

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-)
2015-0100, an Order Amending Order No. R9-)
2013-0001, NPDES No. CAS0109266, as)
Amended by Order No. R9-2015-0001, 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)

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

PETITION FOR REVIEW

**COUNTY OF ORANGE &
ORANGE COUNTY FLOOD
CONTROL DISTRICT**

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December 18, 2015

This Petition for Review (“Petition”) is submitted on behalf of the County of Orange and the Orange County Flood Control District (collectively, “Petitioners”) pursuant to California Water Code Section 13320 and California Code of Regulations (“CCR”) Title 23, Section 2050, for review of Order No. R9-2015-0100, an Order Amending Order No. R9-2013-0001, NPDES No. CAS0109266, as Amended by Order No. R9-2015-0001, 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, adopted by the California Regional Water Quality Control Board, San Diego Region (“Regional Board”) on November 18, 2015 (“Permit”).

The Petitioners have previously filed petitions on the Permit that are currently being held in abeyance. Petition A-2254(n) was filed on June 7, 2013 regarding Order No. R9-2013-0001 (“2013 Petition”). Petition A-2367 was filed on March 13, 2015 regarding Order No. R9-2015-0001 (“2015 Petition”).

I. NAMES, ADDRESSES AND TELEPHONE NUMBERS OF PETITIONERS

Petitioners are the County of Orange (“County”) and the Orange County Flood Control District (“District”). All written correspondence and other communications regarding this matter should be addressed as follows:

- 1) Mary Anne Skorpanich, Deputy Director
ATTN: Chris Crompton
OC Public Works
County of Orange
2301 N. Glassell Street
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Telephone: 714-955-0601

Email: maryanne.skorpanich@ocpw.ocgov.com
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2) Shane Silsby, Director
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County of Orange/Orange County Flood Control District
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Telephone: 714-667-9700
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With a copy to Petitioners' counsel:

3) Ryan M. F. Baron, Senior Deputy County Counsel
333 W. Santa Ana Blvd., Suite 407
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II. SPECIFIC ACTION OR INACTION OF THE REGIONAL BOARD FOR WHICH REVIEW IS SOUGHT

Petitioners request the State Water Resources Control Board ("State Board") to review the Regional Board's Order No. R9-2015-0100, amending Order No. R9-2013-0001, NPDES Permit No. CAS0109266, as amended by Order No. R9-2015-0001. The Petitioners request the State Board review the Regional Board's action or inaction regarding 1) the failure to provide an alternative compliance option during development of the water quality improvement plans, 2) the inclusion of Orange County in the regional Permit, and 3) the inclusion of Orange County in the Permit without the filing or consideration of a report of waste discharge.

A copy of the Regional Board's Order is attached as Exhibit A. A copy of the Permit, as amended by Order R9-2015-0100, is attached as Exhibit B.

This Petition supplements the 2013 Petition and 2015 Petition previously filed by the Petitioners regarding the adoption of Order No. R9-2013-0001 and Order No. R9-2015-0001, respectively. The 2013 Petition and 2015 Petition raise several issues, some of which are applicable to the Permit. The Petitioners have requested that these prior petitions be held in

abeyance, a request that has been granted by the Office of Chief Counsel. To the extent that issues raised in this Petition may be taken up by the State Board, the Petitioners request that corresponding issues raised in the 2013 Petition and 2015 Petition also be considered by the State Board.

III. DATE OF THE REGIONAL BOARD'S ACTION

The Regional Board adopted Order No. R9-2015-0100 on November 18, 2015.

IV. STATEMENT OF REASONS THE ACTION WAS INAPPROPRIATE OR IMPROPER

A. Preliminary Statement

On May 8, 2013, the Regional Board adopted the Permit by way of Order No. R9-2013-0001. The Permit governs the discharges of San Diego County, South Riverside County and South Orange County. At that time, however, the Permit only applied to the San Diego County permittees, yet had provisions specific to Orange County. The Petitioners were not yet enrolled in the Permit and were still subject to an individual NPDES permit, Order R9-2009-0002 ("2009 Permit"), applicable only to the South Orange County Permittees.¹ In comments filed on January 11, 2013 and in presentation and testimony at the April and May 2013 adoption hearing, the Petitioners objected to the Permit on jurisdictional grounds, among other things, and participated in the Permit proceedings under protest. On June 7, 2013, the Petitioners filed the 2013 Petition, which was held in abeyance as the Permit did not yet apply to the Petitioners. The 2013 Petition was filed because the Regional Board's adoption of Order No. R9-2013-0001 on May 8, 2013

¹ The South Orange County Permittees are the 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 Mission Viejo, City of Rancho Santa Margarita, City of San Clemente, City of San Juan Capistrano, County of Orange and the Orange County Flood Control District. It should be noted that, pursuant to Water Code section 13228 designation agreement between the San Diego and Santa Ana Regional Boards, MS4 discharges within the San Diego Regional Board's jurisdiction from the City of Lake Forest will be regulated by the Santa Ana Regional Board after NPDES Permit No. CAS 618030 is reissued.

was a final action pursuant to Water Code § 13320(a). In the 2013 Petition, the Petitioners indicated that changes to the Permit would be sought at the time the Petitioners filed their Report of Waste Discharge (“ROWD”), and that Petitioners reserved the right to amend the 2013 Petition with supplemental points and authorities.

The Petitioners filed a ROWD on May 20, 2014 as the 2009 Permit was set to expire on or about December 16, 2014. In comments filed on November 19, 2014, the Petitioners reiterated their jurisdictional objections, among other things, and again participated in the Permit proceedings under protest. The Regional Board did not consider the Petitioners’ ROWD and adopted Order No. 2015-0001, making only minor changes to the Permit. On March 13, 2015, the Petitioners filed the 2015 Petition, which was held in abeyance pending the State Board’s resolution of the Los Angeles County MS4 Permit (WQO 2015-0075), the enrollment of the South Riverside County permittees in the Permit (Order No. 2015-0100) and the completion of the Permit proceedings.

Although the Petitioners file this Petition with respect to Order No. R9-2015-0100, the issues of concern stated herein have also been raised with respect to the Regional Board’s prior orders on the Permit. The nature of the regional Permit includes a phased enrollment of the counties under the Permit as well as the adoption of an alternative compliance option that the Regional Board indicated it would only establish upon the enrollment of the Riverside County permittees. Therefore, the State Board should review this Petition with respect to the administrative record that applies to the 2013 and 2015 orders, such that the Permit proceedings have been completed.

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 because:

1. The Regional Board failed to provide for an alternative compliance option for discharge prohibitions and receiving water limitations that provides for compliance during the development of a water quality improvement plan;
2. The Regional Board continues to lack authority to adopt a region-wide Permit covering Petitioners; and
3. The Regional Board adopted a Permit as to the Petitioners without the filing of a Report of Waste Discharge, and the Regional Board did not consider the Petitioners' May 20, 2014 Report of Waste Discharge.

These issues were brought to the Regional Board's attention in written and oral comments and testimony.

V. HOW THE PETITIONERS ARE AGGRIEVED

Petitioners are permittees under the Permit. They, along with the other permittees, are responsible for compliance with the Permit. Failure to comply with the Permit exposes Petitioners to liability under the Clean Water Act ("CWA") and the California Porter-Cologne Water Quality Control Act ("Porter-Cologne" or "Water Code"), and subjects them to potential administrative violations and lawsuits by the Regional Board, the State Board and third parties. In Order WQ 2015-0075, the State Board has interpreted the Permit's discharge prohibition and receiving water limitation provisions to provide for liability in the event that discharges from MS4s, including those owned or operated by the Petitioners, cause or contribute to some violation of those provisions. Because the Permit does not provide that the Petitioners are deemed compliant with discharge

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prohibition and receiving water limitations during the development of their water quality improvement plan, the Petitioners currently are at risk to such liability.²

The Petitioners are further aggrieved by being included in a regional Permit that the Regional Board has no jurisdiction to impose upon the Petitioners. The Petitioners operate a mature fifth term stormwater program that has markedly different water quality issues than the other county permittees regulated under the Permit. If the Petitioners remain in a regional Permit, the Petitioners will be governed by a one-size-fits-all Permit without respect for differing climates, geography, soil conditions and other land use and environmental differences. The Petitioners have also incurred substantial costs that have diverted resources away from their stormwater programs by being governed under a regional Permit that was adopted in three phases from the release of the first draft in 2012 to the Riverside enrollment on November 18, 2015. The Petitioners had to participate in three permit adoptions in a three year period, and will do so again in 2018 when the Permit expires. From the time of the adoption of Order No. R9-2015-0001 on February 11, 2015, the Petitioners will only be under the Permit for 3.25 years, well short of the five years allowed by the Clean Water Act. The Petitioners report of waste discharge, previously filed on November 14, 2014, will be due again on December 30, 2017. Lastly, Orange County is split between two regional water boards – Santa Ana and San Diego – yet the Petitioners run an integrated program covering both regional board areas. The Petitioners' permits have always been in sync, where reports of waste discharge are due and permits are issued around the same timeframe. Under the regional Permit, this cycle will be out of sync, such that the ROWD for the regional Permit will be due on December 30, 2017 while the ROWD for the Santa Ana permit will be due on or around August 2020. This creates special

² Petitioners may provide the State Board with additional information concerning the manner in which they have been aggrieved by the Regional Board's action in adopting the Permit.

hardship, technical challenges and additional costs for the Petitioners due to the integrated nature of the stormwater program.

In addition, the Petitioners are aggrieved by the lack of the filing or consideration of a report of waste discharge. Thus, the Permit was adopted as to the Petitioners without the necessary application being filed and does not contain substantial evidence to support some of the Permit's requirements.

VI. ACTION PETITIONERS REQUEST THE STATE WATER BOARD TO TAKE

The Petitioners request that this Petition be reviewed and acted upon by the State Board, such that the State Board holds a hearing on the issues contained herein. The Petitioners request that they be regulated under an individual NPDES permit, not a region-wide Permit, which is based on the Petitioners' report of waste discharge. The Petitioners also request that an individual NPDES Permit be issued that includes an alternative compliance option that is consistent with State Board Order WQ 2015-0075, providing for compliance during the development of a water quality improvement plan.

Should the State Board review and act on this Petition, the Petitioners request that the Board also consider the following Issues of Concern from Petitions A-2254(n) and A-2367:

1. Petition A-2254(n)
 - a. *Issue of Concern #1*: The Regional Board did not have authority to adopt a region-wide Permit covering Petitioners.³

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³ Petition for Review A-2254(n), pg. 2; Memorandum of Points & Authorities, pp. 3-11.

2. Petition A-2367

- a. *Issue of Concern #1*: The Regional Board continues to lack authority to adopt a region-wide Permit covering Petitioners.⁴
- b. *Issue of Concern #2*: The Regional Board did not consider the Petitioners Report of Waste Discharge.⁵
- c. *Issue of Concern #3*: The Regional Board failed to provide for an alternative compliance pathway for discharge prohibitions and receiving water limitations, and went beyond the maximum extent practicable standard found in the Clean Water Act.⁶

Petitions A-2254(n) and A-2367 are currently being held in abeyance, but the aforementioned Issues of Concern in those prior petitions and the actions taken by the Regional Board at that time directly relate to this Petition. Should the State Board not act on this Petition, the Petitioners request that Petitions A-2254(n) and A-2367 continue to be held in abeyance.

VII. A STATEMENT IN SUPPORT OF LEGAL ISSUES RAISED IN THE PETITION

Petitioners have enclosed a separate Memorandum of Points and Authorities in support of this Petition and the issues raised in Section IV, above.⁷ Petitioners reserve the ability to submit a supplemental Memorandum of Points and Authorities to the State Board at such time as may be needed. A copy of the record and a complete transcript of the hearing on Order No. R9-2015-

⁴ Petition for Review A-2367, pg.3; Memorandum of Points and Authorities, pp 3-6.

⁵ Petition for Review A-2367, pg.3; Memorandum of Points and Authorities, pp 6-8.

⁶ Petition for Review A-2367, pg.4; Memorandum of Points and Authorities, pp. 9-12.

⁷ This Petition and Memorandum of Points and Authorities has been prepared in collaboration with other South Orange County Permittees who are currently submitting petitions for review, and accordingly, may be used and/or incorporated by reference by any such other South Orange County Permittee in support of its separate petition for review.

0100 is not available at the time this Petition was filed. Therefore, the Petitioners reserve the right to file a supplemental Memorandum of Points and Authorities once a full record and transcript of the hearing becomes available.⁸

VIII. Notice to Regional Board

A true and correct copy of this Petition was delivered by electronic mail to the Regional Board on December 18, 2015. A true and correct copy of this Petition was also mailed to the Regional Board via UPS on December 18, 2015.

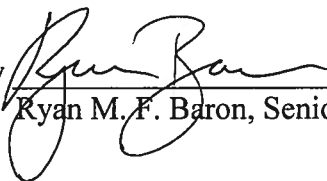
IX. Issues Previously Raised

The issues raised in this Petition were presented to the Regional Board at or before the time the Regional Board acted to adopt Order No. R9-2015-0100 on November 18, 2015.

X. Conclusion

For the reasons stated herein, and as may be submitted in supplemental pleadings, Petitioners have been aggrieved by the Regional Board's action in adopting the Permit. Accordingly, Petitioners request the State Board act on this Petition as described herein.

Respectfully submitted,
LEON J. PAGE
COUNTY COUNSEL

By 
Ryan M. F. Baron, Senior Deputy

⁸ 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.

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. R9-2015-0100, an Order Amending Order No. R9-2013-0001, NPDES No. CAS0109266, as Amended by Order No. R9-2015-0001, 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)	Water Code § 13320(a) 23 C.C.R. § 2050 <i>et seq.</i>

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

**COUNTY OF ORANGE &
 ORANGE COUNTY FLOOD
 CONTROL DISTRICT**

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December 18, 2015

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 Order No. R9-2015-0100, an Order Amending Order No. R9-2013-0001, NPDES No. CAS0109266, as Amended by Order No. R9-2015-0001, 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 (“Permit” or “Orders”), adopted on November 18, 2015 by the California Regional Water Quality Control Board, San Diego Region (“Regional Board”).⁹ A copy of the Regional Board’s Order is attached hereto as Exhibit A. A copy of the Permit is attached as Exhibit B.

I. INCORPORATION OF PRIOR COMMENTS

In written comments submitted on September 14, 2015, the Petitioners incorporated by reference all prior letters, comments, reports, presentations, oral and written testimony, data, communications and other evidence, made by, on behalf of and in support of the Petitioners during the various workshops, hearings and meetings relevant to the adoption of Order No. R9-2015-0100, including comments made during the adoption of Order No. R9-2013-0001 and Order No. R9-2015-0001 (“Comments”). The Permit has been adopted as a phased approach consisting of three separate enrollments for San Diego, Riverside and Orange counties. Thus, Comments made during the prior adoption proceedings are relevant to the adoption of Order No.

⁹ This Memorandum of Points and Authorities has been prepared in collaboration with other South Orange County Permittees concurrently submitting petitions for review, 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. To the extent appropriate, the term “Petitioners,” as used herein, shall also mean and include such other South Orange County Permittees.

R9-2015-0100 and should be included as part of the administrative record. The Regional Board has previously acknowledged that Comments made during the various adoption proceedings for the Permit would be incorporated by reference and a part of the administrative record.¹⁰

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.¹¹ 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.”¹² The Permit, like any administrative decision, must be accompanied by findings that allow the reviewing body to “bridge the analytic gap between the raw evidence and ultimate decision or order.”¹³

III. THE REGIONAL BOARD ABUSED ITS DISCRETION BY DENYING THE PETITIONERS A MEANS OF COMPLYING WITH THE PERMIT DURING DEVELOPMENT OF THE WATER QUALITY IMPROVEMENT PLANS

The Petitioners strongly support the inclusion of an alternative compliance path in the Permit. The State Board made clear in Order WQ 2015-0075 (“State Board Order”) that all regional water boards should be guided by seven principles in fashioning alternative compliance

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¹⁰ Email from Catherine Hagan, Office of Chief Counsel, State Water Resources Control Board, San Diego Region, to Ryan M. F. Baron, Office of County Counsel, County of Orange (Feb. 9, 2015).

¹¹ *Stinnes-Western Chemical Corp.*, WQ Order No. 86-16 (June 20, 1986).

¹² Code Civ. Proc. § 1094.5(b).

¹³ *Topanga Ass’n for a Scenic County v. County of Los Angeles*, 11 Cal.3d 506, 515 (1974).

provisions in stormwater permits.¹⁴ Due to the complexity and variability of stormwater and urban runoff discharges and the need to resolve difficult technical issues over time, the Petitioners are in need of alternative compliance provisions in order to meet receiving water limitations.

The Permit does not provide the Petitioners, however, with a means of complying with the Permit during the development of the water quality improvement plan (“WQIP”).¹⁵ Instead, the Permit requires the Petitioners to strictly comply with receiving water limitations, discharge prohibitions and other water quality standards during the development of the WQIP.¹⁶ By refusing to recognize that the development of a WQIP constitutes compliance with the Permit, the Regional Board exceeded its authority under federal law and issued a Permit that is in conflict with prior State Board direction. Notwithstanding federal law and State Board direction, the Petitioners contend that the Permit’s WQIP development process is sufficiently constrained in a manner that sustains incentives to move on to approval and implementation and is structured with clear, enforceable provisions, such that the State Board can find that compliance should be afforded during WQIP development.

A. The Permit Requires Strict Compliance with Water Quality Standards

The Executive Officer of the Regional Board testified at the adoption hearing on Order No. 2013-0001 that the Permit’s receiving water limitations will not be met within the five-year term of the Permit, and as such, the Orange, Riverside and San Diego County permittees would

¹⁴ State Board Order WQ 2015-75, In the Matter of Review of Order No. R4-2012-0175, NPDES Permit No. CAS00400, Waste Discharge Requirements for Municipal Separate Storm Sewer System (MS4) Discharges within the Coastal Watersheds of Los Angeles County, Except Those Discharges Originating from the City of Long Beach MS4 (June 16, 2015).

¹⁵ Permit, Provision B.3.

¹⁶ Permit, Provisions A.2 and B.3.

be out of compliance upon adoption of the Permit. Numerous comments submitted during the adoption process on all three Orders concluded that complying with the Permit's receiving water limitations provisions is simply not achievable everywhere, all the time, given the variable nature of pollutant sources and urban runoff.¹⁷

Recognizing the impossibility of achieving immediate compliance with the Permit's prohibitions and limitations, Regional Board staff added an alternative compliance option in a later draft of Order No. R9-2013-0001, but the Executive Officer did not initially recommend for or against the option, but left it strictly for the Board to decide.¹⁸ Upon the deliberation of the Regional Board, the Executive Officer recommended against the alternative compliance option on the grounds that the permittees were "not ready" for a compliance option.¹⁹ Upon that recommendation, the Regional Board voted to eliminate the alternative compliance option, leaving the Petitioners with no way to comply with the prohibitions, limitations and other numeric standards in the Permit.

Upon the February 11, 2015 enrollment of the South Orange County Permittees in the Permit, the Petitioners reiterated the need for an alternative compliance option.²⁰ Petitioners again set forth the legal and factual basis by which they were out of compliance with many numeric standards, such as receiving water limitations and water quality based effluent limitations, and that compliance could not be obtained despite implementation of long-term BMPs and use of the iterative process.²¹ The Petitioners requested, at the very least, that due to

¹⁷ County's Comments, Order No. R9-2013-0001, Comment 65, pg. 90 (Jan. 11, 2013).

¹⁸ Draft Tentative Order, R9-2013-0001, Provision II.B.3.c (Mar. 29, 2013).

¹⁹ Transcript, Adoption Hearing, Order No. R9-2013-0001, Part 2, pp. 89-90 (May 8, 2013).

²⁰ County's Comments, Order No. R9-2015-0001, Comments 13-15, pp. 18-20 (Nov. 18, 2014).

²¹ County's Comments, Order No. R9-2015-0001, Comment 47, pg. 49 (Nov. 18, 2014).

the effectiveness of the Orange County stormwater program, the Regional Board fashion an alternative compliance option for the South Orange County permittees through adoption of an individual NPDES permit.²² After extensive testimony, the Regional Board declined to adopt an alternative compliance option at the time the Orange County permittees enrolled in the Permit.

At the November 18, 2015 adoption hearing on Order No. R9-2015-0100, Regional Board staff had recommended a partial compliance option that allowed compliance during implementation of the WQIPs, but not during the development period as was approved by the State Board on the LA Permit.²³ In recommending a partial compliance option, Regional Board staff stated that despite the State Board’s precedential order on the LA Permit, the State Board only directed regional water boards to “consider” an alternative compliance option, but that the regional water boards did not have to include one. Staff went on to testify that compliance was an “exclusive club” that not all permittees should share. Based on the testimony and demeanor of Regional Board staff, it seemed that an alternative compliance option was reluctantly recommended and would only be provided on the most limited basis, despite what had been directed by the State Board. In a 4-1 vote, the Regional Board approved a partial compliance option declining to provide alternative compliance during WQIP development. The dissenting Board member voted against the alternative compliance option altogether on “moral grounds.”

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²² Orange County Presentation, Adoption Hearing, Order No. R9-2015-0001 (February 11, 2015).

²³ State Board Order WQ 2015-75, In the Matter of Review of Order No. R4-2012-0175, NPDES Permit No. CAS00400, Waste Discharge Requirements for Municipal Separate Storm Sewer System (MS4) Discharges within the Coastal Watersheds of Los Angeles County, Except Those Discharges Originating from the City of Long Beach MS4 (June 2015).

This reluctance to adopt even a limited pathway to compliance may manifest itself with future disapprovals of the WQIPs, which could result in being out of compliance for several years.²⁴

The lack of a compliance option, particularly during the development of the WQIP, is in conflict with State Board policy and federal and state law. The Petitioners testified at the Nov. 18, 2015 adoption hearing that certain stormwater discharges would cause them to be out of compliance with the prohibitions and receiving water limitations of the Permit for at least a 2-3 year period beginning from the date of the County's enrollment in the Permit until the WQIPs were approved by the Executive Officer.²⁵ This time period leaves the Petitioners in the untenable position of having to strictly comply with the prohibitions and limitations of the Permit despite not being able to do so in many instances, particularly in wet weather conditions.

B. Federal Law Does Not Require Strict Compliance with Numeric Limits

The Regional Board's denial of a means to comply with the Permit during WQIP development exceeds its authority under federal law and is an abuse of discretion.²⁶ The Clean Water Act does not mandate that MS4 dischargers strictly comply with numeric limits.²⁷ Without a full compliance path, the Petitioners remain strictly liable for any exceedance. This

²⁴ See Letter from Laurie Walsh, Senior Water Resource Control Engineer, State Water Resources Control Board, San Diego Region, to San Diego County Principal Watershed Copermittees (Aug. 5, 2015) (noting significant deficiencies in the WQIPs and issuing a notice of noncompliance and possible enforcement actions). A copy of this letter is attached as Exhibit A to the Request for Official Notice.

²⁵ County Presentation, Order No. R9-2015-0100, slides 4-7 (Nov. 18, 2015).

²⁶ Code of Civ. Proc. § 1094.5.

²⁷ *Natural Resources Defense Council, Inc. v. U.S. E.P.A.*, 966 F.2d 1292, 1308 (9th Cir. 1992) ("*NRDC IP*"); *Defenders of Wildlife v. Browner*, 191 F.3d 1159, 1167 (9th Cir. 1999) ("*Defenders*"). This interpretation has also been upheld in other state courts. See *Chesapeake Bay Foundation v. Md. Dep't of the Env't.*, Case No. 02-C-14-186144 (Anne Arundel Cir. Ct., Dec. 2, 2014); *In re Baltimore County MS4 Permit*, Case No. 03-C-14-000761 (Baltimore Cir. Ct., Oct. 7, 2014); *Natural Resources Defense Council, Inc., et al. v. New York State Department of Environmental Conservation*, 25 N.Y.3d 373 (May 5, 2015).

was not the intent of Congress under the Clean Water Act, and it has not been the intent of the State Board under Order WQ 2015-075.

The Petitioners believe a full alternative compliance option, during development and implementation, is necessary given the major findings in the “State of the Environment” in the Petitioners’ ROWD and in the recent August 2014 American Society of Civil Engineers publication – *Pathogens in Urban Stormwater Systems*, i.e., the inability to comply with bacteria standards in wet weather conditions.²⁸ The knowledge that has been gained from monitoring, studies and the advancement of science and regulation (such as the EPA’s 2012 recreational waters guidance) demonstrates that numeric standards cannot be achieved in the short-term in many cases without continued use of BMPs over successive permit terms.

Many of the referenced numeric limits in the Permit go beyond the MEP standard enacted by Congress because MEP does not mandate permit terms that are impracticable, such as strict compliance with numeric limits. The Ninth Circuit Court of Appeals has squarely found that neither Congress, through its adoption of the 1987 Amendments to the CWA, in particular 33 U.S.C. section 1342(p)(3)(B)(iii) (“Subsection (iii)”), nor EPA, through its implementing regulations, has imposed minimum standards on municipalities.²⁹ Instead, Congress directed the EPA to develop regulations assigning controls that if implemented would attain the MEP standard set forth in Subsection (iii).³⁰ The CWA only requires states to include permit terms that will reduce discharges to the “maximum extent practicable.” As such, MS4 Permit terms that are

²⁸ County’s Comments, Order No. R9-2015-0001, pg. 3 (Nov. 14, 2014).

²⁹ *NRDC II*, *supra*, fn 29; *Defenders*, *supra*, fn 29.

³⁰ See 64 Fed.Reg. 68722, 68752-68754 (“six minimum control measures that constitute the framework for a storm water discharge control program for regulated small MS4s that, when properly implemented, will reduce pollutants to the maximum extent practicable (MEP).”).

impracticable”³¹ or “infeasible” or which costs outweigh its benefits, cannot be properly classified as permit requirements “mandated” by the CWA, such as many of the strict numeric requirements contained in the Permit.

At the adoption hearings on the Permit, the Petitioners provided extensive comment and testimony on the inability of meeting certain numeric limitations in the 5-year term of the Permit, such as dissolved metals, and even the unlikeliness of meeting bacteria standards on a long-term basis. Therefore, without a compliance option, the Regional Board exceeded its authority by adopting a Permit that was unlikely or impossible to comply with. As a matter of law, the CWA does not require MS4s to achieve the impossible. Section 301 of the CWA, which imposes a “zero discharge” requirement in the absence of a NPDES permit, does not apply where compliance with that standard is factually impossible.³²

In *Hughey v. JMS Development Corp.*, for example, stormwater was being discharged from a property without a NPDES permit.³³ The court held that the discharge did not violate the CWA because it was “factually impossible” for the property owner to comply with the “zero discharge” requirement.³⁴ The court found “the evidence was uncontroverted that whenever it rained . . . some discharge was going to occur; nothing [the property owner] could do would prevent all rain water discharge.”³⁵ The court noted that unlike a manufacturing facility that could opt to “abate the discharge of pollutants by ceasing operations,” the developer had no

³¹ The term “impracticable” is defined in Webster’s 9th New Collegiate Dictionary as: “1: not practicable: incapable of being performed or accomplished by the means employed or at command 2: IMPASSABLE.” Webster’s 9th New Collegiate Dict., p. 605 (1993) (emphasis added).

³² *Hughey v. JMS Development Corp.*, 78 F.3d 1523, 1530 (11th Cir. 1996).

³³ *Id.* at 1527.

³⁴ *Id.* at 1530.

³⁵ *Id.*

ability to stop the discharge.³⁶ Further, the developer had made a good faith effort to comply with the CWA's permit requirements.³⁷ The court found that the CWA does not require a permittee to achieve the impossible, such that "Congress is presumed not to have intended an absurd (impossible) result" since "[t]he law does not compel the doing of impossibilities."³⁸

The same rule applies in the case of the Petitioners. The Regional Board established a regulatory scheme that is impossible to attain during the Permit term. The Permit requires the development of a WQIP in accordance with strict standards and timelines³⁹ and implementation of BMPs during WQIP development,⁴⁰ but then arbitrarily denies the Petitioners a means to comply with the Permit while developing the WQIP.⁴¹ By denying the Petitioners a means to comply with the Permit while fulfilling the Permit's WQIP requirements, the Permit's "regulatory framework stands [the Clean Water Act's] scheme on its head."⁴² The Regional Board thus abused its discretion by proceeding in a manner contrary to law and without the support of findings or evidence.

C. The Regional Board Acted Contrary to State Board Precedential Order WQ 2015-0075

In addition to the conflicts with federal law, the Regional Board's action is directly contrary to the State Board's Order directing regional water boards to establish alternative

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³⁶ *Id.*

³⁷ *Id.*

³⁸ *Id.* at 1529-30.

³⁹ Permit, Provision B.3.

⁴⁰ Permit, Provisions A.4.c and E.

⁴¹ Permit, Finding 34, pg. 13; Provision B.3.

⁴² *Atlantic States Legal Fdn. v. Eastman Kodak Co.*, 12 F.3d 353, 357 (2d Cir. 1994).

compliance pathways and is in conflict with the findings and conclusions on which the Order is predicated.

In the State Board Order, the State Board recognized that strict compliance with receiving water limitations “may result in many years of permit noncompliance, because it may take years of technical efforts to achieve compliance with the receiving water limitations, especially for wet weather discharges.”⁴³ This finding is also contained in the Regional Board’s Order.⁴⁴ In recognizing the difficulties with attaining water quality standards, the State Board not only directed regional water boards to adopt alternative compliance pathways, it also upheld compliance during the development portion of a watershed management plan, allowing the LA County Permittees to maintain compliance during the planning process for the WMP/EWMP (the functional equivalent of the Regional MS4 Permit’s WQIP), so long as the planning process “is clearly constrained in a manner that sustains incentives to move on to approval and implementation and is structured with clear, enforceable provisions.”⁴⁵ In fact, the State Board found that there should have been more flexibility during the planning period than what was initially adopted in the LA Permit, and allowed compliance during the development process even when there were deviations to the development schedule.⁴⁶ The State Board then directed

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⁴³ State Board Order, pg. 15.

⁴⁴Permit, Finding 10, pg. 4. The Fact Sheet attributes this statement to the permittees regulated under the Permit, but it is actually a direct quote from the State Board Order. The Petitioners assert that there are broader grounds by which strict compliance is unwarranted and, in some cases, unachievable.

⁴⁵ State Board Order, pp. 31, 48-50.

⁴⁶ *Id.* at pg. 50 (adding Part VI.C.4.g. to the LA Permit allowing deviation from the WMP/EWMP development schedule).

regional water boards to consider the WMP/EWMP as one approach and adopt an alternative compliance option unless regional differences dictated variances.⁴⁷

The Permit does not include any region-specific or permit-specific reason why compliance during the development process was not included.⁴⁸ Regional Board staff initially asserted that the Regional Board only had to consider an alternative compliance option.⁴⁹ Principle 3 of the State Board Order, however, states that regional water boards are to adopt alternative compliance options absent certain region or permit specific reasons.

An additional reason cited at the November 8, 2015 adoption hearing was that the lack of a compliance option “would remove the motivation or incentive for the Copermittees to develop a credible, rigorous, ambitious, and transparent plan.” This argument ignores the fact that the Permit, through a rigorous development schedule established in Provision F.1 sets aggressive time schedules, not only for the submission of the final WQIP, but also for submission of two key WQIP elements to the Regional Board prior to submission of the final plan. The Petitioners must then develop a WQIP within the defined schedule or risk losing an alternative compliance option altogether. Providing compliance during the development period would in no way remove the motivation or incentive of the Petitioners since the failure to obtain Executive Officer

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⁴⁷ *Id.* at pg. 51 (“We direct all regional water boards to consider the WMP/EWMP approach to receiving water limitations compliance when issuing Phase I MS4 permits going forward. In doing so, we acknowledge that regional differences may dictate a variation on the WMP/EWMP approach, but believe that such variations must nevertheless be guided by a few principles. We expect the regional water boards to follow these principles unless a regional water board makes a specific showing that application of a given principle is not appropriate for region-specific or permit-specific reasons.”).

⁴⁸ One of the earliest reasons cited by a member of the Regional Board as to why alternative compliance should not be included was that the San Diego Region was “not L.A.” This was stated on the record at the February 11, 2015 adoption hearing and again in staff workshops later that summer.

⁴⁹ Response to Comments Received on Tentative Order No. R9-2015-0100, Provision B.3.c.4, pg. 30 (revised Nov. 10, 2015).

approval of the WQIP would nullify alternative compliance and the substantial work done by the Petitioners .

The last justification cited by Regional Board staff is that the approach had been supported by EPA in comment letters to the State Board and various regional water boards on alternative compliance.⁵⁰ These EPA letters, however, do not cite to any legal support for the proposition that compliance cannot be afforded during WQIP development, but is simply a preference that is not binding on the State Board or the Regional Board. In fact, the State Board chose to disregard EPA's comment in upholding the approach in the LA Permit.

Thus, without a region or permit specific reason to not provide alternative compliance during the development of the WQIP, the Regional Board's action is in direct conflict with the State Board Order.

D. The WQIP Development Process is Sufficiently Constrained and Reasonable Such That Compliance Should Be Afforded During This Time Period

If the State Board does not agree that Order WQ 2015-0075 mandates compliance during the WQIP development process, the State Board should review the rigorousness of the Regional Board's alternative compliance option. In doing so, the State Board can and should find that the Permit's WQIP development process is "clearly constrained in a manner that sustains incentives to move on to approval and implementation and is structured with clear, enforceable provisions," such that compliance should be afforded during this period.

The WQIP development process is a significant undertaking. For instance, in Los Angeles County, preparation of equivalent watershed management plans has cost approximately \$250,000 per watershed and these plans have identified final implementation costs per watershed

⁵⁰ *Id.* at pg. 31.

in the range of \$300 million to \$6 billion.⁵¹ At the November 18, 2015 adoption hearing, the County testified that WQIP development would focus on twenty or more 303(d) listed waterbody/pollutant combinations in the South Orange County hydrologic unit.⁵² The County's WQIP would essentially establish TMDLS and TSOs for these waterbody/pollutant combinations by developing interim and final numeric goals and compliance schedules. WQIP development would occur in a brief 2.5 year period with a development cost for County outside environmental consultants conservatively estimated at \$500,000 (not including internal costs, attorney review, CEQA, etc.). Implementation costs for bacteria alone are estimated around \$1.6 billion to \$2.1 billion.

More importantly, the Permit's WQIP development process is sufficiently constrained and reasonable. The Permit requires the following:

- a. Assessment of receiving water conditions and impacts from MS4 discharges,
- b. Identification of priority water quality conditions and MS4 sources of pollutants and water quality improvement strategies,
- c. Establishing interim and final numeric goals and schedules for achieving those goals,
- d. Analyses that quantitatively demonstrate implementation will achieve final numeric goals,
- e. Extensive public participation by WQIP consultation panels, and
- f. Strict deadlines for WQIP development.

In addition to the above requirements, the Petitioners are implementing other areas of the Permit while the WQIP development efforts are underway. Unlike in other counties, the Petitioners are, and have been since the 2009 Permit, implementing hydromodification and low impact development requirements. The Petitioners are obligated to carry out EPA's green streets policy and other watershed control measures. In addition, the Permit, unlike other MS4 permits,

⁵¹ County Comments, Order No. 2015 R9-2015-0100, fn 17, Attachment A, *County of Los Angeles Cost Study, Projected WMP/EWMP Implementation Costs*.

⁵² County Presentation, Order No. R9-2015-0100, slides 4-7 (Nov. 18, 2015).

requires identification of stream restoration opportunities and other strategies that involve attaining water quality that are broader than meeting a receiving water limitation.

As a matter of policy, the lack of a full compliance option exposes the Petitioners to unnecessary enforcement when significant resources and expenditures are underway to develop a long-term plan to improve water quality, particularly when a pollutant that is being addressed through the planning process is now the subject of an enforcement action or third party challenge. In other words, it would be unjustifiable to allow enforcement of a standard when the plan for attaining that standard is being developed by the Petitioners and reviewed by the Regional Board. The absence of compliance when the Petitioners are diligently undergoing WQIP planning is patently unfair. It is not only in conflict with the State Board, but is contrary to the Permit's recognition that compliance with water quality standards may take years to achieve.⁵³ It is unreasonable to insist on strictly meeting water quality standards and establishing a compliance pathway, but not extending such compliance to the point at which a permittee needs it most.

Lastly, the San Francisco Bay Regional Board approved a renewed MS4 permit on November 19, 2015, Order No. R2-2015-0049.⁵⁴ Section C.1 of that permit, provides that permittees are deemed in compliance with the receiving water limitations provisions for several pollutants, so long as they are implementing the control strategies for those pollutants set forth in Sections C.2 through C.15 of that permit. Likewise, the Santa Ana Regional Board is

⁵³ State Board Order, Conclusion 2, pg. 76. ("However, we find that municipal storm water dischargers may not be able to achieve water quality standards in the near term and therefore that it is appropriate for municipal storm water permits to incorporate a well-defined, transparent, and finite alternative path to permit compliance that allows MS4 dischargers that are willing to pursue significant undertakings beyond the iterative process to be deemed in compliance with the receiving water limitations.").

⁵⁴ A copy of relevant portions of that permit is attached as Exhibit B to the Request for Official Notice.

considering adopting a renewed MS4 permit that also includes compliance during the watershed management plan development process.⁵⁵

Based on the above reasons, the State Board should direct the Regional Board to provide the Petitioners with an alternative compliance option during the WQIP development process.

IV. THE REGIONAL BOARD HAS NO AUTHORITY TO ISSUE A REGION-WIDE PERMIT COVERING THE PETITIONERS

The Permit covers permittees in three large metropolitan counties – Orange, Riverside and San Diego. On May 21, 2012, Orange and Riverside Counties (“Counties”) sent letters to Staff Counsel for the Regional Board requesting the legal authority to issue a region-wide permit to the Counties.⁵⁶ The Counties contended that in accordance with federal regulations there was no system-wide, jurisdiction-wide or watershed basis to issue a regional permit. The Counties also asserted that they did not apply for the Permit and that there was no administrative basis or other evidence that allowed the Regional Board to adopt a Permit with provisions expressly regulating the Counties without considering a Report of Waste Discharge. On September 7, 2012, Staff Counsel responded to the Counties stating that there was a jurisdiction-wide and watershed basis to impose a regional permit on the Counties. Staff Counsel cited legal authority and examples in the Bay Area and an Alaskan borough where so-called “regional” permits had been issued.⁵⁷

⁵⁵ Tentative Order R8-2015-0001, Provision XI.S.1, pg. 47. A copy of relevant portions of the Tentative Order is attached as Exhibit C to the Request for Official Notice.

⁵⁶ 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); 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).

⁵⁷ Letter from Jessica Jahr, Office of Chief Counsel, 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).

The County, however, continues to assert that the Regional Board lacks legal authority to issue a region-wide permit to the Petitioners:

- 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, and
- 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.

A. There Is No System-wide, Jurisdiction-Wide, Watershed or Other Basis by which to Include Orange County in a Region-wide Permit

Finding 2 in 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). 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."⁵⁸ In the summer of 2012, Regional Board staff circulated a draft Permit and conducted focused meeting workshops seeking input on the draft Permit. At workshops held on June 27, 2012 and July 11, 2012, Regional Board staff indicated that the reason for a region-wide Permit was to consolidate the individual county permits into one Permit to 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 Copermittees and San Diego Water

⁵⁸ EPA Final Rule, 55 Fed. Reg. 47990, 48039-48042 ("Final Rule").

