quality Control Board,  
San Diego Region, in Adopting Order No. R9-  
2013-0001, NPDES Permit No. CAS0109266

}  
Water Code § 13320(a)  
23 C.C.R. § 2050 *et seq.*

**MEMORANDUM OF POINTS & AUTHORITIES  
IN SUPPORT OF PETITION FOR REVIEW**

The County of Orange and Orange County Flood Control District (collectively “Petitioners”) hereby submit this Memorandum of Points and Authorities in support of the Petition for Review. The Petitioners challenge the May 8, 2013 adoption of Order No. R9-2013-0001, NPDES Permit No. CAS0109266 (“Permit”) by the California Regional Water Quality Control Board, San Diego Region (“Regional Board”).<sup>6</sup> A copy of the Regional Board’s Order is attached as Exhibit A.

**I. Preliminary Statement and Reservation of Rights**

The Petitioners wish to note that the Permit, while adopted as a final action by the Regional Board on May 8, 2013, is not presently applicable to the Petitioners. The Petitioners currently are subject to Order R9-2009-0002 (“2009 Permit”), which is applicable only to the

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<sup>6</sup> This Memorandum of Points and Authorities has been prepared in collaboration with other South Orange County Permittees submitting concurrent petitions for review of the Permit and, accordingly, may be used and/or incorporated by reference by any such other South Orange County Permittees in support of their separate petitions for review. Accordingly, to the extent appropriate, the term “Petitioners,” as used herein, shall also mean and include such other South Orange County Permittees.

South Orange County permittees.<sup>7</sup> The 2009 Permit expires on or about December 16, 2014, and under its terms, the Petitioners are required to file a Report of Waste Discharge (“ROWD”) as an application for a new NPDES permit covering discharges from the municipal separate storm sewer systems (“MS4”) operated by the Petitioners. The Petitioners may voluntarily elect to be subject to the Permit prior to the expiration of the 2009 Permit pursuant to Provision F.6 of the Permit.

The Petitioners, in their ROWD, have the full right to request changes in all or any part of the Permit, or to seek coverage under a specific Orange County permit. The Petitioners nevertheless reserve their right to request such changes or such coverage in the filing of the ROWD. Nevertheless, because the adoption of the Permit is a final action of the Regional Board pursuant to Water Code § 13320(a), the Petitioners bring this Petition.

## **II. STANDARD OF REVIEW**

The State Water Resources Control Board (“State Board”), in reviewing a petition brought from an action by a regional board, must exercise its independent judgment to determine whether the regional board’s action was reasonable.<sup>8</sup> The State Board’s review is equivalent to that exercise by a reviewing court under Code Civ. Proc. § 1094.5, which provides that “[a]buse of discretion is established if the respondent has not proceeded in the manner required by law, the order or decision is not supported by the findings, or the findings are not supported by the evidence.”<sup>9</sup> The permit, like any administrative decision, must be accompanied by findings that

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<sup>7</sup> The South Orange County Permittees are the City of Aliso Viejo, the City of Dana Point, the City of Laguna Beach, the City of Laguna Hills, the City of Laguna Niguel, the City of Laguna Woods, the City of Lake Forest, the City of Mission Viejo, the City of Rancho Santa Margarita, the City of San Clemente, the City of San Juan Capistrano, the County of Orange and the Orange County Flood Control District.

<sup>8</sup> *Stinnes-Western Chemical Corp.*, WQ Order No. 86-16.

<sup>9</sup> Code Civ. Proc. § 1094.5(b).

allow the reviewing body to “bridge the analytic gap between the raw evidence and ultimate decision or order.”<sup>10</sup>

### **III. The Regional Board Has No Authority to Issue a Region-Wide Permit Covering the Petitioners**

On May 8, 2013, the Regional Board adopted a Permit covering three distinct counties spread out over thousands of square miles, located in separate metropolitan statistical areas, with 10 major watersheds, and 39 separate municipal separate storm sewer systems (“MS4”). The Regional Permit covers coastal areas in San Diego and Orange Counties and inland areas in Riverside County. Six Total Maximum Daily Loads (“TMDLs”) have been incorporated into the Regional Permit, which apply in specific areas of South Orange and San Diego Counties. The Permit utilizes a one size fits all approach to regulating stormwater despite evidence presented to the Regional Board that each county has different climates, different topography, different pollutant issues, and different types of receiving waters. The Petitioners did not apply for or consent to the Permit, and did not file a Report of Waste Discharge prior to having specific Permit provisions adopted as to the Petitioners. After objections by Orange and Riverside Counties went unheeded,<sup>11</sup> the Petitioners ultimately participated in the April 10-11 and May 8, 2013 adoption hearing under protest and reservation of rights.

For the following reasons, Petitioners assert that the Regional Board lacks legal authority to issue a region-wide permit to the Petitioners:

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<sup>10</sup> *Topanga Ass’n for a Scenic County v. County of Los Angeles*, 11 Cal.3d 506, 515 (1974)

<sup>11</sup> Letter from Ryan M. F. Baron, Office of County Counsel, County of Orange, to Catherine Hagan, Office of Chief Counsel, State Water Resources Control Board, San Diego Region (May 10, 2012), attached hereto as Exhibit C; Letter from David H. K. Huff, Office of County Counsel, County of Riverside, to Catherine Hagan, Office of Chief Counsel, State Water Resources Control Board, San Diego Region (May 21, 2012), attached hereto as Exhibit D; Letter from Jessica Jahr, California Regional Water Quality Control Board, San Diego Region, to Ryan M. F. Baron, Office of County Counsel, County of Orange, and David H. K. Huff, Office of County Counsel, County of Riverside (Sept. 7, 2012), attached hereto as Exhibit E.

- 1) The Petitioners' MS4 system does not interconnect with Riverside and San Diego Counties,
- 2) There is no jurisdictional basis to issue a region-wide permit to the Petitioners,
- 3) The Petitioners do not drain into a shared watershed with Riverside or San Diego Counties,
- 4) The Petitioners MS4 is not adjacent to Riverside or San Diego's MS4, and the quantity and nature of pollutants differ between the three counties,
- 5) The Petitioners never filed an application to be covered by the Permit, and
- 6) The Regional Board must consider a report of waste discharge, which is the administrative and evidentiary basis by which to regulate the Petitioners and adopt a Permit specific to them.

**A. There Is No System-Wide, Jurisdiction-Wide, Watershed or Other Basis by Which to Legally Impose a Region-Wide Permit on the Petitioners**

Finding 2 of the Permit states that the legal and regulatory authority for implementing a region-wide MS4 Permit stems from Section 402(p)(3)(B) of the Clean Water Act ("CWA") and 40 C.F.R. § 122.26(a)(1)(v).<sup>12</sup> The Permit also cites EPA's Final Rule regarding stormwater discharge permit application procedures that there is flexibility to establish system-wide or region-wide permits.<sup>13</sup> Throughout 2012, the Regional Board circulated a draft Permit and conducted Focused Meeting Workshops seeking input on the draft Permit ("2012 Focused Meeting Workshops").<sup>14</sup> At workshops held on June 27, 2012 and July 11, 2012, Regional

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<sup>12</sup> Permit, Finding 2, page 1.

<sup>13</sup> 55 FR 47990, 48039-48042.

<sup>14</sup> Correspondence with and presentations to the Regional Board along with more detailed information regarding the 2012 Focused Meeting Workshops can be found at [http://www.waterboards.ca.gov/rwqcb9/water\\_issues/programs/stormwater/index.shtml](http://www.waterboards.ca.gov/rwqcb9/water_issues/programs/stormwater/index.shtml), and are incorporated by this

Board staff stated that the only reason for a region-wide Permit was to consolidate the three county permits to lessen the amount of permit writing time and reduce Regional Board costs. Upon adoption of the Permit on May 8, 2013, Finding 2 had been amended to state that the “regional nature of this Order will ensure consistency of regulation within watersheds and is expected to result in overall costs savings for the Copermitees and San Diego Water Board.”<sup>15</sup> There was no evidence presented at the adoption hearing of savings by the permittees or Regional Board or that the region-wide permit would ensure consistency of regulation. In any case, neither justification is valid under federal or state law. No other basis was given and no evidence was presented demonstrating why three large, geographically different counties would be covered under one Permit.

In 1987, Congress adopted amendments to the CWA requiring EPA to develop a permitting system for large and medium MS4s. As part of a rulemaking proceeding to adopt regulations implementing the CWA amendments, EPA examined how to define an MS4 “system.” Under the CWA and EPA rules, a “system,” one system, would be issued a permit by the EPA or State authority allowing the discharge of stormwater into waters of the U.S. EPA’s rulemaking proceeding only examined individual MS4s (*i.e.*, city and county unincorporated area) and MS4s within the same geographic area – defined as the same watershed or the political boundary of the discharger (*i.e.*, state owned roads, countywide or regional stormwater

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reference. The Petitioners request that the 2012 Focused Meeting Workshops and two public Board-level workshops held in November and December of 2012 be made a part of the record for this Petition as they are relevant to the issues raised in this Petition. The Regional Board has also cited the 2012 Focused Meeting Workshops and Board-level workshops as evidentiary support for its due process orders as well as for other terms and provisions of the Permit. Therefore, the Regional Board has already made the 2012 Focused Meeting Workshops and Board-level workshops part of the formal record through its written responses and reference during the Permit adoption hearing. *See e.g.*, Tomas Morales, *Ruling on Objections, Requests for Alternative Procedures, and Requests for Designation as Additional Parties to the Proceeding*, San Diego Water Board, pg. 3 (Apr. 3, 2013) (“There were numerous facilitated staff-level stakeholder workshops.”).

<sup>15</sup> Permit, Finding I.2, page 1; Fact Sheet, p. F-23; Response to Comments at pp. 51-52.



management authority). Multiple smaller systems could be defined as a “system” and issued one permit if there were common physical factors and a unified stormwater management plan. The only instance where a larger geographic area would be covered under one permit is where there was an application by a regional stormwater management authority (*e.g.*, joint powers authority) that was legally empowered to perform all the program functions of smaller MS4s and could apply for such a permit. The EPA did not consider defining a “system” based on cost savings or consistency of regulation, and its final rules do not allow for this interpretation.

In adopting a region-wide Permit, the Regional Board has no basis to define the three counties as “one system” and issue one Permit to the Orange County permittees without their application or consent. First, although Orange County’s geographical boundaries abut San Diego and Riverside counties, the Petitioner’s MS4 does not interconnect with these counties. There is a significant amount of undeveloped, rural area between the developed portions of Orange County and Riverside County. The Santa Ana Mountains lie between the two counties, which include hundreds of thousands of acres of federal land (Cleveland National Forest), extend approximately 36 miles along the Los Angeles basin, and do not contain an MS4 system. Camp Pendleton military base separates Orange and San Diego counties, totaling over 122,000 acres, with no adjacent cities or interconnected MS4s. CWA regulations expressly state that a permit can only be issued on a system-wide basis covering all discharges from MS4s within a large or medium municipal storm sewer system. One of the primary considerations in defining a “large or medium municipal separate storm sewer system” is one that has physical interconnections with other municipal separate storm sewers.<sup>16</sup> This is because MS4s and roads (state, city and county roads) within one county often interconnect to a larger flood control system and drain

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<sup>16</sup> 40 C.F.R. § 122.26(b)(4) (defining large systems); 40 C.F.R. § 122.26(b)(7) (defining medium systems).

into one or more hydrologic units. In this case, there are no physical interconnections.