Board.”⁵⁹ However, there was no evidence presented at any of the 2013 and 2015 adoption hearings for the Permit of cost savings for the Copermittees or Regional Board or that the region-wide permit would ensure consistency of regulation. In fact, no other basis was given for why three large, geographically different and disconnected counties would be covered under one Permit.

The Permit’s justification for being issued as a region-wide Permit is invalid under federal and state law. 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, 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 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 (*i.e.*, 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.

⁵⁹ Permit, Provision I, Finding 2 (Legal and Regulatory Authority), pg. 1; Fact Sheet, p. F-23; 2013 Response to Comments, pp. 51-52.

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 and consent. Without any evidentiary reason, the Regional Board baldly concluded that cost savings would result from issuing a region-wide Permit, and issued the Permit based on the geographic boundary of the Regional Board, not the dischargers. However, there are no common physical factors that warrant a region-wide Permit and there is no unified stormwater management plan between the three counties and 39 permittees. The Petitioners do not operate an interconnected MS4 with Riverside and San Diego Counties, and they are not members of a regional stormwater management authority or other joint power agency.

1. The Orange County MS4 Does Not Interconnect with the Riverside and San Diego County MS4s

Although Orange County’s political boundaries abut San Diego and Riverside Counties, the Petitioner’s MS4 does not interconnect with these counties. Between Orange and Riverside Counties, a large undeveloped, rural area separates the developed portions of two counties. The Santa Ana Mountains lie between the two counties, which includes hundreds of thousands of acres of federal land (Cleveland National Forest), extending approximately 36 miles along the Los Angeles basin. The Cleveland National Forest does not contain an MS4 system, and the Orange-Riverside County boundary for South Orange County lies at the top of Saddleback Mountain. California State Route 74, owned and operated by Caltrans, is the only connection between Orange and Riverside Counties winding through the Santa Ana Mountains. In addition, Marine Corps Base Camp Pendleton separates Orange and San Diego Counties, totaling over 122,000 acres of land 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.⁶⁰ In this case, there are no physical interconnections.

2. Orange County Does Not Share a Common Jurisdiction with Riverside and San Diego Counties

There is no jurisdiction-wide basis to issue a region-wide 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.⁶¹ The three counties are not within the same political jurisdiction, and have three distinct boards of supervisors as well as dozens of city councils. Although Region 9 was created by the Legislature as one jurisdiction for purposes of establishing a Regional Water Board, 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.⁶² Regardless, such a permit can only be issued to a multi-jurisdictional entity upon a permit application and upon there being an interconnected MS4 or adjacent MS4.

3. Orange County Does Not Drain Into a Shared Watershed with Riverside and San Diego Counties

Orange County does not drain into a shared watershed with Riverside and San Diego Counties. The Petitioners drain into the San Juan hydrologic unit, which drains into the Pacific Ocean. The Riverside County permittees drain into the Santa Margarita watershed. San Diego

⁶⁰ 40 CFR § 122.26(b)(4) (defining large systems); 40 CFR § 122.26(b)(7) (defining medium systems).

⁶¹ County Comments, Order No. R9-2015-0001, Jurisdictional Map, Exhibit B-7, pg. 35 (Jan. 11, 2013).

⁶² 40 CFR § 122.26(a)(3)(iii)(C).

County drains into the San Luis Rey, San Dieguito, Penasquitos, San Diego, Pueblo San Diego, Sweetwater, Otay and Tijuana hydrologic units. The Petitioners do not drain into or share one common watershed with either county, and therefore cannot be regulated on this basis.

4. There Is No Other Basis By Which to Regulate Orange County Under a Regional Permit

There is no other basis by which to regulate Orange County in the same permit with Riverside and San Diego Counties. Although it is true that Orange County political boundaries abut 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.⁶³

In addition, federal regulations look to interconnection and similarities between jurisdictions as the basis by which to issue one permit.⁶⁴ Federal regulations do not authorize and the EPA Final Rule does not contemplate regional permit issuance based on overall reduced cost savings.⁶⁵ 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.⁶⁶

⁶³ For example, hydromodification applies uniformly to all three counties despite poor soil conditions in Orange County that does not allow maximization of on-site stormwater retention.

⁶⁴ 33 USC 1342(p)(3)(B)(i); 40 CFR 122.26(a)(1)(v).

⁶⁵ 55 Fed. Reg. 47990-01, 48038-48046.

⁶⁶ *Id.* at 48042.

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 authority. The largest area by which one permit could be issued under the Final Rule was to a state entity that operated a defined MS4 (*i.e.*, state highways) or one county and its incorporated cities. There is no factual or technical basis in the Permit that meets these criteria or establishes other bases by which to regulate the three counties under one unified permit. 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 the County 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 have been issued.⁶⁷ In the San Francisco Bay Area MS4 permit (“Bay Area MS4 Permit”), 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 perform common watershed functions for its 94 members. A permit was issued to the Fairbanks North Star Borough, City of Fairbanks, City of the North Pole, the Alaska Department of

⁶⁷ Letter from Jahr, *supra*, fn 61.

Transportation and the University of Alaska Fairbanks, but further review of that permit and the stormwater program maps demonstrate 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 provide sufficient examples of a regional permit comparable to the one being issued to the Petitioners.

B. The EPA’s Rule on the Definition of Waters of the U.S. Under the Clean Water Act Supports the Petitioners’ That Orange County Is Not Adjacent to Riverside and San Diego Counties for Purposes of MS4 Permitting

It has also been asserted by Regional Board staff that the Permit can cover MS4s that are “adjacent” to one another, suggesting that two counties that have abutting political boundaries can be regulated under one MS4 permit. An abutting or shared political boundary, however, does not in and of itself constitute “adjacency” under the CWA such that the County can be regulated under a Permit regulating two other diverse counties.

In federal regulations regarding the *Definition of “Waters of the United States” Under the Clean Water Act*, the EPA and Army Corps of Engineers’ elaborated on the definition of “adjacent” found in the CWA.⁶⁸ Adjacency does not mean mere proximity between MS4s or waterbodies, but means that one waterbody has a significant effect on the other waterbody. “Adjacent” means a waterbody adjacent to navigable waters or waters of the U.S. when the waterbodies are “inseparably bound up.”⁶⁹ “Adjacent waters’ are wetlands, ponds, lakes and

⁶⁸ 80 Fed. Reg. 37054-37127 (“WOTUS Rule”). The WOTUS regulations have been stayed by the Sixth Circuit Court of Appeals, but the interpretation of adjacency is still grounded on existing EPA regulations and prior U.S. Supreme Court cases. *State of Ohio, et al. v. U.S. Army Corps of Eng’rs, et al.*, Nos. 15-3799/3822/3853/3877 (6th Cir. Oct. 9, 2015).

⁶⁹ 80 Fed. Reg. at 37056. *See also United States v. Riverside Bayview Homes*, 474 U.S. 121, 134 (1985).

similar water bodies that provide similar functions which have a significant nexus to traditional navigable waters, interstate waters and the territorial seas. These include waters and wetlands that are adjacent to traditional navigable waters, interstate waters, and the territorial seas as well as waters and wetlands adjacent to other jurisdictional waters such as tributaries and impoundments.”⁷⁰ In the WOTUS Rule, EPA sought comment on clarifying the concept of adjacency as those waters that are “neighboring.” “Neighboring” is proposed as possessing “a shallow subsurface or confined surface hydrologic connection to a jurisdictional water,” that can exchange water, along with chemicals and organisms within that water, and subsequently have a significant effect, particularly in combination with other adjacent waters in the watershed, on the chemical, physical, or biological integrity of a downstream traditional navigable water, interstate water, and the territorial seas.”⁷¹

Thus, recently adopted EPA and ACOE regulations demonstrate that “adjacent” is not defined by geographical proximity, but by a hydrologic between waterbodies or watersheds. As was discussed in Section IV.A.1 above, the County is not hydrologically connected to Riverside or San Diego Counties and has no shared watershed. This interpretation by EPA and ACOE supports the Petitioner’s argument that the Regional Board has no authority to issue the Permit as to the County on the grounds that the County is adjacent to Riverside or San Diego Counties or on mere geography.

C. The South Orange County Permittees Operate a Mature Fifth Term MS4 Program Warranting an Individual NPDES Permit

⁷⁰ 80 Fed. Reg. at 37056, 37062, and 37083 (“Connectivity is a foundational concept in hydrology and freshwater ecology. Connectivity is the degree to which components of a system are joined, or connected, by various transport mechanisms and is determined by the characteristics of both the physical landscape and the biota of the specific system.”).

⁷¹ *Id.* at 22210.

Notwithstanding the legal reasons why the Petitioners should be covered by an individual NPDES permit, there are additional policy considerations that are warranted. The Permit constitutes the fifth term that South Orange County has been covered by a MS4 permit. Orange County has had hydromodification, low impact development and other advanced stormwater requirements since its fourth term 2009 Permit. These requirements have been in place prior to Riverside and San Diego Counties enrolling in the Permit. In fact, Los Angeles County is only now under hydromodification and low impact development requirements as part of its recently issued MS4 permit. The South Orange County Permittees operate MS4 programs that are superior to other programs across the U.S. The program has received two awards for public education from the California Stormwater Quality Association (CASQA) and has been recognized in select areas as a model program by the American Public Works Association (APWA). South Orange County is home to award winning master planned communities that incorporate leading construction techniques. In informal comments, both Regional Board staff and members of the Regional Board have recognized South Orange County as having a superior program.

Despite the matureness of the South Orange County stormwater program, the Permit has largely been developed based on the ROWD filed by the San Diego County permittees. Throughout the 2013 adoption hearings for the Permit, the County presented testimony that it had largely been left out of the development of the region-wide Permit. If the Petitioners remain in a regional Permit, the Petitioners will be governed by a one-size-fits-all Permit without respect for differing climates, geography, soil conditions and other land use and environmental differences.

The Petitioners have also incurred substantial costs that have diverted resources away

from their stormwater programs by being governed under a regional Permit that was adopted in three phases from the release of the first draft in 2012 to the Riverside enrollment on November 18, 2015. The Petitioners had to participate in three permit adoptions in a three year period, and will do so again in 2018 when the Permit expires. From the time of the adoption of Order No. R9-2015-0001 on February 11, 2015, the Petitioners will only be under the Permit for 3.25 years, well short of the five years allowed by the Clean Water Act. The Petitioners report of waste discharge, previously filed on November 14, 2014, will be due again on December 30, 2017.

Lastly, Orange County is split between two regional water boards – Santa Ana and San Diego – yet the Petitioners run an integrated program covering both regional board areas. The Petitioners’ permits have always been in sync, where reports of waste discharge are due and permits are issued around the same timeframe. Under the regional Permit, this cycle will be out of sync, such that the ROWD for the regional Permit will be due on December 30, 2017 while the ROWD for the Santa Ana permit will be due on or around August 2020. This creates special hardship, technical challenges and additional costs for the Petitioners due to the integrated nature of the stormwater program.

Based on the aforementioned legal and policy reasons, the Petitioners respectfully request that the State Board direct the Regional Board to issue an individual permit to the Petitioners.

V. THE PERMIT DOES NOT RECOGNIZE THE PETITIONERS’ REPORT OF WASTE DISCHARGE OR THE SIGNIFICANT WATER QUALITY OUTCOMES THAT HAVE BEEN ACHIEVED IN ORANGE COUNTY, AND THEREFORE, LACKS SUBSTANTIAL EVIDENCE TO SUPPORT NEW OR MODIFIED PROGRAM REQUIREMENTS

Throughout the 2013 and 2015 Permit adoption proceedings, the Petitioners contended that the Regional Board lacked substantial evidence by which to adopt the Permit and lacked authority to issue it as to Petitioners because the Petitioners had not filed an application to be covered by the Permit. Pursuant to Provision F.5 of the Permit, the Petitioners filed a report of

waste discharge on May 20, 2014 as a condition of enrollment. Despite this procedural occurrence, however, the Regional Board failed to consider the application or make any change to the Permit.

Pursuant to federal law, the Petitioners' ROWD is an application to discharge pollutants from a point source to waters of the United States and be covered by a MS4 NPDES Permit.⁷² The ROWD evaluates the prior MS4 permit activities (*i.e.*, the 2009 Permit / "fourth term permit") and discusses the accomplishments of the Orange County stormwater program.⁷³ Based on the ROWD's assessment and findings, the application identifies the activities that are proposed for the next permit term, including additional pollutant control initiatives. The ROWD is also the technical basis, *i.e.*, substantial evidence, for what regulations and activities will be required in the next permit term.

The Petitioners application to be enrolled in the Permit (*i.e.*, fifth term permit) is predicated on the assessment of the "State of the Environment" as described in Section 2 of the Orange County ROWD.⁷⁴ This assessment describes the results of the long-term monitoring and special studies that are used to examine the condition of the surface water environment in Orange County with an emphasis on recreation and aquatic ecosystem health. The analyses focus on bacteria, nutrients, toxicity and improvements in water quality as well as recommendations for the fifth term Permit. These detailed analyses were intended to ensure further improvements in surface water quality. Despite the comprehensive evaluation of the Orange County Stormwater Program presented in the ROWD, there is no discussion in the Permit, Fact Sheet or Response to

⁷² 40 C.F.R. § 122.21.

⁷³ The Orange County Stormwater Program is a cooperative effort by the copermittees of South Orange County.

⁷⁴ Orange County Report of Waste Discharge, Section 2, State of the Environment.

Comments regarding the “State of the Environment.” In fact, the Findings and Fact Sheet for the Permit do not even reference the Petitioners’ application or cite specific areas in the ROWD to provide a basis for or justify particular fifth term stormwater program modifications. Although Finding 38 of the Permit states that the Fact Sheet “contains background information, regulatory and legal citations, references and additional explanatory information and data in support of the requirements of this Order,” many of the requirements within the Permit lack technical justification.⁷⁵ Specifically, new or modified provisions of the Permit lack factual and technical support in the Findings and Fact Sheet, including but not limited to, the following:

1. Basis for including Orange County in the region-wide municipal stormwater permit;
2. Basis for requiring uncontaminated pumped ground water, foundation drains, water from crawl space pumps, and footing drains to obtain coverage under the San Diego Region groundwater extraction permits;
3. Basis for requiring conventional BMPs onsite in addition to alternative compliance;
4. Basis for biofiltration BMPs required to be sized at 1.5 times the design capture volume;
5. Basis for biofiltration BMPs not being an effective LID and treatment measure per the requirement to size them at 1.5 times the design capture volume and also require conventional BMPs when they are used;
6. Basis for offsite regional BMPs required to be sized at 1.1 times the design capture volume;
7. Basis for verification of coverage under all related permits for construction sites; and,

⁷⁵ Permit, Finding 38, pg. 13.

8. Basis for establishing Water Quality Based Effluent Limits (WQBELs) expressed as numeric effluent limitations, in lieu of WQBELs expressed as BMPs, for the TMDL provisions.

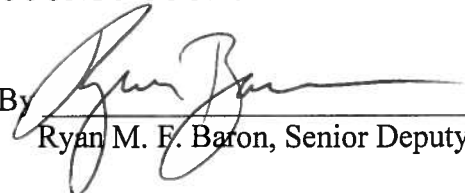
The Findings and Fact Sheet in the Permit only contain generic statements about water quality, and exclude the key findings from the ROWD. And although certain elements of the Permit may have been the general, factual basis for the Petitioners' first and second term permits, they are not appropriate for an advanced fifth term stormwater program.

The absence of any recognition of the significant water quality outcomes that have been achieved in Orange County (*e.g.*, coastal water quality) creates a false case, in many instances, for regulatory change. Without support from specific findings and other evidence, many of the requirements of the Permit lack substantial evidence and are arbitrary and capricious, and therefore, cannot be lawfully adopted. As such, the Petitioners' respectfully request that the State Board direct the Regional Board to issue an individual Permit to the Petitioners that considers the Petitioners' ROWD, including the significant water quality outcomes that have resulted in the past four permit terms, and provides justification for the program modifications discussed herein.

XIX. Conclusion

For all the foregoing reasons, the relief set forth in the Petition should be granted.

Respectfully submitted,
LEON J. PAGE
COUNTY COUNSEL

By 
Ryan M. F. Baron, Senior Deputy

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

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ORDER NO. R9-2015-0100

**AN ORDER AMENDING ORDER NO. R9-2013-0001, NPDES NO. CAS010266,
AS AMENDED BY ORDER NO. R9-2015-0001
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 California Regional Water Quality Control Board, San Diego Region (hereinafter San Diego Water Board), finds that:

ENROLLMENT OF RIVERSIDE COUNTY COPERMITTEES

- 1. Enrollment Process.** On May 8, 2013, the San Diego Water Board adopted Order No. R9-2013-0001, NPDES No. CAS019266, *National Pollutant Discharge Elimination System Permit and Waste Discharge Requirements for Discharges from the Municipal Separate Storm Sewer Systems (MS4s) Draining the Watersheds within the San Diego Region* (Order No. R9-2013-0001, or Regional MS4 Permit). Provision F.5 of that Order (as amended by Order No. R9-2015-0001) outlines a process to designate (enroll) the County of Riverside, the Riverside County Cities of Murrieta, Temecula, and Wildomar, and the Riverside County Flood Control and Water Conservation District as Copermittees under Order No. R9-2013-0001, responsible for compliance with the terms and the conditions of the Regional MS4 Permit. Provision F.5 provides that prior to such enrollment, the San Diego Water Board must first review and consider a Report of Waste Discharge (ROWD) submitted by the Riverside County Copermittees under their current MS4 Permit, Order No. R9-2010-0016, to determine whether the Copermittees should be enrolled under Order No. R9-2013-0001, and what changes to Order No. R9-2013-0001 proposed in the ROWD are appropriate.
- 2. Report of Waste Discharge.** By letter dated May 8, 2015, the Riverside County Copermittees jointly submitted a ROWD in application for the reissuance of waste discharge requirements, pursuant to the requirements of section K.2.c of Order No. R9-2010-0016. The San Diego Water Board reviewed the ROWD and determined it is complete.

3. **Riverside County Copermittees Enrollment.** After consideration of the Riverside County Copermittees' ROWD and changes needed to Order No. R9-2013-0001, the San Diego Water Board determined that the County of Riverside, the Cities of Murrieta, Temecula, and Wildomar, and the Riverside County Flood Control and Water Conservation District should be enrolled as Copermittees under Order No. R9-2013-0001 and be responsible for compliance with the terms and the conditions of the Regional MS4 Permit. Enrolling the Riverside County Copermittees into Order No. R9-2013-0001 will provide regulatory consistency in the implementation of MS4 permit requirements throughout the San Diego Region, improve communication and coordination among Copermittees within watersheds crossing multiple jurisdictions, and maximize efficiency and economy of resources for the San Diego Water Board achieved through the redirection of staff permitting resources to better advance the storm water program. Enrollment of the Cities of Murrieta and Wildomar is subject to a California Water Code section 13228 agreement as set forth in the findings of this Order.

DESIGNATION OF A REGIONAL WATER BOARD

4. **Regional Water Board Designation.** The Cities of Menifee, Murrieta, and Wildomar are located partially within the jurisdictions of both the California Regional Water Quality Control Board, Santa Ana Region (Santa Ana Water Board) and the San Diego Water Board. California Water Code section 13228 provides a way to streamline the regulation of entities whose jurisdictions straddle the border of two or more Regional Water Boards.

As allowed by California Water Code section 13228, during the proceedings for Order No. R9-2010-0016, the Fourth Term Riverside County MS4 Permit, written requests for designation of a single Regional Water Board to regulate matters pertaining to Phase I MS4 discharges were submitted to the San Diego Water Board and Santa Ana Water Board by the City of Murrieta by letter dated July 20, 2010, the City of Wildomar by letter dated July 21, 2010, and the City of Menifee by letter dated July 22, 2010. The Cities of Murrieta and Wildomar requested designation of the San Diego Water Board, and the City of Menifee requested designation of the Santa Ana Water Board.

As authorized by California Water Code section 13228 and pursuant to written agreements dated September 28, 2010 between the San Diego Water Board and the Santa Ana Water Board, the San Diego Water Board is designated under Order No. R9-2010-0016 to regulate Phase I MS4s within the entire jurisdictional area of the Cities of Murrieta and Wildomar, including those areas of each City located within the Santa Ana Water Board's geographic jurisdiction. The Santa Ana Water Board is designated under Order No. R8-2010-0033 to regulate the Phase I MS4s within the entire jurisdictional area of the City of Menifee, including those areas of the City located within the San Diego Water Board's geographic jurisdiction. Written requests to continue these Regional Water Board designations were submitted to the San Diego Water Board and Santa Ana Water Board by the City of Murrieta by

letter dated June 22, 2015, the City of Wildomar by letter dated June 23, 2015, and the City of Menifee by letter dated June 25, 2015.

5. **Factual Considerations.** The Santa Ana Water Board and San Diego Water Board establish generally consistent requirements for MS4 discharges to meet the technology-based standard of reducing pollutants in the discharge to the maximum extent practicable (MEP), a related iterative process to ensure MS4 discharges meet receiving water quality standards, and for non-storm water discharges to be effectively prohibited from entering the MS4. However due to the unique nature of watersheds and water quality issues in the San Diego Region and Santa Ana Region, MS4 permit requirements between the two Regional Water Boards may also vary to address region specific pollutant discharges and watershed conditions. The Cities of Menifee, Murrieta, and Wildomar report that management and implementation of municipal programs to comply with two different MS4 permits creates a significant administrative and financial burden that is not contributing to greater overall water quality improvements in either region.
6. **Regional Water Board Agreement.** The San Diego Water Board and the Santa Ana Water Board entered into an agreement dated October 26, 2015 to:
 - a. Continue designation of the San Diego Water Board to regulate Phase I MS4 discharges within the entire jurisdictional area of the Cities of Murrieta and Wildomar, including those areas of each City located within the Santa Ana Region upon the effective date of Order R9-2015-0100, *and*
 - b. Continue designation of the San Ana Water Board to regulate Phase I MS4 discharges within the entire jurisdictional area of the City of Menifee, including those areas of the City located within the San Diego Region, under Order No. R8-2010-0033 (NPDES No. CAS618030) as it may be amended or reissued upon the effective date of Order No. R9-2015-0100.
7. **Periodic Review of Regional Water Board Agreement.** The basis supporting the Cities of Menifee, Murrieta, and Wildomar requests to designate a specific Regional Water Board for regulatory oversight of MS4 discharges may change under future conditions and circumstances. Therefore the San Diego Water Board and Santa Ana Water Board will periodically review the effectiveness of the agreement during each MS4 permit reissuance. Based on this periodic review the San Diego Water Board may terminate the agreement with the Santa Ana Water Board or otherwise modify the agreement subject to the approval of the Santa Ana Water Board.

AMENDMENTS TO ORDER NO. R9-2013-0001

8. **Effect of this Order.** Order No. R9-2013-0001 is not being reopened for any other purpose than the amendments contained herein. Except as contradicted or superseded by the findings and directives set forth in this Order, all of the previous findings and directives of Order No. R9-2013-0001 (as amended by Order No. R9-2015-0001) shall remain in full force and effect.

9. **Enroll Riverside County Copermittees.** This Order amends Order No. R9-2013-0001 to incorporate the County of Riverside, the Riverside County Cities of Murrieta, Temecula, and Wildomar, and the Riverside County Flood Control and Water Conservation District as Copermittees responsible for compliance with the terms and the conditions of Order No. R9-2013-0001, as amended by Order No. R9-2015-0001 and this Order.
10. **Alternative Compliance Pathway for Prohibitions and Limitations.** The San Diego County, Orange County, and Riverside County Copermittees have asserted that the prohibitions and limitations under Provision A of Order No. R9-2013-0001 may result in many years of noncompliance because years of technical efforts may ultimately be required to achieve compliance with the prohibitions and limitations, especially for wet weather discharges.

The San Diego Water Board considered the incorporation of an alternative pathway to compliance during the adoption proceedings for Order No. R9-2013-0001 in May 2013, but chose not to include it at that time. During the proceedings for Order No. R9-2015-0001, amending Order No. R9-2013-0001 to extend coverage of the Regional MS4 Permit to the Orange County Copermittees and as reflected in Order No. R9-2015-0001, the San Diego Water Board committed to considering the incorporation of a well-defined, transparent, and finite alternative pathway to compliance in Order No. R9-2013-0001 during the MS4 permit reissuance proceedings for the Riverside County Copermittees.

On June 16, 2015, the State Water Resources Control Board (State Water Board) adopted Order WQ 2015-0075, *In the Matter of Review of Order No. R4-2012-0175, NPDES Permit No. CAS004001, Waste Discharge Requirements for Municipal Separate Storm Sewer System (MS4) Discharges within the Coastal Watersheds of Los Angeles County, Except Those Discharges Originating from the City of Long Beach MS4*, which directs all Regional Water Boards to consider a watershed-based planning and implementation approach to compliance with receiving water limitations when issuing Phase I MS4 permits going forward. Consistent with the principles set forth in Order WQ 2015-0075, this Order amends Order No. R9-2013-0001 to incorporate an alternative compliance pathway that allows a Copermittee to utilize the watershed-based Water Quality Improvement Plan to be deemed in compliance with the requirements of Provisions A.1.a, A.1.c, A.1.d, A.2.a, and A.3.b which are included in the prohibitions and limitations under Provision A of the Regional MS4 Permit.

This Order amends the Fact Sheet of Order No. R9-2013-0001, Attachment F, section VII.E, Antidegradation Policy, to provide an expanded analysis consistent with the principles set forth in State Water Board Order WQ 2015-0075, demonstrating why the incorporation of an alternative compliance pathway for prohibitions and limitations in Order No. R9-2013-0001 complies with federal and state antidegradation policies. This Order also amends the Fact Sheet of Order No. R9-2013-0001, Attachment F, section VII.E, Anti-Backsliding Requirements, with an expanded analysis consistent with State Water Board Order WQ 2015-0075 demonstrating that the anti-backsliding requirements of the Clean Water Act and the

federal regulations do not foreclose the incorporation of an alternative compliance pathway into Order No. R9-2013-0001.

- 11. Update to Non-Storm Water Discharges.** Since Order No. R9-2013-0001 was adopted, the State Water Board adopted Order 2014-0194-DWQ (*Statewide National Pollutant Discharge Elimination System (NPDES) Permit for Drinking Water System Discharges to Waters of the United States*) and the San Diego Water Board adopted Order No. R9-2015-0013 (*General Waste Discharge Requirements for Groundwater Extraction Discharges to Surface Waters within the San Diego Region*). These orders are NPDES permits regulating non-storm water discharges that may be discharged to the Copermittees' MS4s. This Order amends Order No. R9-2013-0001 to incorporate State Water Board Order 2014-0194-DWQ and San Diego Water Board Order No. R9-2015-0013 into the requirements for addressing non-storm water discharges.
- 12. Priority Development Project Definition Consistency.** The Fact Sheet of the Regional MS4 Permit as modified by Order No. R9-2015-0001, describes on Page F-98 the San Diego Water Board's intent that the Priority Development Project categories in Provision E.3.b.(1) be consistent with the categories in the Riverside County MS4 Permit (Order No. R9-2010-0016) and the Orange County MS4 Permit (Order No. R9-2009-0002). The San Diego Water Board's intention reflected in the Fact Sheet was not explicitly incorporated in some of the Priority Development Project categories described in Provision E.3.b.(1) and this Order amends the provision with clarifying language to better describe these categories consistent with the Fact Sheet. The Order also has been amended to include the requirements for updating the BMP Design Manual as a result of the corrections to the Priority Development Project categories in Provision E.3.b.(1).
- 13. Definition of Prior Lawful Approval.** During the proceedings for Order No. R9-2015-0001, amending Order No. R9-2013-0001 to extend coverage of the Regional MS4 Permit to the Orange County Copermittees, the land development community asserted that the lack of a definition for the term "prior lawful approval" in the Regional MS4 Permit had created significant uncertainty for the San Diego County Copermittees, the land development community, and the general public about when the development planning requirements are applicable. The San Diego Water Board committed to considering the incorporation of additional guidance for prior lawful approval in Order No. R9-2013-0001 during the MS4 permit reissuance proceedings for the Riverside County Copermittees. This Order amends Order No. R9-2013-0001 to incorporate additional clarification describing when the structural BMP performance requirements are applicable to Priority Development Projects.
- 14. Los Peñasquitos Lagoon Sediment TMDL.** During the proceedings for Order No. R9-2015-0001, amending Order No. R9-2013-0001 to extend coverage of the Regional MS4 Permit to the Orange County Copermittees, the San Diego County Copermittees responsible for implementing the TMDLs for Sediment in Los Peñasquitos Lagoon requested several minor revisions to make the TMDL requirements consistent with the Basin Plan amendment adopted by the San Diego

Water Board. This Order amends Attachment E to Order No. R9-2013-0001 to incorporate minor revisions to the Los Peñasquitos Lagoon Sediment TMDL to make the requirements consistent with the adopted Basin Plan amendment.

15. Compliance Dates for TMDLs Beaches and Creeks Indicator Bacteria TMDLs.

A review of the interim and final compliance dates for the Revised TMDLs for Indicator Bacteria, Project I – Beaches and Creeks (Beaches and Creeks Indicator Bacteria TMDLs) in the San Diego Region in Attachment E to the Order revealed an inconsistency with the adopted Basin Plan amendment. This Order amends Attachment E to Order No. R9-2013-0001 to incorporate minor revisions to the Beaches and Creeks Indicator Bacteria TMDLs to make the requirements consistent with the adopted Basin Plan amendment.

16. Removal of Application for Early Coverage Provisions. Order No. R9-2013-0001, as amended by Order No. R9-2015-0001 included several provisions that allowed the Riverside County Copermittees to apply for early coverage under the Regional MS4 Permit prior to the expiration of Order No. R9-2010-0016. These provisions are no longer necessary once the Riverside County Copermittees are covered by the requirements of the Regional MS4 Permit with the adoption of this Order. This Order amends Order No. R9-2013-0001 to remove provisions related to applying for early coverage under the Regional MS4 Permit.

ADMINISTRATIVE FINDINGS

17. California Environmental Quality Act. This action is exempt from the requirement of preparation of environmental documents under the California Environmental Quality Act [Public Resources Code, Division 13, Chapter 3, Section 21000 et seq.] in accordance with California Water Code section 13389.

18. Public Notice. In accordance with State and federal laws and regulations, the San Diego Water Board has notified San Diego County, Orange County and Riverside County Copermittees, and all known interested agencies and persons of its intent to adopt this Order and has provided them with an opportunity to submit their written comments.

19. Public Hearing. The San Diego Water Board held a public hearing on November 18, 2015 and heard and considered all comments pertaining to the adoption of this Order.

20. Notification. 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 California Water Code 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 adoption date of this Order. 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 or will be provided upon request.

THEREFORE, IT IS HEREBY ORDERED,

1. This Order amends Order No. R9-2013-0001 and Fact Sheet as amended by Order No. R9-2015-0001 (Regional MS4 Permit and Fact Sheet). The revisions to the Regional MS4 Permit and Fact Sheet are shown Attachments 1 and 2 to this Order. Added text to the Regional MS4 Permit and Fact Sheet is displayed in **blue-underline** text and deleted text is displayed as **red-strikeout** text.
2. The amended Regional MS4 Permit and Fact Sheet included as Attachments 1 and 2 to this Order shall become effective on January 7, 2016.
3. The amended Regional MS4 Permit and Fact Sheet included as Attachments 1 and 2 to this Order shall supersede Order No. R9-2010-0016 for the Riverside County Copermittees except for enforcement purposes.
4. San Diego Water Board staff is directed to prepare and post a conformed copy of the Regional MS4 Permit and Fact Sheet, as amended by this Order, incorporating the revisions made by this Order.

I, David W. Gibson, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Diego Region, on November 18, 2015.



David W. Gibson
Executive Officer

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

**ORDER NO. R9-2013-0001,
AS AMENDED BY ORDER NOS. R9-2015-0001 AND R9-2015-0100
NPDES NO. CAS0109266**

**NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT
AND WASTE DISCHARGE REQUIREMENTS FOR
DISCHARGES FROM THE MUNICIPAL SEPARATE STORM SEWER SYSTEMS (MS4s)
DRAINING THE WATERSHEDS WITHIN THE SAN DIEGO REGION**

The San Diego County Copermittees in Table 1a are subject to waste discharge requirements set forth in this Order.

Table 1a. San Diego County Copermittees

City of Carlsbad	City of Oceanside
City of Chula Vista	City of Poway
City of Coronado	City of San Diego
City of Del Mar	City of San Marcos
City of El Cajon	City of Santee
City of Encinitas	City of Solana Beach
City of Escondido	City of Vista
City of Imperial Beach	County of San Diego
City of La Mesa	San Diego County Regional Airport Authority
City of Lemon Grove	San Diego Unified Port District
City of National City	

The Orange County Copermittees in Table 1b are subject to waste discharge requirements set forth in this Order.

Table 1b. Orange County Copermittees¹

City of Aliso Viejo	City of Rancho Santa Margarita
City of Dana Point	City of San Clemente
City of Laguna Beach	City of San Juan Capistrano
City of Laguna Hills	City of Laguna Woods
City of Laguna Niguel	County of Orange
City of Mission Viejo	Orange County Flood Control District

~~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~~ are subject to waste

¹ While not listed in Table 1b., the City of Lake Forest remains a Copermittee under this Order until the later effective date of this Order or the effective date of Santa Ana Water Board Tentative Order No. R8-2015-0001. Thereafter, the City of Lake Forest will no longer be considered a Copermittee under this Order because its Phase I MS4 discharges will be regulated by the Santa Ana Water Board pursuant to Water Code section 13228 designation. The requirements of this Order that apply to the City of Lake Forest for the duration of this Order, however, are described in Finding 29 and Footnote 2 to Table B-1.

Order No. R9-2013-0001
 As amended by Order No. R9-2015-0001
 and [Order No. R9-2015-0100](#)

Amended February 11, 2015
[Amended November 18, 2015](#)

~~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 Riverside County Copermittees may become subject to the requirements of this Order at a date earlier than the expiration date of their current Order subject to the conditions described in Provision F.6 of this Order if the Riverside County Copermittees receive 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:	May 8, 2013
Order No. R9-2013-0001 became effective on:	June 27, 2013
This Order as amended by R9-2015-0001 became effective on:	April 1, 2015
This Order as amended by R9-2015-0100 became effective on:	January 7, 2016
This Order will expire on:	June 27, 2018
The Copermittees must file a Report of Waste Discharge in accordance with Title 23, California Code of Regulations, as application for issuance of new waste discharge requirements no later than 180 days in advance of the Order expiration date.	

I, David W. Gibson, Executive Officer, do hereby certify that this Order with all attachments is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Diego Region, on May 8, 2013, as amended by adoption of Order No. R9-2015-0001 on February 11, 2015, [and as amended by adoption of Order No. R9-2015-0100 on November 18, 2015.](#)

TENTATIVE

David W. Gibson
Executive Officer

Order No. R9-2013-0001
 As amended by Order No. R9-2015-0001
 and [Order No. R9-2015-0100](#)

Amended February 11, 2015
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I. FINDINGS

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

JURISDICTION

- 1. MS4 Ownership or Operation.** Each of the Copermitees owns or operates an MS4, through which it discharges storm water and non-storm water into waters of the U.S. within the San Diego Region. These MS4s fall into one or more of the following categories: (1) a medium or large MS4 that services a population of greater than 100,000 or 250,000 respectively; or (2) a small MS4 that is "interrelated" to a medium or large MS4; or (3) an MS4 which contributes to a violation of a water quality standard; or (4) an MS4 which is a significant contributor of pollutants to waters of the U.S.
- 2. Legal and Regulatory Authority.** This Order is issued pursuant to section 402 of the federal Clean Water Act (CWA) and implementing regulations (Code of Federal Regulations [CFR] Title 40, Part 122 [40 CFR 122]) adopted by the United States Environmental Protection Agency (USEPA), and chapter 5.5, division 7 of the California Water Code (CWC) (commencing with section 13370). This Order serves as an NPDES permit for discharges from MS4s to surface waters. This Order also serves as waste discharge requirements (WDRs) pursuant to article 4, chapter 4, division 7 of the CWC (commencing with section 13260).

The San Diego Water Board has the legal authority to issue a regional MS4 permit pursuant to its authority under CWA section 402(p)(3)(B) and 40 CFR 122.26(a)(1)(v). The USEPA also made it clear that the permitting authority, in this case the San Diego Water Board, has the flexibility to establish system- or region-wide permits (55 Federal Register [FR] 47990, 48039-48042). The regional nature of this Order will ensure consistency of regulation within watersheds and is expected to result in overall cost savings for the Copermitees and San Diego Water Board.

The federal regulations make it clear that the Copermitees need only comply with permit conditions relating to discharges from the MS4s for which they are operators (40 CFR 122.26(a)(3)(vi)). This Order does not require the Copermitees to manage storm water outside of their jurisdictional boundaries, but rather to work collectively to improve storm water management within watersheds.

- 3. CWA NPDES Permit Conditions.** Pursuant to CWA section 402(p)(3)(B), NPDES permits for storm water discharges from MS4s must include requirements to effectively prohibit non-storm water discharges into MS4s, and require controls to reduce the discharge of pollutants in storm water to the maximum extent practicable (MEP), and to require other provisions as the San Diego Water Board determines are appropriate to control such pollutants. This Order prescribes conditions to assure compliance with the CWA requirements for owners and operators of MS4s to effectively prohibit non-storm water discharges into the MS4s, and require controls to reduce the discharge of pollutants in storm water from the MS4s to the MEP.

4. CWA and CWC Monitoring Requirements. CWA section 308(a) and 40 CFR 122.41(h),(j)-(l) and 122.48 require that NPDES permits must specify monitoring and reporting requirements. Federal regulations applicable to large and medium MS4s also specify additional monitoring and reporting requirements in 40 CFR 122.26(d)(1)(iv)(D), 122.26(d)(1)(v)(B), 122.26(d)(2)(i)(F), 122.26(d)(2)(iii)(D), 122.26(d)(2)(iv)(B)(2) and 122.42(c). CWC section 13383 authorizes the San Diego Water Board to establish monitoring, inspection, entry, reporting and recordkeeping requirements. This Order establishes monitoring and reporting requirements to implement federal and State requirements. This Order also includes requirements for the Orange County Copermittees to participate in, and together with South Orange County Wastewater Authority and Orange County Health Care Agency, share responsibility for implementing the unified approach to beach water quality monitoring and assessment program set forth in the October 2014 report, *Workgroup Recommendation for a Unified Beach Water Quality Monitoring and Assessment Program in South Orange County*, issued pursuant to CWC section 13383 in the San Diego Water Board December 5, 2014 Letter Directive.

5. Total Maximum Daily Loads. CWA section 303(d)(1)(A) requires that “[e]ach state shall identify those waters within its boundaries for which the effluent limitations are not stringent enough to implement any water quality standard applicable to such waters.” The CWA also requires states to establish a priority ranking of impaired water bodies known as Water Quality Limited Segments and to establish Total Maximum Daily Loads (TMDLs) for such waters. This priority list of impaired water bodies is called the Clean Water Act Section 303(d) List of Water Quality Limited Segments, commonly referred to as the 303(d) List. The CWA requires the 303(d) List to be updated every two years.

TMDLs are numerical calculations of the maximum amount of a pollutant that a water body can assimilate and still meet water quality standards. A TMDL is the sum of the allowable loads of a single pollutant from all contributing point sources (waste load allocations or WLAs) and non-point sources (load allocations or LAs), background contribution, plus a margin of safety. Discharges from MS4s are point source discharges. The federal regulations (40 CFR 122.44(d)(1)(vii)(B)) require that NPDES permits incorporate water quality based effluent limitations (WQBELs) developed to protect a narrative water quality criterion, a numeric water quality criterion, or both, consistent with the assumptions and requirements of any available WLA for the discharge. Requirements of this Order implement the TMDLs established by the San Diego Water Board or USEPA as of the date this Order was amended in 2015. This Order establishes WQBELs consistent with the assumptions and requirements of all available TMDL WLAs assigned to discharges from the Copermittees’ MS4s.

6. Non-Storm Water Discharges. Pursuant to CWA section 402(p)(3)(B)(ii), this Order requires each Copermittee to effectively prohibit discharges of non-storm water into its MS4. Nevertheless, non-storm water discharges into and from the

MS4s continue to be reported to the San Diego Water Board by the Copermittees and other persons. Monitoring conducted by the Copermittees, as well as the 303(d) List, have identified dry weather, non-storm water discharges from the MS4s as a source of pollutants causing or contributing to receiving water quality impairments in the San Diego Region. The federal regulations (40 CFR 122.26(d)(2)(iv)(B)(1)) require the Copermittees to have a program to prevent illicit discharges to the MS4. The federal regulations, however, allow for specific categories of non-storm water discharges or flows to be addressed as illicit discharges only where such discharges are identified as sources of pollutants to waters of the U.S.

- 7. In-Stream Treatment Systems.** Pursuant to federal regulations (40 CFR 131.10(a)), in no case shall a state adopt waste transport or waste assimilation as a designated use for any waters of the U.S. Authorizing the construction of a runoff treatment facility within a water of the U.S., or using the water body itself as a treatment system or for conveyance to a treatment system, would be tantamount to accepting waste assimilation as an appropriate use for that water body. Runoff treatment must occur prior to the discharge of runoff into receiving waters. Treatment control best management practices (BMPs) must not be constructed in waters of the U.S. Construction, operation, and maintenance of a pollution control facility in a water body can negatively impact the physical, chemical, and biological integrity, as well as the beneficial uses, of the water body.

DISCHARGE CHARACTERISTICS AND RUNOFF MANAGEMENT

- 8. Point Source Discharges of Pollutants.** Discharges from the MS4s contain waste, as defined in the CWC, and pollutants that adversely affect the quality of the waters of the state. A discharge from an MS4 is a “discharge of pollutants from a point source” into waters of the U.S. as defined in the CWA. Storm water and non-storm water discharges from the MS4s contain pollutants that cause or threaten to cause a violation of surface water quality standards, as outlined in the Water Quality Control Plan for the San Diego Basin (Basin Plan). Storm water and non-storm water discharges from the MS4s are subject to the conditions and requirements established in the Basin Plan for point source discharges.
- 9. Potential Beneficial Use Impairment.** The discharge of pollutants and/or increased flows from MS4s may cause or threaten to cause the concentration of pollutants to exceed applicable receiving water quality objectives and impair or threaten to impair designated beneficial uses resulting in a condition of pollution, contamination, or nuisance.
- 10. Pollutants Generated by Land Development.** Land development has created and continues to create new sources of non-storm water discharges and pollutants in storm water discharges as human population density increases. This brings higher levels of car emissions, car maintenance wastes, municipal sewage, pesticides, household hazardous wastes, pet wastes, and trash. Pollutants from these sources are dumped or washed off the surface by non-storm water or storm water flows into

and from the MS4s. When development converts natural vegetated pervious ground cover to impervious surfaces such as paved highways, streets, rooftops, and parking lots, the natural absorption and infiltration abilities of the land are lost. Therefore, runoff leaving a developed area without BMPs that can maintain pre-development runoff conditions will contain greater pollutant loads and have significantly greater runoff volume, velocity, and peak flow rate than pre-development runoff conditions from the same area.

11. Runoff Discharges to Receiving Waters. The MS4s discharge runoff into lakes, drinking water reservoirs, rivers, streams, creeks, bays, estuaries, coastal lagoons, the Pacific Ocean, and tributaries thereto within the eleven hydrologic units comprising the San Diego Region. Historic and current development makes use of natural drainage patterns and features as conveyances for runoff. Rivers, streams and creeks in developed areas used in this manner are part of the Copermittees' MS4s regardless of whether they are natural, anthropogenic, or partially modified features. In these cases, the rivers, streams and creeks in the developed areas of the Copermittees' jurisdictions are both an MS4 and receiving water. Numerous receiving water bodies and water body segments have been designated as impaired by the San Diego Water Board pursuant to CWA section 303(d).

12. Pollutants in Runoff. The most common pollutants in runoff discharged from the MS4s include total suspended solids, sediment, pathogens (e.g., bacteria, viruses, protozoa), heavy metals (e.g., cadmium, copper, lead, and zinc), petroleum products and polynuclear aromatic hydrocarbons, synthetic organics (e.g., pesticides, herbicides, and PCBs), nutrients (e.g., nitrogen and phosphorus), oxygen-demanding substances (e.g., decaying vegetation, animal waste), detergents, and trash. As operators of the MS4s, the Copermittees cannot passively receive and discharge pollutants from third parties. By providing free and open access to an MS4 that conveys discharges to waters of the U.S., the operator essentially accepts responsibility for discharges into the MS4 that it does not prohibit or otherwise control. These discharges may cause or contribute to a condition of pollution or a violation of water quality standards.

13. Human Health and Aquatic Life Impairment. Pollutants in runoff discharged from the MS4s can threaten and adversely affect human health and aquatic organisms. Adverse responses of organisms to chemicals or physical agents in runoff range from physiological responses such as impaired reproduction or growth anomalies to mortality. Increased volume, velocity, rate, and duration of storm water runoff greatly accelerate the erosion of downstream natural channels. This alters stream channels and habitats and can adversely affect aquatic and terrestrial organisms.

14. Water Quality Effects. The Copermittees' water quality monitoring data submitted to date documents persistent exceedances of Basin Plan water quality objectives for runoff-related pollutants at various watershed monitoring stations. Persistent toxicity has also been observed at several watershed monitoring stations. In addition, bioassessment data indicate that the majority of the monitored receiving waters have

Poor to Very Poor Index of Biological Integrity (IBI) ratings. These findings indicate that runoff discharges are causing or contributing to water quality impairments, and are a leading cause of such impairments in the San Diego Region. Non-storm water discharges from the MS4s have been shown to contribute significant levels of pollutants and flow in arid, developed Southern California watersheds, and contribute significantly to exceedances of applicable receiving water quality objectives.

15. Non-Storm Water and Storm Water Discharges. Non-storm water discharges from the MS4s are not considered storm water discharges and therefore are not subject to the MEP standard of CWA section 402(p)(3)(B)(iii), which is explicitly for “Municipal ... *Stormwater Discharges* (emphasis added)” from the MS4s. Pursuant to CWA 402(p)(3)(B)(ii), non-storm water discharges into the MS4s must be effectively prohibited.

16. Best Management Practices. Waste and pollutants which are deposited and accumulate in MS4 drainage structures will be discharged from these structures to waters of the U.S. unless they are removed. These discharges may cause or contribute to, or threaten to cause or contribute to, a condition of pollution in receiving waters. For this reason, pollutants in storm water discharges from the MS4s can be and must be effectively reduced in runoff by the application of a combination of pollution prevention, source control, and treatment control BMPs. Pollution prevention is the reduction or elimination of pollutant generation at its source and is the best “first line of defense.” Source control BMPs (both structural and non-structural) minimize the contact between pollutants and runoff, therefore keeping pollutants onsite and out of receiving waters. Treatment control BMPs remove pollutants that have been mobilized by storm water or non-storm water flows.

17. BMP Implementation. Runoff needs to be addressed during the three major phases of development (planning, construction, and use) in order to reduce the discharge of storm water pollutants to the MEP, effectively prohibit non-storm water discharges, and protect receiving waters. Development which is not guided by water quality planning policies and principles can result in increased pollutant load discharges, flow rates, and flow durations which can negatively affect receiving water beneficial uses. Construction sites without adequate BMP implementation result in sediment runoff rates which greatly exceed natural erosion rates of undisturbed lands, causing siltation and impairment of receiving waters. Existing development can generate substantial pollutant loads which are discharged in runoff to receiving waters. Retrofitting areas of existing development with storm water pollutant control and hydromodification management BMPs is necessary to address storm water discharges from existing development that may cause or contribute to a condition of pollution or a violation of water quality standards.

18. Water Quality Improvements. Since 1990, the Copermittees have been developing and implementing programs and BMPs intended to effectively prohibit

non-storm water discharges to the MS4s and control pollutants in storm water discharges from the MS4s to receiving waters. As a result, several water body / pollutant combinations have been de-listed from the CWA Section 303(d) List, beach closures have been significantly reduced, and public awareness of water quality issues has increased. The 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~~ [October 16, 2012](#) and it became effective on ~~February 14, 2006~~ [August 19, 2013](#). The Ocean Plan is applicable, in its entirety, to point source discharges to the ocean. Requirements of this Order implement the Ocean Plan.

The Ocean Plan identifies the following beneficial uses of ocean waters of the state to be protected: Industrial water supply; water contact and non-contact recreation, including aesthetic enjoyment; navigation; commercial and sport fishing; mariculture; preservation and enhancement of designated Areas of Special Biological Significance; rare and endangered species; marine habitat; fish spawning and shellfish harvesting.

22. Sediment Quality Control Plan. On September 16, 2008, the State Water Board adopted the Water Quality Control Plan for Enclosed Bays and Estuaries – Part 1 Sediment Quality (Sediment Quality Control Plan). The Sediment Quality Control Plan became effective on August 25, 2009. The Sediment Quality Control Plan establishes: 1) narrative sediment quality objectives for benthic community protection from exposure to contaminants in sediment and to protect human health, and 2) a program of implementation using a multiple lines of evidence approach to interpret the narrative sediment quality objectives. Requirements of this Order implement the Sediment Quality Control Plan.

23. National Toxics Rule and California Toxics Rule. USEPA adopted the National Toxics Rule (NTR) on December 22, 1992, and later amended it on May 4, 1995 and November 9, 1999. About forty criteria in the NTR applied in California. On May 18, 2000, USEPA adopted the California Toxics Rule (CTR). The CTR promulgated new toxics criteria for California and, in addition, incorporated the previously adopted NTR criteria that were applicable in the state. The CTR was amended on February 13, 2001. These rules contain water quality criteria for priority pollutants.

24. Antidegradation Policy. This Order is in conformance with the federal Antidegradation Policy described in 40 CFR 131.12, and State Water Board Resolution No. 68-16, *Statement of Policy with Respect to Maintaining High Quality Waters in California*. Federal regulations at 40 CFR 131.12 require that the State water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy in State Water Board Resolution No. 68-16. State Water Board Resolution No. 68-16 incorporates the federal antidegradation policy where the federal policy applies under federal law. State Water Board Resolution No. 68-16 requires that existing quality of waters be maintained unless degradation is justified based on specific findings. The Basin Plan implements, and incorporates by reference, both the State and federal antidegradation policies. [The Fact Sheet of this Order contains additional discussion about antidegradation.](#)

25. Anti-Backsliding Requirements. Section 402(o)(2) of the CWA and federal regulations at 40 CFR 122.44(l) prohibit backsliding in NPDES permits. These anti-backsliding provisions require effluent limitations in a reissued permit to be as stringent as those in the previous permit, with some exceptions where limitations may be relaxed. All effluent limitations in this Order are at least as stringent as effluent limitations in the previous permits. [The Fact Sheet of this Order contains additional discussion about anti-backsliding.](#)

CONSIDERATIONS UNDER FEDERAL AND STATE LAW

26. Coastal Zone Act Reauthorization Amendments. Section 6217(g) of the Coastal Zone Act Reauthorization Amendments of 1990 (CZARA) requires coastal states with approved coastal zone management programs to address non-point source pollution impacting or threatening coastal water quality. CZARA addresses five sources of non-point source pollution: agriculture, silviculture, urban, marinas, and hydromodification. This Order addresses the management measures required for the urban category, with the exception of septic systems. The runoff management programs developed pursuant to this Order fulfills 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), ~~and~~ the Report of Waste Discharge submitted by the Orange County Copermittees prior to the expiration of Order No. R9-2009-0002 (CAS0108740), [and the Report of Waste Discharge submitted by the Riverside County Copermittees prior to the expiration of Order No. R9-2010-0016 \(CAS0108766\).](#) ~~The 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 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 Copermitees to reapply for continued coverage through submittal of a Report of Waste Discharge no later than 180 days prior to expiration of a currently effective permit. [The expiration date of this Order as shown in Table 3, and requirement to file a Report of Waste Discharge no later than 180 days prior to the expiration date of the Order, applies jointly to the San Diego County, Orange County, and Riverside County Copermitees.](#) ~~This requirement is set forth in the Riverside County Copermitees' currently effective permit at Provision K.2.c. The Riverside County MS4 Permit, Order No. R9-2010-0016 (NPDES No. CAS0108766) expires on November 10, 2015.~~

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

29. Regional Water Board Designation. The Cities of Laguna Hills, Laguna Woods, ~~and~~ Lake Forest, [Menifee, Murrieta, and Wildomar](#) are located partially within the jurisdictions of the California Regional Water Quality Control Board, Santa Ana Region (Santa Ana Water Board) and the San Diego Water Board and their discharges are subject to regulation by both Regional Water Boards. [CWC section 13228 provides a way to streamline the regulation of entities whose jurisdictions straddle the border of two or more Regions. CWC section 13228 is implemented in this Order at the request of these six cities and to ease the regulatory burden of municipalities that lie in both the San Diego Water Board's and the adjacent Santa Ana Water Board's jurisdiction. MS4 discharges from these municipalities are regulated by the San Diego Water Board and Santa Ana Water Board as follows:](#)

a. Pursuant to CWC section 13228, the Cities of Laguna Hills, Laguna Woods, and Lake Forest submitted written requests that one Regional Water Board be designated to regulate Phase I MS4 discharges for each of the Cities. The Santa Ana Water Board and the San Diego Water Board have entered into an agreement dated February 10, 2015, whereby the Cities of Laguna Woods and Laguna Hills are largely regulated by the San Diego Water Board under this Order, including those portions of the Cities of Laguna Woods and Laguna Hills not within the San Diego Water Board's jurisdiction, upon the effective date of this Order or Santa Ana Water Board Order No. R8-2015-0001, whichever is later. Similarly, the City of Lake Forest, including those portions of the City of Lake Forest within the San Diego Water Board's jurisdiction, is largely regulated by the Santa Ana Water Board under Order No. R8-2015-0001 (NPDES No. CAS618030) upon the later effective date of this Order or Order No. R8-2015-0001. The agreement provides that the City of Lake Forest is required to retain, and continue implementation of, its over-irrigation discharge prohibition in Title 15, Chapter 14.030, List (b) of the City Municipal Code for regulating storm water quality throughout its jurisdiction. The agreement also requires the City of Lake Forest to actively participate during development and implementation of the Aliso

Creek Watershed Management Area Water Quality Improvement Plan required pursuant to this Order. Each Regional Water Board retains the authority to enforce provisions of its Phase I MS4 permits issued to each city but compliance will be determined based upon the Phase I MS4 permit in which a particular city is regulated as a Copermittee under the terms of the agreement (Water Code section 13228 (b)). Under the terms of the agreement, any TMDL and associated MS4 permit requirements issued by the San Diego Water Board or the Santa Ana Water Board which include the Cities of Laguna Woods, Laguna Hills or Lake Forest as a responsible party, will be incorporated into the appropriate Phase I MS4 permit by reference. Enforcement of the applicable TMDL will remain with the Regional Water Board which has jurisdiction over the targeted impaired water body. Applicable TMDLs subject to the terms of the agreement include, but are not limited to, the Santa Ana Water Board's San Diego Creek/Newport Bay TMDL and the San Diego Water Board's Indicator Bacteria Project I Beaches and Creeks TMDL. The San Diego Water Board will periodically review the effectiveness of the agreement during each MS4 permit reissuance. Based on this periodic review the San Diego Water Board may terminate the agreement with Santa Ana Water Board or otherwise modify the agreement subject to the approval of the Santa Ana Water Board.

b. Pursuant to CWC section 13228, the Cities of Murrieta, Wildomar, and Menifee submitted written requests that one Regional Water Board be designated to regulate Phase I MS4 discharges for each of the Cities. The Santa Ana Water Board and the San Diego Water Board have entered into an agreement dated October 26, 2015, whereby the Cities of Murrieta and Wildomar are largely regulated by the San Diego Water Board under this Order, including those portions of the Cities of Murrieta and Wildomar not within the San Diego Water Board's jurisdiction, upon the effective date of this Order. Similarly, the City of Menifee is largely regulated by the Santa Ana Water Board under Order No. R8-2010-0033 as it may be amended or reissued, including those portions of the City of Menifee within the San Diego Water Board's jurisdiction, upon the effective date of this Order. The agreement also requires the City of Menifee to actively participate during development and implementation of the Santa Margarita River Watershed Management Area Water Quality Improvement Plan required pursuant to this Order. Each Regional Water Board retains the authority to enforce provisions of its Phase I MS4 permits issued to each city but compliance will be determined based upon the Phase I MS4 permit in which a particular city is regulated as a Copermittee under the terms of the agreement (Water Code section 13228 (b)). Under the terms of the agreement, any TMDL and associated MS4 permit requirements issued by the San Diego Water Board or the Santa Ana Water Board which include the Cities of Menifee, Murrieta, or Wildomar as a responsible party, will be incorporated into the appropriate Phase I MS4 permit by reference. Enforcement of the applicable TMDL will remain with the Regional Water Board which has jurisdiction over the targeted impaired water body. Applicable TMDLs subject to the terms of the agreement include, but are not limited to, the Santa Ana Water Board's Lake Elsinore/Canyon Lake Nutrient

TMDLs. The San Diego Water Board will periodically review the effectiveness of the agreement during each MS4 permit reissuance. Based on this periodic review the San Diego Water Board may terminate the agreement with Santa Ana Water Board or otherwise modify the agreement subject to the approval of the Santa Ana Water Board.

30. Integrated Report and Clean Water Act Section 303(d) List. The San Diego Water Board and State Water Board submit an Integrated Report to USEPA to comply with the reporting requirements of CWA sections 303(d), 305(b) and 314, which lists the attainment status of water quality standards for water bodies in the San Diego Region. USEPA issued its *Guidance for 2006 Assessment, Listing and Reporting Requirements Pursuant to Sections 303(d), 305(b) and 314 of the Clean Water Act* on July 29, 2005, which advocates the use of a five category approach for classifying the attainment status of water quality standards for water bodies in the Integrated Report. Water bodies included in Category 5 in the Integrated Report indicate at least one beneficial use is not being supported or is threatened, and a TMDL is required. Water bodies included in Category 5 in the Integrated Report are placed on the 303(d) List.

Water bodies with available data and/or information that indicate at least one beneficial use is not being supported or is threatened, but a TMDL is not required, are included in Category 4 in the Integrated Report. Impaired surface water bodies may be included in Category 4 if a TMDL has been adopted and approved (Category 4a); if other pollution control requirements required by a local, state or federal authority are stringent enough to implement applicable water quality standards within a reasonable period of time (Category 4b); or, if the failure to meet an applicable water quality standard is not caused by a pollutant, but caused by other types of pollution (Category 4c).

Implementation of the requirements of this Order may allow the San Diego Water Board to include surface waters impaired by discharges from the Copermittees' MS4s in Category 4 in the Integrated Report for consideration during the next 303(d) List submittal by the State to USEPA.

31. Economic Considerations. The California Supreme Court has ruled that although CWC section 13263 requires the State and Regional Water Boards (collectively Water Boards) to consider factors set forth in CWC section 13241 when issuing an NPDES permit, the Water Board may not consider the factors to justify imposing pollutant restrictions that are less stringent than the applicable federal regulations require. (*City of Burbank v. State Water Resources Control Bd.* (2005) 35 Cal.4th 613, 618, 626-627.) However, when pollutant restrictions in an NPDES permit are more stringent than federal law requires, CWC section 13263 requires that the Water Boards consider the factors described in CWC section 13241 as they apply to those specific restrictions.

As noted in the following finding, the San Diego Water Board finds that the requirements in this Order are not more stringent than the minimum federal

requirements. Therefore, a CWC section 13241 analysis is not required for permit requirements that implement the effective prohibition on the discharge of non-storm water into the MS4 or for controls to reduce the discharge of pollutants in storm water to the MEP, or other provisions that the San Diego Water Board has determined appropriate to control such pollutants, as those requirements are mandated by federal law. Notwithstanding the above, the San Diego Water Board has developed an economic analysis of the requirements in this Order. The economic analysis is provided in the Fact Sheet.

32. Unfunded Mandates. This Order does not constitute an unfunded local government mandate subject to subvention under Article XIII B, Section (6) of the California Constitution for several reasons, including, but not limited to, the following:

- a. This Order implements federally mandated requirements under CWA section 402 (33 USC section 1342(p)(3)(B)).
- b. The local agency Copermittees' obligations under this Order are similar to, and in many respects less stringent than, the obligations of non-governmental and new dischargers who are issued NPDES permits for storm water and non-storm water discharges.
- c. The local agency Copermittees have the authority to levy service charges, fees, or assessments sufficient to pay for compliance with this Order.
- d. The Copermittees have requested permit coverage in lieu of compliance with the complete prohibition against the discharge of pollutants contained in CWA section 301(a) (33 USC section 1311(a)) and in lieu of numeric restrictions on their MS4 discharges (i.e. effluent limitations).
- e. The local agencies' responsibility for preventing discharges of waste that can create conditions of pollution or nuisance from conveyances that are within their ownership or control under State law predates the enactment of Article XIII B, Section (6) of the California Constitution.
- f. The provisions of this Order to implement TMDLs are federal mandates. The CWA requires TMDLs to be developed for water bodies that do not meet federal water quality standards (33 USC section 1313(d)). Once the USEPA or a state develops a TMDL, federal law requires that permits must contain water quality based effluent limitations consistent with the assumptions and requirements of any applicable wasteload allocation (40 CFR 122.44(d)(1)(vii)(B)).

See the Fact Sheet for further discussion of unfunded mandates.

33. California Environmental Quality Act. The issuance of waste discharge requirements and an NPDES permit for the discharge of runoff from MS4s to waters of the U.S. is exempt from the requirement for preparation of environmental documents under the California Environmental Quality Act (CEQA) (Public Resources Code, Division 13, Chapter 3, section 21000 et seq.) in accordance with CWC section 13389.

STATE WATER BOARD DECISIONS

34. Compliance with Prohibitions and Limitations. The receiving water limitation language specified in this Order is consistent with language recommended by the USEPA and established in State Water Board Order WQ 99-05, *Own Motion Review of the Petition of Environmental Health Coalition to Review Waste Discharge Requirements Order No. 96-03, NPDES Permit No. CAS0108740*, adopted by the State Water Board on June 17, 1999. The receiving water limitation language in this Order requires storm water discharges from MS4s to not cause or contribute to a violation of water quality standards, which is to be achieved through an iterative approach requiring the implementation of improved and better-tailored BMPs over time. Implementation of the iterative approach to comply with receiving water limitations based on applicable water quality standards is necessary to ensure that storm water discharges from the MS4 will not ultimately cause or contribute to violations of water quality standards and will not create conditions of pollution, contamination, or nuisance.

[The San Diego, Orange County, and Riverside County Copermittees have asserted that the prohibitions and limitations may result in many years of noncompliance because years of technical efforts may ultimately be required to achieve compliance with the prohibitions and limitations, especially for wet weather discharges. To address this concern, this Order includes an option that allows a Copermittee to be deemed in compliance with the prohibitions and limitations where more than one permit term may be necessary to achieve full compliance with the prohibitions and limitations. One or more Copermittees within a Watershed Management Area can choose to implement this option.](#)

[An alternative compliance pathway option has been included in this Order consistent with the approach described in Order WQ 2015-0075, *In the Matter of Review of Order No. R4-2012-0175, NPDES Permit No. CAS004001, Waste Discharge Requirements for Municipal Separate Storm Sewer System \(MS4\) Discharges within the Coastal Watersheds of Los Angeles County, Except Those Discharges Originating from the City of Long Beach MS4*, adopted by the State Water Board on June 16, 2015. State Water Board Order WQ 2015-0075 directs the Regional Water Boards to consider a watershed-based planning and implementation approach to compliance with receiving water limitations when issuing Phase I MS4 permits going forward. Order WQ 2015-0075 included seven principles that the Regional Water Boards are expected to follow when incorporating an alternative compliance pathway into an MS4 permit. The Fact Sheet discusses the incorporation of the seven principles stipulated in State Water Board Order WQ 2015-0075 into the alternative compliance pathway option in this Order.](#)

35. Special Conditions for Areas of Special Biological Significance. On March 20, 2012, the State Water Board approved Resolution No. 2012-0012 approving a general exception to the Ocean Plan prohibition against discharges to Areas of Special Biological Significance (ASBS) for certain nonpoint source discharges and

NPDES permitted municipal storm water discharges (General Exception). On June 19, 2012, the State Water Board adopted Order No. 2012-0031, amending the General Exception to require pollutant reductions to be achieved within six years in accordance with ASBS Compliance Plans and ASBS Pollution Prevention Plans. The General Exception requires monitoring and testing of marine aquatic life and water quality in several ASBS to protect California's coastline during storms when rain water overflows into coastal waters. Specific terms, prohibitions, and special conditions were adopted to provide special protections for marine aquatic life and natural water quality in ASBS. The City of San Diego's municipal storm water discharges to the San Diego Marine Life Refuge in La Jolla, and the City of Laguna Beach's municipal storm water discharges to the Heisler Park ASBS are subject to the terms and conditions of the General Exception as amended. The Special Protections contained in Attachment B to the General Exception as amended are applicable to these discharges, and are hereby incorporated into Attachment A of this Order.

ADMINISTRATIVE FINDINGS

- 36. Executive Officer Delegation of Authority.** The San Diego Water Board by prior resolution has delegated all matters that may legally be delegated to its Executive Officer to act on its behalf pursuant to CWC section 13223. Therefore, the Executive Officer is authorized to act on the San Diego Water Board's behalf on any matter within this Order unless such delegation is unlawful under CWC section 13223 or this Order explicitly states otherwise.
- 37. Standard Provisions.** Standard Provisions, which apply to all NPDES permits in accordance with 40 CFR 122.41, and additional conditions applicable to specified categories of permits in accordance with 40 CFR 122.42, are provided in Attachment B to this Order.
- 38. Fact Sheet.** The Fact Sheet for this Order contains background information, regulatory and legal citations, references and additional explanatory information and data in support of the requirements of this Order. The Fact Sheet is hereby incorporated into this Order and constitutes part of the Findings of this Order.
- 39. Public Notice.** In accordance with State and federal laws and regulations, the San Diego Water Board notified the 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.
- 40. Public Hearings.** The San Diego Water Board held a public hearing on April 10 and 11, 2013, that was continued to May 8, 2013 and heard and considered all comments pertaining to the terms and conditions of this Order. The San Diego Water Board also held a public workshop on October 8, 2015, and a public hearing

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on February 11, 2015, and heard and considered all comments pertaining to the amendment of this Order through Order No. R9-2015-0001. [The San Diego Water Board also held a public hearing on November 18, 2015, and heard and considered all comments pertaining to the amendment of this Order through Order No. R9-2015-0100.](#) Details of these public hearings are provided in the Fact Sheet.

41. Effective Date. This Order serves as an NPDES permit pursuant to CWA section 402 or amendments thereto, and as to the San Diego County Copermittees listed in Table ~~2.1a~~, became effective fifty (50) days after the date of its adoption, and as to the Orange County Copermittees listed in Table ~~2.1b~~, ~~becomes~~ [became](#) effective on April 1, 2015, after Order [No. R9-2015-0001](#) ~~was~~ [is](#) adopted, [and as to the Riverside County Copermittees listed in Table 1c, became effective on January 7, 2016, after Order No. R9-2015-0100 was adopted.](#) provided that the Regional Administrator, USEPA, Region IX, does not object to this Order.

42. Review by the State Water Board. Any person aggrieved by this action of the San Diego Water Board may petition the State Water Board to review the action in accordance with CWC section 13320 and California Code of Regulations, title 23, sections 2050, and following. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date of this Order, except that if the thirtieth day following the date of this Order falls on a Saturday, Sunday or State holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found on the Internet at: http://www.waterboards.ca.gov/public_notices/petitions/water_quality or will be provided upon request.

THEREFORE, IT IS HEREBY ORDERED that the Copermitees, in order to meet the provisions contained in division 7 of the CWC (commencing with section 13000) and regulations adopted thereunder, and the provisions of the CWA and regulations adopted thereunder, must each comply with the requirements of this Order. This action in no way prevents the San Diego Water Board from taking enforcement action for past violations of the previous Order [applicable to the Copermitees](#). If any part of this Order is subject to a temporary stay of enforcement, unless otherwise specified, the Copermitees 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 Copermitees' MS4s, and reduce pollutants in storm water discharges from the Copermitees' MS4s to the MEP.

1. Discharge Prohibitions

- a. Discharges from MS4s in a manner causing, or threatening to cause, a condition of pollution, contamination, or nuisance in receiving waters of the state are prohibited.
- b. Non-storm water discharges into MS4s are to be effectively prohibited, through the implementation of Provision E.2, unless such discharges are authorized by a separate NPDES permit.
- c. Discharges from MS4s are subject to all waste discharge prohibitions in the Basin Plan, included in Attachment A to this Order.
- d. Storm water discharges from the City of San Diego's MS4 to the San Diego Marine Life Refuge in La Jolla, and the City of Laguna Beach's MS4 to the Heisler Park ASBS are authorized under this Order subject to the Special Protections contained in Attachment B to State Water Board Resolution No. 2012-0012, [as amended by State Water Board Resolution No. 2012-0031](#), applicable to these discharges, included in Attachment A to this Order. All other discharges from the Copermitees' 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;²
 - (4) Priority pollutant criteria promulgated by the USEPA through the following:
 - (a) National Toxics Rule (NTR)³ (promulgated on December 22, 1992 and amended on May 4, 1995), and
 - (b) California Toxics Rule (CTR).^{4,5}
- b. Discharges from MS4s composed of storm water runoff must not alter natural ocean water quality in an ASBS.

² State Water Board Resolution No. 68-16

³ 40 CFR 131.36

⁴ 65 Federal Register 31682-31719 (May 18, 2000), adding Section 131.38 to 40 CFR

⁵ 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.⁶

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,

⁶ 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"> - Aliso Creek - San Juan Creek - San Mateo Creek - Pacific Ocean - Heisler Park ASBS 	<ul style="list-style-type: none"> - City of Aliso Viejo - City of Dana Point - City of Laguna Beach - City of Laguna Hills¹ - City of Laguna Niguel - City of Laguna Woods¹ - City of Lake Forest² - City of Mission Viejo - City of Rancho Santa Margarita - City of San Clemente - City of San Juan Capistrano - County of Orange - Orange County Flood Control District
Santa Margarita (902.00)	Santa Margarita River	<ul style="list-style-type: none"> - Murrieta Creek - Temecula Creek - Santa Margarita River - Santa Margarita Lagoon - Pacific Ocean 	<ul style="list-style-type: none"> - City of Menifee³ - City of Murrieta^{3,4} - City of Temecula³ - City of Wildomar^{3,4} - County of Riverside³ - County of San Diego⁴ - Riverside County Flood Control and Water Conservation District³
San Luis Rey (903.00)	San Luis Rey River	<ul style="list-style-type: none"> - San Luis Rey River - San Luis Rey Estuary - Pacific Ocean 	<ul style="list-style-type: none"> - City of Oceanside - City of Vista - County of San Diego

Table B-1. Watershed Management Areas

Hydrologic Unit(s)	Watershed Management Area	Major Surface Water Bodies	Responsible Copermittees
Carlsbad (904.00)	Carlsbad	- Loma Alta Slough - Buena Vista Lagoon - Agua Hedionda Lagoon - Batiquitos Lagoon - San Elijo Lagoon - Pacific Ocean	- City of Carlsbad - City of Encinitas - City of Escondido - City of Oceanside - City of San Marcos - City of Solana Beach - City of Vista - County of San Diego
San Dieguito (905.00)	San Dieguito River	- San Dieguito River - San Dieguito Lagoon - Pacific Ocean	- City of Del Mar - City of Escondido - City of Poway - City of San Diego - City of Solana Beach - County of San Diego
Penasquitos (906.00)	Penasquitos	- Los Penasquitos Lagoon - Pacific Ocean	- City of Del Mar - City of Poway - City of San Diego - County of San Diego
	Mission Bay	- Mission Bay - Pacific Ocean - San Diego Marine Life Refuge ASBS	- City of San Diego
San Diego (907.00)	San Diego River	- San Diego River - Pacific Ocean	- City of El Cajon - City of La Mesa - City of San Diego - City of Santee - County of San Diego
Pueblo San Diego (908.00) Sweetwater (909.00) Otay (910.00)	San Diego Bay	- Sweetwater River - Otay River - San Diego Bay - Pacific Ocean	- City of Chula Vista - City of Coronado - City of Imperial Beach - City of La Mesa - City of Lemon Grove - City of National City - City of San Diego - County of San Diego - San Diego County Regional Airport Authority - San Diego Unified Port District
Tijuana (911.00)	Tijuana River	- Tijuana River - Tijuana Estuary - Pacific Ocean	- City of Imperial Beach - City of San Diego - County of San Diego

Notes:

1. By agreement dated February 10, 2015, pursuant to Water Code section 13228, the Phase I MS4 discharges within the jurisdiction of the City of Laguna Hills and the City of Laguna Woods located in the Santa Ana Region are regulated by San Diego Water Board Order No. R9-2013-0001 as amended by Order No. R9-2015-0001, upon the later effective date of Order No. R9-2015-0001 or Santa Ana Water Board Tentative Order No. R8-2015-0001. The City of Laguna Hills and Laguna Woods must also comply with the requirements of the San Diego Creek/Newport Bay TMDL in section XVIII of Santa Ana Water Board Order No. R8-2015-0001.
2. By agreement dated February 10, 2015, pursuant to Water Code section 13228, Phase I MS4 discharges within the City of Lake Forest located within the San Diego Water Board Region are regulated by the Santa Ana Water Board Order No. R8-2015-0001 (NPDES No. CAS618030) upon the later effective date of this Order or Santa Ana Water Board Tentative Order No. R8-2015-0001. In accordance with the terms of the agreement between the San Diego Water Board and the Santa Ana Water Board, the City of Lake Forest must implement the requirements of the Bacteria TMDL in Attachment E of this Order, participate in preparation and implementation of the Water Quality Improvement Plan for the Aliso Creek Watershed Management Area as described in Provision B of this Order and continue implementation of its over-irrigation discharge prohibition in its City Ordinance, Title 15, Chapter 15, section 14.030, List (b).
3. [By agreement dated October 26, 2015, pursuant to Water Code section 13228, Phase I MS4 discharges within the City of Menifee located within the San Diego Water Board Region are regulated by the Santa Ana Water Board Order No. R8-2010-0033 as it may be amended or reissued \(NPDES No. CAS618033\) upon the later effective date of this Order. In accordance with the terms of the agreement between the San Diego Water Board and the Santa Ana Water Board, the City of Menifee must participate in preparation and implementation of the Water Quality Improvement Plan for the Santa Margarita River Watershed Management Area as described in Provision B of this Order. 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, upon further amendment of this Order.](#)
4. [By agreement dated October 26, 2015, pursuant to Water Code section 13228, the Phase I MS4 discharges within the jurisdiction of the City of Murrieta and the City of Wildomar located in the Santa Ana Region are regulated by San Diego Water Board Order No. R9-2013-0001 as amended by Orders No. R9-2015-0001 and R9-2015-0100. The City of Murrieta and City of Wildomar must also comply with the requirements of the Lake Elsinore/Canyon Lake Nutrient TMDLs in section VI.D.2 of Santa Ana Water Board Order No. R8-2010-0033, or corresponding section as it may be amended or reissued. The 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, marine protected areas, wetlands defined by the State or U.S. Fish and Wildlife Service's National Wetlands Inventory as wetlands, waters having the Preservation of Biological Habitats of Special Significance (BIOL) beneficial use designation, and receiving waters identified as ASBS subject to the provisions of Attachment B to State Water Board Resolution No. 2012-0012 (see Attachment A);
- (4) The receiving water limitations of Provision A.2;
- (5) Known historical versus current physical, chemical, and biological water quality conditions;
- (6) Available, relevant, and appropriately collected and analyzed physical, chemical, and biological receiving water monitoring data, including, but not limited to, data describing:
 - (a) Chemical constituents,
 - (b) Water quality parameters (i.e. pH, temperature, conductivity, etc.),
 - (c) Toxicity Identification Evaluations for both receiving water column and sediment,
 - (d) Trash impacts,

- (e) Bioassessments, and
- (f) Physical habitat;
- (7) Available evidence of erosional impacts in receiving waters due to accelerated flows (i.e. hydromodification);
- (8) Available evidence of adverse impacts to the chemical, physical, and biological integrity of receiving waters; and
- (9) The potential improvements in the overall condition of the Watershed Management Area that can be achieved.

b. ASSESSMENT OF IMPACTS FROM MS4 DISCHARGES

The Copermittees must consider the following, at a minimum, to identify the potential impacts to receiving waters that may be caused or contributed to by discharges from the Copermittees' MS4s:

- (1) The discharge prohibitions of Provision A.1 and effluent limitations of Provision A.3; and
- (2) Available, relevant, and appropriately collected and analyzed storm water and non-storm water monitoring data from the Copermittees' MS4 outfalls;
- (3) Locations of each Copermittee's MS4 outfalls that discharge to receiving waters;
- (4) Locations of MS4 outfalls that are known to persistently discharge non-storm water to receiving waters likely causing or contributing to impacts on receiving water beneficial uses;
- (5) Locations of MS4 outfalls that are known to discharge pollutants in storm water causing or contributing to impacts on receiving water beneficial uses; and
- (6) The potential improvements in the quality of discharges from the MS4 that can be achieved.

c. IDENTIFICATION OF PRIORITY WATER QUALITY CONDITIONS

- (1) The Copermittees must use the information gathered for Provisions B.2.a and B.2.b to develop a list of priority water quality conditions as pollutants, stressors and/or receiving water conditions that are the highest threat to receiving water quality or that most adversely affect the quality of receiving waters. The list must include the following information for each priority water quality condition:

- (a) The beneficial use(s) associated with the priority water quality condition;
 - (b) The geographic extent of the priority water quality condition within the Watershed Management Area, if known;
 - (c) The temporal extent of the priority water quality condition (e.g., dry weather and/or wet weather);
 - (d) The Copermittees with MS4s discharges that may cause or contribute to the priority water quality condition; and
 - (e) An assessment of the adequacy of and data gaps in the monitoring data to characterize the conditions causing or contributing to the priority water quality condition, including a consideration of spatial and temporal variation.
- (2) The Copermittees must identify the highest priority water quality conditions to be addressed by the Water Quality Improvement Plan, and provide a rationale for selecting a subset of the water quality conditions identified pursuant to Provision B.2.c.(1) as the highest priorities.

d. IDENTIFICATION OF MS4 SOURCES OF POLLUTANTS AND/OR STRESSORS

The Copermittees must identify and prioritize known and suspected sources of storm water and non-storm water pollutants and/or other stressors associated with MS4 discharges that cause or contribute to the highest priority water quality conditions identified under Provision B.2.c. The identification of known and suspected sources of pollutants and/or stressors that cause or contribute to the highest priority water quality conditions as identified for Provision B.2.c must consider the following:

- (1) Pollutant generating facilities, areas, and/or activities within the Watershed Management Area, including:
 - (a) Each Copermittee's inventory of construction sites, commercial facilities or areas, industrial facilities, municipal facilities, and residential areas,
 - (b) Publicly owned parks and/or recreational areas,
 - (c) Open space areas,
 - (d) All currently operating or closed municipal landfills or other treatment, storage or disposal facilities for municipal waste, and

- (e) Areas not within the Copermittees' jurisdictions (e.g., Phase II MS4s, tribal lands, state lands, federal lands) that are known or suspected to be discharging to the Copermittees' MS4s;
- (2) Locations of the Copermittees' MS4s, including the following:
- (a) All MS4 outfalls that discharge to receiving waters, and
 - (b) Locations of major structural controls for storm water and non-storm water (e.g., retention basins, detention basins, major infiltration devices, etc.);
- (3) Other known and suspected sources of non-storm water or pollutants in storm water discharges to receiving waters within the Watershed Management Area, including the following:
- (a) Other MS4 outfalls (e.g., Phase II Municipal and Caltrans),
 - (b) Other NPDES permitted discharges,
 - (c) Any other discharges that may be considered point sources (e.g., private outfalls), and
 - (d) Any other discharges that may be considered non-point sources (e.g., agriculture, wildlife or other natural sources);
- (4) Review of available data, including but not limited to:
- (a) Findings from the Copermittees' illicit discharge detection and elimination programs,
 - (b) Findings from the Copermittees' MS4 outfall discharge monitoring,
 - (c) Findings from the Copermittees' receiving water monitoring,
 - (d) Findings from the Copermittees' MS4 outfall discharge and receiving water assessments, and
 - (e) Other available, relevant, and appropriately collected data, information, or studies related to pollutant sources and/or stressors that contribute to the highest priority water quality conditions as identified for Provision B.2.c.
- (5) The adequacy of the available data to identify and prioritize sources and/or stressors associated with MS4 discharges that cause or contribute to the highest priority water quality conditions identified under Provision B.2.c.

e. IDENTIFICATION OF POTENTIAL WATER QUALITY IMPROVEMENT STRATEGIES

The Copermittees must evaluate the findings identified under Provisions B.2.a-d, and identify potential strategies that can result in improvements to water quality in MS4 discharges and/or receiving waters within the Watershed Management Area. Potential water quality improvement strategies that may be implemented within the Watershed Management Area must include the following:

- (1) Structural BMPs, non-structural BMPs, incentives, or programs that can potentially be implemented to address the highest priority water quality conditions identified under Provision B.2.c, or MS4 sources of pollutants or stressors identified under Provision B.2.d,
- (2) Retrofitting projects in areas of existing development within the Watershed Management Area that can potentially be implemented to reduce MS4 sources of pollutants or stressors identified under Provision B.2.d causing or contributing to the highest priority water quality conditions identified under Provision B.2.c, and
- (3) Stream, channel, and/or habitat rehabilitation projects within the Watershed Management Area that can potentially be implemented to protect and/or improve conditions in receiving waters from MS4 pollutants and/or stressors identified under Provision B.2.d causing or contributing to the highest priority water quality conditions identified under Provision B.2.c.