Second, there is no jurisdiction-wide basis to issue a regional permit. 40 C.F.R. § 122.26(a)(3)(ii) states that one system-wide permit can cover all discharges from municipal separate storm sewers within a large or medium municipal storm sewer system located within the same jurisdiction. Orange, Riverside and San Diego counties are separate counties with distinct political and geographical boundaries that do not drain into a common watershed and do not share physical interconnections.<sup>17</sup> The three counties are not within the same political jurisdiction, having three distinct boards of supervisors as well as dozens of city councils. While Region 9 can be considered one jurisdiction for Regional Water Board purposes, federal regulations state that there has to be one stormwater management regional authority in which to issue a permit, and the Regional Board is not such an authority.<sup>18</sup> Regardless, such a permit can only be issued to a multi-jurisdictional entity upon a permit application by that entity and upon there being an interconnected or adjacent MS4, of which there is no such entity.

Third, Orange County does not drain into a shared watershed with Riverside and San Diego Counties. The Petitioners drain into the San Juan hydrologic unit that drains into the Pacific Ocean. The Riverside County permittees drain into the Santa Margarita watershed. San Diego County drains into the San Luis Rey, Carlsbad, San Dieguito, Penasquitos, San Diego, Pueblo San Diego, Sweetwater, Otay and Tiajuana hydraulic units, which drain into the Pacific Ocean. The Petitioners do not drain into or share one common watershed with either county, and therefore, cannot be regulated on this basis.

There is no other basis by which to regulate Orange County in the same permit with

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<sup>17</sup> See jurisdictional map submitted by Petitioners at Exhibit B-7, page 35.

<sup>18</sup> 40 C.F.R. § 122.26(a)(3)(iii)(C)

Riverside and San Diego Counties. Although it is true that Orange County political boundaries about the two counties, there are hundreds of thousands of acres of federal land that separate Orange County, and thus, the County's MS4 does not interconnect with and is not adjacent to its neighbors. Based on differing permit requirements for the three counties, such as TMDLs, and monitoring data filed in annual reports, the quantity and nature of pollutants are different between the three counties, and do not serve as a basis or determination by which to lump all three counties into a one-size fits all permit.<sup>19</sup>

In addition, federal regulations look to interconnection and similarities between jurisdictions as the basis by which to issue one permit.<sup>20</sup> Federal regulations do not authorize and the EPA Final Rule does not contemplate regional permit issuance based on overall reduced cost savings;<sup>21</sup> regardless, overall cost savings have not been demonstrated by the Regional Board. Although it may be administratively convenient to impose a one-size fits all Permit, the EPA Final Rule contemplates such consistency within a watershed and not throughout a geographical area the size of the three counties. In fact, the EPA indicated in its Response to Comments that issuance of one Permit to several counties could be unmanageable.<sup>22</sup> Although the EPA Final Rule does use the term "regional" in its Response to Comments, a careful reading of that term shows that EPA was analyzing whether individual permits should be issued to individual cities, a county and its incorporated cities, a set of copermittees with interconnected sewer systems and other infrastructure, one state entity, or a regional stormwater management

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<sup>19</sup> For example, hydromodification control requirements apply uniformly to all three counties despite poor soil conditions in Orange County that does not allow maximization of on-site stormwater retention.

<sup>20</sup> 33 U.S.C. § 1342(p)(3)(B)(i); 40 C.F.R. § 122.26(a)(1)(v).

<sup>21</sup> 55 Fed. Reg. 47990-01, 48038-48046.

<sup>22</sup> 55 Fed. Reg. 48042.

authority. The largest area by which one permit could be issued under the Final Rule was essentially to a state entity that operated a defined MS4 (*i.e.*, state roadways) or one county and its incorporated cities. There is no factual or technical basis in the Permit that meets this criteria or establishes other bases to regulate Orange County, Riverside County, and San Diego County under one unified permit with Riverside and San Diego Counties. There is also no statistical basis by which to issue a region-wide Permit, as Orange County is comprised of over three million people and is the sixth largest county by population in the U.S. The U.S. Bureau of Census designates Orange County in a different Metropolitan Statistical Area than San Diego County, designating it in a Combined Statistical Area with Los Angeles, Ventura and San Bernardino Counties.

Lastly, the Regional Board cited examples in the Bay Area and in Alaska where region-wide permits were alleged to have been issued.<sup>23</sup> In the San Francisco Bay Area MS4 permit (“Bay Area MS4 Permit”),<sup>24</sup> the cities and counties covered under that permit interconnect with one another and drain into the San Francisco Bay. The Bay Area MS4s agreed to end their existing permits early and applied for and consented to a region-wide permit. The Bay Area is also represented by a joint powers organization or regional watershed management program, the Bay Area Stormwater Management Agencies Association, comprised of 8 municipal stormwater programs that performs common watershed functions for its 94 members. The Regional Board also cited a “region-wide” permit issued to the Fairbanks North Star Borough, City of Fairbanks, City of the North Pole, the Alaska Department of Transportation and the University of Alaska Fairbanks. Further review of that permit and the stormwater program maps demonstrate,

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<sup>23</sup> Letter from Jessica Jahr, *supra*, fn 8.

<sup>24</sup> Order R2-2009-0074; NPDES Permit No. CAS612008.

however, that the region regulated is a borough, the Alaskan equivalent of a county. All of the regulated Alaska permittees are physically interconnected through a storm drain system and roadways and drain into one watershed. In short, neither the Bay Area nor the Fairbanks Borough permits constitute sufficient examples of a region-wide permit comparable to the Permit issued to the Petitioners.

**B. There Is No Technical Basis to Regulate the Petitioners Due to the Lack of a Report of Waste Discharge Application**

In order for an MS4 system to be issued a permit, the operator of the system must apply for it.<sup>25</sup> The Report of Waste Discharge is the mechanism by which an MS4 applies to discharge stormwater. Every MS4 permit contains a requirement that a ROWD be filed within 180 days of the expiration of the permit so that a new permit can be considered and adopted. A ROWD is a several hundred page application that contains information used to determine prospective provisions of the new permit, including, but not limited to, monitoring, program strengths and other tools that are assessed in the new permit. A ROWD contains quantitative data and other evidence by which to make findings, conclusions of law, establish programs and approve a permit to a system. In short, a ROWD is the evidence the Regional Board uses to regulate the permittee and issue a permit.

The Petitioners never applied for the region-wide Permit. The Regional Board adopted a Permit that expressly covers Orange County water bodies and regulates the actions of the Petitioners, but the Permit is not based on any ROWD or other application filed by the Petitioners. There is no technical basis for the Permit or substantial evidence in the record by which to regulate Orange County under a region-wide Permit, or any permit other than the

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<sup>25</sup> 40 C.F.R. § 122.21.

Petitioners existing 2009 permit.<sup>26</sup> Thus, the terms and conditions of the Permit as to Petitioners are arbitrary and capricious. The lack of an application process prior to adoption of the Permit is not only in conflict with the Clean Water Act, Porter Cologne and the California Administrative Procedure Act, it is akin to being issued a driver's license without ever having applied for the license or taken the driving test.<sup>27</sup>

### **Compliance With the Discharge Prohibitions and Receiving Water Limitations Is Impossible**

Regional Board staff testified at the Permit adoption hearing that the receiving water limitations will not be met within the five-year term of the Permit. Likewise, the Executive Officer, David Gibson, testified that all of the Riverside, Orange and San Diego County permittees were out of compliance with their respective permits. Numerous comments submitted during the permit adoption process pointed out that complying with the receiving water limitations provision is simply not achievable everywhere, all the time, given the variable nature pollutant sources and urban runoff and the unpredictable Southern California climate.

Recognizing the impossibility of achieving immediate compliance with the receiving water limitations, Regional Board staff added a compliance option in an earlier draft of the Permit.<sup>28</sup> However, the Regional Board removed this provision at the close of the final permit adoption hearing, leaving the Petitioners with no way to comply with the receiving water

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<sup>26</sup> The Petitioners current Fourth Term permit in the San Diego Region has been in existence for only two years with programs that have just started, or like hydromodification, have not yet started and are in interim phases. Therefore, there is no legal basis by which to adopt these programs into a region-wide Permit as programs that are barely underway or have not begun do not provide substantial evidence for carrying these programs forward into the region-wide Permit or making such program requirements stricter.

<sup>27</sup> When Regional Board staff initially circulated a draft of the Permit prior to the 2012 Focused Meeting Workshops, the draft Permit did not contain a ROWD requirement for the Orange County permittees. Upon adoption of the Permit on May 8, 2013, the Permit had been revised to include a ROWD "short form" requirement to determine whether modification to the Order upon enrollment by the Petitioners was necessary.

<sup>28</sup> Draft Tentative Order R9-2013-0001, § II.B.3.c (Mar. 29, 2013).

limitations in Provision II.A. The reasoning provided at the hearing was that the permittees “were not ready” for a compliance option.

The Permit mandates that “[d]ischarges from MS4s must not cause or contribute to the violation of water quality standards in any receiving water.” (Permit § II.A.2.a.) Under a 2011 Ninth Circuit Court of Appeals ruling, compliance with this provision is determined by water quality monitoring results on an outfall-by-outfall basis.<sup>29</sup> The *NRDC* case fundamentally changed the remedy for receiving water limitations exceedances, from requiring further action to imposing strict liability. Prior to *NRDC*, permittees could maintain permit compliance by implementing the iterative process of increasing best management practices (“BMPs”) in response to an exceedance.<sup>30</sup> This is consistent with federal law and State Board policy that MS4s must achieve the Maximum Extent Practicable (“MEP”) standard and are not legally required to adhere to strict numeric standards.<sup>31</sup>

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<sup>29</sup> *Natural Resources Defense Council v. County of Los Angeles*, 673 F.3d 880, 883 (9th Cir. 2011), rev’d on other grounds by 133 S.Ct. 710 (2013).

<sup>30</sup> (State Water Resources Control Board, WQ 2001-15 at 7 (Nov. 15, 2001). The State Water Board stated that the precedential receiving water limitations language in WQ 1999-05, which is substantially similar to the language in the Permit, does not require strict compliance with water quality standards: [The receiving water limitations language] does not require strict compliance with water quality standards. Our language requires that storm water management plans be designed to achieve compliance with water quality standards. Compliance is to be achieved over time, through an iterative approach requiring improved BMPs. . . [T]he iterative approach is consistent with U.S. EPA’s general approach to storm water regulations, which relies on BMPs instead of numeric effluent limitations.

<sup>31</sup> *Defenders of Wildlife v. Browner*, 191 F.3d 1159, 1165 (9th Cir. 1999); *Divers Environmental Conservation Organization v. State Water Quality Resources Control Board*, 145 Cal. App. 4th 246, 256 (2006); *Bldg. Indus. Ass’n v. State Water Quality Resources Control Board*, 124 Cal.App.4th 866, 889-90 (2004); Betsy Jennings, State Board Memorandum, Definition of Maximum Extent Practicable (1993). See also State Board Order No. 99-05; State Board Order No. 2001-15. In State Water Quality Order No. 2001-15 at page 8, the State Board affirmed the iterative approach stating that “we will generally not require ‘strict adherence’ with water quality standards through numeric effluent limitations and we continue to follow an iterative approach.” Most recently on September 7, 2012, the State Board found that “[i]t is not feasible at this time to set enforceable numeric effluent criteria for municipal BMPs and in particular urban discharges.” See also Fact Sheet for NPDES Permit and Waste Discharges Requirements for State of California Department of Transportation, NPDES Permit No. CAS000003, Order No. 2012-XX-DWG.

Under the *NRDC* case, the Petitioner’s diligent and rigorous efforts to avoid exceedances through the iterative process of implementing best management practices does not protect the Petitioners from strict liability if any of its outfalls exceeds water quality standards for any of the thousands of pollutants regulated under the Permit at any time. The *NRDC* case fundamentally changed the implications of the receiving water limitations language in Provision II.A, essentially turning every receiving water quality standard in the Basin Plan, Ocean Plan, and any other water quality control plan listed in Provision II.A.2(a) into a de facto effluent limitation.