3. Water Quality Improvement Goals, Strategies and Schedules

The Copermittees must identify and develop specific water quality improvement goals and strategies to address the highest priority water quality conditions identified within a Watershed Management Area. The water quality improvement goals and strategies must address the highest priority water quality conditions by effectively prohibiting non-storm water discharges to the MS4, reducing pollutants in storm water discharges from the MS4 to the MEP, and protecting the water quality standards of receiving waters.

a. WATER QUALITY IMPROVEMENT GOALS AND SCHEDULES

(1) Numeric Goals

The Copermittees must develop and incorporate numeric goals⁷ into the

⁷ Interim and final numeric goals may take a variety of forms such as TMDL established WQBELs, action levels, pollutant concentration, load reductions, number of impaired water bodies delisted from the List of Water Quality Impaired Segments, Index of Biotic Integrity (IBI) scores, or other appropriate metrics. Interim and final numeric goals are not necessarily limited to one criterion or indicator, but may include multiple criteria and/or indicators. Except for TMDL established WQBELs, interim and final numeric goals and corresponding schedules may be revised through the adaptive management process under Provision B.5.

Water Quality Improvement Plan. 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 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 acceptance of the Water Quality Improvement Plan, the shortest practicable time in which each jurisdictional strategy will be initiated after acceptance of the Water Quality Improvement Plan;
 - (iii) For each optional jurisdictional strategy identified pursuant to Provision B.3.b.(1)(b), a realistic assessment of the shortest practicable time required to:
 - [a] Secure the resources needed to fund the optional jurisdictional strategy, and
 - [b] Procure the resources, materials, labor, and applicable permits necessary to initiate implementation of the optional jurisdictional strategy;
 - (iv) If each jurisdictional strategy identified pursuant to Provisions B.3.b.(1)(a)-(b) is expected to be continuously implemented (e.g. inspections) or completed within a schedule (e.g. construction of structural BMP); and
 - (v) If a jurisdictional strategy identified pursuant to Provisions B.3.b.(1)(a)-(b) is expected to be completed within a schedule, the anticipated time to complete based on a realistic assessment of the shortest practicable time required.

- (b) The Copermittees in the Watershed Management Area must develop schedules for the regional or multi-jurisdictional strategies identified pursuant to Provision B.3.b.(2). Each schedule must specify:
- (i) A realistic assessment of the shortest practicable time to:
 - [a] Secure the resources needed to fund the optional regional or multi-jurisdictional strategy, and
 - [b] Procure the resources, materials, labor, and permits necessary to initiate the implementation of the optional regional or multi-jurisdictional strategy;
 - (ii) If each regional or multi-jurisdictional strategy identified pursuant to Provision B.3.b.(2) is expected to be continuously implemented (e.g. inspections) or completed within a schedule (e.g. construction of structural BMP); and
 - (iii) If a regional or multi-jurisdictional strategy and/or activity identified pursuant to Provisions B.3.b.(2) is expected to be completed within a schedule, the anticipated time to complete based on a realistic assessment of the shortest practicable time required.

(4) Optional Watershed Management Area Analysis

- (a) For each Watershed Management Area, the Copermittees have the option to perform a Watershed Management Area Analysis for the purpose of developing watershed-specific requirements for structural BMP implementation, as described in Provision E.3.c.(3). The Watershed Management Area Analysis must include GIS layers (maps) as output. The analysis must include the following information, to the extent it is available, in order to characterize the Watershed Management Areas:
- (i) A description of dominant hydrologic processes, such as areas where infiltration or overland flow likely dominates;
 - (ii) A description of existing streams in the watershed, including bed material and composition, and if they are perennial or ephemeral;
 - (iii) Current and anticipated future land uses;
 - (iv) Potential coarse sediment yield areas; and
 - (v) Locations of existing flood control structures and channel structures, such as stream armoring, constrictions, grade control structures, and hydromodification or flood management basins.
- (b) The Copermittees must use the results of the Watershed Management Area Analysis performed pursuant to Provision B.3.b.(4)(a) to identify and compile a list of candidate projects that could potentially be used as

alternative compliance options for Priority Development Projects, to be implemented in lieu of onsite structural BMP performance requirements described in Provisions E.3.c.(1) and E.3.c.(2)(a). Specifically, the Copermitees 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 Copermitees must use the results of the Watershed Management Area Analysis performed pursuant to Provision B.3.b.(4)(a) to identify areas within the Watershed Management Area where it is appropriate to allow Priority Development Projects to be exempt from the hydromodification management BMP performance requirements described in Provision E.3.c.(2), including supporting rationale.

C. PROHIBITIONS AND LIMITATIONS COMPLIANCE OPTION

Each Copermitee has the option to utilize the implementation of the Water Quality Improvement Plan to demonstrate compliance with the requirements of Provisions A.1.a, A.1.c, A.1.d, A.2, and A.3.b within a Watershed Management Area subject to the following conditions:

(1) A Copermitee is eligible to be deemed in compliance with Provisions A.1.a, A.1.c, A.1.d, A.2, and A.3.b within a Watershed Management Area when the Water Quality Improvement Plan for a Watershed Management Area incorporates the following:

(a) Numeric goals, water quality improvement strategies, and schedules developed pursuant to Provisions B.3.a and B.3.b that include the following:

- (i) Interim and final WQBELs established by the TMDLs in Attachment E to this Order applicable to the Copermitee's jurisdiction within the Watershed Management Area; AND
- (ii) Interim and final numeric goals for any ASBS subject to the provisions of Attachment B to State Water Board Resolution No. 2012-0012

(included as Attachment A to this Order) applicable to the Copermittee's jurisdiction within the Watershed Management Area; AND

- (iii) Interim and final numeric goals applicable to the Copermittee's MS4 discharges within the Watershed Management Area expressed as numeric concentration-based or load-based goals for all pollutants and conditions listed on the Clean Water Act Section 303(d) List of Water Quality Impaired Segments⁸ for the receiving waters in the Watershed Management Area that do not have a TMDL incorporated into Attachment E to this Order; AND/OR
- (iv) Interim and final numeric goals for pollutants and conditions identified as receiving water priorities in the Water Quality Improvement Plan that will result in chemical, physical, and biological conditions protective of the beneficial uses of the receiving waters impacted by the Copermittee's MS4 discharges within the Watershed Management Area; AND
- (v) The Copermittee has the option to include interim and final numeric goals applicable to the Copermittee's MS4 discharges and/or receiving waters within the Watershed Management Area for any pollutants or conditions in addition to those described in Provisions B.3.c.(1)(a)(i)-(iv); AND
- (vi) Schedules for achieving each final numeric goal that reflect a realistic assessment of the shortest practicable time needed for achievement; AND
- (vii) For each final numeric goal developed pursuant to Provisions B.3.a and B.3.c.(1)(a)(i)-(v), annual milestones⁹ and the dates for their achievement must be included within each of the next five (5) Water Quality Improvement Plan Annual Report reporting periods, or until the final numeric goal is achieved. Annual milestones and the dates for their achievement for the 5 Water Quality Improvement Plan Annual Report reporting periods of the next permit term, or until the final numeric goal is achieved, must be provided as part of the Report of Waste Discharge required pursuant to Provision F.5.

(b) An analysis that meets all of the following conditions:

- (i) The analysis, with clearly stated assumptions included in the analysis, must quantitatively demonstrate that the implementation of

⁸ 2010 and subsequent 303(d) Lists

⁹ Annual milestones for each final numeric goal must be clearly and directly linked to, or demonstrate progress is being made toward the achievement of the final numeric goal. The annual milestones may consist of water quality improvement strategy implementation phases, interim numeric goals, and other acceptable metrics. The annual milestones may address multiple numeric goals and/or multiple water bodies, as applicable and appropriate.

- the water quality improvement strategies required under Provision B.3.b will achieve the final numeric goals within the schedules developed pursuant to Provisions B.3.a and B.3.c.(1)(a).
- (ii) The development of the analysis must include a public participation process which allows the public to review and provide comments on the analysis methodology utilized and the assumptions included in the analysis. Public comments and responses must be included as part of the analysis documentation included in the Water Quality Improvement Plan.
- (iii) The analysis may be performed by an individual Copermittee or jointly by two or more Copermittees choosing to utilize this compliance option for their jurisdictions within the Watershed Management Area.
- (iv) The analysis must be updated as part of the iterative approach and adaptive management process required under Provisions B.5.a-b.
- (c) Specific monitoring and assessments required pursuant to Provision B.4.a that will be performed by the Copermittee capable of 1) demonstrating whether the implementation of the water quality improvement strategies are making progress toward achieving the numeric goals in accordance with the established schedules developed pursuant to Provisions B.3.a and B.3.c.(1)(a), and 2) determining whether interim and final numeric goals have been achieved. The specific monitoring and assessments must be updated as part of the iterative approach and adaptive management process required under Provision B.5.c.
- (d) Documentation showing that the numeric goals, schedules, and annual milestones proposed pursuant to Provision B.3.c.(1)(a), the analysis performed pursuant to Provision B.3.c.(1)(b), and the specific monitoring and assessments proposed pursuant to Provision B.3.c.(1)(c) have been reviewed by the Water Quality Improvement Consultation Panel (see Provision F.1.a.(1)(b)). Updates must be reviewed by the Water Quality Improvement Consultation Panel for any recommendations.
- (2) Each Copermittee that voluntarily completes the requirements of Provision B.3.c.(1) is deemed in compliance with Provisions A.1.a, A.1.c, A.1.d, A.2, and A.3.b for the pollutants and conditions for which numeric goals are developed when the Water Quality Improvement Plan, incorporating the requirements of Provision B.3.c.(1), is accepted by the San Diego Water Board pursuant to Provision F.1.b or F.2.c. The Copermittee is deemed in compliance during the term of this Order as long as:
- (a) The Copermittee is implementing the water quality improvement strategies within its jurisdiction developed pursuant to Provision B.3.b.(1) and in

compliance with the schedules for implementing the strategies established pursuant to Provisions B.3.b.(3)(a) and B.3.c.(1)(a)(vii); AND

(b) The Copermittee is performing the monitoring and assessments developed pursuant to Provision B.3.c.(1)(c); AND

(c) The Copermittee's assessments in the Water Quality Improvement Plan Annual Report submitted pursuant to Provision F.3.b.(3) support a conclusion that: 1) the Copermittee is in compliance with the annual milestones and dates for achievement developed pursuant to Provision B.3.c.(1)(a)(vii), OR 2) the Copermittee has provided acceptable rationale and recommends appropriate modifications to the interim numeric goals, and/or water quality improvement strategies, and/or schedules to improve the rate of progress toward achieving the final numeric goals developed pursuant to Provisions B.3.a and B.3.c.(1)(a)(i)-(vi); AND

(d) Any proposed modifications to the numeric goals, strategies, schedules, and/or annual milestones are accepted by the San Diego Water Board as part of subsequent updates to the Water Quality Improvement Plan pursuant to Provision F.2.c;¹⁰ AND

(e) The Copermittee is implementing the requirements of Provision A.4.a.

4. Water Quality Improvement Monitoring and Assessment Program

- a. The Copermittees in each Watershed Management Area must develop and incorporate an integrated monitoring and assessment program into the Water Quality Improvement Plan that assesses: 1) the progress toward achieving the numeric goals and schedules, 2) the progress toward addressing the highest priority water quality conditions for each Watershed Management Area, and 3) each Copermittee's overall efforts to implement the Water Quality Improvement Plan.
- b. The monitoring and assessment program must incorporate the monitoring and assessment requirements of Provision D, which may allow the Copermittees to modify the program to be consistent with and focus on the highest priority water quality conditions for each Watershed Management Area.
- c. For Watershed Management Areas with applicable TMDLs, the monitoring and assessment program must incorporate the specific monitoring and assessment requirements of Attachment E.

¹⁰ A request for proposed changes to the Water Quality Improvement Plan does not stay any permit condition.

- d. For Watershed Management Areas with any ASBS, the water quality monitoring and assessment program must incorporate the monitoring requirements of Attachment B to State Water Board Resolution No. 2012-0012 (see Attachment A).

5. Iterative Approach and Adaptive Management Process

The Copermittees in each Watershed Management Area must implement the iterative approach pursuant to Provision A.4 to adapt the Water Quality Improvement Plan, monitoring and assessment program, and jurisdictional runoff management programs to become more effective toward achieving compliance with Provisions A.1.a, A.1.c and A.2.a, and must include the following:

a. RE-EVALUATION OF PRIORITY WATER QUALITY CONDITIONS

The priority water quality conditions and potential water quality improvement strategies included in the Water Quality Improvement Plan pursuant to Provisions B.2.c and B.2.e may be re-evaluated by the Copermittees as needed during the term of this Order as part of the Water Quality Improvement Plan Annual Report. Re-evaluation and recommendations for modifications to the priority water quality conditions and potential water quality improvement strategies must be provided in the Report of Waste Discharge, and must consider the following:

- (1) Achieving the outcome of improved water quality in MS4 discharges and receiving waters through implementation of the water quality improvement strategies identified in the Water Quality Improvement Plan;
- (2) New information developed when the requirements of Provisions B.2.a-c have been re-evaluated;
- (3) Spatial and temporal accuracy of monitoring data collected to inform prioritization of water quality conditions and implementation strategies to address the highest priority water quality conditions;
- (4) Availability of new information and data from sources other than the jurisdictional runoff management programs within the Watershed Management Area that informs the effectiveness of the actions implemented by the Copermittees;
- (5) San Diego Water Board recommendations; and
- (6) Recommendations for modifications solicited through a public participation process.

PROVISION B: WATER QUALITY IMPROVEMENT PLANS

- B.4. Water Quality Improvement Monitoring and Assessment Program
B.5. Iterative Approach and Adaptive Management Process

b. ADAPTATION OF GOALS, STRATEGIES AND SCHEDULES

The water quality improvement goals, strategies and schedules, included in the Water Quality Improvement Plan pursuant to Provisions B.3, must be re-evaluated and adapted as new information becomes available to result in more effective and efficient measures to address the highest priority water quality conditions identified pursuant to Provision B.2.c. Re-evaluation of and modifications to the water quality improvement goals, strategies and schedules must be provided in the Water Quality Improvement Plan Annual Report, and must consider the following:

- (1) Modifications to the priority water quality conditions based on Provision B.5.a;
- (2) Progress toward achieving interim and final numeric goals in receiving waters and MS4 discharges for the highest priority water quality conditions in the Watershed Management Area,
- (3) Progress toward achieving outcomes according to established schedules;
- (4) New policies or regulations that may affect identified numeric goals;
- (5) Measurable or demonstrable reductions of non-storm water discharges to and from each Copermittee's MS4;
- (6) Measurable or demonstrable reductions of pollutants in storm water discharges from each Copermittee's MS4 to the MEP;
- (7) New information developed when the requirements of Provisions B.2.b and B.2.d have been re-evaluated;
- (8) Efficiency in implementing the Water Quality Improvement Plan;
- (9) San Diego Water Board recommendations; and
- (10) Recommendations for modifications solicited through a public participation process.

c. ADAPTATION OF MONITORING AND ASSESSMENT PROGRAM

The water quality improvement monitoring and assessment program, included in the Water Quality Improvement Plan pursuant to Provision B.4, must be re-evaluated and adapted when new information becomes available. Re-evaluation and recommendations for modifications to the monitoring and assessment program, pursuant to the requirements of Provision D, may be provided in the Water Quality Improvement Plan Annual Report, but must be provided in the Report of Waste Discharge.

d. ADAPTATION OF PROHIBITIONS AND LIMITATIONS COMPLIANCE OPTION

If a Copermittee has implemented the Prohibitions and Limitations Compliance Option allowed to be included in the Water Quality Improvement Plan pursuant to Provision B.3.c, the Copermittee must re-evaluate and adapt the numeric goals, water quality improvement strategies, schedules, and annual milestones required under Provision B.3.c.(1) when significant new information becomes available, or with the Report of Waste Discharge required pursuant to Provision F.5. Significant changes in the numeric goals, water quality improvement strategies, schedules, or annual milestones requires an update to the analysis required under Provision B.3.c.(2).

6. Water Quality Improvement Plan Submittal, Updates, and Implementation

- a. The Copermittees must submit and commence implementation of the Water Quality Improvement Plans in accordance with the requirements of Provision F.1.
- b. The Copermittees must submit proposed updates to the Water Quality Improvement Plan for acceptance by the San Diego Water Board Executive Officer in accordance with the requirements of Provision F.2.c.

C. ACTION LEVELS

The purpose of this provision is for the Copermittees to incorporate numeric action levels in the Water Quality Improvement Plans. The goal of the action levels is to guide Water Quality Improvement Plan implementation efforts and measure progress towards the protection of water quality and designated beneficial uses of waters of the state from adverse impacts caused or contributed to by MS4 discharges. This goal will be accomplished through monitoring and assessing the quality of the MS4 discharges during the implementation of the Water Quality Improvement Plans.

1. Non-Storm Water Action Levels¹¹

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.2.¹²

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 ¹	OP
Fecal Coliform	MPN/100 ml	200 ²	-	400	OP
<i>Enterococci</i>	MPN/100 ml	35	-	104 ³	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.”

¹¹ 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.

¹² 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 ¹	-	400 ²	BP
<i>Enterococci</i>	MPN/100 ml	35	-	104 ³	BP
Priority Pollutants	µg/L	See Table C-3			

Abbreviations/Acronyms:

AMAL – average monthly action level
 OP – Ocean Plan water quality objective
 NTU – Nephelometric Turbidity Units
 µg/L – micrograms per liter

MDAL – maximum daily action level
 BP – Basin Plan water quality objective
 MPN/100 ml – most probable number per 100 milliliters

Notes:

1. Based on a minimum of not less than five samples for any 30-day period.
2. The NAL is reached if more than 10 percent of total samples exceed 400 MPN per 100 ml during any 30 day period.
3. This value has been set to the Basin Plan water quality objective for saltwater “designated beach areas” and is not applicable to water bodies that are not designated with the water contact recreation (REC-1) beneficial use.

Table C-3. Non-Storm Water Action Levels for Priority Pollutants

Parameter	Units	Freshwater (CTR)		Saltwater (CTR)	
		MDAL	AMAL	MDAL	AMAL
Cadmium	µg/L	**	**	16	8
Copper	µg/L	*	*	5.8	2.9
Chromium III	µg/L	**	**	-	-
Chromium VI	µg/L	16	8.1	83	41
Lead	µg/L	*	*	14	2.9
Nickel	µg/L	**	**	14	6.8
Silver	µg/L	*	*	2.2	1.1
Zinc	µg/L	*	*	95	47

Abbreviations/Acronyms:

CTR – California Toxic Rule
 AMAL – average monthly action level
 µg/L – micrograms per liter
 MDAL – maximum daily action level

Notes:

- * Action levels developed on a case-by-case basis (see below)
- ** Action levels developed on a case-by-case basis (see below), but calculated criteria are not to exceed Maximum Contaminant Levels (MCLs) under the California Code of Regulations, Title 22, Division 4, Chapter 15, Article 4, Section 64431

The Cadmium, Copper, Chromium (III), Lead, Nickel, Silver and Zinc NALs for MS4 discharges to freshwater receiving waters will be developed on a case-by-case basis based on site-specific water quality data (receiving water hardness). For these priority pollutants, refer to 40 CFR 131.38(b)(2).

(3) Non-Storm Water Discharges from MS4s to Inland Surface Waters

Table C-4. Non-Storm Water Action Levels for Discharges from MS4s to Inland Surface Waters

Parameter	Units	AMAL	MDAL	Instantaneous Maximum	Basis
Dissolved Oxygen	mg/L	Not less than 5.0 in WARM waters and not less than 6.0 in COLD waters			BP
Turbidity	NTU	-	20	See MDAL	BP
pH	Units	Within limit of 6.5 to 8.5 at all times			BP
Fecal Coliform	MPN/100 ml	200 ¹	-	400 ²	BP
<i>Enterococci</i>	MPN/100 ml	33	-	61 ³	BP
Total Nitrogen	mg/L	-	1.0	See MDAL	BP
Total Phosphorus	mg/L	-	0.1	See MDAL	BP
MBAS	mg/L	-	0.5	See MDAL	BP
Iron	mg/L	-	0.3	See MDAL	BP
Manganese	mg/L	-	0.05	See MDAL	BP
Priority Pollutants	µg/L	See Table C-3			

Abbreviations/Acronyms:

AMAL – average monthly action level
 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 Copermitees; or
- (2) Applicable numeric WQBELs required to meet the WLAs established for the TMDLs in Attachment E to this Order.

- c. For the NALs incorporated into the Water Quality Improvement Plan, the Copermitees may develop and incorporate secondary NALs specific to the Watershed Management Area at levels greater than the NALs required by Provisions C.1.a and C.1.b which can be utilized to further refine the prioritization and assessment of water quality improvement strategies for effectively prohibiting non-storm water discharges to the MS4s, as well as the detection and

elimination of non-storm water and illicit discharges to and from the MS4. The secondary NALs may be developed using an approach acceptable to the San Diego Water Board.

- d. Dry weather monitoring data from MS4 outfalls collected in accordance with Provision D.2.b may be utilized to develop or revise NALs based on watershed-specific data, subject to San Diego Water Board Executive Officer approval.

2. Storm Water Action Levels¹³

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).¹⁴

- 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.

¹³ 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.

¹⁴ The Copermittees may utilize SALs or other benchmarks currently established by the Copermittees as interim SALs until the Water Quality Improvement Plans are accepted by the San Diego Water Board Executive Officer.

- b.** If not identified in Provision C.2.a, SALs must be identified, developed and incorporated in the Water Quality Improvement Plan for pollutants or waste constituents that cause or contribute, or are threatening to cause or contribute to a condition of pollution or nuisance in receiving waters associated with the highest priority water quality conditions related to storm water discharges from the MS4s. SALs must be based on:
- (1) Federal and State water quality guidance and/or water quality standards; and
 - (2) Site-specific or receiving water-specific conditions; or
 - (3) Applicable numeric WQBELs required to meet the WLAs established for the TMDLs in Attachment E to this Order.
- c.** For the SALs incorporated into the Water Quality Improvement Plan, the Copermittees may develop and incorporate secondary SALs specific to the Watershed Management Area at levels greater than the SALs required by Provisions C.2.a and C.2.b which can be utilized to further refine the prioritization and assessment of water quality improvement strategies for reducing pollutants in storm water discharges from the MS4s. The secondary SALs may be developed based on the approaches recommended by the State Water Board's Storm Water Panel¹⁵ 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.

¹⁵ 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 Copermittees to monitor and assess the impact on the conditions of receiving waters caused by discharges from the Copermittees' MS4s under wet weather and dry weather conditions. The goal of the monitoring and assessment program is to inform the Copermittees about the nexus between the health of receiving waters and the water quality condition of the discharges from their MS4s. This goal will be accomplished through monitoring and assessing the conditions of the receiving waters, discharges from the MS4s, pollutant sources and/or stressors, and effectiveness of the water quality improvement strategies implemented as part of the Water Quality Improvement Plans.

1. Receiving Water Monitoring Requirements

The Copermittees must develop and conduct a program to monitor the condition of the receiving waters in each Watershed Management Area during dry weather and wet weather. Following San Diego Water Board acceptance of the Water Quality Improvement Plans for each Watershed Management Area, the Copermittees must conduct long-term receiving water monitoring during implementation of the Water Quality Improvement Plan to assess the long term trends and determine if conditions in receiving waters are improving. Any available monitoring data not collected specifically for this Order that meet the quality assurance criteria of the Copermittees and the monitoring requirements of this Order may be utilized by the Copermittees. The Copermittees must conduct the following receiving water monitoring procedures:

a. TRANSITIONAL RECEIVING WATER MONITORING

Until the monitoring requirements and schedules of Provisions D.1.b-e are incorporated into a Water Quality Improvement Plan that is accepted by the San Diego Water Board pursuant to Provision F.1.b, the Copermittees must conduct the following receiving water monitoring in the Watershed Management Area:

- (1) Continue the receiving water monitoring programs required in Order Nos. R9-2007-0001 (Monitoring and Reporting Program No. R9-2007-0001 Sections II.A.1-A.5), R9-2009-0002, and R9-2010-0016, unless the Executive Officer provides conditional approval for Copermittees to proceed with implementation of the proposed monitoring and assessment program developed in accordance with Provision B.4;
- (2) Continue the monitoring in the Hydromodification Management Plans approved by the San Diego Water Board;
- (3) Participate in the following regional receiving water monitoring programs, as applicable to the Watershed Management Area:

- (a) Storm Water Monitoring Coalition Regional Monitoring,
 - (b) Southern California Bight Regional Monitoring, and
 - (c) Sediment Quality Monitoring;
- (4) Implement the monitoring programs developed as part of any implementation plans or load reduction plans (e.g. Bacteria Load Reduction Plans, Comprehensive Load Reduction Plans) for the TMDLs in Attachment E to this Order; and
- (5) For Watershed Management Areas with ASBS, implement the monitoring requirements of Attachment B to State Water Board Resolution No. 2012-0012, included in Attachment A to this Order.

b. LONG-TERM RECEIVING WATER MONITORING STATIONS

The Copermittees must select at least one long-term receiving water monitoring station from among the existing mass loading stations, temporary watershed assessment stations, bioassessment stations, and stream assessment stations previously established by the Copermittees to be representative of the receiving water quality in the Watershed Management Area. Additional long-term receiving water monitoring stations must be selected where necessary to support the implementation and adaptation of the Water Quality Improvement Plan.

c. DRY WEATHER RECEIVING WATER MONITORING

During the term of the Order, the Copermittees must perform monitoring during at least three dry weather monitoring events at each of the long-term receiving water monitoring stations. At least one monitoring event must be conducted during the dry season (May 1 – September 30) and at least one monitoring event must be conducted during a dry weather period during the wet season (October 1 – April 30), after the first wet weather event of the season, with an antecedent dry period of at least 72 hours following a storm event producing measureable rainfall of greater than 0.1 inch.

(1) Dry Weather Receiving Water Field Observations

For each dry weather monitoring event, the Copermittees must record field observations consistent with Table D-1 at each long-term receiving water monitoring station.

Table D-1. Field Observations for Receiving Water Monitoring Stations

Field Observations
<ul style="list-style-type: none"> • Station identification and location • Presence of flow, or pooled or ponded water • If flow is present: <ul style="list-style-type: none"> - Flow estimation (i.e. width of water surface, approximate depth of water, approximate flow velocity, flow rate) - Flow characteristics (i.e. presence of floatables, surface scum, sheens, odor, color) • If pooled or ponded water is present: <ul style="list-style-type: none"> - Characteristics of pooled or ponded water (i.e. presence of floatables, surface scum, sheens, odor, color) • Station description (i.e. deposits or stains, vegetation condition, structural condition, and observable biology) • Presence and assessment of trash in and around station

(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"> • pH • Temperature • Specific conductivity • Dissolved oxygen • Turbidity

(3) Dry Weather Receiving Water Analytical Monitoring

For each dry weather monitoring event, the Copermittees must collect and analyze samples from each long-term receiving water monitoring station as follows:

- (a) Analytes that are field measured are not required to be analyzed by a laboratory;
- (b) The Copermittees must implement consistent sample collection methods for regional comparability of data, unless site-specific conditions indicate the need for alternate methods;
- (c) Grab samples may be collected for pH, temperature, specific conductivity, dissolved oxygen, turbidity, hardness, and indicator bacteria;

- (d) For all other constituents, composite samples must be collected for a duration adequate to be representative of changes in pollutant concentrations and runoff flows using one of the following techniques:
 - (i) Time-weighted composites composed of 24 discrete hourly samples, which may be collected through the use of automated equipment, or
 - (ii) Flow-weighted composites collected over a typical 24-hour period, which may be collected through the use of automated equipment;
- (e) Only one analysis of the composite of aliquots is required;
- (f) Analysis for the following constituents is required:
 - (i) Constituents contributing to the highest priority water quality conditions identified in the Water Quality Improvement Plan,
 - (ii) Constituents listed as a cause for impairment of receiving waters in the Watershed Management Area listed on the CWA section 303(d) List,
 - (iii) Constituents for implementation plans or load reduction plans (e.g. Bacteria Load Reduction Plans, Comprehensive Load Reduction Plans) developed for watersheds where the Copermitttees are listed responsible parties under the TMDLs in Attachment E to this Order,
 - (iv) Applicable NAL constituents, and
 - (v) Constituents listed in Table D-3.

Table D-3. Analytical Monitoring Constituents for Receiving Water Monitoring Stations

Conventionals, Nutrients	Metals (Total and Dissolved)	Pesticides	Indicator Bacteria
<ul style="list-style-type: none"> • Total Dissolved Solids • Total Suspended Solids • Turbidity • Total Hardness • Total Organic Carbon • Dissolved Organic Carbon • Sulfate • Methylene Blue Active Substances (MBAS) • Total Phosphorus • Orthophosphate • Nitrite¹ • Nitrate¹ • Total Kjeldhal Nitrogen • Ammonia 	<ul style="list-style-type: none"> • Arsenic • Cadmium • Chromium • Copper • Iron • Lead • Mercury • Nickel • Selenium • Thallium • Zinc 	<ul style="list-style-type: none"> • Organophosphate Pesticides • Pyrethroid Pesticides 	<ul style="list-style-type: none"> • Total Coliform • Fecal Coliform² • <i>Enterococcus</i>

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 Chronic¹ Toxicity Testing for Receiving Water Monitoring Stations

Organism	Units	Test	USEPA Protocol
Freshwater			
<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
Marine and Estuarine			
<i>Strongylocentrotus purpuratus</i> (Purple Sea Urchin)	Pass / Fail	Embryo-Larval Development	EPA-600-R-95-136

Notes:

- 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:

- A static renewal toxicity test with the fathead minnow, *Pimephales promelas* (Larval Survival and Growth Test Method 1000.0);
- A static renewal toxicity test with the daphnid, *Ceriodaphnia dubia* (Survival and Reproduction Test Method 1002.0); and
- A static renewal toxicity test with the green alga, *Selenastrum capricornutum* (also named *Raphidocelis subcapitata*) (Growth Test Method 1003.0).

- (b) Marine and Estuarine Test Species and Methods: If samples are collected in receiving waters with salinity greater or equal to 1 ppt, the Copermittees must follow the methods for chronic toxicity tests as established in 40 CFR 136.3 using a single-concentration test design for routine monitoring, or a five-concentration test design for additional toxicity testing if the limitation is exceeded. The Copermittees must conduct the following critical life state chronic toxicity tests on undiluted samples in accordance with species and short term test methods in Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to West Coast Marine and Estuarine Organisms (EPA-600-R-95-136; 1995). Artificial sea salts must be used to increase sample salinity. The Copermittees must conduct a static non-renewal toxicity test with the purple sea urchin, *Strongylocentrotus purpuratus* (Embryo-larval Development Test Method). Additional species may be used by the Copermittees if approved by the San Diego Water Board Executive Officer.
- (c) Holding Times: All toxicity tests must be conducted as soon as possible following sample collection. The 36-hour sample holding time for test initiation shall be targeted. However, no more than 72 hours shall elapse before the conclusion of sample collection and test initiation.
- (d) Test Species Sensitivity Screening: To determine the most sensitive test species for freshwater, the Copermittees must screen 2 wet weather and 2 dry weather toxicity tests with a vertebrate, an invertebrate, and a plant species. After this screening period, subsequent monitoring must be conducted using the most sensitive test species. Alternatively, if a sensitive test species has already been determined, or if there is prior knowledge of potential toxicant(s) and a test species is sensitive to such toxicant(s), then monitoring must be conducted using only that test species. Sensitive test species determinations must also consider the most sensitive test species used for proximal receiving water monitoring. Rescreening must occur once each permit term.
- (e) Chronic toxicity test biological endpoint data must be analyzed using the Test of Significant Toxicity t-test approach specified in *National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document* (USEPA, Office of Wastewater Management, Washington, D.C., EPA-833-R-10-003, 2010). For this monitoring program, the critical chronic instream waste concentration (IWC) is set at 100 percent receiving water (i.e. no dilution) for receiving water samples. A 100 percent receiving water and a control must be tested.
- (f) Toxicity Identification Evaluation (TIE) / Toxicity Reduction Evaluation (TRE): If chronic toxicity is detected in receiving waters, the Copermittees must discuss the need for conducting a TIE/TRE in the assessments

required under Provision D.4.a.(2), and develop a plan for implementing the TIE/TRE to be incorporated in the Water Quality Improvement Plan.

(5) Dry Weather Receiving Water Bioassessment Monitoring

Bioassessment monitoring for each long-term receiving water monitoring station is required at least once during the term of this Order. The Copermitees must conduct bioassessment monitoring during at least one dry weather monitoring event at each long-term receiving water monitoring station as follows:

- (a) The following bioassessment samples and measurements must be collected:
- (i) Macroinvertebrate samples must be collected in accordance with the “Reachwide Benthos (Multihabitat) Procedure” in the most current Surface Water Ambient Monitoring Program (SWAMP) Bioassessment Standard Operating Procedures (SOP), and amendments, as applicable;¹⁶
 - (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;¹⁷ and
 - (iii) Freshwater algae samples must be collected in accordance with the SWAMP Standard Operating Procedures for Collecting Algae Samples.¹⁸ 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;¹⁹ and

¹⁶ 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

¹⁷ Available at:

http://www.waterboards.ca.gov/water_issues/programs/swamp/docs/reports/fieldforms_fullversion052908.pdf

¹⁸ Fetscher et al. 2009. Standard Operating Procedures for Collecting Stream Algae Samples and Associated Physical Habitat and Chemical Data for Ambient Bioassessments in California.

¹⁹ The most current calculation method at the time the Order was adopted is outlined in “A Quantitative Tool for Assessing the Integrity of Southern California Coastal Streams” (Ode, et al. 2005. Environmental Management. Vol. 35, No. 1, pp. 1-13). If an updated or new calculation method is developed, either both

(ii) An IBI for algae for each monitoring station where bioassessment monitoring was conducted, when a calculation method is developed.²⁰

(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 approach²¹ 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

(i.e. current and updated/new) methods must be used, or historical IBIs must be recalculated with the updated or new calculation method.

²⁰ When a calculation method is developed, IBIs must be calculated for all available and appropriate historical data.

²¹ Stormwater Monitoring Coalition Model Monitoring Technical Committee, 2004. Model Monitoring Program for Municipal Separate Storm Sewer Systems in Southern California. Technical Report #419. August 2004.

- (f) Known or suspected cause(s) of existing downstream erosion or habitat impact, including flow, soil, slope, and vegetation conditions, as well as upstream land uses and contributing new and existing development.

d. WET WEATHER RECEIVING WATER MONITORING

During the term of the Order, the Copermittees must perform monitoring during at least three wet weather monitoring events at each long-term receiving water monitoring station. At least one wet weather monitoring event must be conducted during the first wet weather event of the wet season (October 1 – April 30), and at least one wet weather monitoring event during a wet weather event that occurs after February 1.

(1) Wet Weather Receiving Water Field Observations

For each wet weather monitoring event, the following narrative descriptions and observations must be recorded at each long-term receiving water monitoring station:

- (a) A narrative description of the station that includes the location, date and duration of the storm event(s) sampled, rainfall estimates of the storm event, and the duration between the storm event sampled and the end of the previous measurable (greater than 0.1 inch rainfall) storm event;
- (b) The flow rates and volumes measured or estimated (data from nearby USGS gauging stations may be utilized, or flow rates may be measured or estimated in accordance with the USEPA Storm Water Sampling Guidance Document (EPA-833-B-92-001), section 3.2.1, or other method proposed by the Copermittees that is acceptable to the San Diego Water Board);
- (c) Station condition (i.e. deposits or stains, vegetation condition, structural condition, observable biology); and
- (d) Presence and assessment of trash in and around station.

(2) Wet Weather Receiving Water Field Monitoring

For each wet weather monitoring event, the Copermittees must monitor and record the parameters in Table D-2 at each long-term receiving water monitoring station.