The *NRDC* case turned MS4 permits on their head, making them even more stringent than most industrial permits by holding the MS4s responsible for every imaginable pollutant that might be found in the receiving water, while industrial permittees are responsible only for pollutants specifically listed in their permit. In rejecting an argument that an industrial permittee should be held responsible for discharges of pollutants not listed in its permit, a court reasoned that “it is impossible to identify and rationally limit every chemical or compound present in a discharge of pollutants.”<sup>32</sup> “Compliance with such a permit would be *impossible* and anybody seeking to harass a permittee need only analyze that permittee’s discharge until determining the presence of a substance not identified in the permit.”<sup>33</sup>

The significance of the *NRDC* case cannot be overstated. Under *NRDC*, the current receiving water limitations provision exposes copermitees to risk of liability if a discharge from any of their MS4 outfalls exceeds receiving water standards for any of the thousands of pollutant limitations incorporated by reference into the Permit through the Basin Plan, Ocean Plan, and

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<sup>32</sup> *Atlantic States Legal Fdn., Inc. v. Eastman Kodak Co.*, 12 F.3d 353, 357 (2d Cir. 1994) (internal quotation omitted).

<sup>33</sup> *Id.* (internal quotation omitted) (emphasis added).



other water quality control plans.<sup>34</sup> In other words, MS4 discharges are being held to standards meant to apply only in the receiving water. The pollutant limitations in these water quality control plans were never intended to be applied at the end of the pipe, but *NRDC* instantly transformed them in to de facto effluent limitations.

**A. The Regional Board Exceeded Its Authority by Adopting a Permit That Is Impossible to Comply With**

As a matter of law, the Clean Water Act does not require permittees to achieve the impossible. For example, Section 301 of the Clean Water Act, which imposes a “zero discharge” requirement in the absence of an NPDES permit, does not apply where compliance with that standard is factually impossible.<sup>35</sup> The *Hughey* court found that storm water was being discharged from a developer’s property and that the developer had not obtained an NPDES permit.<sup>36</sup> There was no violation of the Clean Water Act, however, because it was physically impossible for the developer to comply with the “zero discharge” requirement.<sup>37</sup> The court found “the evidence was uncontroverted that whenever it rained . . . some discharge was going to occur; nothing [the developer] could do would prevent all rain water discharge.”<sup>38</sup>

The court noted that unlike a manufacturing facility that could opt to “abate the discharge of pollutants by ceasing operations,” the developer had no ability to stop the discharge. *Id.* Moreover, the developer had made a good faith effort to comply with the Clean Water Act’s

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<sup>34</sup> *Natural Resources Defense Council*, 673 F.3d at 892 (holding that the receiving water limitations provision “prohibits MS4 discharges into receiving waters that exceed the Water Quality Standards established in the Basin Plan and elsewhere”).

<sup>35</sup> *Hughey v. JMS Development Corp.*, 78 F.3d 1523, 1530 (11th Cir. 1996).

<sup>36</sup> *Id.* at 1527.

<sup>37</sup> *Id.* at 1530.

<sup>38</sup> *Id.* at 1530.

permit requirement, but the state agency responsible for issuing the permit was not yet prepared to issue such permits.<sup>39</sup> The court held the Clean Water Act does not require a permittee to achieve the impossible, finding that “Congress is presumed not to have intended an absurd (impossible) result.”<sup>40</sup> The same rule applies here.

The Clean Water Act does not require municipal permittees to do the impossible and comply with unachievable numeric limits. Because the copermitees are involuntary permittees that have no choice but to obtain a municipal storm water permit to discharge the inevitable runoff that enters the MS4, the Permit, as a matter of law, cannot impose terms that are unobtainable.

#### **B. Watershed Plans Are Not Required by the Clean Water Act or Porter-Cologne**

The Clean Water Act does not require MS4 permits to include watershed planning provisions.<sup>41</sup> Nor does Porter-Cologne. In fact, the California Watershed Improvement Act of 2009 allows -- but does not require -- MS4 permittees to develop watershed improvement plans. Cal. Water Code § 16100-16104. Those watershed improvement plans may be incorporated into MS4 permits, in which case a permittee implementing the plan could be “deemed in compliance” with the permit.<sup>42</sup> The Petitioners are not aware of mandatory watershed planning requirements in any other MS4 permit besides this Permit. Other MS4 permits, such as the recently adopted Los Angeles County MS4 Permit, include only voluntary watershed plans.<sup>43</sup> Consistent with the California Watershed Improvement Act of 2009, the Los Angeles County MS4 Permit provides

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<sup>39</sup> Id.

<sup>40</sup> Id. at 1529.

<sup>41</sup> . 33 U.S.C. § 1342(p); 40 C.F.R. § 122.26.

<sup>42</sup> Cal. Water Code § 16102(e).

<sup>43</sup> (Los Angeles Regional Water Quality Control Board Order No. R4-2012-0175 § VI.C.)

that implementation of the watershed plans “shall constitute a Permittee’s compliance with the receiving water limitations provisions.”<sup>44</sup>

The Permit, by contrast, mandates that the Petitioners prepare a Water Quality Improvement Plan for each watershed, without the benefit of compliance linkage.<sup>45</sup> Provision II.B sets forth detailed requirements for developing Water Quality Improvement Plans. Each Water Quality Improvement Plan is required to identify water quality priorities and goals, strategies, and schedules to improve those priority conditions.<sup>46</sup> Water Quality Improvement Plans must include a monitoring and assessment program to measure progress.<sup>47</sup> Permittees are required to implement an iterative process to adapt strategies where needed.<sup>48</sup> While the Petitioners expect that this will be a resource-intensive process, the Petitioners would rather accept the Water Quality Improvement Plan requirements than be subject to numeric effluent limitations. Under the Permit, however, the Petitioners have no choice because it has been compelled to accept both.

**C. The Regional Board Lacks Authority to Require Watershed Planning Without Compliance Linkage**

The Permit violates the Tenth Amendment to the United States Constitution because it compels the Petitioners to administer a federal regulatory scheme. The Tenth Amendment states that “[t]he powers not delegated to the United States by the Constitution, nor prohibited by it to the States, are reserved to the States respectively, or to the people.” U.S. Const. amend. X. The U.S. Supreme Court has held that under the Tenth Amendment, “the Federal Government may

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<sup>44</sup> (*Id.* § VI.C.2.b.)

<sup>45</sup> (Permit § II.B.1)

<sup>46</sup> (Permit § II.B.1-3.)

<sup>47</sup> (Permit § II.B.4.)

<sup>48</sup> (Permit § II.B.5.)

not compel the States to implement, by legislation or executive action, federal regulatory programs.”<sup>49</sup> The protection afforded by the Tenth Amendment extends to local governments. *Id.* at 931 n.15; *Environmental Defense Ctr., Inc. v. Environmental Protection Agency*, 344 F.3d 832, 847 (2003).

A state or local government (which includes a flood control district) may be persuaded to implement a federal regulatory program, but “the residents of the State or municipality must retain the ‘ultimate decision’ as to whether or not the State or municipality will comply with the federal regulatory program.” *Environmental Defense Ctr.*, 344 F.3d at 847 (citing *New York v. United States*, 505 U.S. 144, 168 (1997)). Permissible methods of “persuasion” include federal funding that is contingent on participation in a federal program. *Id.* (citing *South Dakota v. Dole*, 483 U.S. 203, 205-08 (1987)). Offering an alternative to implementing a federal regulatory program may also be constitutionally permissible, so long as the alternative does not “unduly infringe on the sovereignty of the State or local government.” *City of Abilene v. Environmental Protection Agency*, 325 F.3d 657, 662 (2003) (citing *New York*, 505 U.S. at 176).

An example of an alternative that crosses the line into compulsion is the “take title” provision of the Low-Level Radioactive Waste Policy, which gave states the choice of either regulating radioactive waste according to federal standards, or taking possession of that waste. *New York*, 505 U.S. at 174-77. The Supreme Court determined this provision violates the Tenth Amendment because, “[e]ither way, ‘the Act commandeers the legislative process of the States by directly compelling them to enact and enforce a federal regulatory program.’”<sup>50</sup> “A choice between two unconstitutionally coercive regulatory techniques is no choice at all.”<sup>51</sup>

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<sup>49</sup> *Printz v. United States*, 521 U.S. 898, 925 (1997).

<sup>50</sup> *New York*, 505 U.S. at 176 (quoting *Hodel v. Virginia Surface Mining & Reclamation Ass’n, Inc.*, 452 U.S. 264, 288 (1981))

In the storm water context, a Phase I MS4 permit did not violate the Tenth Amendment even though it required the cities to implement storm water management programs regulating new development, construction sites, sanitary sewers, landfills, hazardous waste treatment facilities, and industrial facilities.<sup>52</sup> The court reasoned that the cities had a constitutional alternative to implementing this federal program: accept a permit with effluent limitations instead of storm water management requirements.<sup>53</sup> Likewise, the Ninth Circuit Court of Appeals held that the storm water management requirements in EPA's Phase II MS4 permit rule did not run afoul of the Tenth Amendment because cities had the option to enroll in a Phase I MS4 permit instead, and that permit had already been found constitutional in *City of Abilene*. *Environmental Defense Ctr.*, 344 F.3d at 848.

Unlike the MS4 permit requirements challenged in *City of Abilene* and *Environmental Defense Center*, the Permit violates the Tenth Amendment because the Petitioners have no choice but to implement a federal regulatory program.<sup>54</sup> The Regional Board has taken the management permit and effluent permit alternatives discussed in *City of Abilene* and made them both compulsory in the Permit. The Permit requires the City to implement the storm water management programs such as the Water Quality Improvement Plans in Provision II.B and the

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<sup>51</sup> *Id.*

<sup>52</sup> *City of Abilene*, 325 F.3d at 660, 662.

<sup>53</sup> *Id.* at 662.

<sup>54</sup> The Regional Board has found that each and every requirement in the Permit is federally mandated under the Clean Water Act. (Permit at F-29 to F-30.) The Petitioners disagree with this finding, but notes that the Regional Board cannot have it both ways. If the Permit includes only federal requirements, then the Tenth Amendment must be respected. If the Permit includes state law requirements above and beyond what is required under the Clean Water Act, then those requirements are unfunded state mandates.

Jurisdictional Runoff Management Programs in Provision II.D, *and* to comply with the de facto effluent limitations in Provision II.A. There is no choice here.

Moreover, the Regional Board has also made clear that all permittees in the political boundary of the Regional Board have no choice but to enroll in this particular Permit, even though Orange and Riverside County permittees have disputed the Regional Board's authority to require their enrollment. The Regional Board has continued to insist that it has the legal authority to issue a region-wide permit, and has stated repeatedly that it intends to do so over those objections.<sup>55</sup>

The Petitioners respectfully request that the State Board remand the Permit back to the Regional Board with direction to restore the compliance linkage between the Water Quality Improvement Plans in Provision II.B and the receiving water limitations in Provision II.A. This linkage would cure the legal issues addressed here by giving the Petitioners an opportunity to comply with the Permit and providing a constitutional choice, instead of compelling both implementation of federal stormwater management programs and compliance with effluent limitations.

#### **IV. The Permit's Low Impact Development and Hydromodification Requirements Conflict with Applicable Laws**

The Permit requires that certain development projects include prescriptive low impact development ("LID") requirements.<sup>56</sup> The Permit also requires Petitioners to develop and

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<sup>55</sup> (Permit at F-22 to F-23; Response to Comments at 51-52.)

<sup>56</sup> Permit, Directive E.3., pages 81-91.

implement a hydromodification management plan (“HMP”) for the same development projects.<sup>57</sup> Petitioners agree that in some developments, the concepts of LID and HMPs have the potential to improve water quality by reducing the discharge of pollutants from the MS4. However, the LID and HMP provisions go beyond MEP, and the inability to tailor these requirements on a project-by-project basis violates federal and state law.

**A. There is No Substantial Evidence to Require Hydromodification and LID Practices, and Such Requirements Force the Petitioners to Go Beyond MEP**

The Permit requires hydromodification controls with uncertain ability to exempt projects where an Hydromodification Plan (“HMP”) is infeasible.<sup>58</sup> These requirements apply across three large counties with varying climates, soil conditions and topography. In urbanizing watersheds, hydromodification can have consequences if left unchecked, but a presumptive one size fits all solution can cause more problems than it solves. In some places, HMP requirements have unintended consequences in terms of floodplain and habitat impacts. The strategy of matching some pre-development flow duration hydrology to protect streams is most effective and appropriate where the receiving stream is in pristine condition and site conditions are suitable for water volume management. In many urban watersheds, streams have already been highly impacted and in some cases have already evolved to changes in hydrology. There are other situations where a particular stream reach may be sensitive to increased flows, but detention or infiltration on site is infeasible.

Effective strategies to address hydromodification are basin specific determined by both development site conditions and receiving channel conditions. A panel of five stormwater and hydromodification management experts was convened in August 2012 to answer key questions

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<sup>57</sup> Permit, Fact Sheet VII.D., page F063.

<sup>58</sup> Permit, Directives D.3.b(4)(c), page 29; Directive E.3.c(2), page 87.

related to hydromodification.<sup>59</sup> The panel's key overarching recommendation was that hydromodification impacts are best addressed by initially identifying and prioritizing opportunities and constraints at the watershed scale. A basin specific HMP can ensure that the strategies implemented have the greatest ecological benefit for the money spent. The Permit, however, embraces a one size fits all solution. The Regional Board had no evidence before it that a blanket requirement to implement hydromodification controls and LID on all land development projects improves water quality. To that extent, the HMP and LID requirements in the Permit lack substantial evidentiary support and are arbitrary and capricious under the California Administrative Procedure Act and violate the CWA in that the requirements do not on their face demonstrate water quality benefits. Capturing all run-off also goes beyond the MEP standard, particularly when it is infeasible to do so.

There is also no evidence of water quality benefit to support a pre-development run-off reference requirement.<sup>60</sup> A pre-development standard is entirely subjective. While a project proponent would need to review on-site or nearby soil conditions for this reference, evidence was presented at the adoption hearing that this could not be done as easily as using an Internet website, which was the contention of Regional Board staff in advocating for the new standard. Also, in highly developed concrete areas, it would be difficult to find nearby conditions that could be used as this reference, and is thus, arbitrary.

**B. The HMP and LID Requirements Expose the Petitioners to Significant Litigation Risk And Will Be Largely Unenforceable Under the U.S. Supreme Court's Nollan/Dolan Standard and the Mitigation Fee Act**

Many of the land development requirements, such as hydromodification, pose

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<sup>59</sup> A copy of the panel's recommended hydromodification management approaches and tools for the regional municipal stormwater permit is included as Exhibit F.

<sup>60</sup> Directive E.3.c(2)(a), page 87.



constitutional issues that will either expose the Petitioners to litigation and/or will result in the Petitioners and other municipalities being unable and unwilling to implement such requirements. Specifically the Petitioners are most concerned with, but are not limited to the following provisions:

- 1) requiring permittees to compel development projects that have no impact on hydromodification to implement on-site or alternative compliance hydromodification mitigation measures,
- 2) requiring use of a pre-development (naturally occurring) runoff reference condition for sites that are, in fact, developed, and
- 3) requiring stream, channel and habitat restoration.

The Petitioners are concerned that implementing these types of requirements would subject them to liability under the takings clauses of the U.S. and California Constitutions and the Mitigation Fee Act because of the questionable nexus between a project's impacts on hydromodification and the hydromodification management measures in the Permit. When imposing a condition on a development permit, a local government is required under federal and state constitutions to establish that the condition bears a reasonable relationship to the impacts of the project. This rule applies evenly to legislatively enacted requirements and impact fees or exactions.<sup>61</sup> Moreover, fees imposed on a discretionary ad-hoc basis are subject to heightened scrutiny under a two-part test. First, local governments must show that there is a substantial relationship between the burden created by the impact of development and any fee or exaction.<sup>62</sup> Second, a project's impacts must bear a rough proportionality to any development fee or

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<sup>61</sup> Bldg. Ass'n Indus. v. City of Patterson, 171 Cal. App. 4th 886, 898 (2009).

<sup>62</sup> Nollan v. Cal. Coastal Comm'n, 483 U.S. 825, 837 (1987).

exaction.<sup>63</sup> Under California law, the *Nollan/Dolan* heightened scrutiny test also applies to in-lieu fees.<sup>64</sup>

The Legislature has also memorialized these constitutional requirements in the Mitigation Fee Act, which establishes procedures that local governments must follow to impose impact fees.<sup>65</sup> Irrespective of whether the hydromodification management requirements are implemented by legislative act or on an ad-hoc basis, the Petitioners attempt to enforce them as proposed in the Permit will likely result in claims alleging unconstitutional takings of private property and violations of the Mitigation Fee Act. This is because a developer could demonstrate that limiting hydromodification impacts to already developed property to its naturally occurring state, or requiring hydromodification mitigation measures for impacts not imposed by the project, would not have a legally sufficient nexus to the impact of the development project. At the Permit adoption hearing, and as discussed above, the Petitioners have demonstrated that HMP and LID requirements can be technically and economically infeasible, and may not lead to improved water quality.

Similarly, the Permit allows for an alternative compliance mechanism through the payment of in-lieu fees to the municipality who would then be responsible for implementing an off-site mitigation project.<sup>66</sup> Because the Mitigation Fee Act contains the same *Nollan/Dolan* nexus requirements, the Petitioners would be prohibited from requiring an in-lieu fee for a hydromodification control measure that was infeasible or did not demonstrate a water quality benefit.

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<sup>63</sup> *Dolan v. City of Tigard*, 512 U.S. 374, 391 (1994).

<sup>64</sup> *Ehrlich v. City of Culver City*, 12 Cal. 4th 854, 876 (1996).

<sup>65</sup> Gov't Code secs. 66000-66025.

<sup>66</sup> Permit, Directive E.3.c(3)(c), page 90.

In all likelihood, municipalities will not risk constitutional challenges and the high litigation costs of such challenges, but will instead exempt projects from certain requirements or limit their applicability based on documented technical and legal reasons. Such actions then would only be addressed through a Regional Board audit years after a project has been approved and developed. The State Board should eliminate predevelopment runoff reference conditions and stream, channel and habitat restoration requirements in their entirety.

### **C. HMP and LID Provisions Are in Conflict With and Are Preempted By CEQA**

The HMP and LID Permit provisions are designed to address potential adverse impacts on water quality that may occur from a new development or redevelopment project. Such an analysis, however, is already required to be conducted by Permittees under the California Environmental Quality Act (“CEQA”). CEQA imposes numerous requirements with which municipalities must comply when considering projects within their respective jurisdictions, and requires that municipalities consider and mitigate potentially significant adverse environmental impacts.

First, CEQA does not allow a local government discretionary approval to require over-mitigation of a project. The CEQA Guidelines provide that “a lead agency for a project has the authority to require feasible changes in any or all activities involved in the project in order to substantially lessen or avoid significant effects on the environment, consistent with applicable constitutional requirements such as the ‘nexus’ and ‘rough proportionality’ standards established by case law.”<sup>67</sup> Should it be demonstrated that a project will not have a significant adverse impact on water quality or that the hydromodification or LID mitigation measure does not have a nexus to the project, *e.g.*, stream restoration, CEQA prohibits such measure from being

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<sup>67</sup> Cal. Code Regs. tit. 14, §15041 (citing Nollan, 483 U.S. at 825 and Dolan, 512 U.S. at 374).

implemented.

Second, CEQA allows local agencies the discretion to adopt a Statement of Overriding Considerations if the public agency finds that “specific overriding economic, legal, social, technological, or other benefits of the project outweigh the significant effects on the environment.”<sup>68</sup> Because the Permit does not allow exemptions to the HMP and LID provisions, the Permit ignores the statutory mandates of CEQA by eliminating the Petitioners’ ability to adopt a Statement of Overriding Considerations as to water quality impacts, and in effect, eliminates the land use discretion to approve a project and fashion mitigation measures specific to that project. Under Public Resources Code section 21081.6(c), a responsible agency – such as the Regional Board – cannot direct how a lead agency – such as a Permittee – is to comply with CEQA’s terms:

Any mitigation measures submitted to a lead agency by a responsible agency or an agency having jurisdiction over natural resources affected by the project shall be limited to measures which mitigate impacts to resources which are subject to the statutory authority of a definitions applicable to, that agency. Compliance or non-compliance by a responsible agency or agency having jurisdiction over natural resources affected by a project with that requirement shall not limit . . . the authority of the lead agency to approve, condition, or deny projects as provided by this division or any other provision of law.<sup>69</sup>

In addition, section 21081.1 states that the lead agency’s determination “shall be final and conclusive on all persons, including responsible agencies, unless challenged as provided in Section 21167.” It similarly states that the lead agency “shall be responsible for determining whether an environmental impact report, a negative declaration, or mitigated negative

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<sup>68</sup> Pub. Res. Code § 21081.

<sup>69</sup> Pub. Res. Code § 21081.6(c); emphasis added.

declaration shall be required for any project which is subject to this division.”<sup>70</sup> Further, no additional procedural or substantive requirements beyond those expressly set forth in CEQA may be imposed upon a local agency’s CEQA review process:

It is the intent of the Legislature that courts, consistent with generally accepted rules of statutory interpretation, shall not interpret this division or the state guidelines adopted pursuant to Section 21083 in a manner which imposes procedural or substantive requirements beyond those explicitly stated in this division or in the state guidelines.<sup>71</sup>

Public Resources Code section 21001 provides that local agencies “should not approve projects as proposed if there are feasible alternatives or feasible mitigation measures available which would substantially lessen the significant environmental effects of such projects.”<sup>72</sup> However, the Permit appears to conclude that all runoff from a wide class of new development and redevelopment projects will result in significant adverse impacts on the environment, and that such impacts must be mitigated by those particular mitigation measures as mandated in the Permit. Thus, the Permit dictates the terms and results of environmental review, without regard for CEQA's provisions, and eliminates a local governmental agency’s discretion to consider and approve feasible alternatives or mitigation measures – even if alternative measures might have a lesser effect on the environment. In effect, then, the Permit circumvents the intent of the Legislature by dictating the mitigation measures that shall be used in every instance, whether or not an environmental analysis shows there is an adverse impact on the environment.

#### **D. The HMP and LID Provisions Improperly Dictate the Manner of Compliance**

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<sup>70</sup> Pub. Res. Code § 21080.1(a).

<sup>71</sup> Pub. Res. Code § 21083.1.

<sup>72</sup> Pub. Res. Code § 21001.

The Permit provisions regarding HMP and LID, among other things, improperly prescribe how the Petitioners are to comply with the MEP standard, and the Regional Board cannot dictate the Petitioners manner of compliance with improving water quality.<sup>73</sup> As discussed above, these provisions are overbroad and will not necessarily result in improved water quality. For example, the HMP requirement for hardened channels has not been demonstrated to have any water quality benefits.