(3) Wet Weather Receiving Water Analytical Monitoring

For each wet weather monitoring event, the Copermittees must collect and analyze samples from each long-term receiving water monitoring station as follows:

- (a) Analytes that are field measured are not required to be analyzed by a laboratory;
- (b) The Copermittees must implement consistent sample collection methods for regional comparability of data, unless site-specific conditions indicate the need for alternate methods;
- (c) Grab samples may be collected for pH, temperature, specific conductivity, dissolved oxygen, turbidity, hardness, and indicator bacteria;
- (d) For all other constituents, composite samples must be collected for a duration adequate to be representative of changes in pollutant concentrations and runoff flows using one of the following techniques:
 - (i) Time-weighted composites composed of 24 discrete hourly samples, which may be collected through the use of automated equipment, or
 - (ii) Flow-weighted composites collected over the length of the storm event or a typical 24-hour period, which may be collected through the use of automated equipment;
- (e) Only one analysis of the composite of aliquots is required;
- (f) Analysis for the following constituents is required:
 - (i) Constituents contributing to the highest priority water quality conditions identified in the Water Quality Improvement Plan,
 - (ii) Constituents listed as a cause for impairment of receiving waters in the Watershed Management Area listed on the CWA section 303(d) List,
 - (iii) Constituents for implementation plans or load reduction plans (e.g. Bacteria Load Reduction Plans, Comprehensive Load Reduction Plans) developed for watersheds where the Copermittees are listed responsible parties under the TMDLs in Attachment E to this Order,
 - (iv) Applicable SAL constituents, and
 - (v) Constituents listed in Table D-3.

(4) Wet Weather Receiving Water Toxicity Monitoring

For each wet weather monitoring event, the Copermittees must collect grab or composite samples from each long-term receiving water monitoring station to be analyzed for chronic aquatic toxicity in accordance with Provisions D.1.c.(4)(a)-(f).

e. OTHER RECEIVING WATER MONITORING REQUIREMENTS

(1) Regional Monitoring

The Copermittees must participate in the following regional receiving waters monitoring programs, as applicable to the Watershed Management Area:

(a) Storm Water Monitoring Coalition Regional Monitoring; and

(b) Southern California Bight Regional Monitoring and

(c) Unified Beach Water Quality Monitoring and Assessment Program.
The Orange County Copermittees shall participate in and, together with South Orange County Wastewater Authority and Orange County Health Care Agency, shall share responsibility for implementation of a unified regional beach water quality monitoring and assessment program in south Orange County, as set forth in the October 2014 report, *Workgroup Recommendation for a Unified Beach Water Quality Monitoring and Assessment Program in South Orange County*, issued pursuant to CWC section 13383 and subject to future revision in the San Diego Water Board December 5, 2014 Letter Directive.

(2) Sediment Quality Monitoring

The Copermittees must perform sediment monitoring to assess compliance with sediment quality receiving water limits applicable to MS4 discharges to enclosed bays and estuaries. The monitoring may be performed either by individual or multiple Copermittees to assess compliance with receiving water limits, or through participation in a water body monitoring coalition. A Sediment Monitoring Plan which satisfies the requirements of the State Water Board's Water Quality Control Plan for Enclosed Bays and Estuaries of California – Part 1 Sediment Quality (Sediment Control Plan) must be submitted as part of the monitoring and assessment program in the Water Quality Improvement Plan.

(a) The Sediment Monitoring Plan design must include the following:

- (i) The elements required under Section VII.D (Receiving Water Limits Monitoring Frequency) and Section VII.E (Sediment Monitoring) of the Sediment Control Plan;
- (ii) A Quality Assurance Project Plan (QAPP) describing the project objectives and organization, functional activities, and quality assurance/quality control protocols for the water and sediment monitoring; and
- (iii) A schedule for completion of all sample collection and analysis activities and submission of Sediment Monitoring Reports.

- (b) The Copermitees 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 Copermitees 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 Copermitees 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 Copermitees 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 Copermitees to participate in an effort to develop alternative watershed monitoring with other regulated entities, other interested parties, and the San Diego Water Board to refine, coordinate, and implement regional monitoring and assessment programs to determine the status and trends of water quality conditions in 1) coastal waters, 2) enclosed bays, harbors, estuaries, and lagoons, and 3) streams.

2. MS4 Outfall Discharge Monitoring Requirements

The Copermittees must develop and conduct a program to monitor the discharges from the MS4 outfalls in each Watershed Management Area during dry weather and wet weather. Following San Diego Water Board acceptance of the Water Quality Improvement Plans for each Watershed Management Area, the Copermittees must conduct MS4 outfall discharge monitoring during implementation of the Water Quality Improvement Plan to assess the effectiveness of their jurisdictional runoff management programs toward effectively prohibiting non-storm water discharges into the MS4 and reducing pollutants in storm water discharges from their MS4s to the MEP. Any available monitoring data not collected specifically for this Order that meet the quality assurance criteria of the Copermittees and the monitoring requirements of this Order may be utilized by the Copermittees. The Copermittees must conduct the following MS4 outfall monitoring procedures:

a. TRANSITIONAL MS4 OUTFALL DISCHARGE MONITORING

Until the monitoring requirements and schedules of Provisions D.2.b-c are incorporated into a Water Quality Improvement Plan that is accepted by the San Diego Water Board pursuant to Provision F.1.b, the Copermittees must conduct the following MS4 outfall discharge monitoring in the Watershed Management Area:

(1) MS4 Outfall Discharge Monitoring Station Inventory

Each Copermittee must identify all major MS4 outfalls that discharge directly to receiving waters within its jurisdiction and geo-locate those outfalls on a map of the MS4 pursuant to Provision E.2.b.(1). This information must be compiled into a MS4 outfall discharge monitoring station inventory, and must include the following information:

- (a) Latitude and longitude of MS4 outfall point of discharge;
- (b) Watershed Management Area;
- (c) Hydrologic subarea;
- (d) Outlet size;
- (e) Accessibility (i.e. safety and without disturbance of critical habitat);
- (f) Approximate drainage area; and

- (g) Classification of whether the MS4 outfall is known to have persistent dry weather flows, transient dry weather flows, no dry weather flows, or unknown dry weather flows.

(2) Transitional Dry Weather MS4 Outfall Discharge Field Screening Monitoring

Until the monitoring requirements and schedules of Provision D.2.b are incorporated into a Water Quality Improvement Plan that is accepted by the San Diego Water Board pursuant to Provision F.1.b, each Copermittee must perform dry weather MS4 outfall field screening monitoring to identify non-storm water and illicit discharges within its jurisdiction in accordance with Provision E.2.c, to determine which discharges are transient flows and which are persistent flows, and prioritize the dry weather MS4 discharges that will be investigated and eliminated in accordance with Provision E.2.d.

(a) Transitional Dry Weather MS4 Outfall Discharge Field Screening Monitoring Frequency

Each Copermittee must field screen the MS4 outfalls in its inventory developed pursuant to Provision D.2.a.(1) as follows:

- (i) For Copermittees with less than 125 major MS4 outfalls that discharge to receiving waters within a Watershed Management Area, at least 80 percent of the outfalls must be visually inspected two times per year during dry weather conditions. For any Copermittee with portions of its jurisdiction in more than one Watershed Management Area and more than 500 major outfalls, see Provision D.2.a.(2)(a)(iv).
- (ii) For Copermittees with 125 major MS4 outfalls or more, but less than or equal to 500 that discharge to receiving waters within a Watershed Management Area, all the outfalls must be visually inspected at least annually during dry weather conditions. For any Copermittee with portions of its jurisdiction in more than one Watershed Management Area and more than 500 major outfalls, see Provision D.2.a.(2)(a)(iv).
- (iii) For Copermittees with more than 500 major MS4 outfalls that discharge to receiving waters within a Watershed Management Area, at least 500 outfalls must be visually inspected at least annually during dry weather conditions. For any Copermittee with portions of its jurisdiction in more than one Watershed Management Area and more than 500 major outfalls, see Provision D.2.a.(2)(a)(iv). Copermittees with more than 500 major MS4 outfalls within a Watershed Management Area must identify and prioritize at least 500 outfalls to be inspected considering the following:

- [a] Assessment of connectivity of the discharge to a flowing receiving water;
 - [b] Reported exceedances of NALs in water quality monitoring data;
 - [c] Surrounding land uses;
 - [d] Presence of constituents listed as a cause for impairment of receiving waters in the Watershed Management Area listed on the CWA section 303(d) List; and
 - [e] Flow rate.
- (iv) For any Copermittee with portions of its jurisdiction in more than one Watershed Management Area and more than 500 major MS4 outfalls within its jurisdiction, at least 500 major MS4 outfalls within its inventory must be visually inspected at least annually during dry weather conditions. Copermittees with more than 500 major MS4 outfalls in more than one Watershed Management Area must identify and prioritize at least 500 outfalls to be inspected considering the following:
- [a] Assessment of connectivity of the discharge to a flowing receiving water;
 - [b] Reported exceedances of NALs in water quality monitoring data;
 - [c] Surrounding land uses;
 - [d] Presence of constituents listed as a cause for impairment of receiving waters in the Watershed Management Area listed on the CWA section 303(d) List; and
 - [e] Flow rate.
- (v) Inspections of major MS4 outfalls conducted in response to public reports and staff or contractor reports and notifications may count toward the required visual inspections of MS4 outfall discharge monitoring stations.
- (b) Transitional Dry Weather MS4 Outfall Discharge Field Screening Visual Observations
- (i) An antecedent dry period of at least 72 hours following any storm event producing measurable rainfall greater than 0.1 inch is required prior to conducting field screening visual observations during a field screening monitoring event.
 - (ii) During the field screening monitoring event, each Copermittee must record visual observations consistent with Table D-5 at each MS4 outfall discharge monitoring station inspected.

Table D-5. Field Screening Visual Observations for MS4 Outfall Discharge Monitoring Stations

Field Observations
<ul style="list-style-type: none"> • Station identification and location • Presence of flow, or pooled or ponded water • If flow is present: <ul style="list-style-type: none"> - Flow estimation (i.e. width of water surface, approximate depth of water, approximate flow velocity, flow rate) - Flow characteristics (i.e. presence of floatables, surface scum, sheens, odor, color) - Flow source(s) suspected or identified from non-storm water source investigation - Flow source(s) eliminated during non-storm water source identification • If pooled or ponded water is present: <ul style="list-style-type: none"> - Characteristics of pooled or ponded water (i.e. presence of floatables, surface scum, sheens, odor, color) - Known or suspected source(s) of pooled or ponded water • Station description (i.e. deposits or stains, vegetation condition, structural condition, observable biology) • Presence and assessment of trash in and around station • Evidence or signs of illicit connections or illegal dumping

- (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.²²

(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

²² Persistent flow is defined as the presence of flowing, pooled, or ponded water more than 72 hours after a measureable rainfall event of 0.1 inch or greater during three consecutive monitoring and/or inspection events. All other flowing, pooled, or ponded water is considered transient.

San Diego Water Board pursuant to Provision F.1.b, the Copermittees must conduct the following wet weather MS4 outfall discharge monitoring within the Watershed Management Area:

(a) Transitional Wet Weather MS4 Outfall Discharge Monitoring Stations

The Copermittees must select wet weather MS4 outfall discharge monitoring stations from the inventories developed pursuant to Provision D.2.a.(1) for each Watershed Management Area as follows:

- (i) At least five wet weather MS4 outfall discharge monitoring stations that are representative of storm water discharges from areas consisting primarily of residential, commercial, industrial, and typical mixed-use land uses present within the Watershed Management Area;
- (ii) At least one wet weather MS4 outfall discharge monitoring station for each Copermittee within the Watershed Management Area; and
- (iii) The County of San Diego may select at least two (2) wet weather MS4 outfall discharge monitoring stations for the portion of the Santa Margarita River Watershed Management Area within its jurisdiction to be monitored during the transitional period until the Riverside County Copermittees are notified of coverage under this Order. After the Riverside County Copermittees are notified of coverage under this Order, the Copermittees in the Watershed Management Area must select wet weather MS4 outfall discharge monitoring stations consistent with the requirements above.

(b) Transitional Wet Weather MS4 Outfall Discharge Monitoring Frequency

Each wet weather MS4 outfall discharge monitoring station selected pursuant to Provision D.2.a.(3)(a) must be monitored once during the wet season (October 1 – April 30). The wet weather monitoring events must be selected to be representative of the range of hydrological conditions experienced in the region. At least 10 percent of samples must be conducted during the first wet weather event of the wet season, to include at least one such sample in each Watershed Management Area..

(c) Transitional Wet Weather MS4 Outfall Discharge Field Observations

For each wet weather monitoring event, the following narrative descriptions and observations must be recorded at each wet weather MS4 outfall discharge monitoring station:

- (i) A narrative description of the station that includes the location, date and duration of the storm event(s) sampled, rainfall estimates of the storm event, and the duration between the storm event sampled and the end of the previous measurable (greater than 0.1 inch rainfall) storm event; and
 - (ii) The flow rates and volumes measured or estimated from the MS4 outfall (data from nearby USGS gauging stations may be utilized, or flow rates may be measured or estimated in accordance with the USEPA Storm Water Sampling Guidance Document (EPA-833-B-92-001), section 3.2.1, or other method proposed by the Copermittees that is acceptable to the San Diego Water Board);
- (d) Transitional Wet Weather MS4 Outfall Discharge Field Monitoring

For each wet weather monitoring event, the Copermittees must monitor and record the parameters in Table D-2 at each wet weather MS4 outfall discharge monitoring station.

- (e) Transitional Wet Weather MS4 Outfall Discharge Analytical Monitoring

For each wet weather monitoring event, the Copermittees must collect and analyze samples from each wet weather MS4 outfall discharge monitoring station as follows:

- (i) Analytes that are field measured are not required to be analyzed by a laboratory;
- (ii) The Copermittees must implement consistent sample collection methods for regional comparability of data, unless site-specific conditions indicate the need for alternate methods;
- (iii) Grab samples may be collected for pH, temperature, specific conductivity, dissolved oxygen, turbidity, and indicator bacteria;
- (iv) For all other constituents, composite samples must be collected for a duration adequate to be representative of changes in pollutant concentrations and runoff flows using one of the following techniques:
 - [a] Time-weighted composites collected over the length of the storm event or the first 24 hour period whichever is shorter, composed of discrete samples, which may be collected through the use of automated equipment, or
 - [b] Flow-weighted composites collected over the length of the storm event or a typical 24 hour period, whichever is shorter, which may be collected through the use of automated equipment, or
 - [c] If automated compositing is not feasible, a composite sample may be collected using a minimum of 4 grab samples, collected during

the first 24 hours of the storm water discharge, or for the entire storm water discharge if the storm event is less than 24 hours;

- (v) Only one analysis of the composite of aliquots is required;
- (vi) The samples must be analyzed for the following constituents:
 - [a] Constituents listed as a cause for impairment of receiving waters in the Watershed Management Area listed on the CWA section 303(d) List,
 - [b] Constituents for implementation plans or load reduction plans (e.g. Bacteria Load Reduction Plans, Comprehensive Load Reduction Plans) developed for watersheds where the Copermittees are listed responsible parties under the TMDLs in Attachment E to this Order, and
 - [c] Constituents listed in Table D-6.

Table D-6. Analytical Monitoring Constituents for Wet Weather MS4 Outfall Discharge Monitoring Stations

Conventionals, Nutrients	Metals (Total and Dissolved)	Indicator Bacteria
<ul style="list-style-type: none"> • Total Dissolved Solids • Total Suspended Solids • Turbidity • Total Hardness • Total Organic Carbon • Dissolved Organic Carbon • Sulfate • Methylene Blue Active Substances (MBAS) • Total Phosphorus • Orthophosphate • Nitrite¹ • Nitrate¹ • Total Kjeldhal Nitrogen • Ammonia 	<ul style="list-style-type: none"> • Arsenic • Cadmium • Chromium • Copper • Iron • Lead • Nickel • Selenium • Thallium • Zinc 	<ul style="list-style-type: none"> • Total Coliform • Fecal Coliform² • <i>Enterococcus</i>

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 Copermitttee has less than 5 major outfalls within a Watershed Management Area, then the Copermitttee 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 Copermitttee, 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 Copermitttee 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 Copermitttee'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"> • Total Dissolved Solids • Total Suspended Solids • Total Hardness • Total Phosphorus • Orthophosphate • Nitrite¹ • Nitrate¹ • Total Kjeldhal Nitrogen • Ammonia 	<ul style="list-style-type: none"> • Cadmium • Copper • Lead • Zinc 	<ul style="list-style-type: none"> • Total Coliform • Fecal Coliform² • <i>Enterococcus</i>

Notes:

1. Nitrite and nitrate may be combined and reported as nitrite+nitrate.
2. *E. Coli* may be substituted for Fecal Coliform.

- (iv) If the Copermittee identifies and eliminates the source of the persistent flow non-storm water discharge, analysis of the sample is not required.

c. WET WEATHER MS4 OUTFALL DISCHARGE MONITORING

The Copermittees must perform wet weather MS4 outfall monitoring to identify pollutants in storm water discharges from the MS4s, to guide pollutant source identification efforts, and to determine compliance with the WQBELs associated with the applicable TMDLs in Attachment E to this Order. The Copermittees must conduct the following wet weather MS4 outfall discharge monitoring within the Watershed Management Area:

(1) Wet Weather MS4 Outfall Discharge Monitoring Stations

The Copermittees may adjust the wet weather MS4 outfall discharge monitoring locations in the Watershed Management Area, as needed, to identify pollutants in storm water discharges from MS4s, to guide pollutant source identification efforts, and to determine compliance with the WQBELs associated with the applicable TMDLs in Attachment E to this Order in accordance with the highest priority water quality conditions identified in the Water Quality Improvement Plan, provided the number of stations is at least equivalent to the number of stations required under Provision D.2.a.(3)(a). Additional outfall monitoring locations, above the minimum per jurisdiction, may be required to demonstrate compliance with the WQBELs associated with the applicable TMDLs in Attachment E.

(2) Wet Weather MS4 Outfall Discharge Monitoring Frequency

The Copermitees must monitor the wet weather MS4 outfall discharge monitoring stations in the Watershed Management Area at least once (1) per year. The Copermitees may need to increase the frequency of monitoring in order to identify pollutants in storm water discharges from the MS4s causing or contributing to the highest priority water quality conditions, to guide pollutant source identification efforts, or to determine compliance with the WQBELs associated with the applicable TMDLs in Attachment E to this Order.

(3) Wet Weather MS4 Outfall Discharge Field Observations

For each wet weather monitoring event, the following narrative descriptions and observations must be recorded at each wet weather MS4 outfall discharge monitoring station:

- (a) A narrative description of the station that includes the location, date and duration of the storm event(s) sampled, rainfall estimates of the storm event, and the duration between the storm event sampled and the end of the previous measurable (greater than 0.1 inch rainfall) storm event; and
- (b) The flow rates and volumes measured or estimated (data from nearby USGS gauging stations may be utilized, or flow rates may be measured or estimated in accordance with the USEPA Storm Water Sampling Guidance Document (EPA-833-B-92-001), section 3.2.1, or other method proposed by the Copermitees that is acceptable to the San Diego Water Board);

(4) Wet Weather MS4 Outfall Discharge Field Monitoring

For each wet weather monitoring event, the Copermitees must monitor and record the parameters in Table D-2 at each wet weather MS4 outfall discharge monitoring station.

(5) Wet Weather MS4 Outfall Discharge Analytical Monitoring

For each wet weather monitoring event, the Copermitees must collect and analyze samples from each wet weather MS4 outfall discharge monitoring station as follows:

- (a) Analytes that are field measured are not required to be analyzed by a laboratory;

- (b) The 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 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 Copermitees' MS4s in the Watershed Management Area;
 - [b] Assess the effectiveness of water quality improvement strategies being implemented by the Copermitees within the Watershed Management Area toward reducing pollutants in storm water discharges from the MS4s to receiving waters within the Watershed Management Area to the MEP, with an estimate, if possible, of the pollutant load reductions attributable to specific water quality strategies implemented by the Copermitees; and
 - [c] Identify modifications necessary to increase the effectiveness of the water quality improvement strategies implemented by the Copermitees in the Watershed Management Area toward reducing pollutants in storm water discharges from the MS4s to receiving waters in the Watershed Management Area to the MEP.
- (iv) Identify data gaps in the monitoring data necessary to assess Provisions D.4.b.(2)(c)(i)-(iii).
- (d) The Copermitees must evaluate all the data collected pursuant to Provision D.2.c, and incorporate new outfall monitoring data into time series plots for each long-term monitoring constituent for the Watershed Management Area, and perform statistical trends analysis on the cumulative long-term wet weather MS4 outfall discharge water quality data set.

c. SPECIAL STUDIES ASSESSMENTS

The Copermitees must annually evaluate the results and findings from the special studies developed and implemented pursuant to Provision D.3, and assess their relevance to the Copermitees' efforts to characterize receiving water conditions, understand sources of pollutants and/or stressors, and control and reduce the discharges of pollutants from the MS4 outfalls to receiving waters in the Watershed Management Area. The Copermitees must report the results of the special studies assessments applicable to the Watershed Management Area, and identify any necessary modifications or updates to the Water Quality Improvement Plan based on the results in the Water Quality Improvement Plan Annual Reports required pursuant to Provision F.3.b.(3).

d. INTEGRATED ASSESSMENT OF WATER QUALITY IMPROVEMENT PLAN

As part of the iterative approach and adaptive management process required for the Water Quality Improvement Plan pursuant to Provision B.5, the Copermitees in each Watershed Management Area must integrate the data collected pursuant to Provisions D.1-D.3, the findings from the assessments required pursuant to

Provisions D.4.a-c, and information collected during the implementation of the jurisdictional runoff management programs required pursuant to Provision E to assess the effectiveness of, and identify necessary modifications to, the Water Quality Improvement Plan as follows:

- (1) The Copermittees must re-evaluate the priority water quality conditions and numeric goals for the Watershed Management Area, as needed, during the term of this Order pursuant to Provision B.5.a. The re-evaluation and recommendations for modifications to the priority water quality conditions, and/or numeric goals and corresponding schedules may be provided in the Water Quality Improvement Plan Annual Reports required pursuant to Provision F.3.b.(3), but must at least be provided in the Report of Waste Discharge pursuant to Provision F.5.b. The priority water quality conditions and numeric goals for the Watershed Management Area must be re-evaluated as follows:
 - (a) Re-evaluate the receiving water conditions in the Watershed Management Area in accordance with Provision B.2.a;
 - (b) Re-evaluate the impacts on receiving waters in the Watershed Management Area from MS4 discharges in accordance with Provision B.2.b;
 - (c) Re-evaluate the identification of MS4 sources of pollutants and/or stressors in accordance with Provision B.2.d;
 - (d) Identify beneficial uses of the receiving waters that are protected in accordance with Provision D.4.a;
 - (e) Evaluate the progress toward achieving the interim and final numeric goals for protecting impacted beneficial uses in the receiving waters.
- (2) The Copermittees must re-evaluate the water quality improvement strategies for the Watershed Management Area during the term of this Order pursuant to Provision B.5.b. The re-evaluation and recommendations for modifications to the water quality improvement strategies and schedules may be provided in the Water Quality Improvement Plan Annual Reports required pursuant to Provision F.3.b.(3), but must at least be provided in the Report of Waste Discharge pursuant to Provision F.5.b. The water quality improvement strategies for the Watershed Management Area must be re-evaluated as follows:
 - (a) Identify the non-storm water and storm water pollutant loads from the Copermittees' MS4 outfalls in the Watershed Management Area, calculated or estimated pursuant to Provisions D.4.b;

- (b) Identify the non-storm water and storm water pollutant load reductions, or other improvements to receiving water or water quality conditions, that are necessary to attain the interim and final numeric goals identified in the Water Quality Improvement Plan for protecting beneficial uses in the receiving waters;
 - (c) Identify the non-storm water and storm water pollutant load reductions, or other improvements to the quality of MS4 discharges, that are necessary for the Copermittees to demonstrate that non-storm water and storm water discharges from their MS4s are not causing or contributing to exceedances of receiving water limitations;
 - (d) Evaluate the progress of the water quality improvement strategies toward achieving the interim and final numeric goals identified in the Water Quality Improvement Plan for protecting beneficial uses in the receiving waters.
- (3) The Copermittees must re-evaluate and adapt the water quality monitoring and assessment program for the Watershed Management Area when new information becomes available to improve the monitoring and assessment program pursuant to Provision B.5.c. The re-evaluation and recommendations for modifications to the monitoring and assessment program may be provided in the Water Quality Improvement Plan Annual Reports required pursuant to Provision F.3.b.(3), but must at least be provided in the Report of Waste Discharge pursuant to Provision F.5.b. Modifications to the water quality monitoring and assessment program must be consistent with the requirements of Provision D.1-D.3. The re-evaluation of the water quality monitoring and assessment program for the Watershed Management Area must consider the data gaps identified by the assessments required pursuant to Provisions D.4.a-b, and results of the special studies implemented pursuant to Provision D.4.c.

5. Monitoring Provisions

Each Copermittee must comply with all the monitoring, reporting, and recordkeeping provisions of the Standard Permit Provisions and General Provisions contained in Attachment B to this Order.

E. JURISDICTIONAL RUNOFF MANAGEMENT PROGRAMS

The purpose of this provision is for each Copermittee to implement a program to control the contribution of pollutants to and the discharges from the MS4 within its jurisdiction. The goal of the jurisdictional runoff management programs is to implement strategies that effectively prohibit non-storm water discharges to the MS4 and reduce the discharge of pollutants in storm water to the MEP. This goal will be accomplished through implementing the jurisdictional runoff management programs in accordance with the strategies identified in the Water Quality Improvement Plans.

Each Copermittee must update its jurisdictional runoff management program document, in accordance with Provision F.2.a, to incorporate all the requirements of Provision E. Until the Copermittee has updated its jurisdictional runoff management program document with the requirements of Provision E, the Copermittee must continue implementing its current jurisdictional runoff management program.

1. Legal Authority Establishment and Enforcement

- a. Each Copermittee must establish, maintain, and enforce adequate legal authority within its jurisdiction to control pollutant discharges into and from its MS4 through statute, ordinance, permit, contract, order, or similar means. This legal authority must, at a minimum, authorize the Copermittee to:
 - (1) Prohibit and eliminate all illicit discharges and illicit connections to its MS4;
 - (2) Control the contribution of pollutants in discharges of runoff associated with industrial and construction activity to its MS4 and control the quality of runoff from industrial and construction sites, including industrial and construction sites which have coverage under the statewide General Permit for Discharges of Storm Water Associated with Industrial Activities (Industrial General Permit) or General Permit for Discharges of Storm Water Associated with Construction Activities (Construction General Permit), as well as to those sites which do not;
 - (3) Control the discharge of spills, dumping, or disposal of materials other than storm water into its MS4;
 - (4) Control through interagency agreements among Copermittees the contribution of pollutants from one portion of the MS4 to another portion of the MS4;
 - (5) Control, by coordinating and cooperating with other owners of the MS4 such as Caltrans, the U.S. federal government, or sovereign Native American Tribes through interagency agreements, where possible, the contribution of pollutants from their portion of the MS4 to the portion of the MS4 within the Copermittee's jurisdiction;

- (6) Require compliance with conditions in its statutes, ordinances, permits, contracts, orders, or similar means to hold dischargers to its MS4 accountable for their contributions of pollutants and flows;
 - (7) Require the use of BMPs to prevent or reduce the discharge of pollutants in storm water from its MS4 to the MEP;
 - (8) Require documentation on the effectiveness of BMPs implemented to prevent or reduce the discharge of pollutants in storm water from its MS4 to the MEP;
 - (9) Utilize enforcement mechanisms to require compliance with its statutes, ordinances, permits, contracts, orders, or similar means; and
 - (10) Carry out all inspections, surveillance, and monitoring procedures necessary to determine compliance and noncompliance with its statutes, ordinances, permits, contracts, orders, or similar means and with the requirements of this Order, including the prohibition of illicit discharges and connections to its MS4; the Copermittee must also have authority to enter, monitor, inspect, take measurements, review and copy records, and require regular reports from industrial facilities, including construction sites, discharging into its MS4.
- b. With the first Water Quality Improvement Plan Annual Report required pursuant to Provision F.3.b.(3), each Copermittee must submit a statement certified by its Principal Executive Officer, Ranking Elected Official, or Duly Authorized Representative that the Copermittee has taken the necessary steps to obtain and maintain full legal authority within its jurisdiction to implement and enforce each of the requirements contained in this Order.

2. Illicit Discharge Detection and Elimination

Each Copermittee must implement a program to actively detect and eliminate illicit discharges and improper disposal into the MS4, or otherwise require the discharger to apply for and obtain a separate NPDES permit. The illicit discharge detection and elimination program must be implemented in accordance with the strategies in the Water Quality Improvement Plan described pursuant to Provision B.3.b.(1) and include, at a minimum, the following requirements:

a. NON-STORM WATER DISCHARGES

Each Copermittee must address all non-storm water discharges as illicit discharges unless a non-storm water discharge is either identified as a discharge authorized by a separate NPDES permit, or identified as a category of non-storm water discharges or flows that must be addressed pursuant to the following requirements:

- PROVISION E: JURISDICTIONAL RUNOFF MANAGEMENT PROGRAMS
- E.1. Legal Authority Establishment and Enforcement
 - E.2. Illicit Discharge Detection and Elimination

(1) Discharges of non-storm water to the MS4 from the following categories must be addressed as illicit discharges unless the discharge has coverage [or meets the exception criteria](#) under NPDES Permit No. CAG919003~~1~~ (~~Order No. R9-2007-0034, or subsequent order~~) ~~for discharges to San Diego Bay, or NPDES Permit No. CAG919002~~ (Order No. R9-[2015-0013](#)-~~2008-0002~~, ~~or subsequent order~~ [as it may be amended or reissued](#)) for discharges to surface waters [within the San Diego Region](#) ~~other than San Diego Bay~~:

(1) Uncontaminated pumped ground water;

(2) Discharges from foundation drains;²³

(3) Water from crawl space pumps; and

(4) Water from footing drains.²⁰

(2) Discharges of non-storm water from water line flushing and water main breaks to the MS4 must be addressed as illicit discharges unless the discharge has coverage under NPDES Permit No. CAG679001 (Order No. R9-2010-0003, ~~or subsequent order~~ [as it may be amended or reissued](#)) [or NPDES General Permit No. CAG140001 \(Order 2014-0194-DWQ, as it may be amended or reissued\)](#). This category includes water line flushing and water main break discharges from water purveyors issued a water supply permit by the California Department of Public Health or federal military installations. Discharges from recycled or reclaimed water lines to the MS4 must be addressed as illicit discharges, unless the discharges have coverage under a separate NPDES permit.

(3) Discharges of non-storm water to the MS4 from the following categories must be addressed by the Copermittee as illicit discharges only if the Copermittee or the San Diego Water Board identifies the discharge as a source of pollutants to receiving waters:

(a) Diverted stream flows;

(b) Rising ground waters;

(c) Uncontaminated ground water infiltration to MS4s;

(d) Springs;

(e) Flows from riparian habitats and wetlands;

²³ 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.

- (f) Discharges from potable water sources;
 - (g) Discharges from foundation drains;²⁴ and
 - (h) Discharges from footing drains.²¹
- (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

²⁴ 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.

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:

(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),²⁵
- (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;

²⁵ 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.

- (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;
- (h) Landscaped or other pervious areas designed and constructed to effectively receive and infiltrate, retain and/or treat runoff from impervious areas, prior to discharging to the MS4;
- (i) Small collection strategies located at, or as close as possible to, the source (i.e. the point where storm water initially meets the ground) to minimize the transport of runoff and pollutants to the MS4 and receiving waters;
- (j) Use of permeable materials for projects with low traffic areas and appropriate soil conditions;
- (k) Landscaping with native or drought tolerant species; and
- (l) Harvesting and using precipitation.

b. PRIORITY DEVELOPMENT PROJECTS

Priority Development Projects are land development projects that fall under the planning and building authority of the Copermittee for which the Copermittee must impose specific requirements, in addition to those described in Provision E.3.a, including the implementation of structural BMPs to meet the performance requirements described in Provision E.3.c.

(1) Definition of Priority Development Project

Priority Development Projects include the following:

- (a) New development projects that create 10,000 square feet or more of impervious surfaces (collectively over the entire project site). This includes commercial, industrial, residential, mixed-use, and public development projects on public or private land.
- (b) Redevelopment projects that create and/or replace 5,000 square feet or more of impervious surface (collectively over the entire project site on an existing site of 10,000 square feet or more of impervious surfaces). This includes commercial, industrial, residential, mixed-use, and public development projects on public or private land.

- (c) New and redevelopment projects that create [and/or replace](#) 5,000 square feet or more of impervious surface (collectively over the entire project site), and support one or more of the following uses:
- (i) Restaurants. This category is defined as a facility that sells prepared foods and drinks for consumption, including stationary lunch counters and refreshment stands selling prepared foods and drinks for immediate consumption (SIC code 5812).
 - (ii) Hillside development projects. This category includes development on any natural slope that is twenty-five percent or greater.
 - (iii) Parking lots. This category is defined as a land area or facility for the temporary parking or storage of motor vehicles used personally, for business, or for commerce.
 - (iv) Streets, roads, highways, freeways, and driveways. This category is defined as any paved impervious surface used for the transportation of automobiles, trucks, motorcycles, and other vehicles.
- (d) New or redevelopment projects that create [and/or](#) replace 2,500 square feet or more of impervious surface (collectively over the entire project site), and discharging directly to an Environmentally Sensitive Area (ESA). “Discharging directly to” includes flow that is conveyed overland a distance of 200 feet or less from the project to the ESA, or conveyed in a pipe or open channel any distance as an isolated flow from the project to the ESA (i.e. not commingled with flows from adjacent lands).
- (e) New development projects, [or redevelopment projects that create and/or replace 5,000 square feet or more of impervious surface](#), that support one or more of the following uses:
- (i) Automotive repair shops. This category is defined as a facility that is categorized in any one of the following Standard Industrial Classification (SIC) codes: 5013, 5014, 5541, 7532-7534, or 7536-7539.
 - (ii) Retail gasoline outlets (RGOs). This category includes RGOs that meet the following criteria: (a) 5,000 square feet or more or (b) a projected Average Daily Traffic (ADT) of 100 or more vehicles per day.
- (f) New or redevelopment projects that result in the disturbance of one or more acres of land and are expected to generate pollutants post construction.

(2) Special Considerations for Redevelopment Projects

The structural BMP performance requirements of Provision E.3.c are applicable to redevelopment Priority Development Projects, as defined in E.3.b.(1), as follows:

- (a) Where redevelopment results in the creation or replacement of impervious surface in an amount of less than fifty percent of the surface area of the previously existing development, then the structural BMP performance requirements of Provision E.3.c apply only to the creation or replacement of impervious surface, and not the entire development; or
- (b) Where redevelopment results in the creation or replacement of impervious surface in an amount of more than fifty percent of the surface area of the previously existing development, then the structural BMP performance requirements of Provision E.3.c apply to the entire development.

(3) Priority Development Project Exemptions

Each Copermittee has the discretion to exempt the following projects from being defined as Priority Development Projects:

- (a) New or retrofit paved sidewalks, bicycle lanes, or trails that meet the following criteria:
 - (i) Designed and constructed to direct storm water runoff to adjacent vegetated areas, or other non-erodible permeable areas; OR
 - (ii) Designed and constructed to be hydraulically disconnected from paved streets or roads; OR
 - (iii) Designed and constructed with permeable pavements or surfaces in accordance with USEPA Green Streets guidance.²⁶
- (b) Retrofitting or redevelopment of existing paved alleys, streets or roads that are designed and constructed in accordance with the USEPA Green Streets guidance.²⁷

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.

²⁶ See "Managing Wet Weather with Green Infrastructure – Municipal Handbook: Green Streets" (USEPA, 2008).

²⁷ Ibid.

(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 85th percentile storm event (design capture volume);²⁸
- (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,²⁹ 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:

²⁸ This volume is not a single volume to be applied to all areas covered by this Order. The size of the 85th percentile storm event is different for various parts of the San Diego Region. The Copermittees are encouraged to calculate the 85th 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 85th percentile storm event in such areas. Where the Copermittees will use isopluvial maps to determine the 85th percentile storm event in areas lacking rain data, the Copermittees must describe their method for using isopluvial maps in its BMP Design Manuals.

²⁹ 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.

- [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 85th percentile hourly rainfall intensity (for each hour of a storm event), as determined from the local historical rainfall record, multiplied by a factor of two;
- [c] Be ranked with high or medium pollutant removal efficiency for the Priority Development Project's most significant pollutants of concern. Flow-thru treatment control BMPs with a low removal efficiency ranking must only be approved by a Copermittee when a feasibility analysis has been conducted which exhibits that implementation of flow-thru treatment control BMPs with high or medium removal efficiency rankings are infeasible for a Priority Development Project or portion of a Priority Development Project.

- (b) A Priority Development Project may be allowed to utilize alternative compliance under Provision E.3.c.(3) in lieu of complying with the storm water pollutant control BMP performance requirements of Provision E.3.c.(1)(a). The Priority Development Project must mitigate for the portion of the pollutant load in the design capture volume not retained onsite if Provision E.3.c.(3) is utilized. If a Priority Development Project is allowed to utilize alternative compliance, flow-thru treatment control BMPs must be implemented to treat the portion of the design capture volume that is not reliably retained onsite. Flow-thru treatment control BMPs must be sized and designed in accordance with Provisions E.3.c.(1)(a)(ii)[a]-[c].

(2) Hydromodification Management BMP Requirements

Each Copermittee must require each Priority Development Project to implement onsite BMPs to manage hydromodification that may be caused by storm water runoff discharged from a project as follows:

- (a) Post-project runoff conditions (flow rates and durations) must not exceed pre-development runoff conditions by more than 10 percent (for the range of flows that result in increased potential for erosion, or degraded instream habitat downstream of Priority Development Projects).
 - (i) In evaluating the range of flows that results in increased potential for erosion of natural (non-hardened) channels, the lower boundary must correspond with the critical channel flow that produces the critical shear stress that initiates channel bed movement or that erodes the toe of channel banks.
 - (ii) The Copermittees may use monitoring results collected pursuant to Provision D.1.a.(2) to re-define the range of flows resulting in

increased potential for erosion, or degraded instream habitat conditions, as warranted by the data.

- (b) Each Priority Development Project must avoid critical sediment yield areas known to the Copermittee or identified by the optional Watershed Management Area Analysis pursuant to Provision B.3.b.(4), or implement measures that allow critical coarse sediment to be discharged to receiving waters, such that there is no net impact to the receiving water.
- (c) A Priority Development Project may be allowed to utilize alternative compliance under Provision E.3.c.(3) in lieu of complying with the performance requirements of Provision E.3.c.(2)(a). The Priority Development Project must mitigate for the post-project runoff conditions not fully managed onsite if Provision E.3.c.(3) is utilized.

(d) Exemptions

Each Copermittee has the discretion to exempt a Priority Development Project from the hydromodification management BMP performance requirements of Provisions E.3.c.(2) where the project discharges storm water runoff to:

- (i) Existing underground storm drains discharging directly to water storage reservoirs, lakes, enclosed embayments, or the Pacific Ocean;
- (ii) Conveyance channels whose bed and bank are concrete lined all the way from the point of discharge to water storage reservoirs, lakes, enclosed embayments, or the Pacific Ocean; or
- (iii) An area identified by the Copermittees as appropriate for an exemption by the optional Watershed Management Area Analysis incorporated into the Water Quality Improvement Plan pursuant to Provision B.3.b.(4).