**E. The Regional Board's HMP and LID Requirements Unlawfully Eliminates the Orange County Permittees' Statutory Authority Over Flood Control**

The objective of the Clean Water Act is to restore and maintain the chemical, physical, and biological integrity of waters of the U.S..<sup>74</sup> In carrying out this objective, Section 402(p) requires municipalities to reduce the discharge of pollutants from the MS4 to the MEP standard. The Permit, however, goes well beyond the congressional intent of the Clean Water Act to only address pollutants by requiring the Petitioners and property owners to restore and/or retrofit streams, channels and habitat, with no technical evidence as to how this will reduce the discharge of pollutants to MEP or under what legal authority these requirements can be imposed.<sup>75</sup>

Not only do such requirements go beyond MEP, but go beyond the scope of the Clean Water Act's focus on pollutant reduction. First, there is no evidence in the Order for how restoration requirements reduce pollutants from leaving the MS4. Second, in a recent decision in the Eastern District of Virginia, a federal court has held that the EPA has no authority under the Clean Water Act to regulate non-pollutants.<sup>76</sup> Restoration as described in the Order does not

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<sup>73</sup> Water Code § 13360(a).

<sup>74</sup> CWA 101(a).

<sup>75</sup> Permit, Directive E.5.e.(2), page 106.

<sup>76</sup> *Virginia Dept. of Transportation v. EPA*, No. 1:12-CV-775, 2013 WL 53741, (E.D. Va. Jan. 3, 2013).

regulate pollutants directly, but requires costly over-mitigation by project proponents to do more than address pollutants by restoring streams, channels and habitat to a subjective, predevelopment standard. Essentially, the Order uses restoration as a surrogate for pollutants, and tries to unlawfully regulate the flow of water and not pollutants themselves.

Under state law, the Orange County Flood Control District has been delegated authority by the Legislature to construct lengthy networks of channels and infrastructure for flood control purposes.<sup>77</sup> Under this authority, the District has exclusive authority to control the flow of water in these channels. Although the State and Regional Boards may have some ability to impose conditions that impact volumetric flows (which is now called into question by the 4th District court case), this authority does not extend to NDPES permits.<sup>78</sup> Returning channels to natural conditions impinges on municipal flood control authority as removing concrete and performing other restoration efforts would alter the flow of water in those channels.

Engineered channels serve the public health and safety through flood control protection. A significant portion of Orange County lies in a flood plain whereby property owners are required to carry flood insurance. Concrete channels are used to better control the flow of water and minimize flooding and reduce insurance premiums. State courts have recognized that residents living near flood control improvements have a right to rely on the current standards of a particular channel to protect against flooding.<sup>79</sup> Restoring a stream or channel to a natural state would exacerbate flood conditions because engineered channels are designed to ensure that stormwater is controlled to certain patterns. Large tracts of homes and businesses are built up to

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<sup>77</sup> Orange County Flood Control Act of 1934.

<sup>78</sup> *S.D. Warren Co. v. Me. Bd. of Envtl. Prot.*, 547 U.S. 370 (2006); *PUD No.1 v. Washington Dep't of Ecology*, 511 U.S. 700 (1994).

<sup>79</sup> *Arreola v. County of Monterey*, 99 Cal.App.4th 722 (2002).

and near flood control channels, and thus, restoration would expose residents to threats of flood, potential property damage and loss of life, and expose municipalities to claims of inverse condemnation and other torts based on relied upon flood control protections by the public. Restoration in some cases would also require use of eminent domain authority, which the State cannot require municipalities to exercise. Lastly, to the extent the LID requirements would interfere with downstream or upstream water rights holders, compliance with the requirements potentially expose the Petitioners to common law liability.

Notwithstanding the potential conflict between the exclusive jurisdiction of the District over flood control channel design, construction and operation, the Regional Permit does not cover activities within waters of the United States. The Regional Permit, like all MS4 permits, covers discharges from the MS4 to receiving waters. (*See* Regional Permit Finding 2: “This Order serves as an NPDES permit for discharges from MS4s to surface waters.”) If the “development project” consists of work in the receiving water itself, there obviously is no “discharge” to the MS4. The work in the receiving water may require a CWA Section 404 permit from the Army Corps of Engineers, as well as CWA Section 401 certification from the Regional Board, which are intended to address water quality impacts and which, jurisdictionally, are appropriate. If the work is being done in a water of the State (which might include some flood control infrastructure), a waste discharge requirement must be obtained. These points are expressly recognized by the Regional Permit in Footnote 22, which states that “[d]evelopment 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.”



In addition, Provision II.E.3.a.3, relating to the requirement LID BMP requirements for all development projects, calls for the “[m]aintenance or restoration of natural storage reservoirs and drainage corridors.” The same objections to interference with the statutory duties of the flood control districts and to the jurisdiction of the Regional Permit over such activities contained in waters of the United States apply to that provision. In fact, the Regional Permit provides that

The State Board must provide an express exemption for flood control projects in the Development Planning provisions of the Regional Permit or direct the Regional Board to so act. By adopting the Regional Permit in derogation of law, the Regional Board has acted arbitrarily and capriciously.

#### **V. The Permit Improperly Deletes Categories of Exempt Non-Stormwater Discharges**

Federal law requires that MS4 permits include a requirement that Permittees effectively prohibit the discharge of non-stormwater into the MS4.<sup>80</sup> Federal regulations exempt certain discharge categories from this effective prohibition requirement.<sup>81</sup> A Permittee only must address a discharge in one of these categories when a Permittee identifies the discharge as a source of pollutants to waters of the U.S..<sup>82</sup>

The Permit impermissibly deletes three of the non-stormwater discharge categories – landscape irrigation, irrigation water and lawn watering (collectively “Irrigation”).<sup>83</sup> Federal regulations require that permittees address discharges within an exempt category when they identify a discharge as a source of pollutants to waters of the United States. Neither the

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<sup>80</sup> 33 U.S.C. § 1342(p)(3)(B)(ii).

<sup>81</sup> 40 C.F.R. § 122.26(d)(2)(iv)(B)(1).

<sup>82</sup> *Id.*

<sup>83</sup> Permit, Directive E.2.a(1), page 74.

regulations nor EPA's guidance allow the Regional Board to delete entire categories of exempt non-stormwater discharges when Permittees identify a discharge within one of the categories as a source of pollutants. Accordingly, the State Board should restore the Irrigation categories of exempt non-stormwater discharges.

**VI. The Permit Must Require the Discharge of All Pollutants From the MS4 Be Subject to the MEP Standard**

Section 402(p)(3)(B)(ii) of the Clean Water Act requires the Petitioners to effectively prohibit non-stormwater discharges into the MS4, namely pollutants generated from illicit connections and unlawful dumping. The Permit at Finding 15, however, states that non-stormwater discharges are not subject to the MEP standard. This finding is not supported by federal law. While federal law regulates "non-stormwater discharges" into the MS4, Section 402(p)(3)(B)(iii) expressly states that the "discharge of pollutants" shall be reduced to MEP. In drafting this section of the CWA, Congress expressly intended all discharges from MS4s to be subject to MEP as it used the term "pollutant" and did not differentiate between stormwater and nonstormwater, as the Permit does. Therefore, the duty of the Petitioners to reduce the discharge of pollutants from the MS4 to MEP applies to both stormwater and nonstormwater pollutants.

Furthermore, the focus of the CWA and federal regulations is on a management program that includes a comprehensive planning process to reduce the discharge of pollutants to MEP.<sup>84</sup> One of the elements of the management program is the illicit discharge prevention program.<sup>85</sup> The control and limitation of illicit discharges into the MS4 is intended to achieve

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<sup>84</sup> 40 CFR 122.26(d)(2)(iv).

<sup>85</sup> 40 CFR 122.26(d)(2)(iv)(B)(1).

the overall MEP standard for discharges from the MS4. This is confirmed by the preamble to EPA regulations that discuss the required elements of the management program. According to EPA:

[Copermittees are required] to develop management programs for four types of pollutant sources which discharge to large and medium municipal storm sewer systems. Discharges from large and medium municipal storm sewer systems are usually expected to be composed primarily of: (1) Runoff from commercial and residential areas; (2) storm water runoff from industrial areas; (3) runoff from construction sites; and (4) non- storm water discharges. Part 2 of the permit application has been designed to allow [Copermittees] the opportunity to propose MEP control measures for each of these components of the discharge. 55 Fed Reg at 48052 (emphasis added). *See also* 55 Fed Reg at 48045 (stating “Part 2 of the proposed permit application [which includes the illicit discharge prevention requirement] is designed to provide municipalities with the opportunity of proposing a comprehensive program of structural and non-structural control measures that will control the discharge of pollutants, to the maximum extent practicable, from municipal storm sewers.”) <sup>86</sup>

EPA’s position is consistent with existing State Water Resources Control Board policy which states that discharges into the MS4 are to be controlled through an iterative, BMP based approach that is *less* stringent than the MEP standard.<sup>87</sup> The State Board held:

An NPDES permit is properly issued for “discharge of a pollutant” to waters of the United States. (Clean Water Act § 402(a).) The Clean Water Act defines “discharge of a pollutant” as an “addition” of a pollutant to waters of the United States from a point source. (Clean Water Act section 502(12).) Section 402(p)(3)(B) authorizes the issuance of permits for discharges “from municipal storm sewers.”

We find that the permit language is overly broad because it applies the MEP standard not only to discharges “from” MS4s, but also to discharges “into” MS4s. . . [T]he specific language in this prohibition too broadly restricts all discharges “into” an MS4, and does not allow flexibility to use regional solutions, where they could be applied in a manner that fully protects receiving waters. It is important to emphasize that dischargers into MS4s continue to be required to implement a full range of BMPs, including source control. In particular, dischargers subject to industrial and construction permits must comply with all conditions in those permits prior to

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<sup>86</sup> Emphasis added

<sup>87</sup> Specifically in State Board in Order No. WQ-2001-15, *In the Matter of the Petitions of Building Industry Assoc. of San Diego County and Western States Petroleum Assoc.* (2001).

discharging storm water into MS4s.<sup>88</sup>

The State Board's decision in the Building Industry Association (“BIA”) matter makes clear that the CWA does not include a blanket prohibition on discharges of non-stormwater into the MS4. To the extent the Permit holds the Petitioners liable in the event that any discharge into the MS4 occurs, the Permit violates the CWA and is in conflict with existing State Board policy.

It is also technically infeasible in some cases to differentiate between non-stormwater or stormwater pollutants discharged from the MS4. Thus, just as the discharge of non-stormwater into the MS4 is subject to the effective prohibition standard, the discharge of pollutants in non-stormwater from the MS4 is subject to the MEP standard. There are several instances where the specific provisions in the Permit need to be modified in order to reflect this approach.

#### **VII. The Permit Cannot Legally Presume that Discharges from MS4s Always Contain Waste or Pollutants**

Discharges may contain waste or pollutants, but the Permit presumes that discharges necessarily always contain waste or pollutants. Under current law, the Regional Board’s issuance of the Permit is a quasi-judicial decision.<sup>89</sup> As a quasi-judicial decision, the Regional Board’s action must be supported by legally adequate findings, and those findings must be supported by evidence in the record.<sup>90</sup>

Pursuant to the Supreme Court’s decision in *Topanga Association for a Scenic Community v. County of Los Angeles* (1974) 11 Cal.3d 506, findings are intended to “facilitate orderly analysis and minimize the likelihood that the agency will randomly leap from evidence to

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<sup>88</sup> *Id.*, at 9-10.

<sup>89</sup> *City of Rancho Cucamonga v. Regional Water Quality Control Board* (2006) 135 Cal.App.4th 1377,1385.

<sup>90</sup> *Topanga Association for a Scenic Community v. County of Los Angeles* (1974) 11 Cal.3d 506.

conclusions.”<sup>91</sup> In contrast, the Permit cites no evidence that stormwater itself is a pollutant or that in every instance it contains pollutants or waste as those terms are defined by the CWA and Porter Cologne respectively. Absent evidence demonstrating that this is the case, the Regional Board cannot make this finding.