(e) Interim Timeframe Exemptions

Until the Copermittees have updated their BMP Design Manual in accordance with Provision F.2.b with the requirements of Provision E, the Copermittees have the discretion to exempt a Priority Development Project from the hydromodification management BMP performance requirements of Provision E.3.c.(2) where the project discharges storm water runoff directly to:

- (i) An engineered channel conveyance system with a capacity to convey peak flows generated by the 10-year storm event all the way from the

point of discharge to water storage reservoirs, lakes, enclosed embayments, or the Pacific Ocean; and

- (ii) Large river reaches with a drainage area larger than 100 square miles and a 100-year flow capacity in excess of 20,000 cubic feet per second, provided that properly sized energy dissipation is included at all Priority Development Project discharge points.

(3) Alternative Compliance Program to Onsite Structural BMP Implementation

At the discretion of each Copermittee, Priority Development Projects may be allowed to participate in an alternative compliance program in lieu of implementing the onsite structural BMP performance requirements of Provisions E.3.c.(1) and E.3.c.(2)(a), provided that the Water Quality Improvement Plan includes the optional Watershed Management Area Analysis described in Provision B.3.b.(4), and Water Quality Equivalency calculations have been accepted by the San Diego Water Board's Executive Officer pursuant to Provision E.3.c.(3)(a). The alternative compliance program is available to a Priority Development Project only if the Priority Development Project applicant enters into a voluntary agreement with the Copermittee authorizing this arrangement. In addition to the voluntary agreement, relief from implementing structural BMPs onsite may be authorized by the Copermittee under the following conditions:

(a) Water Quality Equivalency

Copermittees must submit Water Quality Equivalency calculations for acceptance by the San Diego Water Board's Executive Officer prior to administering an alternative compliance program in order to establish a regional and technical basis for determining the water quality benefits associated with alternative compliance projects. Accepted Water Quality Equivalency calculations must be incorporated as part of any Copermittee's alternative compliance program necessary for evaluating Watershed Management Area Analysis candidate projects, project applicant-proposed alternative compliance projects, alternative compliance in lieu fee structures, and alternative compliance water quality credit systems as described in Provisions E.3.c.(3)(b)-(e).

(b) Watershed Management Area Analysis Candidate Projects

The Priority Development Project applicant agrees to fund, contribute funds to, or implement a candidate project identified by the Copermittees in the Watershed Management Area Analysis included in the Water Quality Improvement Plan, pursuant to Provisions B.3.b.(4) subject to the following conditions:

- (i) The Copermittee must determine that implementation of the candidate project will have a greater overall water quality benefit for the Watershed Management Area than fully complying with the performance requirements of Provisions E.3.c.(1) and E.3.c.(2)(a) onsite;
- (ii) If the Priority Development Project applicant chooses to fully or partially fund a candidate project, then the in-lieu fee structure described in Provision E.3.c.(3)(c) must be followed;
- (iii) If the Priority Development Project applicant chooses to fully or partially fund a candidate project, then the Copermittee must ensure that the funds to be obtained from the Priority Development Project applicant are sufficient to mitigate for impacts caused by not fully implementing structural BMPs onsite, pursuant to the performance requirements described in Provisions E.3.c.(1) and E.3.c.(2)(a);
- (iv) If the Priority Development Project applicant chooses to implement a candidate project, then the Copermittee must ensure that pollutant control and/or hydromodification management within the candidate project are sufficient to mitigate for impacts caused by not implementing structural BMPs fully onsite, pursuant to the performance requirements described in Provisions E.3.c.(1) and E.3.c.(2)(a);
- (v) The voluntary agreement to fund, partially fund, or implement a candidate project must include reliable sources of funding for operation and maintenance of the candidate project;
- (vi) Design of the candidate project must be conducted under an appropriately qualified engineer, geologist, architect, landscape architect, or other professional, licenses where applicable, and competent and proficient in the fields pertinent to the candidate project design;
- (vii) The candidate project must be constructed as soon as possible, but no later than 4 years after the certificate of occupancy is granted for the first Priority Development Project that contributed funds toward the construction of the candidate project, unless a longer period of time is authorized by the San Diego Water Board Executive Officer; and
- (viii) If the candidate project is constructed after the Priority Development Project is constructed, the Copermittee must require temporal mitigation for pollutant loads and altered flows that are discharged from the Priority Development Project.

(c) Project Applicant Proposed Alternative Compliance Projects

The Copermittee may allow a Priority Development Project applicant to propose and fund, contribute funds to, or implement an alternative compliance project not identified by the Watershed Management Area Analysis included in the Water Quality Improvement Plan pursuant to Provisions B.3.b.(4). This option is allowed provided the Copermittee determines that implementation of the alternative compliance project will have a greater overall water quality benefit for the Watershed Management Area than fully complying with the performance requirements of Provisions E.3.c.(1) and E.3.c.(2)(a) onsite, and is subject to the requirements described in Provisions E.3.c.(3)(a)(ii)-(viii).

(d) Alternative Compliance In-Lieu Fee Structure

If a Copermittee chooses to allow a Priority Development Project applicant to fund, or partially fund a candidate project or an alternative compliance project, then the Copermittee must develop and implement an in-lieu fee structure. This may be developed individually or with other Copermittees and/or entities, as a means for designing, developing, constructing, operating and maintaining offsite alternative compliance projects. The in-lieu fee must be transferred to the Copermittee (for public projects) or an escrow account (for private projects) prior to the construction of the Priority Development Project.

(e) Alternative Compliance Water Quality Credit System Option

The Copermittee may develop and implement an alternative compliance water quality credit system option, individually or with other Copermittees and/or entities, provided that such a credit system clearly exhibits that it will not allow discharges from Priority Development Projects to cause or contribute to a net impact over and above the impact caused by projects meeting the onsite structural BMP performance requirements of Provisions E.3.c.(1) and E.3.c.(2)(a). Any credit system that a Copermittee chooses to implement must be submitted to the San Diego Water Board Executive Officer for review and acceptance as part of the Water Quality Improvement Plan.

(4) Long-Term Structural BMP Maintenance

Each Copermittee must require the project applicant to submit proof of the mechanism under which ongoing long-term maintenance of all structural BMPs will be conducted.

(5) Infiltration and Groundwater Protection

- (a) Structural BMPs designed to primarily function as large, centralized infiltration devices (such as large infiltration trenches and infiltration basins) must not cause or contribute to an exceedance of an applicable groundwater quality objective. At a minimum, such infiltration BMPs must be in conformance with the design criteria listed below, unless the development project applicant demonstrates to the Copermittee that one or more of the specific design criteria listed below are not necessary to protect groundwater quality. The design criteria listed below do not apply to small infiltration systems dispersed throughout a development project.
- (i) Runoff must undergo pretreatment such as sedimentation or filtration prior to infiltration;
 - (ii) Pollution prevention and source control BMPs must be implemented at a level appropriate to protect groundwater quality at sites where infiltration BMPs are to be used;
 - (iii) Infiltration BMPs must be adequately maintained to remove pollutants in storm water to the MEP;
 - (iv) The vertical distance from the base of any infiltration BMP to the seasonal high groundwater mark must be at least 10 feet. Where groundwater basins do not support beneficial uses, this vertical distance criteria may be reduced, provided groundwater quality is maintained;
 - (v) The soil through which infiltration is to occur must have physical and chemical characteristics (e.g., appropriate cation exchange capacity, organic content, clay content, and infiltration rate) which are adequate for proper infiltration durations and treatment of runoff for the protection of groundwater beneficial uses;
 - (vi) Infiltration BMPs must not be used for areas of industrial or light industrial activity, and other high threat to water quality land uses and activities as designated by each Copermittee, unless source control BMPs to prevent exposure of high threat activities are implemented, or runoff from such activities is first treated or filtered to remove pollutants prior to infiltration; and
 - (vii) Infiltration BMPs must be located a minimum of 100 feet horizontally from any water supply wells.
- (b) The Copermittee may develop, individually or with other Copermittees, alternative mandatory design criteria to that listed above for infiltration BMPs which are designed to primarily function as centralized infiltration devices. Before implementing the alternative design criteria in the development planning process the Copermittee(s) must:

- (i) Notify the San Diego Water Board of the intent to implement the alternative design criteria submitted; and
- (ii) Comply with any conditions set by the San Diego Water Board.

d. BMP DESIGN MANUAL UPDATE

Each Copermittee must update its BMP Design Manual³⁰ pursuant to Provision F.2.b. Until the Copermittee has updated its BMP Design Manual [pursuant to Provision F.2.b.\(1\)](#) ~~with the 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, t~~The Copermittee must implement the [updated](#) BMP Design Manual within 180 days [following completion](#) of ~~completing~~ the update [pursuant to Provision F.2.b.\(1\), unless directed otherwise by the San Diego Water Board Executive Officer. The date the BMP Design Manual is implemented is the "effective date" of the BMP Design Manual.](#) The update of the BMP Design Manual [required pursuant to Provision F.2.b.\(1\)](#) must include the following:

- (1) Updated procedures to determine the nature and extent of storm water requirements applicable to a potential development or redevelopment projects. These procedures must inform project applicants of the storm water management requirements applicable to their project including, but not limited to, general requirements for all development projects, structural BMP design procedures and requirements, hydromodification management requirements, requirements specific to phased projects, and procedures specific to private developments and public improvement projects;
- (2) Updated procedures to identify pollutants and conditions of concern for selecting the most appropriate structural BMPs that consider, at a minimum, the following:
 - (a) Receiving water quality (including pollutants for which receiving waters are listed as impaired under the CWA section 303(d) List);
 - (b) Pollutants, stressors, and/or receiving water conditions that cause or contribute to the highest priority water quality conditions identified in the Water Quality Improvement Plan;
 - (c) Land use type of the project and pollutants associated with that land use type; and
 - (d) Pollutants expected to be present onsite.
- (3) Updated procedures for designing structural BMPs, including any updated

³⁰ 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.

- 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 Projects applications that have not received prior lawful approval by the Copermittee by the effective date of the BMP Design Manual pursuant to Provision E.3.d, implement~~ the requirements of Provision E.3. ~~must be implemented. For project applications that have received prior lawful approval before the effective date of the BMP Design Manual pursuant to Provision E.3.d, the Copermittee may allow previous land development requirements to apply. except that the Copermittee may allow previous land development requirements to apply to a Priority Development Project if the conditions of Provision E.3.e.(1)(a)(i) or Provision E.3.e.(1)(a)(ii) are met:~~

- (i) The Copermittee has, prior to the effective date of the BMP Design Manual required to be developed pursuant to Provision E.3.d:

[a] Approved³¹ a design that incorporates the storm water drainage system for the Priority Development Project in its entirety, including all applicable structural pollutant treatment control and hydromodification management BMPs consistent with the previous applicable MS4 permit requirements;³² AND

[b] Issued a private project permit or approval, or functional equivalent for public projects, that authorizes the Priority Development Project applicant to commence construction activities based on a design that incorporates the storm water

³¹ For public projects, a design stamped by the City or County Engineer, or engineer of record for the project is considered an approved design.

³² Order Nos. R9-2007-0001, R9-2009-0002, and R9-2010-0016 for San Diego County, Orange County, and Riverside County Copermittees, respectively

drainage system approved in conformance with Provision E.3.e.(1)(a)(i)[a]; AND

- [c] Confirmed that there have been construction activities on the Priority Development Project site within the 365 days prior to the effective date of the BMP Design Manual, OR the Copermittee confirms that construction activities have commenced on the Priority Development Project site within the 180 days after the effective date of the BMP Design Manual, where construction activities are undertaken in reliance on the permit or approval, or functional equivalent for public projects, issued by the Copermittee in conformance with Provision E.3.e.(1)(a)(i)[b]; AND
- [d] Issued all subsequent private project permits or approvals, or functional equivalent for public projects, that are needed to implement the design initially approved in conformance with Provision E.3.e.(1)(a)(i)[a] within 5 years of the effective date of the BMP Design Manual. The storm water drainage system for the Priority Development Project in its entirety, including all applicable structural pollutant treatment control and hydromodification management BMPs must remain in substantial conformity with the design initially approved in conformance with Provision E.3.e.(1)(a)(i)[a].

(ii) The Copermittee demonstrates it lacks the land use authority or legal authority to require a Priority Development Project to implement the requirements of Provision E.3.

- (b) Each Copermittee must identify the roles and responsibilities of its various municipal departments in implementing the structural BMP requirements, including each stage of a project from application review and approval through BMP maintenance and inspections.
- (c) Each Copermittee must require and confirm that appropriate easements and ownerships are properly recorded in public records and the information is conveyed to all appropriate parties when there is a change in project or site ownership.
- (d) Each Copermittee must require and confirm that prior to occupancy and/or intended use of any portion of the Priority Development Project, each structural BMP is inspected to verify that it has been constructed and is operating in compliance with all of its specifications, plans, permits, ordinances, and the requirements of this Order.

(2) Priority Development Project Inventory and Prioritization

- (a) Each Copermittee must develop, maintain, and update at least annually, a watershed-based database to track and inventory all Priority Development

Projects and associated structural BMPs within its jurisdiction. Inventories must be accurate and complete beginning from December 2002 for the San Diego County Copermittees, February 2003 for the Orange County Copermittees, and July 2005 for the Riverside County Copermittees. The use of an automated database system, such as GIS, is highly recommended. The database must include, at a minimum, the following information:

- (i) Priority Development Project location (address and hydrologic subarea);
 - (ii) Descriptions of structural BMP type(s);
 - (iii) Date(s) of construction;
 - (iv) Party responsible for structural BMP maintenance;
 - (v) Dates and findings of structural BMP maintenance verifications; and
 - (vi) Corrective actions and/or resolutions, when applicable.
- (b) Each Copermittee must prioritize the Priority Development Projects with structural BMPs within its jurisdiction. The designation of Priority Development Projects as high priority must consider the following:
- (i) The highest water quality priorities identified in the Water Quality Improvement Plan;
 - (ii) Receiving water quality;
 - (iii) Number and sizes of structural BMPs;
 - (iv) Recommended maintenance frequency of structural BMPs;
 - (v) Likelihood of operation and maintenance issues of structural BMPs;
 - (vi) Land use and expected pollutants generated; and
 - (vii) Compliance record.

(3) Structural BMP Maintenance Verifications and Inspections

Each Copermittee is required to verify that structural BMPs on each Priority Development Project are adequately maintained, and continue to operate effectively to remove pollutants in storm water to the MEP through inspections, self-certifications, surveys, or other equally effective approaches.

- (a) All (100 percent) of the structural BMPs at Priority Development Projects that are designated as high priority must be inspected directly by the Copermittee annually prior to each rainy season;
- (b) For verifications performed through a means other than direct Copermittee inspection, adequate documentation must be required by the Copermittee

to provide assurance that the required maintenance of structural BMPs at each Priority Development Project has been completed; and

- (c) Appropriate follow-up measures (including re-inspections, enforcement, etc.) must be conducted to ensure that structural BMPs at each Priority Development Project continue to reduce pollutants in storm water to the MEP as originally designed.

f. DEVELOPMENT PROJECT ENFORCEMENT

Each Copermittee must enforce its legal authority established pursuant to Provision E.1 for all development projects, as necessary, to achieve compliance with the requirements of this Order, in accordance with its Enforcement Response Plan pursuant to Provision E.6.

4. Construction Management

Each Copermittee must implement a construction management program in accordance with the strategies in the Water Quality Improvement Plan described pursuant to Provision B.3.b.(1) and includes, at a minimum, the following requirements:

a. PROJECT APPROVAL PROCESS

Prior to issuance of any local permit(s) that allows the commencement of construction projects that involve ground disturbance or soil disturbing activities that can potentially generate pollutants in storm water runoff, each Copermittee must:

- (1) Require a pollution control plan, construction BMP plan, and/or an erosion and sediment control plan, to be submitted by the project applicant to the Copermittee;
- (2) Confirm the pollution control plan, construction BMP plan, and/or erosion and sediment control plan, complies with the local grading ordinance, other applicable local ordinances, and the requirements of this Order;
- (3) Confirm the pollution control, construction BMP, and/or erosion and sediment control plan, includes seasonally appropriate and effective BMPs and management measures described in Provision E.4.c, as applicable to the project; and
- (4) Verify that the project applicant has obtained coverage under the statewide Construction General Permit (Order 2009-0009-DWQ or subsequent Order), if applicable.

b. CONSTRUCTION SITE INVENTORY AND TRACKING

- (1) Each Copermittee must maintain and update, at least quarterly, a watershed-based inventory of all construction projects issued a local permit that allows ground disturbance or soil disturbing activities that can potentially generate pollutants in storm water runoff. The use of an automated database system, such as GIS, is highly recommended. The inventory must include:
 - (a) Relevant contact information for each site (e.g., name, address, phone, and email for the owner and contractor);
 - (b) The basic site information including location (address and hydrologic subarea), Waste Discharge Identification (WDID) number (if applicable), size of the site, and approximate area of disturbance;
 - (c) Whether or not the site is considered a high threat to water quality, as defined in Provision E.4.b.(2) below;
 - (d) The project start and completion dates;
 - (e) The required inspection frequency, as defined in the Copermittee's jurisdictional runoff management program document;
 - (f) The date the Copermittee accepted or approved the pollution control plan, construction BMP plan, and/or erosion and sediment control plan; and
 - (g) Whether or not there are ongoing enforcement actions administered to the site.
- (2) Each Copermittee must identify all construction sites within its jurisdiction that represent a high threat to downstream surface water quality. The designation of construction sites as high threat to water quality must consider the following:
 - (a) Sites located within a hydrologic subarea where sediment is known or suspected to contribute to the highest priority water quality conditions identified in the Water Quality Improvement Plan;
 - (b) Sites located within the same hydrologic subarea and tributary to a water body segment listed as impaired for sediment on the CWA section 303(d) List;
 - (c) Sites located within, directly adjacent to, or discharging directly to a receiving water within an ESA; and
 - (d) Other sites determined by the Copermittees or the San Diego Water Board as a high threat to water quality.

c. CONSTRUCTION SITE BMP IMPLEMENTATION

Each Copermittee must implement, or require the implementation of effective BMPs to reduce discharges of pollutants in storm water from construction sites to the MEP, and effectively prohibit non-storm water discharges from construction sites into the MS4. These BMPs must be site specific, seasonally appropriate, and construction phase appropriate. BMPs must be implemented at each construction site year round. Dry season BMP implementation must plan for and address unseasonal rain events that may occur during the dry season (May 1 through September 30). Copermittees must implement, or require the implementation of, BMPs in the following categories:

- (1) Project Planning;
- (2) Good Site Management “Housekeeping”, including waste management;
- (3) Non-storm Water Management;
- (4) Erosion Control;
- (5) Sediment Control;
- (6) Run-on and Run-off Control; and
- (7) Active/Passive Sediment Treatment Systems, where applicable.

d. CONSTRUCTION SITE INSPECTIONS

Each Copermittee must conduct construction site inspections to require and confirm compliance with its local permits and applicable local ordinances, and the requirements of this Order. Priority for site inspections must consider threat to water quality pursuant to Provision E.4.b as well as the nature of the construction activity, topography, and the characteristics of soils and receiving water quality.

(1) Inspection Frequency

- (a) Each Copermittee must conduct inspections at all inventoried sites, including high threat to water quality sites, at an appropriate frequency for each phase of construction to confirm the site reduces the discharge of pollutants in storm water from construction sites to the MEP, and effectively prohibits non-storm water discharges from entering the MS4.
- (b) Each Copermittee must establish appropriate inspection frequencies for high threat to water quality sites, and all other sites, for each phase of construction. Inspection frequencies appropriate for addressing the

highest water quality priorities identified in the Water Quality Improvement Plan, and for complying with the requirements of this Order must be identified in each Copermittee's jurisdictional runoff management program document.

- (c) Based upon inspection findings, each Copermittee must implement all follow-up actions (i.e., re-inspection, enforcement) necessary to require and confirm site compliance with its local permits and applicable local ordinances, and the requirements of this Order.

(2) Inspection Content

Inspections of construction sites by the Copermittee must include, at a minimum:

- (a) Verification of coverage under the Construction General Permit (Notice of Intent (NOI) and/or WDID number) during initial inspections, when applicable;
- (b) Assessment of compliance with its local permits and applicable local ordinances related to pollution prevention, including the implementation and maintenance of applicable BMPs;
- (c) Assessment of BMP adequacy and effectiveness;
- (d) Visual observations of actual non-storm water discharges;
- (e) Visual observations of actual or potential discharge of sediment and/or construction related materials from the site;
- (f) Visual observations of actual or potential illicit connections; and
- (g) If any violations are found and BMP corrections are needed, inspectors must take and document appropriate actions in accordance with the Enforcement Response Plan pursuant to Provision E.6.

(3) Inspection Tracking and Records

Each Copermittee must track all inspections and re-inspections at all inventoried construction sites. The Copermittee must retain all inspection records in an electronic database or tabular format, which must be made available to the San Diego Water Board upon request. Inspection records must include, at a minimum:

- (a) Site name, location (address and hydrologic subarea), and WDID number (if applicable);

- (b) Inspection date;
- (c) Approximate amount of rainfall since last inspection;
- (d) Description of problems observed with BMPs and indication of need for BMP addition/repair/replacement and any scheduled re-inspection, and date of re-inspection;
- (e) Descriptions of any other specific inspection comments which must, at a minimum, include rationales for longer compliance time;
- (f) Description of enforcement actions issued in accordance with the Enforcement Response Plan pursuant to Provision E.6; and
- (g) Resolution of problems noted and date problems fixed.

e. CONSTRUCTION SITE ENFORCEMENT

Each Copermittee must enforce its legal authority established pursuant to Provision E.1 for all its inventoried construction sites, as necessary, to achieve compliance with the requirements of this Order, in accordance with its Enforcement Response Plan pursuant to Provision E.6.

5. Existing Development Management

Each Copermittee must implement an existing development management program in accordance with the strategies in the Water Quality Improvement Plan described pursuant to Provision B.3.b.(1) and includes, at a minimum, the following requirements:

a. EXISTING DEVELOPMENT INVENTORY AND TRACKING

Each Copermittee must maintain, and update at least annually, a watershed-based inventory of the existing development within its jurisdiction that may discharge a pollutant load to and from the MS4. The use of an automated database system, such as GIS, is highly recommended. The inventory must, at a minimum, include:

- (1) Name, location (hydrological subarea and address, if applicable) of the following types of existing development with its jurisdiction:
 - (a) Commercial facilities or areas;
 - (b) Industrial facilities;
 - (c) Municipal facilities, including:

- (i) MS4 and related structures;³³
- (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;
- (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;

³³ The inventory may refer to the MS4 map required to be maintained pursuant to Provision E.2.b.(1).

- (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;³⁴ and
 - (v) Inventoried existing development must be inspected by the Copermittee, as needed, in response to valid public complaints.
- (b) Based upon inspection findings, each Copermittee must implement all follow-up actions (i.e. education and outreach, re-inspection, enforcement) necessary to require and confirm compliance with its applicable local ordinances and permits and the requirements of this Order, in accordance with its Enforcement Response Plan pursuant to Provision E.6.

(2) Inspection Content

- (a) Inspections of existing development must include, at a minimum:
- (i) Visual inspections for the presence of actual non-storm water discharges;
 - (ii) Visual inspections for the presence of actual or potential discharge of pollutants;
 - (iii) Visual inspections for the presence of actual or potential illicit connections; and
 - (iv) Verification that the description of the facility or area in the inventory, required pursuant to Provision E.5.a.(2), has not changed.

³⁴ 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).

- (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 of any persons required to obtain coverage under the statewide Industrial General Permit and Construction General Permit and failing to do so, within five (5) calendar days from the time the Copermittee become aware of the circumstances. Written notification may be provided electronically by email to RB9_Nonfilers@waterboards.ca.gov.

7. Public Education and Participation

Each Copermittee must implement, individually or with other Copermittees, a public education and participation program in accordance with the strategies identified in the Water Quality Improvement Plan to promote and encourage the development of programs, management practices, and behaviors that reduce the discharge of pollutants in storm water to the MEP, prevent controllable non-storm water discharges from entering the MS4, and protect water quality standards in receiving waters. The public education and participation program must be implemented in accordance with the strategies in the Water Quality Improvement Plan described pursuant to Provision B.3.b.(1) and include, at a minimum, the following requirements:

a. PUBLIC EDUCATION

The public education program component implemented within the Copermittee's jurisdiction must include, at a minimum, the following:

- (1) Educational activities, public information activities, and other appropriate outreach activities intended to reduce pollutants associated with the application of pesticides, herbicides and fertilizer and other pollutants of concern in storm water discharges to and from its MS4 to the MEP, as determined and prioritized by the Copermittee(s) by jurisdiction and/or watershed to address the highest priority water quality conditions identified in the Water Quality Improvement Plan;
- (2) Educational activities, public information activities, and other appropriate outreach activities to facilitate the proper management and disposal of used oil and toxic materials; and
- (3) Appropriate education and training measures for specific target audiences, such as construction site operators, residents, underserved target audiences and school-aged children, as determined and prioritized by the Copermittee(s) by jurisdiction and/or watershed, based on high risk behaviors and pollutants of concern.

b. PUBLIC PARTICIPATION

The public participation program component implemented within the Copermittee's jurisdiction must include, at a minimum, the following:

- (1) A process for members of the public to participate in updating the highest priority water quality conditions, numeric goals, and water quality improvement strategies in the Water Quality Improvement Plan;

- (2) Opportunities for members of the public to participate in providing the Copermittee recommendations for improving the effectiveness of the water quality improvement strategies implemented within its jurisdiction; and
- (3) Opportunities for members of the public to participate in programs and/or activities that can result in the prevention or elimination of non-storm water discharges to the MS4, reduction of pollutants in storm water discharges from the MS4, and/or protection of the quality of receiving waters.

8. Fiscal Analysis

- a. Each Copermittee must secure the resources necessary to meet all the requirements of this Order.
- b. Each Copermittee must conduct an annual fiscal analysis of its jurisdictional runoff management program in its entirety. The fiscal analysis must include the following:
 - (1) Identification of the various categories of expenditures necessary to implement the requirements of this Order, including a description of the specific capital, operation and maintenance, and other expenditure items to be accounted for in each category of expenditures;
 - (2) The staff resources needed and allocated to meet the requirements of this Order, including any development, implementation, and enforcement activities required;
 - (3) The estimated expenditures for Provisions E.8.b.(1) and E.8.b.(2) for the current fiscal year; and
 - (4) The source(s) of funds that are proposed to meet the necessary expenditures described in Provisions E.8.b.(1) and E.8.b.(2), including legal restrictions on the use of such funds, for the current fiscal year and next fiscal year.
- c. Each Copermittee must submit a summary of the annual fiscal analysis with each Water Quality Improvement Plan Annual Report required pursuant to Provision F.3.b.(3).
- d. Each Copermittee must provide the documentation used to develop the summary of the annual fiscal analysis upon request by the San Diego Water Board.

F. REPORTING

The purpose of this provision is to determine and document compliance with the requirements set forth in this Order. The goal of reporting is to communicate to the San Diego Water Board and the people of the State of California the implementation status of each jurisdictional runoff management program and compliance with the requirements of this Order. This goal is to be accomplished through the submittal of specific deliverables to the San Diego Water Board by the Copermittees.

1. Water Quality Improvement Plans

The Copermittees for each Watershed Management Area must develop and submit the Water Quality Improvement Plan in accordance with the following requirements:

a. WATER QUALITY IMPROVEMENT PLAN DEVELOPMENT

Each Water Quality Improvement Plan must be developed in accordance with the following process:

(1) Public Participation Process

The Copermittees must implement a public participation process to solicit data, information, and recommendations to be utilized in the development of the Water Quality Improvement Plan. The public participation process must include the following:

- (a) The Copermittees must develop a publicly available and noticed schedule of the opportunities for the public to participate and provide comments during the development of the Water Quality Improvement Plan. The schedule may be adjusted as necessary by the Copermittees, provided the public is provided timely notification of the changes to the schedule.
- (b) The Copermittees must form a Water Quality Improvement Consultation Panel to provide recommendations during the development of the Water Quality Improvement Plan. The Water Quality Improvement Consultation Panel must consist of at least the following members:
 - (i) A representative of the San Diego Water Board;
 - (ii) A representative of the environmental community familiar with the water quality conditions of concern of the receiving waters in the Watershed Management Area, preferably from an environmental interest group associated with a water body within the Watershed Management Area; and
 - (iii) A representative of the development community familiar with the opportunities and constraints for implementing structural BMPs,

retrofitting projects, and stream, channel or habitat rehabilitation projects in the Watershed Management Area, preferably with relevant engineering, hydrology, and/or geomorphology experience in the Watershed Management Area.

- (c) The Copermittees must coordinate the schedules for the public participation process among the Watershed Management Areas to provide the public time and opportunity to participate during the development of the Water Quality Improvement Plans.

(2) Priority Water Quality Conditions

- (a) The Copermittees must solicit data, information and recommendations from the public to be utilized in the development and identification of the priority water quality conditions and potential water quality improvement strategies for the Watershed Management Area.
- (b) The Copermittees must review the priority water quality conditions the Copermittees plan on including in the Water Quality Improvement Plan with the Water Quality Improvement Consultation Panel to receive recommendations or concurrence.
- (c) The Copermittees must consider revisions to the priority water quality conditions based on recommendations from the Water Quality Improvement Consultation Panel.
- (d) The Copermittees must include all the potential water quality improvement strategies identified by the public and the Water Quality Improvement Consultation Panel with the submittal of the priority water quality conditions to the San Diego Water Board.
- (e) The Copermittees must submit the Water Quality Improvement Plan requirements of Provision B.2 to the San Diego Water Board as early as 6 months and no later than 12 months after the commencement of coverage under this Order. Upon receipt, the San Diego Water Board will issue a public notice and release the proposed priority water quality conditions and potential water quality improvement strategies for public review and comment for a minimum of 30 days.
- (f) The Copermittees must consider revisions to the priority water quality conditions and potential water quality improvement strategies developed pursuant to Provision B.2 based on public comments received by the close of the comment period.

(3) Water Quality Improvement Goals, Strategies and Schedules

- (a) The Copermittees must solicit recommendations from the public on potential numeric goals for the highest priority water quality conditions identified for the Watershed Management Area, and recommendations on the strategies that should be implemented to achieve the potential numeric goals.
- (b) The Copermittees must consult with the Water Quality Improvement Consultation Panel and consider revisions to the following items based on the Panel's recommendations:
 - (i) The numeric goals and schedules the Copermittees propose to include in the Water Quality Improvement Plan;
 - (ii) The water quality improvement strategies and schedules the Copermittees propose to implement in the Watershed Management Area and include in the Water Quality Improvement Plan; and
 - (iii) If the Copermittees choose to implement Provision B.3.b.(4), the results of the Watershed Management Area Analysis the Copermittees proposed to incorporate into the Water Quality Improvement Plan.
- (c) The Copermittees must submit the Water Quality Improvement Plan requirements of Provision B.3 to the San Diego Water Board as early as 9 months and no later than 18 months after the commencement of coverage under this Order. Upon receipt, the San Diego Water Board will issue a public notice and release the proposed water quality improvement goals, strategies and schedules for public review and comment for a minimum of 30 days.
- (d) The Copermittees must consider revisions to the water quality improvement goals, strategies and schedules developed pursuant to Provision B.3 based on public comments received by the close of the comment period.

b. WATER QUALITY IMPROVEMENT PLAN SUBMITTAL AND IMPLEMENTATION

- (1) Within 24 months after the commencement of coverage under this Order, the Copermittees for each Watershed Management Area must submit a complete Water Quality Improvement Plan in accordance with the requirements of Provision B of this Order to the San Diego Water Board. The San Diego Water Board will issue a public notice and release the Water Quality Improvement Plan for public review and comment for a minimum of 30 days.

- (2) The Copermittees must consider revisions to the Water Quality Improvement Plan based on written comments received by the close of the public comment period.
- (3) The Copermittees must promptly submit any revisions to the Water Quality Improvement Plan to the San Diego Water Board no later than 60 days after the close of the public comment period.
- (4) If issues concerning the Water Quality Improvement Plan are resolved informally through discussions among the Copermittees, the San Diego Water Board and interested parties, the San Diego Water Board Executive Officer may provide written notification of acceptance to the Copermittees that the Water Quality Improvement Plan meets the requirements of Provision B. However, if the Executive Officer determines that significant issues with the Water Quality Improvement Plan remain, the matter will be scheduled for San Diego Water Board consideration at a public meeting.
- (5) The Copermittees must commence with implementation of the Water Quality Improvement Plan, in accordance with the water quality improvement strategies and schedules therein, upon written notification of acceptance with the Water Quality Improvement Plan by the San Diego Water Board Executive Officer.
- (6) During implementation of the Water Quality Improvement Plan the Copermittees must correct any deficiencies in the Plan identified by the San Diego Water Board in the updates submitted with the Water Quality Improvement Plan Annual Report following a request by the Board to do so.
- (7) The Water Quality Improvement Plan must be made available on the Regional Clearinghouse required pursuant to Provision F.4 within 30 days of receiving notification of acceptance with the Water Quality Improvement Plan by the San Diego Water Board Executive Officer.

2. Updates

a. JURISDICTIONAL RUNOFF MANAGEMENT PROGRAM DOCUMENT UPDATES

Each Copermittee must update its jurisdictional runoff management program document in accordance with the following requirements:

- (1) Each Copermittee is encouraged to seek public and key stakeholder participation and comments, as early and often as possible during the process of developing updates to its jurisdictional runoff management program document;

- (2) Each Copermittee must update its jurisdictional runoff management program document to incorporate the requirements of Provision E concurrent with the submittal of the Water Quality Improvement Plan. Each Copermittee must correct any deficiencies in the jurisdictional runoff management program document based on comments received from the San Diego Water Board in the updates submitted with the Water Quality Improvement Plan Annual Report;
- (3) Each Copermittee must submit updates to its jurisdictional runoff management program, with the supporting rationale for the modifications, either in the Water Quality Improvement Plan Annual Report required pursuant to Provision F.3.b.(3), or as part of the Report of Waste Discharge required pursuant to Provision F.5.b;
- (4) The Copermittee must revise proposed modifications to its jurisdictional runoff management program as directed by the San Diego Water Board Executive Officer; and
- (5) Updated jurisdictional runoff management program documents must be made available on the Regional Clearinghouse required pursuant to Provision F.4 within 30 days of submitting the Water Quality Improvement Plan Annual Report.

b. BMP DESIGN MANUAL UPDATES

Each Copermittee must update its BMP Design Manual in accordance with the following requirements:

- (1) Each Copermittee must update its BMP Design Manual to incorporate the requirements of Provisions E.3.a-d concurrent with the submittal of the Water Quality Improvement Plan. Each Copermittee must correct any deficiencies in the BMP Design Manual based on comments received from the San Diego Water Board in the updates submitted with the Water Quality Improvement Plan Annual Report;
- (2) ~~Subsequent~~ [Any future](#) updates to the BMP Design Manual [made after its update pursuant to Provision F.2.b.\(1\) is completed](#) must be consistent with the requirements of Provisions E.3.a-d and must be submitted as part of the Water Quality Improvement Plan Annual Reports required pursuant to Provision F.3.b.(3), or as part of the Report of Waste Discharge required pursuant to Provision F.5.b; and
- (3) ~~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.
- (4) [If the San Diego Water Board amends Provisions E.3.a-d during the permit term but after the Copermittee has completed the update pursuant to](#)

Provision F.2.b.(1), the Copermitttee must revise its BMP Design Manual to incorporate the amended Provision E.3.a-d requirements as soon as possible but not later than 90 days after the date the San Diego Water Board adopts the amendments to Provisions E.3.a-d, unless otherwise directed by the San Diego Water Board Executive Officer. Under these circumstances, the effective date of the BMP Design Manual is no later than 90 days after the date the San Diego Water Board adopts the amendments to Provisions E.3.a-d, unless otherwise directed by the San Diego Water Board Executive Officer.

C. WATER QUALITY IMPROVEMENT PLAN UPDATES

- (1) The Water Quality Improvement Plans must be updated in accordance with the following process:
 - (a) The Copermitttees 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 Copermitttees 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 Copermitttees 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 Copermitttees 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).³⁵ 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:

³⁵ Data must be uploaded to CEDEN Southern California Regional Data Center (<http://www.sccwrp.org/Data/DataSubmission/SouthernCaliforniaRegionalDataCenter.aspx>) using the templates provided on the CEDEN website.

- (a) The beneficial uses of the receiving waters within the San Diego Region that are supported and not adversely affected by the Copermittees' MS4 discharges;
 - (b) The beneficial uses of the receiving waters within the San Diego Region that are adversely impacted by the Copermittees' MS4 discharges;
 - (c) The progress toward protecting the beneficial uses in the receiving waters within the San Diego Region from the Copermittees' discharges; and
 - (d) Pollutants or conditions of emerging concern that may impact beneficial uses in the receiving waters within the San Diego Region.
- (2) The Regional Monitoring and Assessment Report must include recommendations for improving the implementation and assessment of the Water Quality Improvement Plans and jurisdictional runoff management programs.
 - (3) Each Copermittee must provide any data or documentation utilized in developing the Regional Monitoring and Assessment Report upon request by the San Diego Water Board. Any Copermittee monitoring and assessment data utilized in developing the Regional Monitoring and Assessment Report must be available for access on the Regional Clearinghouse required pursuant to Provision F.4.

4. Regional Clearinghouse

The Copermittees must develop, update, and maintain an internet-based Regional Clearinghouse that is made available to the public no later than 18 months after the effective date of this Order.³⁶

- 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;

³⁶ The Copermittees may develop, update and maintain the clearinghouse(s) of other Copermittees or agencies.

- (4) BMP Design Manual for each Copermittee within the Watershed Management Area, and all updated versions with date of update;
 - (5) Reports from special studies (e.g. source identification, BMP effectiveness assessment) conducted in the Watershed Management Area;
 - (6) Monitoring data collected pursuant to Provision D for each Watershed Management Area must be uploaded to CEDEN,³⁷ 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.

³⁷ 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 Riverside County Copermittees are required to submit a complete Report of Waste Discharge pursuant to the requirements of their current Order. The San Diego Water Board will review and consider the Report of Waste Discharge to determine whether modification to this Order, pursuant to the requirements of Provision H, will be required prior to the Riverside County Copermittees obtaining coverage under this Order. The current Order for Riverside County Copermittees is 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)~~

a. Names and addresses of the Copermittees;

~~(2)~~

b. Names and titles of the primary contacts of the Copermittees;

~~(3)~~

c. Proposed changes to the Copermittees' Water Quality Improvement Plans and the supporting justification;

~~(4)~~

d. Proposed changes to the Copermittees' jurisdictional runoff management programs and the supporting justification;

~~(5)~~

e. Any other information necessary for the re-issuance of this Order;

~~(6)~~

f. Any information to be included as part of the Report of Waste Discharge pursuant to the requirements of this Order; and

~~(7)~~

g. Any other information required by federal regulations for NPDES permit reissuance.

~~6. Application for Early Coverage~~

~~a. The Riverside County Copermittees 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~~

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~~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.~~

6. Reporting Provisions

Each Copermittee must comply with all the reporting and recordkeeping provisions of the Standard Permit Provisions and General Provisions contained in Attachment B to this Order.