In addition, the Regional Board lacks the authority to regulate pure stormwater as a pollutant. The CWA and its implementing regulations define the term “pollutant” to mean:

dredged spoil, solid waste, incinerator residue, filter backwash, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials (except those regulated under the Atomic Energy Act of 1954, as amended (42 U.S.C. 2011 et seq.)), heat, wrecked or discarded equipment, rock, sand, cellar dirt and industrial, municipal, and agricultural waste discharged into water.<sup>92</sup>

Federal regulations further define the term “stormwater” to mean: “storm water runoff, snow melt runoff, and surface runoff and drainage.”<sup>93</sup> Notably, the definition of the term “pollutant” does not include “stormwater.” Moreover, the text of the CWA requires the discharges of *pollutants* to be reduced to MEP.<sup>94</sup> There is no prohibition on or comparable authority to regulate the discharge of pure *stormwater*.

This rationale was recently adopted by the Eastern District of Virginia, when it held that the EPA has no authority under the Clean Water Act to regulate non-pollutants.<sup>95</sup> Specifically, the Court stated:

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<sup>91</sup> Id., at 514 [emphasis added].

<sup>92</sup> 33 U.S.C. § 1362(6); 40 C.F.R. § 122.2.

<sup>93</sup> 40 C.F.R. § 122.26(b)(13)

<sup>94</sup> 33 U.S.C. § 1342(p).

<sup>95</sup> *Virginia Dept. of Transportation v. EPA*, No. 1:12-CV-775, slip op. (E.D. Va. Jan. 3, 2013).

Pollutant is statutorily defined. (33 U.S.C. § 1362(6)). The Court sees no ambiguity in the wording of this statute. EPA is charged with establishing TMDLs for the appropriate pollutants; that does not give them the authority to regulate nonpollutants. The parties agree that sediment is a pollutant under 33 U.S.C. § 1362(6), and stormwater is not.<sup>96</sup>

Likewise, the Porter-Cologne Act defines the term “waste” to mean:

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.<sup>97</sup>

Although the definition is certainly different and potentially broader than the definition of “pollutant” under the CWA, the definition of “waste” does not include stormwater or any other discharge that is not created by human activity. As a matter of law, the Regional Board is therefore without authority to regulate all discharges of stormwater as pollutants or waste.

#### **VIII. The Permit Cannot Classify Natural Waters as Part of the MS4, and an MS4 Cannot Be Classified as Both a MS4 and Receiving Water**

The Permit states that development often makes use of natural drainage patterns and features as conveyances for runoff. Finding 11 of the Permit goes on to state that rivers, streams and creeks in developed areas are part of the Petitioners’ MS4 whether or not the river, stream or creek is natural, anthropogenic or partially modified.<sup>98</sup> It further states that these natural water bodies are both an MS4 and a receiving water.

Finding 11 of the Permit is expressly contradicted by federal regulations and a recent opinion by the U.S. Supreme Court. Natural creeks cannot legally be classified as part of the MS4, and the MS4 and a water of the U.S. cannot be comingled. The flow of water from an improved portion of a navigable waterway into an unimproved portion of the same waterway

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<sup>96</sup> Id., at 5.

<sup>97</sup> Cal Water Code § 13050(d).

<sup>98</sup> Permit, Finding 11, page 4.

does not qualify as a “discharge of a pollutant” under the CWA.<sup>99</sup>

In addition, the definition of a *municipal separate storm sewer* means “a conveyance or system of conveyances including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains:

- i. Owned or operated by a state, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to state law) ... including special districts under state law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under section 208 of the Clean Water Act that discharges into waters of the United States;
- ii. Designed or used for collecting or conveying stormwater;
- iii. Which is not a combined sewer; and
- iv. Which is not part of a publicly owned treatment works (POTW) as defined at 40 CFR 122.2.<sup>100</sup>

This definition includes only man-made channels and systems and does not encompass natural water bodies simply because an outfall discharges to a receiving water. Any improvement to a natural river, stream or creek does not mean it is a MS4, but an improved water of the U.S. Moreover, U.S. EPA itself, in the Preamble to its proposed MS4 regulations<sup>101</sup> expressly determined that “streams, wetlands and other water bodies that are waters of the United States are not storm sewers for the purposes of this rule” and that “stream channelization, and stream bed stabilization, which occur in waters of the United States” were not subject to NPDES permits under Section 402 of the CWA.<sup>102</sup>

Lastly, municipalities do not own, control or operate natural rivers, streams and creeks.

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<sup>99</sup> *L.A. County Flood Control District v. NRDC*, 133 S.Ct. 710 (Jan. 8, 2013); *South. Fla. Water Management Dist. V. Miccosukee Tribe*, 541 U.S. 95, 109-112 (2004) (holding that the transfer of a polluted water between two parts of the same waterbody does not cause a discharge of pollutants under the CWA).

<sup>100</sup> 40 CFR 122.26(b)(8).

<sup>101</sup> 53 Fed. Reg. 49416 (Dec. 7, 1988).

<sup>102</sup> 53 Fed. Reg. at 49442.

Such water bodies are often administrated by the State of California in the public trust for the right of the people to use such waters for certain purposes or are privately owned.<sup>103</sup> The Legislature, acting within the confines of the common law public trust doctrine, is the ultimate administrator of the trust and may often be the final arbiter of permissible uses of trust lands. Moreover, a municipality obviously cannot “operate” a natural creek or stream.

**IX. The Permit Copermittees Do Not Accept Free and Open Access to MS4s, and Are Not Responsible for All Discharges Not Prohibited**

Finding 12 of the Permit states that MS4s willingly provide free and open access and convey discharges to waters of the U.S., and that MS4 operators then accept all responsibility for such discharges not prohibited or otherwise controlled.<sup>104</sup> This is simply not the case, and is legally unsupportable. An MS4 is designed to accept stormwater for flood control purposes and prevent damage to life and property. Although it is true that the Copermittees have an obligation to effectively prohibit non-stormwater discharges, namely illicit connections and unlawful dumping, it is also true that the discharger into the MS4 is ultimately responsible for a condition of pollution or violation of a water quality standard. And, in accordance with California state law, MS4s downstream of upstream flows must accept those flows and cannot attempt to block or divert such flows.<sup>105</sup> Finding 12 of the Permit attempts to shift all legal responsibility to the MS4s, which is completely unsupportable. Accordingly, the State Board should direct the Regional Board to strike this portion of Finding 12.

**X. The Permit Is More Stringent Than Federal Law, Requiring An Economic Analysis. In Addition, the Current Economic Analysis Is Insufficient**

There are a number of Permit requirements that are more stringent than federal law,

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<sup>103</sup> Marks v. Whitney (1971).

<sup>104</sup> Permit, Finding I.12, page 4.

<sup>105</sup> Keyes v. Romley (1966) 64 Cal.2d 396; Locklin v. City of Lafayette, (1994) 7 Cal. 4th 327.



including but without limitation, hydromodification controls, LID, and the requirements to strictly comply with numeric standards. As such, the Regional Board is required to conduct an analysis of economic considerations pursuant to Water Code section 13241.<sup>106</sup> The Regional Board found, however, that none of the terms and provisions of the Permit went beyond federal law.<sup>107</sup>

Despite this finding, the Regional Board provided an economic analysis, but one that does not comply with section 13241.<sup>108</sup> A proper economic analysis would analyze the economic impacts that result from compliance with Petitioners existing stormwater permit compared to the costs of complying with the proposed Permit (*i.e.*, the costs of complying with the new requirements). Instead, the Fact Sheet provides an inverse analysis, without any quantification, that it would more expensive to not fully implement the Permit's programs. In addition, the economic analysis states that the Petitioners have a significant amount of flexibility to choose how to implement BMPs and that "least expensive measures" can be chosen.<sup>109</sup> This statement, however, conflicts with the Permit's definition of MEP at page C-6, which expressly acknowledges Chief Counsel's 1993 MEP memo that only the Regional and State Boards determine whether BMPs meet MEP, and that selection of the least expensive BMPs will likely not result in meeting the MEP standard.

The Fact Sheet also fails to cite any recent cost benefit numbers, but relies on inapplicable cost data, such as a 1999 EPA study on household costs. The analysis of costs contained in the is deficient in several ways. First, the approach to compliance costs is fundamentally deficient

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<sup>106</sup> City of Burbank v. State Water Resources Control Bd., 35 Cal.4th 613, 618, 626-627 (2005).

<sup>107</sup> Permit, Finding 30, page 9.

<sup>108</sup> Permit, Fact Sheet VI, page F-15.

<sup>109</sup> Permit, Fact Sheet VI, page F-17.

because it tells the public nothing at all about the relationship between the cost of any particular control and the pollution control benefits to be achieved by implementing that control. Under this generalized approach, extremely costly requirements that bear little or even no relationship (or even a negative relationship) to the pollution control benefits to be achieved could be justified as long as the overall program costs are within what the Regional Board deems to be an acceptable range. This is not a proper way to determine whether a control reduces the discharge of pollutants from the MS4 to MEP. A more individualized assessment of cost is required. Otherwise, dischargers may be required to implement very costly controls that have no relationship to pollution control benefits, a result inconsistent with MEP. This analytical flaw in the Fact Sheet is compounded by the approach taken to assess the benefits of the Permit. Here again, the assessment approach misses the mark because it tells the public nothing about the pollution control benefits to be achieved by implementation of the controls in the Permit. All the Fact Sheet indicates, in essence, is that people like clean water and in theory may be willing to pay for it, that urban storm water may contribute to beach closures, and that such beach closures have an economic impact. This analysis sheds no light on the relationship between a BMP's costs and the pollution control benefits to be achieved by implementing that BMP.

Second, the Fact Sheet contains faulty assumptions and relies upon outdated or inapplicable data. The California State University, Sacramento ("CSUS") Cost Survey cited in at page F-18 assessed program costs for Phase I cities. Nothing in the Fact Sheet links any of the actual conditions of the Phase I permits of the Phase I cities studied by CSUS with any of the requirements of the Permit. Therefore, the study tells the public nothing about the costs to implement the Permit. The data included in the Fact Sheet is also more than a decade old.

Lastly, local agencies cannot readily establish or raise fees to help pay for the BMPs

necessary to comply with either the California Toxics Rule criteria or proposed Site Specific Objectives due to the limitations imposed by Proposition 218, Proposition 26 and the Mitigation Fee Act. For instance, Proposition 218 requires that property-related fees be put to a vote, so cities cannot assess fees without the consent of two-thirds of the property owners. Therefore, the costs associated with the implementation and maintenance of the BMPs will almost always be expended using local agency General Funds.

**XI. The Regional Board Lacks the Legal Authority to Determine that the Permit’s Provisions Do Not Constitute Unfunded State Mandates**

Finding 31 of the Permit asserts that none of the Permit’s requirements constitute an unfunded state mandate requiring a subvention of funds in accordance with Article XIII B, Section 6(a) of the California Constitution.<sup>110</sup> Finding 31 is self-serving and inappropriate, and should be deleted from the Permit because the Regional Board has no legal jurisdiction or authority to make such a finding. The Commission on State Mandates is the only State agency that has the jurisdiction and ability to make that determination. The Fact Sheet’s discussion of unfunded state mandates is not consistent with applicable legal authority or the Permit.<sup>111</sup>

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 . . . .” Section 6 applies to stormwater permits issued by the State Board and the Regional Boards.<sup>112</sup>

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<sup>110</sup> Permit, Finding I.31, page 10.

<sup>111</sup> Permit, Fact Sheet, page F-29.

<sup>112</sup> *County of Los Angeles v. Commission on State Mandates* (2007) 150 Cal.App.4th 898, 920.

Section 6 was added to the California Constitution by voter approval in 1979, as part of a larger effort that had as its goal both limiting state and local spending and restricting the ability of local entities to raise revenue. Section 6 must be viewed as a “safety valve” designed to protect local governments from being placed in the untenable position of being required by the state, on the one hand, to implement certain state mandated programs while also, on the other hand, being prohibited from raising the money needed to pay for those state mandated programs.<sup>113</sup> Recognizing that such a situation was neither a fair nor a wise approach to governing, the voters enacted Section 6 to prevent state government from shifting financial responsibility for carrying out governmental functions to local agencies without the state paying for them.

To implement Section 6, the Legislature created the Commission on State Mandates. The Commission has sole and exclusive jurisdiction to determine whether a state law or order of a state agency is an unfunded state mandate.<sup>114</sup> In accordance with Section 6, Government Code section 17500 et seq. and case law, the Commission has determined that an unfunded state mandate exists when: (a) the state imposes a new program or higher level of service that is; (b) mandated by state law, not federal law; and (c) when the local government lacks adequate fee authority to pay for the new program or higher level of service.

Because the Commission has exclusive authority in this area, the State Board should strike Finding 31.

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<sup>113</sup> *Department of Finance v. Commission on State Mandates* (2003) 30 Cal.4th 727, 735; *County of San Diego v. State of California* (1997) 15 Cal.4th 68, 81.

<sup>114</sup> Government Code §§ 17551 and 17552; *Kinlaw v. State of California* (1991) 54 Cal.3d 326, 331-334.

## **XII. The Permit Should Not Require the Reduction or Elimination of All Non-Stormwater Discharges as a Part of The Illicit Discharge Detection and Elimination Program**

Provision E.2.a and E.2.a.(7) require the Petitioners, as a part of their Illicit Discharge Detection and Elimination Program (“IDDE”) program, to address all non-stormwater discharges as illicit discharges. Thus, the Petitioners must reduce or eliminate non-stormwater discharges whether or not the discharges have been identified as illicit discharges. The rationale within the Fact Sheet states that “Provision E.2.a.(7) is consistent with the requirements of the CWA section 402(p)(3)(B)(ii) and 40CFR 122.26(d)(1)(v)(B).”<sup>115</sup> That, in fact, is not the case. Clean Water Act Section 402(p)(3)(B)(ii) states that the MS4 stormwater permits “shall include a requirement to effectively prohibit non-stormwater discharges into the storm sewers.” Federal regulations include two provisions designed to begin implementation of the “effective prohibition.”<sup>116</sup> The first provision requires a screening analysis, intended to provide sufficient information to develop priorities for a program to detect and remove illicit discharges.<sup>117</sup> The second provision requires a recommended site-specific management plan to detect and remove illicit discharges (or ensure they are covered by an NPDES permit) and to control improper disposal to MS4s.<sup>118</sup> Therefore, Provision E.2.a and E.2.a(7) misapply federal regulations in that the Petitioners are required to identify the non-stormwater discharge as an illicit discharge prior to having an obligation to effectively prohibit it. There is not a presumption to reduce or eliminate it otherwise.

The Code of Federal Regulations 122.26(d)(1)(v)(B) states “A description of the

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<sup>115</sup> Permit, Fact Sheet, page F-67.

<sup>116</sup> 55 Fed. Reg. 47989, 48037 (Nov. 16, 1990).

<sup>117</sup> 40 CFR 122.26(d)(1)(iv)(D).

<sup>118</sup> 40 CFR 122.26(d)(1)(iv)(D) and 122.26(d)(2)(B).

existing program to identify illicit connections to the municipal storm sewer system. The description should include inspection procedures and methods for detecting and preventing illicit discharges, and describe areas where this program has been implemented.” The Permit blurs the lines between the need of the Petitioners to “effectively” prohibit non-stormwater discharges and detect and eliminate illicit discharges. The State Board should revise this section of the Permit to be consistent with federal law.

### **XIII. The Permit Improperly Intrudes on Permittees' Local Land Use Authority in Violation of 10<sup>th</sup> Amendment and State Constitution**

To the extent that this Permit relies on federal authority under the CWA to impose land use regulations and dictate specific methods of compliance, it violates the Tenth Amendment of the U.S. Constitution. According to the Tenth Amendment, "[t]he powers not delegated to the United States by the Constitution, nor prohibited by it to the States, are reserved to the States respectively, or to the people." Article XI, section 7 of the California Constitution also guarantees municipalities the right to "make and enforce within [their] limits all local police, sanitary and other ordinances and regulations not in conflict with general laws."<sup>119</sup> Furthermore, the United States Supreme Court has held that the ability to enact land use regulations is delegated to municipalities as part of their inherent police powers to protect the public health, safety, and welfare of its residents.<sup>120</sup> Because it is a constitutionally conferred power, land use powers cannot be overridden by state or federal statutes.

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<sup>119</sup> See also *City of W. Hollywood v. Beverly Towers*, 52 Cal. 3d 1184, 1195 (1991).

<sup>120</sup> See *Berman v. Parker*, 348 U.S. 26, 32-33 (1954).

Even so, both the CWA and Porter-Cologne regarding NPDES permitting do not indicate that the Legislature intended to preempt local land use authority.<sup>121</sup> This is simply not the case, as the permit improperly imposes numerous mandatory land use requirements, including but not limited to the adoption of low impact development ("LID") ordinances.

**XV. The Permit's incorporation of the Bacterial Indicators TMDL for Beaches and Inland Streams are a violation of State and Federal Law**

**A. Federal Law does not require the TMDL to be incorporated into the Permit.**

As with water quality standards, there is no question that the Federal Clean Water Act and its implementing regulations do not require municipal stormwater permits to include TMDLs.

In *Defenders of Wildlife v. Browner*, 191 F.3d 1159 (9th Cir. 1999), the Ninth Circuit held that municipal stormwater do not need to comply with Water Quality Standards, stating "industrial discharges must comply strictly with state water-quality standards," while Congress chose "not to include a similar provision for municipal storm-sewer discharges."

TMDLs are an expression of water quality standards.<sup>122</sup>The Ninth Circuit's holding that the Federal Clean Water Act and its implementing regulations do not require municipal stormwater permits to include water quality standards therefore applies by extension to TMDLs.

Any inclusion of TMDLs in the Permit is purely a function of State law, and at the discretion of the Regional Board. However, as explained more fully below, the manner in which the Regional Board included the Bacterial Indicators TMDL for Beaches and Inland Streams into the Permit represents an abuse of discretion, and the Permit must be revised.

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<sup>121</sup> *Sherwin Williams Co. v. City of Los Angeles*, 4 Cal. 4th 893 (1993); *California Rifle & Pistol Assn. v. City of West Hollywood*, 66 Cal. App. 4th 1302, 1309 (1998) (Preemption of police power does not exist unless "Legislature has removed the constitutional police power of the City to regulate" in the area); see Water Code §§ 13374 and 13377 and 33 U.S.C. § 1342 (b)(1)(B).

<sup>122</sup> (*Pronsolino v. Nastri* (9th Cir. 2002) 291 F.3d 1123, 1129 [TMDLs are primarily informational tools that allow the states to proceed from the identification of waters requiring additional planning to the required plans]; *City of Arcadia v. State Water Resources Control Bd.* (2006) 135 Cal.App.4th 1392, 1415 [TMDL does not establish water quality objectives, but merely implements, under Water Code section 13242, the existing narrative water quality objectives].)

**B. To the extent that the TMDL is incorporated as a WQBEL, the Regional Board was required to follow Federal Regulations.**

Although Federal law does not require the inclusion of TMDLs in municipal stormwater permits, when issuing NPDES permits, a Regional Board is required to follow Federal Regulations.<sup>123</sup> Thus although inclusion of WQBELs is not required by Federal law, if the Regional Board is going to include them in a permit, they must be developed in accordance with Federal Regulations.

The Regional Board failed to provide adequate justification for incorporating numeric water quality based effluent limitations (“WQBELs”) in the Permit for each of the thirty-three (33) incorporated Total Maximum Daily Loads (“TMDL”) to which they apply. A WQBEL is an enforceable translation in an MS4 permit for attaining compliance with a TMDL waste load allocation, which serves to protect beneficial uses of a receiving water.<sup>124</sup> The Permit fails to establish that an adequate requisite Reasonable Potential Analysis (“RPA”) has been conducted.

There are two generally accepted approaches to conducting an RPA. According to USEPA guidance, “A permit writer can conduct a reasonable potential analysis using effluent and receiving water data and modeling techniques, as described above, or using a non-quantitative approach.”<sup>125</sup> Neither the administrative record nor the Permit’s fact sheet contains any evidence of the Regional Board having performed an RPA in accordance with either of the two foregoing approaches. No modeling appears to have been conducted either. Furthermore, the absence of any reference to WQBELs or RPA in any of the Regional Board’s TMDLs counters its assertion that the TMDL development process satisfied the RPA requirement for establishing a numeric WQBEL in this instance.

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<sup>123</sup> . (23 Cal Code Regs § 2235.2 [“Waste discharge requirements for discharge from point sources to navigable waters shall be issued and administered in accordance with the currently applicable federal regulations for the National Pollutant Discharge Elimination System (NPDES) program”].)

<sup>124</sup> (40 C.F.R. § 130.2.)

<sup>125</sup> (NPDES Permit Writers’ Manual, September 2010, page 6-23.)



Beyond this the Regional Board's failure to conduct an RPA to determine if an excursion above a water quality standard is appropriate, federal regulations also require that the storm water discharge be measured against an "allowable" ambient concentration. <sup>126</sup>Incomplete and partial wet and dry weather monitoring data relative to some TMDLs cannot singularly serve to determine an excursion above a TMDL. Outfall monitoring data would have to have been evaluated against in-stream generated ambient (dry weather) data to make such a determination. The Regional Board, however, did not base the Permits WQBELs on any such data.

As for the second, non-quantitative approach, the Regional Board also failed to provide information in the Permit, its accompanying documents, or the administrative record indicating that it had performed a non-quantitative analysis based on recommended criteria described in USEPA guidance. In lieu of conducting either a quantitative or non-quantitative RPA, the Regional Board concluded that reasonable potential can be demonstrated in several ways, one of which is through the TMDL development process. <sup>127</sup>No citation to any authority was provided for this proposition. In essence, the Regional Board appears to claim that the same analysis it used to establish a TMDL constitutes a type of RPA. The logic it used to arrive at this conclusion is, however, faulty. A WQBEL is a means of attaining a TMDL WLA, a translation of a WLA into prescribed actions or limits which has in the past been typically expressed as a BMP. Before a WQBEL can be developed, however, a need for it must be established. As the Writers' Manual points out:

The permit writer should always provide justification for the decision to require WQBELs in the permit fact sheet or statement of basis and must do so where required by federal and state regulations. *A thorough rationale is particularly important when the decision to include WQBELs is not based on an analysis of*

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<sup>126</sup> 40 C.F.R. §122.44(d)(1)(iii).

<sup>127</sup> Fact Sheet, p. F-34.

*effluent data for the pollutant of concern.*

(NPDES Permit Writers' Manual, September 2010, page 6-23

(emphasis added).)

The Regional Board provided no such "thorough rationale," which in the absence of effluent data derived from outfall monitoring, is absolutely necessary to justify the need for a numeric WQBEL. It is possible that outfall monitoring could demonstrate that existing BMPs implemented through a MS4 permittee's storm water management plan is already meeting a TMDL WLA, thereby obviating the need for any WQBELs. But that was not done, and simply translating a TMDL WLA directly into a numeric WQBEL without the requisite analysis is a clear violation of permit-writing standards, applicable law and good practice.

Finally, the EPA Memorandum is clear that reliance on numerics should be coupled with the "disaggregation" of different storm water sources within permits. (*See* EPA Memorandum at pp. 3-4.) The Permit fails to adequately disaggregate storm water sources within applicable TMDLs regarding numeric WQBELs and for receiving water limitations, further making the imposition of numeric standards inappropriate.