G. PRINCIPAL WATERSHED COPERMITTEE RESPONSIBILITIES

1. The Copermittees within each Watershed Management Area must designate a Principal Watershed Copermittee and notify the San Diego Water Board of the name of the Principal Watershed Copermittee. An individual Copermittee should not be designated a Principal Watershed Copermittee for more than two Watershed Management Areas. The notification may be submitted with the Water Quality Improvement Plan required pursuant to Provision F.1 of this Order.
2. The Principal Watershed Copermittee is responsible for, at a minimum, the following:
 - a. Serving as liaison between the Copermittees in the Watershed Management Area and the San Diego Water Board on general permit issues, and when necessary and appropriate, representing the Copermittees in the Watershed Management Area before the San Diego Water Board;
 - b. Facilitating the development of the Water Quality Improvement Plan in accordance with the requirements of Provision B of this Order;
 - c. Coordinating the submittal of the deliverables required by Provisions F.1, F.2, F.3.a, and F.3.b of this Order; and
 - d. Coordinating and developing, with the other Principal Watershed Copermittees, the requirements of Provisions F.3.c, F.4, and F.5.b of this Order.
3. The Principal Watershed Copermittee is not responsible for ensuring that the other Copermittees within the Watershed Management Area are in compliance with the requirements of this Order. Each Copermittee within the Watershed Management Area is responsible for complying with the requirements of this Order.

H. MODIFICATION OF ORDER

1. Modifications of the Order may be initiated by the San Diego Water Board or by the Copermittees. Requests by Copermittees must be made to the San Diego Water Board.
2. Minor modifications to the Order may be made by the San Diego Water Board where the proposed modification complies with all the prohibitions and limitations, and other requirements of this Order.
3. This Order may also be re-opened and modified, revoked and, reissued or terminated in accordance with the provisions of 40 CFR 122.44, 122.62 to 122.64, and 124.5. Causes for taking such actions include, but are not limited to, failure to comply with any condition of this Order and permit, and endangerment to human health or the environment resulting from the permitted activity.
4. This Order may be re-opened for modification for cause including but not limited to the following:
 - ~~a. 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.~~
 - a. Any of the TMDLs in Attachment E to this Order are amended in the Basin Plan by San Diego Water Board, and the amendment is approved by the State Water Board, Office of Administrative Law, and the USEPA;
 - ~~d.~~
 - b. The Basin Plan is amended by the San Diego Water Board to incorporate a new TMDL, and the amendment is approved by the State Water Board, Office of Administrative Law, and the USEPA; or
 - ~~e.~~
 - c. Updating or revising the monitoring and reporting requirements is determined to be necessary, at the discretion of the San Diego Water Board. Such modification(s) may include, but is (are) not limited to, revision(s) to: (i) implement recommendations from Southern California Coastal Water Research Project (SCCWRP), (ii) develop, refine, implement, and/or coordinate a regional monitoring program, (iii) develop and implement improved monitoring and assessment programs in keeping with San Diego Water Board Resolution No. R9-2012-0069, Resolution in Support of a Regional Monitoring Framework, and/or (iv) add provisions to require the Copermittees to evaluate and provide information on cost and values of the monitoring and reporting program.

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~~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 Riverside County Copermittees submit a complete Report of Waste Discharge pursuant to the requirements of their current Orders.~~

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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.

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.

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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.

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2. Attachment B to State Water Board Resolution 2012-0012, as amended by State Water Board Resolution No. 2012-0031.

Special Protections for Areas of Special Biological Significance (ASBS), Governing Point Source Discharges of Storm Water and Nonpoint Source Waste Discharges

I. PROVISIONS FOR POINT SOURCE DISCHARGES OF STORM WATER AND NONPOINT SOURCE WASTE DISCHARGES

The following terms, prohibitions, and special conditions (hereafter collectively referred to as special conditions) are established as limitations on point source storm water and nonpoint source discharges. These special conditions provide Special Protections for marine aquatic life and natural water quality in Areas of Special Biological Significance (ASBS), as required for State Water Quality Protection Areas pursuant to California Public Resources Code Sections 36700(f) and 36710(f). These Special Protections are adopted by the State Water Board as part of the California Ocean Plan (Ocean Plan) General Exception.

The special conditions are organized by category of discharge. The State Water Resources Control Board (State Water Board) and Regional Water Quality Control Boards (Regional Water Boards) will determine categories and the means of regulation for those categories [e.g., Point Source Storm Water National Pollutant Discharge Elimination System (NPDES) or Nonpoint Source].

A. PERMITTED POINT SOURCE DISCHARGES OF STORM WATER

1. General Provisions for Permitted Point Source Discharges of Storm Water

- a. Existing storm water discharges into an ASBS are allowed only under the following conditions:
 - (1) The discharges are authorized by an NPDES permit issued by the State Water Board or Regional Water Board;
 - (2) The discharges comply with all of the applicable terms, prohibitions, and special conditions contained in these Special Protections; and
 - (3) The discharges:
 - (i) Are essential for flood control or slope stability, including roof, landscape, road, and parking lot drainage;
 - (ii) Are designed to prevent soil erosion;
 - (iii) Occur only during wet weather;
 - (iv) Are composed of only storm water runoff.
- b. Discharges composed of storm water runoff shall not alter natural ocean water quality in an ASBS.

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- c. The discharge of trash is prohibited.
 - d. Only discharges from existing storm water outfalls are allowed. Any proposed or new storm water runoff discharge shall be routed to existing storm water discharge outfalls and shall not result in any new contribution of waste to an ASBS (i.e., no additional pollutant loading). "Existing storm water outfalls" are those that were constructed or under construction prior to January 1, 2005. "New contribution of waste" is defined as any addition of waste beyond what would have occurred as of January 1, 2005. A change to an existing storm water outfall, in terms of re-location or alteration, in order to comply with these special conditions, is allowed and does not constitute a new discharge.
 - e. Non-storm water discharges are prohibited except as provided below:
 - (1) The term "non-storm water discharges" means any waste discharges from a municipal separate storm sewer system (MS4) or other NPDES permitted storm drain system to an ASBS that are not composed entirely of storm water.
 - (2) (i) The following non-storm water discharges are allowed, provided that the discharges are essential for emergency response purposes, structural stability, slope stability or occur naturally:
 - (a) Discharges associated with emergency fire fighting operations.
 - (b) Foundation and footing drains.
 - (c) Water from crawl space or basement pumps.
 - (d) Hillside dewatering.
 - (e) Naturally occurring groundwater seepage via a storm drain.
 - (f) Non-anthropogenic flows from a naturally occurring stream via a culvert or storm drain, as long as there are no contributions of anthropogenic runoff.
 - (ii) An NPDES permitting authority may authorize non-storm water discharges to an MS4 with a direct discharge to an ASBS only to the extent the NPDES permitting authority finds that the discharge does not alter natural ocean water quality in the ASBS.
 - (3) Authorized non-storm water discharges shall not cause or contribute to a violation of the water quality objectives in Chapter II of the Ocean Plan nor alter natural ocean water quality in an ASBS.
2. Compliance Plans for Inclusion in Storm Water Management Plans (SWMP) and Storm Water Pollution Prevention Plans (SWPPP).

The discharger shall specifically address the prohibition of non-storm water runoff and the requirement to maintain natural water quality for storm water discharges to an ASBS in an ASBS Compliance Plan to be included in its SWMP or a SWPPP, as appropriate to permit type. If a statewide permit includes a SWMP, then the discharger shall prepare a stand-alone compliance plan for ASBS discharges. The ASBS Compliance Plan is subject to approval by

the Executive Director of the State Water Board (statewide permits) or Executive Officer of the Regional Water Board (for permits issued by Regional Water Boards).

- a. The Compliance Plan shall include a map of surface drainage of storm water runoff, showing areas of sheet runoff, prioritize discharges, and describe any structural Best Management Practices (BMPs) already employed and/or BMPs to be employed in the future. Priority discharges are those that pose the greatest water quality threat and which are identified to require installation of structural BMPs. The map shall also show the storm water conveyances in relation to other features such as service areas, sewage conveyances and treatment facilities, landslides, areas prone to erosion, and waste and hazardous material storage areas, if applicable. The SWMP or SWPPP shall also include a procedure for updating the map and plan when changes are made to the storm water conveyance facilities.
- b. The ASBS Compliance Plan shall describe the measures by which all non-authorized non-storm water runoff (e.g., dry weather flows) has been eliminated, how these measures will be maintained over time, and how these measures are monitored and documented.
- c. For Municipal Separate Storm Sewer System (MS4s), the ASBS Compliance Plan shall require minimum inspection frequencies as follows:
 - (1) The minimum inspection frequency for construction sites shall be weekly during rainy season;
 - (2) The minimum inspection frequency for industrial facilities shall be monthly during the rainy season;
 - (3) The minimum inspection frequency for commercial facilities (e.g., restaurants) shall be twice during the rainy season; and
 - (4) Storm water outfall drains equal to or greater than 18 inches (457 mm) in diameter or width shall be inspected once prior to the beginning of the rainy season and once during the rainy season and maintained to remove trash and other anthropogenic debris.
- d. The ASBS Compliance Plan shall address storm water discharges (wet weather flows) and, in particular, describe how pollutant reductions in storm water runoff, that are necessary to comply with these special conditions, will be achieved through BMPs. Structural BMPs need not be installed if the discharger can document to the satisfaction of the State Water Board Executive Director (statewide permits) or Regional Water Board Executive Officer (Regional Water Board permits) that such installation would pose a threat to health or safety. BMPs to control storm water runoff discharges (at the end-of-pipe) during a design storm shall be designed to achieve on average the following target levels:
 - (1) Table B Instantaneous Maximum Water Quality Objectives in Chapter II of the Ocean Plan; or
 - (2) A 90% reduction in pollutant loading during storm events, for the applicant's total discharges.

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The baseline for these determinations is the effective date of the Exception, except for those structural BMPs installed between January 1, 2005 and adoption of these Special Protections, and the reductions must be achieved and documented within six (6) years of the effective date.

- e. The ASBS Compliance Plan shall address erosion control and the prevention of anthropogenic sedimentation in ASBS. The natural habitat conditions in the ASBS shall not be altered as a result of anthropogenic sedimentation.
- f. The ASBS Compliance Plan shall describe the non-structural BMPs currently employed and planned in the future (including those for construction activities), and include an implementation schedule. The ASBS Compliance Plan shall include non-structural BMPs that address public education and outreach. Education and outreach efforts must adequately inform the public that direct discharges of pollutants from private property not entering an MS4 are prohibited. The ASBS Compliance Plan shall also describe the structural BMPs, including any low impact development (LID) measures, currently employed and planned for higher threat discharges and include an implementation schedule. To control storm water runoff discharges (at the end-of-pipe) during a design storm, permittees must first consider, and use where feasible, LID practices to infiltrate, use, or evapotranspire storm water runoff on-site, if LID practices would be the most effective at reducing pollutants from entering the ASBS.
- g. The BMPs and implementation schedule shall be designed to ensure that natural water quality conditions in the receiving water are achieved and maintained by either reducing flows from impervious surfaces or reducing pollutant loading, or some combination thereof.
- h. If the results of the receiving water monitoring described in IV.B. of these special conditions indicate that the storm water runoff is causing or contributing to an alteration of natural ocean water quality in the ASBS, the discharger shall submit a report to the State Water Board and Regional Water Board within 30 days of receiving the results.
 - (1) The report shall identify the constituents in storm water runoff that alter natural ocean water quality and the sources of these constituents.
 - (2) The report shall describe BMPs that are currently being implemented, BMPs that are identified in the SWMP or SWPPP for future implementation, and any additional BMPs that may be added to the SWMP or SWPPP to address the alteration of natural water quality. The report shall include a new or modified implementation schedule for the BMPs.
 - (3) Within 30 days of the approval of the report by the State Water Board Executive Director (statewide permits) or Regional Water Board Executive Officer (Regional Water Board permits), the discharger shall revise its ASBS Compliance Plan to incorporate any new or modified BMPs that have been or will be implemented, the implementation schedule, and any additional monitoring required.
 - (4) As long as the discharger has complied with the procedures described above and is implementing the revised SWMP or SWPPP, the discharger does not have to repeat

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the same procedure for continuing or recurring exceedances of natural ocean water quality conditions due to the same constituent.

- (5) The requirements of this section are in addition to the terms, prohibitions, and conditions contained in these Special Protections.

3. Compliance Schedule

- a. On the effective date of the Exception, all non-authorized non-storm water discharges (e.g., dry weather flow) are effectively prohibited.
- b. Within eighteen (18) months from the effective date of the Exception, the discharger shall submit a draft written ASBS Compliance Plan to the State Water Board Executive Director (statewide permits) or Regional Water Board Executive Officer (Regional Water Board permits) that describes its strategy to comply with these special conditions, including the requirement to maintain natural water quality in the affected ASBS. The ASBS Compliance Plan shall include a description of appropriate non-structural controls and a time schedule to implement structural controls (implementation schedule) to comply with these special conditions for inclusion in the discharger's SWMP or SWPPP, as appropriate to permit type. The final ASBS Compliance Plan, including a description and final schedule for structural controls based on the results of runoff and receiving water monitoring, must be submitted within thirty (30) months from the effective date of the Exception.
- c. Within 18 months of the effective date of the Exception, any non-structural controls that are necessary to comply with these special conditions shall be implemented.
- d. Within six (6) years of the effective date of the Exception, any structural controls identified in the ASBS Compliance Plan that are necessary to comply with these special conditions shall be operational.
- e. Within six (6) years of the effective date of the Exception, all dischargers must comply with the requirement that their discharges into the affected ASBS maintain natural ocean water quality. If the initial results of post-storm receiving water quality testing indicate levels higher than the 85th 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 85th 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

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compliance may persist, the cause or causes of the delay as well as measures to minimize the impact of the delay on water quality, the measures taken or to be taken by the discharger to prevent or minimize the delay, the schedule by which the measures will be implemented, and the anticipated date of compliance. The discharger shall adopt all reasonable measures to avoid and minimize such delays and their impact on water quality.

The discharger may request an extension of time for compliance based on lack of funding. The request for an extension shall require:

1. for municipalities, a demonstration of significant hardship to discharger ratepayers, by showing the relationship of storm water fees to annual household income for residents within the discharger's jurisdictional area, and the discharger has made timely and complete applications for all available bond and grant funding, and either no bond or grant funding is available, or bond and/or grant funding is inadequate; or
2. for other governmental agencies, a demonstration and documentation of a good faith effort to acquire funding through that agency's budgetary process, and a demonstration that funding was unavailable or inadequate.

B. NONPOINT SOURCE DISCHARGES

1. General Provisions for Nonpoint Sources

a. Existing nonpoint source waste discharges are allowed into an ASBS only under the following conditions:

- (1) The discharges are authorized under waste discharge requirements, a conditional waiver of waste discharge requirements, or a conditional prohibition issued by the State Water Board or a Regional Water Board.
- (2) The discharges are in compliance with the applicable terms, prohibitions, and special conditions contained in these Special Protections.
- (3) The discharges:
 - (i) Are essential for flood control or slope stability, including roof, landscape, road, and parking lot drainage;
 - (ii) Are designed to prevent soil erosion;
 - (iii) Occur only during wet weather;
 - (iv) Are composed of only storm water runoff.

b. Discharges composed of storm water runoff shall not alter natural ocean water quality in an ASBS.

c. The discharge of trash is prohibited.

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- d. Only existing nonpoint source waste discharges are allowed. "Existing nonpoint source waste discharges" are discharges that were ongoing prior to January 1, 2005. "New nonpoint source discharges" are defined as those that commenced on or after January 1, 2005. A change to an existing nonpoint source discharge, in terms of relocation or alteration, in order to comply with these special conditions, is allowed and does not constitute a new discharge.
- e. Non-storm water discharges from nonpoint sources (those not subject to an NPDES Permit) are prohibited except as provided below:
- (1) The term "non-storm water discharges" means any waste discharges that are not composed entirely of storm water.
 - (2) The following non-storm water discharges are allowed, provided that the discharges are essential for emergency response purposes, structural stability, slope stability, or occur naturally:
 - (i) Discharges associated with emergency fire fighting operations.
 - (ii) Foundation and footing drains.
 - (iii) Water from crawl space or basement pumps.
 - (iv) Hillside dewatering.
 - (v) Naturally occurring groundwater seepage via a storm drain.
 - (vi) Non-anthropogenic flows from a naturally occurring stream via a culvert or storm drain, as long as there are no contributions of anthropogenic runoff.
 - (3) Authorized non-storm water discharges shall not cause or contribute to a violation of the water quality objectives in Chapter II of the Ocean Plan nor alter natural ocean water quality in an ASBS.
- f. At the San Clemente Island ASBS, discharges incidental to military training and research, development, test, and evaluation operations are allowed. Discharges incidental to underwater demolition and other in-water explosions are not allowed in the two military closure areas in the vicinity of Wilson Cove and Castle Rock. Discharges must not result in a violation of the water quality objectives, including the protection of the marine aquatic life beneficial use, anywhere in the ASBS.
- g. At the San Nicolas Island and Begg Rock ASBS, discharges incidental to military research, development, testing, and evaluation of, and training with, guided missile and other weapons systems, fleet training exercises, small-scale amphibious warfare training, and special warfare training are allowed. Discharges incidental to underwater demolition and other in-water explosions are not allowed. Discharges must not result in a violation of the water quality objectives, including the protection of the marine aquatic life beneficial use, anywhere in the ASBS.
- h. All other nonpoint source discharges not specifically authorized above are prohibited.

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2. Planning and Reporting

- a. The nonpoint source discharger shall develop an ASBS Pollution Prevention Plan, including an implementation schedule, to address storm water runoff and any other nonpoint source discharges from its facilities. The ASBS Pollution Prevention Plan must be equivalent in contents to an ASBS Compliance Plan as described in I (A)(2) in this document. The ASBS Pollution Prevention Plan is subject to approval by the Executive Director of the State Water Board (statewide waivers or waste discharge requirements) or Executive Officer of the Regional Water Board (Regional Water Board waivers or waste discharge requirements).
- b. The ASBS Pollution Prevention Plan shall address storm water discharges (wet weather flows) and, in particular, describe how pollutant reductions in storm water runoff that are necessary to comply with these special conditions, will be achieved through Management Measures and associated Management Practices (Management Measures/Practices). Structural BMPs need not be installed if the discharger can document to the satisfaction of the State Water Board Executive Director or Regional Water Board Executive Officer that such installation would pose a threat to health or safety. Management Measures to control storm water runoff during a design storm shall achieve on average the following target levels:
 - (1) Table B Instantaneous Maximum Water Quality Objectives in Chapter II of the Ocean Plan; or
 - (2) A 90% reduction in pollutant loading during storm events, for the applicant's total discharges.

The baseline for these determinations is the effective date of the Exception, except for those structural BMPs installed between January 1, 2005 and adoption of these Special Protections, and the reductions must be achieved and documented within six (6) years of the effective date.

- c. If the results of the receiving water monitoring described in IV.B. of these special conditions indicate that the storm water runoff or other nonpoint source pollution is causing or contributing to an alteration of natural ocean water quality in the ASBS, the discharger shall submit a report to the State Water Board and the Regional Water Board within 30 days of receiving the results.
 - (1) The report shall identify the constituents that alter natural water quality and the sources of these constituents.
 - (2) The report shall describe Management Measures/Practices that are currently being implemented, Management Measures/Practices that are identified in the ASBS Pollution Prevention Plan for future implementation, and any additional Management Measures/Practices that may be added to the Pollution Prevention Plan to address the alteration of natural water quality. The report shall include a new or modified implementation schedule for the Management Measures/Practices.
 - (3) Within 30 days of the approval of the report by the State Water Board Executive Director (statewide waivers or waste discharge requirements) or Executive Officer of the Regional Water Board (Regional Water Board waivers or waste discharge

requirements), the discharger shall revise its ASBS Pollution Prevention Plan to incorporate any new or modified Management Measures/Practices that have been or will be implemented, the implementation schedule, and any additional monitoring required.

(4) As long as the discharger has complied with the procedures described above and is implementing the revised ASBS Pollution Prevention Plan, the discharger does not have to repeat the same procedure for continuing or recurring exceedances of natural water quality conditions due to the same constituent.

(5) The requirements of this section are in addition to the terms, prohibitions, and conditions contained in these Special Protections.

3. Compliance Schedule

a. On the effective date of the Exception, all non-authorized non-storm water discharges (e.g., dry weather flow) are effectively prohibited.

b. Within eighteen (18) months from the effective date of the Exception, the dischargers shall submit a draft written ASBS Pollution Prevention Plan to the State Water Board Executive Director (statewide waivers or waste discharge requirements) or Executive Officer of the Regional Water Board (Regional Water Board waivers or waste discharge requirements) that describes its strategy to comply with these special conditions, including the requirement to maintain natural ocean water quality in the affected ASBS. The Pollution Prevention Plan shall include a description of appropriate non-structural controls and a time schedule to implement structural controls to comply with these special conditions for inclusion in the discharger's Pollution Prevention Plan. The final ASBS Pollution Prevention Plan, including a description and final schedule for structural controls based on the results of runoff and receiving water monitoring, must be submitted within thirty (30) months from the effective date of the Exception.

c. Within 18 months of the effective date of the Exception, any non-structural controls that are necessary to comply with these Special Protections shall be implemented.

d. Within six (6) years of the effective date of the Exception, any structural controls identified in the ASBS Pollution Prevention Plan that are necessary to comply with these special conditions shall be operational.

e. Within six (6) years of the effective date of the Exception, all dischargers must comply with the requirement that their discharges into the affected ASBS maintain natural ocean water quality. If the initial results of post-storm receiving water quality testing indicate levels higher than the 85th 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 85th percentile threshold of reference water quality data and the pre-storm receiving water levels, for any constituent, then natural ocean water quality is exceeded. See attached Flowchart.

f. The Executive Director of the State Water Board (statewide waivers or waste discharge requirements) or Executive Officer of the Regional Water Board (Regional Water Board waivers or waste discharge requirements) may only authorize additional time to comply

with the special conditions d. and e., above if good cause exists to do so. Good cause means a physical impossibility or lack of funding.

If a discharger claims physical impossibility, it shall notify the Board in writing within thirty (30) days of the date that the discharger first knew of the event or circumstance that caused or would cause it to fail to meet the deadline in (d.) or (e.). The notice shall describe the reason for the noncompliance or anticipated noncompliance and specifically refer to this Section of this Exception. It shall describe the anticipated length of time the delay in compliance may persist, the cause or causes of the delay as well as measures to minimize the impact of the delay on water quality, the measures taken or to be taken by the discharger to prevent or minimize the delay, the schedule by which the measures will be implemented, and the anticipated date of compliance. The discharger shall adopt all reasonable measures to avoid and minimize such delays and their impact on water quality.

The discharger may request an extension of time for compliance based on lack of funding. The request for an extension shall require:

1. a demonstration that the discharger has made timely and complete applications for all available bond and grant funding, and either no bond or grant funding is available, or bond and/or grant funding is inadequate; or
2. for governmental agencies, a demonstration and documentation of a good faith effort to acquire funding through that agency's budgetary process, and a demonstration that funding was unavailable or inadequate.

II. ADDITIONAL REQUIREMENTS FOR PARKS AND RECREATION FACILITIES

In addition to the provisions in Section I (A) or I (B), respectively, a discharger with parks and recreation facilities shall comply with the following:

- A. The discharger shall include a section in an ASBS Compliance Plan (for NPDES dischargers) or an ASBS Pollution Prevention Plan (for nonpoint source dischargers) to address storm water runoff from parks and recreation facilities.
 1. The plan shall identify all pollutant sources, including sediment sources, which may result in waste entering storm water runoff. Pollutant sources include, but are not limited to, roadside rest areas and vistas, picnic areas, campgrounds, trash receptacles, maintenance facilities, park personnel housing, portable toilets, leach fields, fuel tanks, roads, piers, and boat launch facilities.
 2. The plan shall describe BMPs or Management Measures/Practices that will be implemented to control soil erosion (both temporary and permanent erosion controls) and reduce or eliminate pollutants in storm water runoff in order to achieve and maintain natural water quality conditions in the affected ASBS. The plan shall include BMPs or Management Measures/Practices to ensure that trails and culverts are maintained to prevent erosion and minimize waste discharges to ASBS.

3. The plan shall include BMPs or Management Measures/Practices to prevent the discharge of pesticides or other chemicals, including agricultural chemicals, in storm water runoff to the affected ASBS.
 4. The plan shall include BMPs or Management Measures/Practices that address public education and outreach. The goal of these BMPs or Management Measures/Practices is to ensure that the public is adequately informed that waste discharges to the affected ASBS are prohibited or limited by special conditions in these Special Protections. The BMPs or Management Measures/Practices shall include signage at camping, picnicking, beach and roadside parking areas, and visitor centers, or other appropriate measures, which notify the public of any applicable requirements of these Special Protections and identify the ASBS boundaries.
 5. The plan shall include BMPs or Management Measures/Practices that address the prohibition against the discharge of trash to ASBS. The BMPs or Management Measures/Practices shall include measures to ensure that adequate trash receptacles are available for public use at visitor facilities, including parking areas, and that the receptacles are adequately maintained to prevent trash discharges into the ASBS. Appropriate measures include covering trash receptacles to prevent trash from being wind blown and periodically emptying the receptacles to prevent overflows.
 6. The plan shall include BMPs or Management Measures/Practices to address runoff from parking areas and other developed features to ensure that the runoff does not alter natural water quality in the affected ASBS. BMPs or Management Measures/Practices shall include measures to reduce pollutant loading in runoff to the ASBS through installation of natural area buffers (LID), treatment, or other appropriate measures.
- B. Maintenance and repair of park and recreation facilities must not result in waste discharges to the ASBS. The practice of road oiling must be minimized or eliminated, and must not result in waste discharges to the ASBS.

III. ADDITIONAL REQUIREMENTS – WATERFRONT AND MARINE OPERATIONS

In addition to the provisions in Section I (A) or I (B), respectively, a discharger with waterfront and marine operations shall comply with the following:

- A. For discharges related to waterfront and marine operations, the discharger shall develop a Waterfront and Marine Operations Management Plan (Waterfront Plan). This plan shall contain appropriate Management Measures/Practices to address nonpoint source pollutant discharges to the affected ASBS.
 1. The Waterfront Plan shall contain appropriate Management Measures/Practices for any waste discharges associated with the operation and maintenance of vessels, moorings, piers, launch ramps, and cleaning stations in order to ensure that beneficial uses are protected and natural water quality is maintained in the affected ASBS.
 2. For discharges from marinas and recreational boating activities, the Waterfront Plan shall include appropriate Management Measures, described in The Plan for California's Nonpoint Source Pollution Control Program, for marinas and recreational boating, or equivalent practices, to ensure that nonpoint source pollutant discharges do not alter natural water quality in the affected ASBS.

3. The Waterfront Plan shall include Management Practices to address public education and outreach to ensure that the public is adequately informed that waste discharges to the affected ASBS are prohibited or limited by special conditions in these Special Protections. The management practices shall include appropriate signage, or similar measures, to inform the public of the ASBS restrictions and to identify the ASBS boundaries.
 4. The Waterfront Plan shall include Management Practices to address the prohibition against trash discharges to ASBS. The Management Practices shall include the provision of adequate trash receptacles for marine recreation areas, including parking areas, launch ramps, and docks. The plan shall also include appropriate Management Practices to ensure that the receptacles are adequately maintained and secured in order to prevent trash discharges into the ASBS. Appropriate Management Practices include covering the trash receptacles to prevent trash from being windblown, staking or securing the trash receptacles so they don't tip over, and periodically emptying the receptacles to prevent overflow.
 5. The discharger shall submit its Waterfront Plan to the by the State Water Board Executive Director (statewide waivers or waste discharge requirements) or Executive Officer of the Regional Water Board (Regional Water Board waivers or waste discharge requirements) within six months of the effective date of these special conditions. The Waterfront Plan is subject to approval by the State Water Board Executive Director or the Regional Water Board Executive Officer, as appropriate. The plan must be fully implemented within 18 months of the effective date of the Exception.
- B. The discharge of chlorine, soaps, petroleum, other chemical contaminants, trash, fish offal, or human sewage to ASBS is prohibited. Sinks and fish cleaning stations are point source discharges of wastes and are prohibited from discharging into ASBS. Anthropogenic accumulations of discarded fouling organisms on the sea floor must be minimized.
- C. Limited-term activities, such as the repair, renovation, or maintenance of waterfront facilities, including, but not limited to, piers, docks, moorings, and breakwaters, are authorized only in accordance with Chapter III.E.2 of the Ocean Plan.
- D. If the discharger anticipates that the discharger will fail to fully implement the approved Waterfront Plan within the 18 month deadline, the discharger shall submit a technical report as soon as practicable to the State Water Board Executive Director or the Regional Water Board Executive Officer, as appropriate. The technical report shall contain reasons for failing to meet the deadline and propose a revised schedule to fully implement the plan.
- E. The State Water Board or the Regional Water Board may, for good cause, authorize additional time to comply with the Waterfront Plan. Good cause means a physical impossibility or lack of funding.

If a discharger claims physical impossibility, it shall notify the Board in writing within thirty (30) days of the date that the discharger first knew of the event or circumstance that caused or would cause it to fail to meet the deadline in Section III.A.5. The notice shall

describe the reason for the noncompliance or anticipated noncompliance and specifically refer to this Section of this Exception. It shall describe the anticipated length of time the delay in compliance may persist, the cause or causes of the delay as well as measures to minimize the impact of the delay on water quality, the measures taken or to be taken by the discharger to prevent or minimize the delay, the schedule by which the measures will be implemented, and the anticipated date of compliance. The discharger shall adopt all reasonable measures to avoid and minimize such delays and their impact on water quality. The discharger may request an extension of time for compliance based on lack of funding. The request for an extension shall require:

1. a demonstration of significant hardship by showing that the discharger has made timely and complete applications for all available bond and grant funding, and either no bond or grant funding is available, or bond and/or grant funding is inadequate.
2. for governmental agencies, a demonstration and documentation of a good faith effort to acquire funding through that agency's budgetary process, and a demonstration that funding was unavailable or inadequate.

IV. MONITORING REQUIREMENTS

Monitoring is mandatory for all dischargers to assure compliance with the Ocean Plan. Monitoring requirements include both: (A) core discharge monitoring, and (B) ocean receiving water monitoring. The State and Regional Water Boards must approve sampling site locations and any adjustments to the monitoring programs. All ocean receiving water and reference area monitoring must be comparable with the Water Boards' Surface Water Ambient Monitoring Program (SWAMP).

Safety concerns: Sample locations and sampling periods must be determined considering safety issues. Sampling may be postponed upon notification to the State and Regional Water Boards if hazardous conditions prevail.

Analytical Chemistry Methods: All constituents must be analyzed using the lowest minimum detection limits comparable to the Ocean Plan water quality objectives. For metal analysis, all samples, including storm water effluent, reference samples, and ocean receiving water samples, must be analyzed by the approved analytical method with the lowest minimum detection limits (currently Inductively Coupled Plasma/Mass Spectrometry) described in the Ocean Plan.

A. CORE DISCHARGE MONITORING PROGRAM

1. General sampling requirements for timing and storm size:

Runoff must be collected during a storm event that is greater than 0.1 inch and generates runoff, and at least 72 hours from the previously measurable storm event. Runoff samples shall be collected during the same storm and at approximately the same time when post-storm receiving water is sampled, and analyzed for the same constituents as receiving water and reference site samples (see section IV B) as described below.

2. Runoff flow measurements

- a. For municipal/industrial storm water outfalls in existence as of December 31, 2007,

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18 inches (457mm) or greater in diameter/width (including multiple outfall pipes in combination having a width of 18 inches, runoff flows must be measured or calculated, using a method acceptable to and approved by the State and Regional Water Boards.

- b. This will be reported annually for each precipitation season to the State and Regional Water Boards.
3. Runoff samples – storm events
- a. For outfalls equal to or greater than 18 inches (0.46m) in diameter or width:
 - (1) samples of storm water runoff shall be collected during the same storm as receiving water samples and analyzed for oil and grease, total suspended solids, and, within the range of the southern sea otter indicator bacteria or some other measure of fecal contamination; and
 - (2) samples of storm water runoff shall be collected and analyzed for critical life stage chronic toxicity (one invertebrate or algal species) at least once during each storm season when receiving water is sampled in the ASBS.
 - (3) If an applicant has no outfall greater than 36 inches, then storm water runoff from the applicant's largest outfall shall be further collected during the same storm as receiving water samples and analyzed for Ocean Plan Table B metals for protection of marine life, Ocean Plan polynuclear aromatic hydrocarbons (PAHs), current use pesticides (pyrethroids and OP pesticides), and nutrients (ammonia, nitrate and phosphates).
 - b. For outfalls equal to or greater than 36 inches (0.91m) in diameter or width:
 - (1) samples of storm water runoff shall be collected during the same storm as receiving water samples and analyzed for oil and grease, total suspended solids, and, within the range of the southern sea otter indicator bacteria or some other measure of fecal contamination; and
 - (2) samples of storm water runoff shall be further collected during the same storm as receiving water samples and analyzed for Ocean Plan Table B metals for protection of marine life, Ocean Plan polynuclear aromatic hydrocarbons (PAHs), current use pesticides (pyrethroids and OP pesticides), and nutrients (ammonia, nitrate and phosphates); and
 - (3) samples of storm water runoff shall be collected and analyzed for critical life stage chronic toxicity (one invertebrate or algal species) at least once during each storm season when receiving water is sampled in the ASBS.
 - c. For an applicant not participating in a regional monitoring program [see below in Section IV (B)] in addition to (a.) and (b.) above, a minimum of the two largest outfalls or 20 percent of the larger outfalls, whichever is greater, shall be sampled (flow weighted composite samples) at least three times annually during wet weather (storm event) and analyzed for all Ocean Plan Table A constituents, Table B constituents for marine

aquatic life protection (except for toxicity, only chronic toxicity for three species shall be required), DDT, PCBs, Ocean Plan PAHs, OP pesticides, pyrethroids, nitrates, phosphates, and Ocean Plan indicator bacteria. For parties discharging to ASBS in more than one Regional Water Board region, at a minimum, one (the largest) such discharge shall be sampled annually in each Region.

4. The Executive Director of the State Water Board (statewide permits) or Executive Officer of the Regional Water Board (Regional Water Board permits) may reduce or suspend core monitoring once the storm runoff is fully characterized. This determination may be made at any point after the discharge is fully characterized, but is best made after the monitoring results from the first permit cycle are assessed.

B. Ocean Receiving Water and Reference Area Monitoring Program

In addition to performing the Core Discharge Monitoring Program in Section II.A above, all applicants having authorized discharges must perform ocean receiving water monitoring. In order to fulfill the requirements for monitoring the physical, chemical, and biological characteristics of the ocean receiving waters within their ASBS, dischargers may choose either (1) an individual monitoring program, or (2) participation in a regional integrated monitoring program.

1. Individual Monitoring Program: The requirements listed below are for those dischargers who elect to perform an individual monitoring program to fulfill the requirements for monitoring the physical, chemical, and biological characteristics of the ocean receiving waters within the affected ASBS. In addition to Core Discharge Monitoring, the following additional monitoring requirements shall be met:
 - a. Three times annually, during wet weather (storm events), the receiving water at the point of discharge from the outfalls described in section (IV)(A)(3)(c) above shall be sampled and analyzed for Ocean Plan Table A constituents, Table B constituents for marine aquatic life, DDT, PCBs, Ocean Plan PAHs, OP pesticides, pyrethroids, nitrates, phosphates, salinity, chronic toxicity (three species), and Ocean Plan indicator bacteria.

The sample location for the ocean receiving water shall be in the surf zone at the point of discharges; this must be at the same location where storm water runoff is sampled. Receiving water shall be sampled prior to (pre-storm) and during (or immediately after) the same storm (post storm). Post storm sampling shall be during the same storm and at approximately the same time as when the runoff is sampled. Reference water quality shall also be sampled three times annually and analyzed for the same constituents pre-storm and post-storm, during the same storm seasons when receiving water is sampled. Reference stations will be determined by the State Water Board's Division of Water Quality and the applicable Regional Water Board(s).
 - b. Sediment sampling shall occur at least three times during every five (5) year period. The subtidal sediment (sand or finer, if present) at the discharge shall be sampled and analyzed for Ocean Plan Table B constituents for marine aquatic life, DDT, PCBs, PAHs, pyrethroids, and OP pesticides. For sediment toxicity testing, only an acute toxicity test using the amphipod *Eohaustorius estuarius* must be performed.

- c. A quantitative survey of intertidal benthic marine life shall be performed at the discharge and at a reference site. The survey shall be performed at least once every five (5) year period. The survey design is subject to approval by the Regional Water Board and the State Water Board's Division of Water Quality. The results of the survey shall be completed and submitted to the State Water Board and Regional Water Board at least six months prior to the end of the permit cycle.
 - d. Once during each five (5) year period, a bioaccumulation study shall be conducted to determine the concentrations of metals and synthetic organic pollutants at representative discharge sites and at representative reference sites. The study design is subject to approval by the Regional Water Board and the State Water Board's Division of Water Quality. The bioaccumulation study may include California mussels (*Mytilus californianus*) and/or sand crabs (*Emerita analoga* or *Blepharipoda occidentalis*). Based on the study results, the Regional Water Board and the State Water Board's Division of Water Quality, may adjust the study design in subsequent permits, or add or modify additional test organisms (such as shore crabs or fish), or modify the study design appropriate for the area and best available sensitive measures of contaminant exposure.
 - e. Marine Debris: Representative quantitative observations for trash by type and source shall be performed along the coast of the ASBS within the influence of the discharger's outfalls. The design, including locations and frequency, of the marine debris observations is subject to approval by the Regional Water Board and State Water Board's Division of Water Quality.
 - f. The monitoring requirements of the Individual Monitoring Program in this section are minimum requirements. After a minimum of one (1) year of continuous water quality monitoring of the discharges and ocean receiving waters, the Executive Director of the State Water Board (statewide permits) or Executive Officer of the Regional Water Board (Regional Water Board permits) may require additional monitoring, or adjust, reduce or suspend receiving water and reference station monitoring. This determination may be made at any point after the discharge and receiving water is fully characterized, but is best made after the monitoring results from the first permit cycle are assessed.
2. Regional Integrated Monitoring Program: Dischargers may elect to participate in a regional integrated monitoring program, in lieu of an individual monitoring program, to fulfill the requirements for monitoring the physical, chemical, and biological characteristics of the ocean receiving waters within their ASBS. This regional approach shall characterize natural water quality, pre- and post-storm, in ocean reference areas near the mouths of identified open space watersheds and the effects of the discharges on natural water quality (physical, chemical, and toxicity) in the ASBS receiving waters, and should include benthic marine aquatic life and bioaccumulation components. The design of the ASBS stratum of a regional integrated monitoring program may deviate from the otherwise prescribed individual monitoring approach (in Section IV.B.1) if approved by the State Water Board's Division of Water Quality and the Regional Water Boards.
- a. Ocean reference areas shall be located at the drainages of flowing watersheds with minimal development (in no instance more than 10% development), and shall not be located in CWA Section 303(d) listed waterbodies or have tributaries that are 303(d) listed. Reference areas shall be free of wastewater discharges and anthropogenic non- storm water runoff. A minimum of low threat storm runoff discharges (e.g.

stream highway overpasses and campgrounds) may be allowed on a case-by-case basis. Reference areas shall be located in the same region as the ASBS receiving water monitoring occurs. The reference areas for each Region are subject to approval by the participants in the regional monitoring program and the State Water Board's Division of Water Quality and the applicable Regional Water Board(s). A minimum of three ocean reference water samples must be collected from each station, each from a separate storm during the same storm season that receiving water is sampled. A minimum of one reference location shall be sampled for each ASBS receiving water site sampled per responsible party. For parties discharging to ASBS in more than one Regional Water Board region, at a minimum, one reference station and one receiving water station shall be sampled in each region.