**C. The Permit's TMDL requirements violate the Water Code and State Board Policy**

The Permit includes limitations based on wasteload allocations ("WLAs") developed in fully approved and adopted Total Maximum Daily Loads ("TMDLs").<sup>128</sup> The Permit characterizes the limitations as Water Quality Based Effluent Limitations. However, the WLAs are to be achieved in the receiving water. Accordingly, Petitioners consider the limitations to be receiving water limitations.<sup>129</sup> Permittees are to comply with the limitations by implementing best management practices ("BMPs").

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<sup>128</sup> Permit, Attachment E. Specific Provisions for Total Maximum Daily Loads Applicable to Order No. R9-2013-0001.

<sup>129</sup> *See, e.g.*, State Board Order WQ 2009-0008.

Federal and state policy provide that an iterative BMP approach is appropriate in MS4 permits for achieving receiving water limitations.<sup>130</sup> Where existing BMPs are not sufficient to meet the receiving water limitations, permittees are to implement more effective BMPs. This approach is consistent with the MEP standard governing the discharge of all pollutants from the MS4. Petitioners submit that to be consistent with federal and state policy, the Permit must be clarified to provide for compliance with WLAs through an iterative BMP approach. To the extent the Regional Board can rely on state law to support the TMDL provisions, petitioners submit that the Regional Board has not complied with relevant requirements.<sup>131</sup> Accordingly, the State Board should direct the Regional Board to revise the permit's TMDL provisions consistent with federal and state law and policy.

### **C. Status of Delisted Beaches [forthcoming]**

The Regional Board improperly incorporated the Baby Beach TMDL and the Beaches and Creek TMDL into the Permit. Two Basin Plan Amendments by the Regional Board (Resolution R9-2008-0027 and Resolution R9-2010-0001) clearly establish that no additional actions are required for beaches that are delisted. Baby Beach is not on the most recent 303(d) list for REC-1 bacteria objectives, and therefore, the requirements for the Petitioners are limited to monitoring and implementation of existing implementation actions. The Permit does not recognize this approach for delisted beaches or recognize that Baby Beach is delisted, and must be revised accordingly.

## **XVI. THE PERMIT'S ACTION LEVEL REQUIREMENTS ARE INCONSISTENT WITH STATE AND FEDERAL LAW**

Permit, section II.C, entitled "Action Levels," imposes a series of Non-stormwater Action

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<sup>130</sup> See, e.g., State Board Order WQ 99-05.

<sup>131</sup> (e.g., Water Code §§ 13000, 13263(a), 13241).

Levels (“NALs”) and Stormwater Action Levels (“SALs”), as numeric “goals” to be achieved. To the extent an NAL or SAL is based on an interim or final effluent limitation from a TMDL, then such a NAL or SAL becomes an “enforceable effluent limitations” which must be strictly complied with.

**A. The Permit’s Action Levels Could be Interpreted as Numeric Effluent Limitations.**

The Regional Permit, in Provision II.C, sets forth requirements for the incorporation of Non-Storm Water Action Levels (“NALs”) and Storm Water Action Levels (“SALs”) into Water Quality Implementation Plans (“WQIPs). The preamble to Provision II.C states that 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 language establishes that the NALs and SALs are not intended to be enforceable themselves if not attained by the permittees.

Unfortunately, the language of the Regional Permit is not entirely clear on this point. Footnotes 7 and 9 of the Regional Permit state that NALs and SALs incorporated into a WQIP “are not considered by the San Diego Water Board to be enforceable effluent limitations” (unless based on a water quality based effluent limitation (“WQBEL”) expressed as an interim or final effluent limitation for a TMDL and the compliance date for that WQBEL has passed).

Given that the Regional Board has an obligation to make ensure that the provisions of the Regional Permit are clear and unambiguous, the Petitioners request that the State Board either amend the footnotes or text of the Regional Permit to make clear that the NALs and SALs are not enforceable effluent limitations or direct the Regional Board to take that action.

**B. The Permit Lacks Adequate Findings that the Action Levels Are Necessary, or Compliant with Water Code Sections 13263 and 13241.**

The Permit’s Action Level requirements include several predetermined action levels for, among other things, dissolved oxygen, turbidity, pH, copper, zinc, and lead. (Permit section

C.1.a.) These pre-set levels were selected by the Regional Board as necessary to achieve the MEP standard required by the Clean Water Act. As an initial matter, Action Levels are not required by the Clean Water Act or the MEP standard for the same reasons that TMDLs and numeric effluent limitations are not required by the Clean Water Act or the MEP standard. More importantly, the Permit contains no findings explaining why the specific levels were chosen, or how their inclusion in the permit is necessary to achieve the MEP standard. It likewise lacks any findings as to how the chosen standards are compliant with factors set forth in Water Code sections 13263 and 13241.

The Fact Sheet includes a discussion of where the initial Action Level numbers came from but includes no analysis of whether they are reasonable or attainable.<sup>132</sup> The Fact Sheet additionally fails to explain why the each pollutant level chosen is necessary for inclusion in the Permit.<sup>133</sup> Instead, the Fact Sheet refers back to the 2009 and 2010 municipal permits issued for South Orange County and Riverside County and states that the Permit's Action Levels were developed for those permits. The Fact Sheet fails to note that the Petitioners objected to the 2009 Action Levels on the grounds that they were arbitrarily chosen. The Fact Sheet further fails to note that the 2009 Action Levels were appealed via petition to the State Board by several of the permittees. Those petitions are currently in abeyance.

Lastly, both the Permit and the Fact Sheet fail to assess whether the Action Levels meet the requirements of Water Code sections 13263 and 13241. Because neither the NALs are not required by federal law, the Regional Board must comply with state law in imposing these requirements. This includes considering certain factors, including the water quality conditions that could be reasonably achieved and economic considerations. A substantial body of evidence exists suggests several of the proposed NALs may not be reasonably achievable. Petitioners are hopeful that the Permit's NAL provisions will provide Permittees with flexibility to prioritize

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<sup>132</sup> See Fact Sheet pp. F-57, F-58.

<sup>133</sup> Id.

their response to NAL exceedances. However, if Permittees are required to respond to and address all exceedances without reasonable prioritization, the cost will be significant. Because some exceedances will not be indicative of impacts to water quality, the cost to implement the NALs may have little if any commensurate environmental benefit. There is nothing in the record that suggests that the Regional Board has considered these water quality and economic factors.

Pursuant to the California Supreme Court's decision in *Topanga Association for a Scenic Community v. County of Los Angeles*, 11 Cal.3d 506 (1974), which held that appropriate findings are required to "facilitate orderly analysis and minimize the likelihood that the agency will randomly leap from evidence to conclusions."<sup>134</sup> That is precisely what the Regional Board has done with regard to the Permit's Action Levels. For that reason they must be removed from the Permit until such time as the Regional Board demonstrates that they are feasible, cost effective and necessary.

## **XVII. The Petitioners Were Not Afforded Basic Due Process**

The period provided to review and comment on the Permit was unreasonably short given the breadth of the Permit. By denying the Petitioners a meaningful opportunity to review and comment on a Permit that so drastically affects their rights and finances, the Regional Board has denied the Petitioners due process rights under state and federal law. The United States Constitution, the California Constitution and the California Administrative Procedures Act, as applicable to the Regional Board, all require basic procedural due process.<sup>135</sup> The essence of due process is the opportunity to be heard at a meaningful time and in a meaningful manner.

On March 18, 2013, the Regional Board published notice that the Permit's adoption

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<sup>134</sup> *Id.*, at 514.

<sup>135</sup> See *Morongo Band of Mission Indians v. State Water Resources Control Board* (2009) 45 Cal.4th 731; Gov. Code § 11425.10.

hearing would be held in three weeks from that date on April 10, 2013. At that time, the Regional Board had not released additional Permit edits or drafted a response to comments. On March 27, 2013, the Regional Board released an errata sheet with over 60 pages of changes to the Permit and 258 pages of response to comments, including many material changes including, but not limited to, a reasonable assurance analysis and a material change to the permit that 100 percent of stormwater be kept on site. Many of these new provisions were newly introduced and were not in response to any written comments.

In preparing for the adoption hearing, the Petitioners and their experts had only 8 working days to review the 60 pages of material changes and 258 pages of response to comments. The Petitioners immediately requested an additional written comment period as well as a continuance of the April 10, 2013 adoption hearing, as did the other permittees, environmental stakeholders, the building community, members of Congress, state legislators and local elected officials. On April 3, 2013, the Regional Board summarily denied these requests.<sup>136</sup> In addition, the Regional Board unfairly excluded objections from the Orange County Board of Supervisors that were filed on March 26, 2013 and other organizations on the grounds that the objections were untimely, even though inadequate time was given to prepare and object to the adoption hearing.<sup>137</sup>

In denying the Petitioners' request for a new written comment period, the Regional Board contended that "a new [written] comment period is only required if the revised permit is

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<sup>136</sup> Order, Tomas Morales, Chair, San Diego Water Board, Ruling on Objections, Requests for Alternative Procedures, and Requests for Designation as Additional Parties to the Proceeding (April 3, 2013).

<sup>137</sup> The Regional Board had provided inconsistent deadlines for when objections and requests for alternative procedures could be raised. Notice for the adoption hearing contained a deadline of 5p.m. Friday, March 22, 2013, while notice for the Regional Board's agenda, which contained the adoption hearing, called for a deadline of 12p.m. Tuesday, March 26, 2013.

essentially a new draft permit . . .”, and that the 60 pages of Permit revisions were proposed as minor changes all in response to comments. This is an incorrect interpretation of the law. Under this theory, the Regional Board could propose hundreds of material changes and an entirely new basis for compliance to the permit *ad infinitum* immediately up until the Permit’s adoption. The sheer quantity of Permit edits released 8 working days prior to the hearing should have triggered a new written comment period as well a continuance as it prejudiced the Petitioners in not being able to adequately comment on the Permit and prepare for the hearing.

Furthermore, the law states that a new comment period is required if the revisions to a permit or proposed rule are not a logical outgrowth of the initial proposal.<sup>138</sup> The RAA and the 100 percent onsite pollutant retention requirements for land development were not proposed in the initial Permit and were not commented on by any interested party, and thus, were not a logical outgrowth of the initial Permit. Analogizing the Regional’s Board’s error in the context of court cases on notice and comment proceedings in rulemakings, a final “rule” is a logical outgrowth of a proposed “rule” only if interested parties “should have anticipated that the change was possible, and thus reasonably should have filed their comments on the subject during the notice and comment period.”<sup>139</sup> Newly added material Permit provisions regarding RAA and 100 percent onsite retention of pollutants could not have been anticipated.

The Petitioners were given an unreasonable amount of time to conduct a formal adjudicatory proceeding. The Petitioners originally requested four hours for the Orange County permittees to present a case in chief and call witnesses. The Regional Board unreasonably limited all permittees to four hours of total time, and thus, the Orange County

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<sup>138</sup> *NRDC v EPA*, 279 F.3d 1180, 1186-1188 (9<sup>th</sup> Cir. 2002).

<sup>139</sup> *Environmental Integrity Project v. EPA*; *City of Waukesha v. EPA* 320 F.3d 228; *Northeast Maryland Waste Disposal Auth* 358 F.3d 952



permittees had a little over an hour to present a Permit where 60 pages of material edits had been introduced 8 working days before the initial hearing. This is simply not enough time for the County, Flood Control District and 13 cities to present the testimony of witnesses, cross-examine Regional Board staff and other interested parties and provide rebuttal testimony. The Petitioners were prejudiced by having to shorten their presentation and were unable to present on a number of Permit issues. This limitation of time is not in accordance with the formal adjudicatory procedures that are available to the Petitioners under the California Administrative Procedure Act.