- b. ASBS ocean receiving water must be sampled in the surf zone at the location where the runoff makes contact with ocean water (i.e. at "point zero"). Ocean receiving water stations must be representative of worst-case discharge conditions (i.e. co-located at a large drain greater than 36 inches, or if drains greater than 36 inches are not present in the ASBS then the largest drain greater than 18 inches.) Ocean receiving water stations are subject to approval by the participants in the regional monitoring program and the State Water Board's Division of Water Quality and the applicable Regional Water Board(s). A minimum of three ocean receiving water samples must be collected during each storm season from each station, each from a separate storm. A minimum of one receiving water location shall be sampled in each ASBS per responsible party in that ASBS. For parties discharging to ASBS in more than one Regional Water Board region, at a minimum, one reference station and one receiving water station shall be sampled in each region.
 - c. Reference and receiving water sampling shall commence during the first full storm season following the adoption of these special conditions, and post-storm samples shall be collected during the same storm event when storm water runoff is sampled. Sampling shall occur in a minimum of two storm seasons. For those ASBS dischargers that have already participated in the Southern California Bight 2008 ASBS regional monitoring effort, sampling may be limited to only one storm season.
 - d. Receiving water and reference samples shall be analyzed for the same constituents as storm water runoff samples. At a minimum, constituents to be sampled and analyzed in reference and discharge receiving waters must include oil and grease, total suspended solids, Ocean Plan Table B metals for protection of marine life, Ocean Plan PAHs, pyrethroids, OP pesticides, ammonia, nitrate, phosphates, and critical life stage chronic toxicity for three species. In addition, within the range of the southern sea otter, indicator bacteria or some other measure of fecal contamination shall be analyzed.
3. Waterfront and Marine Operations: In addition to the above requirements for ocean receiving water monitoring, additional monitoring must be performed for marinas and boat launch and pier facilities:
- a. For all marina or mooring field operators, in mooring fields with 10 or more occupied moorings, the ocean receiving water must be sampled for Ocean Plan indicator bacteria, residual chlorine, copper, zinc, grease and oil, methylene blue active substances (MBAS), and ammonia nitrogen.

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- (1) For mooring field operators opting for an individual monitoring program (Section IV.B.1 above), this sampling must occur weekly (on the weekend) from May through October.
 - (2) For mooring field operators opting to participate in a regional integrated monitoring program (Section IV.B.2 above), this sampling must occur monthly from May through October on a high use weekend in each month. The Water Boards may allow a reduction in the frequency of sampling, through the regional monitoring program, after the first year of monitoring.
- b. For all mooring field operators, the subtidal sediment (sand or finer, if present) within mooring fields and below piers shall be sampled and analyzed for Ocean Plan Table B metals (for marine aquatic life beneficial use), acute toxicity, PAHs, and tributyltin. For sediment toxicity testing, only an acute toxicity test using the amphipod *Eohaustorius estuarius* must be performed. This sampling shall occur at least three times during a five (5) year period. For mooring field operators opting to participate in a regional integrated monitoring program, the Water Boards may allow a reduction in the frequency of sampling after the first sampling effort's results are assessed.

Glossary

At the point of discharge(s) – Means in the surf zone immediately where runoff from an outfall meets the ocean water (a.k.a., at point zero).

Areas of Special Biological Significance (ASBS) – Those areas designated by the State Water Board as ocean areas requiring protection of species or biological communities to the extent that alteration of natural water quality is undesirable. All Areas of Special Biological Significance are also classified as a subset of State Water Quality Protection Areas.

Design storm – For purposes of these Special Protections, a design storm is defined as the volume of runoff produced from one inch of precipitation per day or, if this definition is inconsistent with the discharger's applicable storm water permit, then the design storm shall be the definition included in the discharger's applicable storm water permit.

Development – Relevant to reference monitoring sites, means urban, industrial, agricultural, grazing, mining, and timber harvesting land uses.

Higher threat discharges - Permitted storm drains discharging equal to or greater than 18 inches, industrial storm drains, agricultural runoff discharged through an MS4, discharges associated with waterfront and marina operations (e.g., piers, launch ramps, mooring fields, and associated vessel support activities, except for passive discharges defined below), and direct discharges associated with commercial or industrial activities to ASBS.

Low Impact Development (LID) – A sustainable practice that benefits water supply and contributes to water quality protection. Unlike traditional storm water management, which entails collecting and conveying storm water runoff through storm drains, pipes, or other conveyances to a centralized storm water facility, LID focuses on using site design and storm water management to maintain the site's pre-development runoff rates and volumes. The goal of LID is to mimic a site's predevelopment hydrology by using design techniques that infiltrate, filter, store, evaporate, and detain runoff close to the source of rainfall.

Marine Operations – Marinas or mooring fields that contain slips or mooring locations for 10 or more vessels.

Management Measure (MM) - Economically achievable measures for the control of the addition of pollutants from various classes of nonpoint sources of pollution, which reflect the greatest degree of pollutant reduction achievable through the application of the best available nonpoint pollution control practices, technologies, processes, siting criteria, operating methods, or other alternatives. For example, in the "marinas and recreational boating" land- use category specified in the Plan for California's Nonpoint Source Pollution Control Program (NPS Program Plan) (SWRCB, 1999), "boat cleaning and maintenance" is considered a MM or the source of a specific class or type of NPS pollution.

Management Practice (MP) - The practices (e.g., structural, non-structural, operational, or other alternatives) that can be used either individually or in combination to address a specific MM class or classes of NPS pollution. For example, for the “boat cleaning and maintenance” MM, specific MPs can include, but are not limited to, methods for the selection of environmentally sensitive hull paints or methods for cleaning/removal of hull copper anti-fouling paints.

Municipal Separate Storm Sewer System (MS4) – A municipally-owned storm sewer system regulated under the Phase I or Phase II storm water program implemented in compliance with Clean Water Act section 402(p). Note that an MS4 program’s boundaries are not necessarily congruent with the permittee’s political boundaries.

Natural Ocean Water Quality - The water quality (based on selected physical, chemical and biological characteristics) that is required to sustain marine ecosystems, and which is without apparent human influence, *i.e.*, an absence of significant amounts of: (a) man-made constituents (e.g., DDT); (b) other chemical (e.g., trace metals), physical (temperature/thermal pollution, sediment burial), and biological (e.g., bacteria) constituents at concentrations that have been elevated due to man’s activities above those resulting from the naturally occurring processes that affect the area in question; and (c) non-indigenous biota (e.g., invasive algal bloom species) that have been introduced either deliberately or accidentally by man. Discharges “*shall not alter natural ocean water quality*” as determined by a comparison to the range of constituent concentrations in reference areas agreed upon via the regional monitoring program(s). If monitoring information indicates that *natural ocean water quality* is not maintained, but there is sufficient evidence that a discharge is not contributing to the alteration of natural water quality, then the Regional Water Board may make that determination. In this case, sufficient information must include runoff sample data that has equal or lower concentrations for the range of constituents at the applicable reference area(s).

Nonpoint source – Nonpoint pollution sources generally are sources that do not meet the definition of a point source. Nonpoint source pollution typically results from land runoff, precipitation, atmospheric deposition, agricultural drainage, marine/boating operations or hydrologic modification. Nonpoint sources, for purposes of these Special Protections, include discharges that are not required to be regulated under an NPDES permit.

Non-storm water discharge – Any runoff that is not the result of a precipitation event. This is often referred to as “dry weather flow.”

Non-structural control – A Best Management Practice that involves operational, maintenance, regulatory (e.g., ordinances) or educational activities designed to reduce or eliminate pollutants in runoff, and that are not structural controls (*i.e.* there are no physical structures involved).

Physical impossibility - Means any act of God, war, fire, earthquake, windstorm, flood or natural catastrophe; unexpected and unintended accidents not caused by discharger or its employees’ negligence; civil disturbance, vandalism, sabotage or terrorism; restraint by court order or public authority or agency; or action or non-action by, or inability to

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obtain the necessary authorizations or approvals from any governmental agency other than the permittee.

Representative sites and monitoring procedures – Are to be proposed by the discharger, with appropriate rationale, and subject to approval by Water Board staff.

Sheet-flow – Runoff that flows across land surfaces at a shallow depth relative to the cross-sectional width of the flow. These types of flow may or may not enter a storm drain system before discharge to receiving waters.

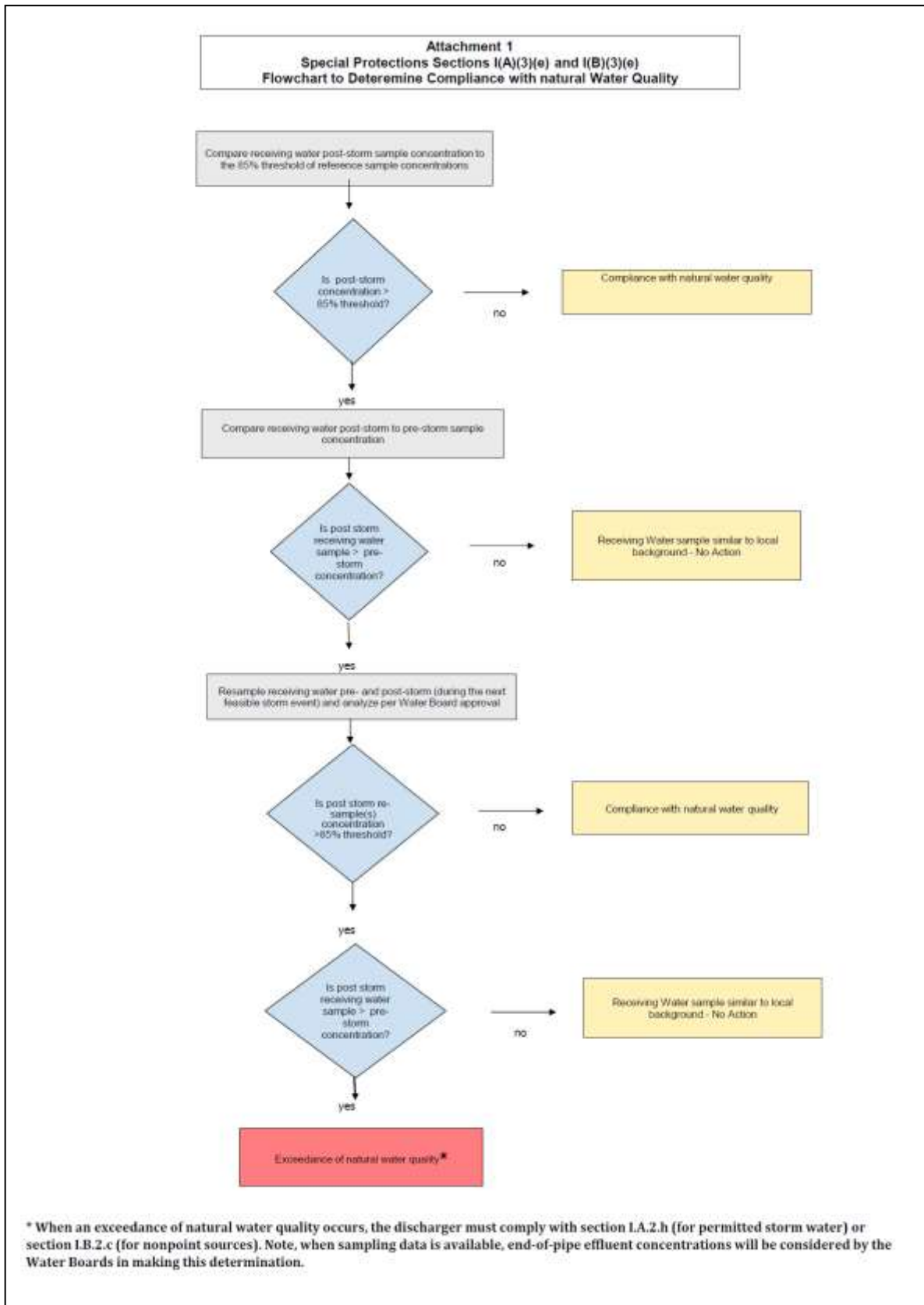
Storm Season – Also referred to as rainy season, means the months of the year from the onset of rainfall during autumn until the cessation of rainfall in the spring.

Structural control – A Best Management Practice that involves the installation of engineering solutions to the physical treatment or infiltration of runoff.

Surf Zone - The surf zone is defined as the submerged area between the breaking waves and the shoreline at any one time.

Surface Water Ambient Monitoring Program (SWAMP) comparable – Means that the monitoring program must 1) meet or exceed 2008 SWAMP Quality Assurance Program Management Plan (QAPP) Measurement Quality Objectives, or 2) have a Quality Assurance Project Plan that has been approved by SWAMP; in addition data must be formatted to match the database requirements of the SWAMP Information Management System. Adherence to the measurement quality objectives in the Southern California Bight 2008 ASBS Regional Monitoring Program QAPP and data base management comprises being SWAMP comparable.

Waterfront Operations - Piers, launch ramps, and cleaning stations in the water or on the adjacent shoreline.



ATTACHMENT B**STANDARD PERMIT PROVISIONS AND GENERAL PROVISIONS****1. Standard Permit Provisions**

Code of Federal Regulations Title 40 Section 122.41 (40 CFR 122.41) includes conditions, or provisions, that apply to all National Pollutant Discharge Elimination System (NPDES) permits. Additional provisions applicable to NPDES permits are in 40 CFR 122.42. All applicable provisions in 40 CFR 122.41 and 40 CFR 122.42 must be incorporated into this Order and NPDES permit. The applicable 40 CFR 122.41 and 40 CFR 122.42 provisions are as follows:

a. DUTY TO COMPLY [40 CFR 122.41(a)]

The Copermittee must comply with all of the provisions of this permit. Any permit noncompliance constitutes a violation of the Clean Water Act (CWA) and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application.

- (1) The Copermittee must comply with effluent standards or prohibitions established under Section 307(a) of the CWA for toxic pollutants and with standards for sewage sludge use or disposal established under Section 405(d) of the CWA within the time provided in the regulations that establish these standards or prohibitions or standards for sewage sludge use or disposal, even if the permit has not yet been modified to incorporate the requirement. [40 CFR 122.41(a)(1)]
- (2) The CWA provides that any person who violates Section 301, 302, 306, 307, 308, 318 or 405 of the CWA, or any permit condition or limitation implementing any such sections in a permit issued under Section 402, or any requirement imposed in a pretreatment program approved under Section 402(a)(3) or 402(b)(8) of the CWA, is subject to a civil penalty not to exceed \$25,000 per day for each violation. The CWA provides that any person who *negligently* violates Section 301, 302, 306, 307, 308, 318, or 405 of the CWA, or any condition or limitation implementing any of such sections in a permit issued under Section 402 of the CWA, or any requirement imposed in a pretreatment program approved under Section 402(a)(3) or 402(b)(8) of the CWA, is subject to criminal penalties of \$2,500 to \$25,000 per day of violation, or imprisonment of not more than 1 year, or both. In the case of a second or subsequent conviction for a negligent violation, a person shall be subject to criminal penalties of not more than \$50,000 per day of violation, or by imprisonment of not more than 2 years, or both. Any person who *knowingly* violates such sections, or such conditions or limitations is subject to criminal penalties of \$5,000 to \$50,000 per day of violation, or imprisonment for not more than 3 years, or both. In the case of a second or subsequent conviction for a knowing violation, a person shall be subject to criminal penalties of not more than \$100,000 per day of violation, or imprisonment of not more than 6 years, or both. Any person who knowingly violates Section 301, 302, 303, 306, 307, 308, 318 or 405 of the CWA, or any permit condition or limitation implementing any of such sections in a permit issued under Section 402 of the CWA, and who knows at that time that he thereby places another person in imminent

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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 Copermitee wishes to continue an activity regulated by this permit after the expiration date of this permit, the Copermitee 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 Copermitee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

d. DUTY TO MITIGATE [40 CFR 122.41(d)]

The Copermitee 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 Copermitee 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 Copermitee 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 Copermitee only when the operation is necessary to achieve compliance with the conditions of this permit.

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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

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- 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 Copermitee 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

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- (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 Copermittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing 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 Copermittee 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 Copermittee 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 Copermittee 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

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- 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

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- reported in the permit application under 40 CFR 122.26(d)(2)(iv) and (v);
[40 CFR 122.42(c)(3)]
- (4) A summary of data, including monitoring data, that is accumulated throughout the reporting year; [40 CFR 122.42(c)(4)]
 - (5) Annual expenditures and budget for year following each annual report;
[40 CFR 122.42(c)(5)]
 - (6) A summary describing the number and nature of enforcement actions, inspections, and public education programs; [40 CFR 122.42(c)(6)]
 - (7) Identification of water quality improvements or degradation.
[40 CFR 122.42(c)(7)]

p. STANDARD PERMIT PROVISIONS FOR STORM WATER DISCHARGES [40 CFR 122.42(d)]

The initial permits for discharges composed entirely of storm water issued pursuant to 40 CFR 122.26(e)(7) must require compliance with the conditions of the permit as expeditiously as practicable, but in no event later than three years after the date of issuance of the permit.

2. General Provisions

In addition to the standard provisions required to be incorporated into the Order and NPDES permit pursuant to 40 CFR 122.41 and 40 CFR 122.42, several other general provisions apply to this Order. The general provisions applicable to this Order and NPDES permit are as follows:

a. DISCHARGE OF WASTE IS A PRIVILEGE

No discharge of waste into the waters of the State, whether or not such discharge is made pursuant to waste discharge requirements, shall create a vested right to continue such discharge. All discharges of waste into waters of the State are privileges, not rights. [CWC Section 13263(g)]

b. DURATION OF ORDER AND NPDES PERMIT

- (1) *Effective date.* This Order supersedes Order No. R9-2007-0001 for the San Diego County Copermittees listed in Table ~~2.1~~^{2.1}a and became effective on June 27, 2013 ~~for those Copermittees~~. This Order as amended by Order R9-2015-0001 supersedes Order No. R9-2009-0002 ~~for the Orange County Copermittees listed in Table 1b and its amendments through Order No. R9-2015-0001 becomes became~~ effective April 1, 2015, ~~following the date Order No. R9-2015-0001 is adopted~~. This Order ~~as amended by Order Nos. R9-2015-0001 and R9-2015-0100~~ supersedes Order No. R9-2010-0016 ~~for the Riverside County Copermittees listed in Table 1c and its amendments through Order No. R9-2015-0100 became effective January 7, 2016. upon further amendment or earlier notice of coverage.~~

ATTACHMENT B: STANDARD PERMIT PROVISIONS AND GENERAL PROVISIONS

1. Standard Permit Provisions
2. General Provisions

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- (2) *Expiration.* This Order and NPDES permit expires five years after [June 27, 2013](#), its [initial](#) effective date. [40 CFR 122.46(a)]
- (3) *Continuation of expired order.* After this Order and NPDES permit expires, the terms and conditions of this Order and NPDES permit are automatically continued pending issuance of a new permit if all requirements of the federal NPDES regulations on the continuation of expired permits (40 CFR 122.6) are complied with.

c. AVAILABILITY

A copy of this Order must be kept at a readily accessible location and must be available to on-site personnel at all times.

d. CONFIDENTIALITY OF INFORMATION

Except as provided for in 40 CFR 122.7, no information or documents submitted in accordance with or in application for this Order will be considered confidential, and all such information and documents shall be available for review by the public at the San Diego Water Board office.

Claims of confidentiality for the following information will be denied:
[40 CFR 122.7(b)]

- (1) The name and address of any permit applicant or Copermittee;
[40 CFR 122.7(b)(1)] and
- (2) Permit applications and attachments, permits, and effluent data.
[40 CFR 122.7(b)(2)]

e. EFFLUENT LIMITATIONS

- (1) *Interim effluent limitations.* The Copermittee must comply with any interim effluent limitations as established by addendum, enforcement action, or revised waste discharge requirements which have been, or may be, adopted by the San Diego Water Board.
- (2) *Other effluent limitations and standards.* If any applicable toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is promulgated under Section 307(a) of the CWA for a toxic pollutant and that standard or prohibition is more stringent than any limitation on the pollutant in the permit, the San Diego Water Board shall institute proceedings under these regulations to modify or revoke and reissue the permit to conform to the toxic effluent standard or prohibition. [40 CFR 122.44(b)(1)]

f. DUTY TO MINIMIZE OR CORRECT ADVERSE IMPACTS

The Copermittee must take all reasonable steps to minimize or correct any adverse impact on the environment resulting from noncompliance with this Order, including such accelerated or additional monitoring as may be necessary to determine the nature and impact of the noncompliance.

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g. PERMIT ACTIONS

The filing of a request by the Copermittee for modification, revocation and reissuance, or termination of this Order, or a notification of planned change in or anticipated noncompliance with this Order does not stay any condition of this Order. (See 40 CFR 122.41(f)) In addition, the following provisions apply to this Order:

- (1) Upon application by any affected person, or on its own motion, the San Diego Water Board may review and revise the requirements in this Order. All requirements must be reviewed periodically. [CWC Section 13263(e)]
- (2) This Order may be terminated or modified for cause, including, but not limited to, all of the following: [CWC Section 13381]
 - (a) Violation of any condition contained in the requirements of this Order. [CWC Section 13381(a)]
 - (b) Obtaining the requirements in this Order by misrepresentation, or failure to disclose fully all relevant facts. [CWC Section 13381(b)]
 - (c) A change in any condition that requires either a temporary or permanent reduction or elimination of the permitted discharge. [CWC Section 13381(c)]
- (3) When this Order is transferred to a new owner or operator, such requirements as may be necessary under the CWC may be incorporated into this Order.

h. NPDES PERMITTED NON-STORM WATER DISCHARGES

The San Diego Water Board has, in prior years, issued a limited number of individual NPDES permits for non-storm water discharges to MS4s. The San Diego Water Board or State Water Board may in the future, upon prior notice to the Copermittee(s), issue an NPDES permit for any non-storm water discharge (or class of non-storm water discharges) to an MS4.

i. MONITORING

In addition to the standard provisions required under 40 CFR 122.41(j) and (l)(4), the following general monitoring provisions apply to this Order:

- (1) Where procedures are not otherwise specified in Order, sampling, analysis and quality assurance/quality control must be conducted in accordance with the Quality Assurance Management Plan (QAMP) for the State of California's Surface Water Ambient Monitoring Program (SWAMP), adopted by the State Water Resources Control Board (State Water Board).
- (2) Pursuant to 40 CFR 122.41(j)(2) and CWC Section 13383(a), each Copermittee must retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring

instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least five (5) years from the date of the sample, measurement, report or application. This period may be extended by request of the San Diego Water Board at any time.

- (3) All chemical, bacteriological, and toxicity analyses must be conducted at a laboratory certified for such analyses by the California Department of Public Health or a laboratory approved by the San Diego Water Board.
- (4) For priority toxic pollutants that are identified in the California Toxics Rule (CTR) (65 Fed. Reg. 31682), the Copermittees must instruct their laboratories to establish calibration standards that are equivalent to or lower than the Minimum Levels (MLs) published in Appendix 4 of the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (SIP). If a Copermittee can demonstrate that a particular ML is not attainable, in accordance with procedures set forth in 40 CFR Part 136, the lowest quantifiable concentration of the lowest calibration standard analyzed by a specific analytical procedure (assuming that all the method specified sample weights, volumes, and processing steps have been followed) may be used instead of the ML listed in Appendix 4 of the SIP. The Copermittee must submit documentation from the laboratory to the San Diego Water Board for approval prior to raising the ML for any priority toxic pollutant.

j. ENFORCEMENT

- (1) The San Diego Water Board is authorized to enforce the terms of this Order under several provisions of the CWC, including, but not limited to, CWC Sections 13385, 13386, and 13387.
- (2) Nothing in this Order shall be construed to protect the Copermittee from its liabilities under federal, state, or local laws.
- (3) The CWC provides for civil and criminal penalties comparable to, and in some cases greater than, those provided for under the CWA.
- (4) Except as provided in the standard conditions required under 40 CFR 122.41(m) and (n), nothing in this Order shall be construed to relieve the Copermittee from civil or criminal penalties for noncompliance.
- (5) Nothing in this Order shall be construed to preclude the institution of any legal action or relieve the Copermittee from any responsibilities, liabilities, or penalties to which the Copermittee is or may be subject to under Section 311 of the CWA.
- (6) Nothing in this Order shall be construed to preclude institution of any legal action or relieve the Copermittee from any responsibilities, liabilities, or penalties established pursuant to any applicable state law or regulation under authoring preserved by Section 510 of the CWA.

k. SEVERABILITY

The provisions of this Order are severable, and if any provision of this Order, or the application of any provisions of this Order to any circumstance, is held invalid, the

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application of such provision to other circumstances and the remainder of this Order shall not be affected thereby.

I. 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 [at SanDiego@waterboards.ca.gov](mailto:SanDiego@waterboards.ca.gov), ~~and one electronic copy to the USEPA.~~
- (5) [When hard copies are requested or required,](#) ~~T~~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
 2375 NORTHSIDE DRIVE, SUITE 100
 SAN DIEGO CA 92108
 Telephone: (619) 516-1990 Fax: (619) 516-1994

~~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.

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Clean Water Act Section 303(d) Water Body - An impaired water body in which water quality does not meet applicable water quality standards and/or is not expected to meet water quality standards, even after the application of technology based pollution controls required by the CWA. The discharge of runoff to these water bodies by the Copermittees is significant because these discharges can cause or contribute to violations of applicable water quality standards.

Construction Activities – Actions implemented during construction of development or redevelopment projects during the Preliminary Task (including rough grading and/or disking, clearing and grubbing operations, or any soil disturbance prior to mass grading), Grading or Land Development (including topography and slope reconfiguration, alluvium removals, canyon cleanouts, rock undercuts, keyway excavations, land form grading, and stockpiling of select material for capping operations), Streets and Utility Installation (including excavation and street paving, lot grading, curbs, gutters and sidewalks, public utilities, public water facilities including fire hydrants, public sanitary sewer systems, storm sewer systems and/or other drainage improvements), or Vertical Construction (including the build out of structures from foundations to roofing, including rough landscaping).

Construction Site – Any project, including projects requiring coverage under the Construction General Permit, that involves soil disturbing activities including, but not limited to, clearing, grading, disturbances to ground such as stockpiling, and excavation.

Contamination - As defined in the Porter-Cologne Water Quality Control Act, contamination is “an impairment of the quality of waters of the State by waste to a degree which creates a hazard to the public health through poisoning or through the spread of disease. ‘Contamination’ includes any equivalent effect resulting from the disposal of waste whether or not waters of the State are affected.”

Copermittee – A permittee to a NPDES permit that is only responsible for permit conditions relating to the discharge for which it is operator [40 CFR 122.26(b)(1)]. For the purposes of this Order, a Copermittee is one of the individual permittees identified in Tables 1a-1c of this Order.

Copermittees – All of the individual Copermittees, collectively.

Critical Channel Flow (Qc) – The channel flow that produces the critical shear stress that initiates bed movement or that erodes the toe of channel banks. When measuring Qc, it should be based on the weakest boundary material – either bed or bank.

Daily Discharge – Defined as either: (1) the total mass of the constituent discharged over the calendar day or any 24 hour period that reasonably represents a calendar day for purposes of sampling (as specified in the permit), for a constituent with limitations expressed in units of mass or; (2) the unweighted arithmetic mean measurement of the constituent over the day for a constituent with limitations expressed in other units of measurement (e.g. concentration.)

The Daily Discharge may be determined by the analytical results of a composite sample taken over the course of one day (a calendar day, or other 24 hour period other than a day), or by the arithmetic mean of analytical results from one or more grab samples taken over the course of a day.

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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.

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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:

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“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.

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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.

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Pre-Development Runoff Conditions – Approximate flow rates and durations that exist or existed onsite before land development occurs. For new development projects, this equates to runoff conditions immediately before project construction. For redevelopment projects, this equates to runoff conditions from the project footprint assuming infiltration characteristics of the underlying soil, and existing grade. Runoff coefficients of concrete or asphalt must not be used. A redevelopment Priority Development Project must use available information pertaining to existing underlying soil type and onsite existing grade to estimate pre-development runoff conditions.

Priority Development Projects - New development and redevelopment projects defined under Provision E.3.b of Order No. R9-2013-0001, [as amended by Order Nos. R9-2015-0001 and R9-2015-0100](#).

Rainy Season (aka Wet Season) –October 1 to April 30

Receiving Waters – Waters of the United States.

Receiving Water Limitations - Waste discharge requirements issued by the San Diego Water Board typically include both: (1) “Effluent Limitations” (or “Discharge Limitations”) that specify the technology-based or water-quality-based effluent limitations; and (2) “Receiving Water Limitations” that specify the water quality objectives in the Basin Plan as well as any other limitations necessary to attain those objectives. In summary, the “Receiving Water Limitations” provision is the provision used to implement the requirements of CWA section 402(p)(3)(B).

Redevelopment - The creation and/or replacement of impervious surface on an already developed site. Examples include the expansion of a building footprint, road widening, the addition to or replacement of a structure, ~~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 [routine maintenance activities, such as](#) trenching and resurfacing associated with utility work; [pavement grinding](#); resurfacing existing roadways; ~~new sidewalks construction~~, pedestrian ramps, or bike lanes on existing roads; and routine replacement of damaged pavement, such as pothole repair.

Regional Clearinghouse – A central location for the collection and distribution of information developed and maintained by the Copermittees including, but not limited to, plans, reports, manuals, data, contact information, and/or links to such documents and information.

Rehabilitation - Remedial measures or activities for the purpose of improving or restoring the beneficial uses of streams, channels or river systems. Techniques may vary from in-stream restoration techniques to off-line storm water management practices installed in the system corridor or upland areas, or a combination of in-stream and out of stream techniques. Rehabilitation techniques may include, but are not limited to the following: riparian zone restoration, constructed wetlands, channel modifications that improve habitat and stability, and daylighting of drainage systems.

Reporting Period – The period of information that is reported in the Water Quality Improvement Plan Annual Report. The reporting period consists of two components: 1) July 1 to June 30, consistent with the fiscal year, for the implementation of the jurisdictional runoff management programs, and 2) October 1 to September 30, consistent with the monitoring year for the monitoring and assessment programs. Together, these two time periods constitute the reporting year for the Water Quality Improvement Plan Annual Report due January 31 following the end of the monitoring year.

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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

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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

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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).

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ATTACHMENT D
JURISDICTIONAL RUNOFF MANAGEMENT PROGRAM
ANNUAL REPORT FORM

Order No. R9-2013-0001

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**JURISDICTIONAL RUNOFF MANAGEMENT PROGRAM
 ANNUAL REPORT FORM
 FY _____**

I. COPERMITTEE INFORMATION	
Copermittee Name: _____	
Copermittee Primary Contact Name: _____	
Copermittee Primary Contact Information: Address: _____	
City: _____	County: _____
Telephone: _____	Fax: _____
State: _____	Zip: _____
Email: _____	
II. LEGAL AUTHORITY	
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"/>
III. JURISDICTIONAL RUNOFF MANAGEMENT PROGRAM DOCUMENT UPDATE	
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"/>
IV. ILLICIT DISCHARGE DETECTION AND ELIMINATION PROGRAM	
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	_____
V. DEVELOPMENT PLANNING PROGRAM	
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	_____

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**JURISDICTIONAL RUNOFF MANAGEMENT PROGRAM
 ANNUAL REPORT FORM**

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VI. CONSTRUCTION MANAGEMENT PROGRAM				
Has the Copermittee implemented a construction management program that complies with Order No. R9-2013-0001?				YES <input type="checkbox"/> NO <input type="checkbox"/>
Number of construction sites in inventory				
Number of active construction sites in inventory				
Number of inactive construction sites in inventory				
Number of construction sites closed/completed during reporting period				
Number of construction site inspections				
Number of construction site violations				
Number of enforcement actions issued				
Number of escalated enforcement actions issued				
VII. EXISTING DEVELOPMENT MANAGEMENT PROGRAM				
Has the Copermittee implemented an existing development management program that complies with Order No. R9-2013-0001?				YES <input type="checkbox"/> NO <input type="checkbox"/>
	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 <input type="checkbox"/> NO <input type="checkbox"/>
Has the Copermittee implemented a public participation program component that complies with Order No. R9-2013-0001?				YES <input type="checkbox"/> NO <input type="checkbox"/>
IX. FISCAL ANALYSIS				
Has the Copermittee attached to this form a summary of its fiscal analysis that complies with Order No. R9-2013-0001?				YES <input type="checkbox"/> NO <input type="checkbox"/>

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

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ATTACHMENT E

SPECIFIC PROVISIONS FOR TOTAL MAXIMUM DAILY LOADS APPLICABLE TO ORDER NO. R9-2013-0001, [AS AMENDED BY ORDER NOS. R9-2015-0001 AND R9-2015-0100](#)

These provisions implement load allocations (LAs) and wasteload allocations (WLAs) of the Total Maximum Daily Loads (TMDLs) established by the San Diego Water Board or USEPA under Clean Water Act section 303(c), applicable to discharges regulated under this Order. The provisions and schedules for implementation of the TMDLs described below must be incorporated into the Water Quality Improvement Plans, required pursuant to Provision B of this Order, for the specified Watershed Management Areas.

1. Total Maximum Daily Load for Diazinon in Chollas Creek Watershed
2. Total Maximum Daily Loads for Dissolved Copper in Shelter Island Yacht Basin
3. Total Maximum Daily Loads for Total Nitrogen and Total Phosphorus in Rainbow Creek Watershed
4. Total Maximum Daily Loads for Dissolved Copper, Lead, and Zinc in Chollas Creek
5. Total Maximum Daily Loads for Indicator Bacteria, Baby Beach in Dana Point Harbor and Shelter Island Shoreline Park in San Diego Bay
6. Revised Total Maximum Daily Loads for Indicator Bacteria, Project I – Twenty Beaches and Creeks in the San Diego Region (Including Tecolote Creek)
7. Total Maximum Daily Load for Sediment in Los Peñasquitos Lagoon

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1. Total Maximum Daily Load for Diazinon in Chollas Creek Watershed

a. APPLICABILITY

- (1) TMDL Basin Plan Amendment: Resolution No. R9-2002-0123
- (2) TMDL Adoption and Approval Dates:
 - San Diego Water Board Adoption Date: August 14, 2002
 - State Water Board Approval Date: July 16, 2003
 - Office of Administrative Law Approval Date: September 11, 2003
 - US EPA Approval Date: November 3, 2003
- (3) TMDL Effective Date: September 11, 2003
- (4) Watershed Management Area: San Diego Bay
- (5) Water Body: Chollas Creek
- (6) Responsible Copermittees: City of La Mesa, City of Lemon Grove, City of San Diego, County of San Diego, San Diego Unified Port District

b. FINAL TMDL COMPLIANCE REQUIREMENTS

The final diazinon TMDL compliance requirements for Chollas Creek consist of the following:

(1) Final TMDL Compliance Date

The Responsible Copermittees must be in compliance with the final TMDL compliance requirements as of December 31, 2010.

(2) Final Water Quality Based Effluent Limitations

(a) Final Receiving Water Limitations

Discharges from the MS4s must not cause or contribute to the exceedance of the following receiving water limitations:

Table 1.1
Final Receiving Water Limitations Expressed as Concentrations in Chollas Creek

Constituent	Exposure Duration	Receiving Water Limitation	Averaging Period
Diazinon	Acute	0.08 µg/L	1 hour
	Chronic	0.05 µg/L	4 days

(b) Final Effluent Limitations

Discharges from the MS4s containing concentrations that do not exceed the following effluent limitations will not cause or contribute to exceedances of the receiving water limitations under Specific Provision 1.b.(2)(a):

Table 1.2

Final Effluent Limitations Expressed as Concentrations in MS4 Discharges to Chollas Creek

Constituent	Exposure Duration	Effluent Limitation	Averaging Period
Diazinon	Acute	0.072 µg/L	1 hour
	Chronic	0.045 µg/L	4 days

(c) Best Management Practices

The following BMPs for Chollas Creek must be incorporated into the Water Quality Improvement Plan for the San Diego Bay Watershed Management Area and implemented by the Responsible Copermittees:

- (i) The Responsible Copermittees must implement BMPs to achieve the receiving water limitations under Specific Provision 1.b.(2)(a) and/or the effluent limitations under Specific Provision 1.b.(2)(b) for Chollas Creek.
- (ii) The Responsible Copermittees must implement the Diazinon Toxicity Control Plan and Diazinon Public Outreach/Education Program as described in the report titled, *Technical Report for Total Maximum Daily Load for Diazinon in Chollas Creek Watershed, San Diego County*, dated August 14, 2002, including subsequent modifications, in order to achieve the receiving water limitations under Specific Provision 1.b.(2)(a) and/or the effluent limitations under Specific Provision 1.b.(2)(b).
- (iii) The Responsible Copermittees should coordinate any BMPs implemented to address this TMDL with Caltrans as possible.

(3) Final TMDL Compliance Determination

Compliance with the final WQBELs, on or after the final TMDL compliance date, may be demonstrated via one of the following methods:

- (a) There is no direct or indirect discharge from the Responsible Copermittee's MS4s to the receiving water; OR
- (b) There are no exceedances of the final receiving water limitations under Specific Provision 1.b.(2)(a) in the receiving water at, or downstream of the Responsible Copermittee's MS4 outfalls; OR

- (c) There are no exceedances of the final effluent limitations under Specific Provision 1.b.(2)(b) at the Responsible Copermittee's MS4 outfalls; OR
- (d) The Responsible Copermittees develop and implement the Water Quality Improvement Plan as follows:
 - (i) Incorporate the BMPs required under Specific Provision 1.b.(2)(c) as part of the Water Quality Improvement Plan,
 - (ii) Include an analysis in the Water Quality Improvement Plan, utilizing a watershed model or other watershed analytical tools, to demonstrate that the implementation of the BMPs required under Provision 1.b.(2)(c) achieves compliance with Specific Provisions 1.b.(3)(a), 1.b.(3)(b) and/or 1.b.(3)(c),
 - (iii) The results of the analysis must be accepted by the San Diego Water Board as part of the Water Quality Improvement Plan,
 - (iv) The Responsible Copermittees continue to implement the BMPs required under Specific Provision 1.b.(2)(c), AND
 - (v) The Responsible Copermittees continue to perform the specific monitoring and assessments specified in Specific Provision 1.d, to demonstrate compliance with Specific Provisions 1.b.(3)(a), 1.b.(3)(b) and/or 1.b.(3)(c).

c. INTERIM TMDL COMPLIANCE REQUIREMENTS

The Responsible Copermittees must be in compliance with the final diazinon TMDL compliance requirements as of December 31, 2010.

d. SPECIFIC MONITORING AND ASSESSMENT REQUIREMENTS

- (1) The Responsible Copermittees must implement the monitoring and assessment requirements issued under Investigation Order No. R9-2004-0277, *California Department of Transportation and San Diego Municipal Separate Storm Sewer System Copermittees Responsible for the Discharge of Diazinon into the Chollas Creek Watershed*. The monitoring reports required under Investigation Order No. R9-2004-0277 must be submitted as part of the Transitional Monitoring and Assessment Program and Water Quality Improvement Plan Annual Reports required under Provision F.3.b of this Order.
- (2) The Responsible Copermittees must monitor the effluent of the MS4 outfalls for diazinon within the Chollas Creek watershed, and calculate or estimate the annual diazinon loads, in accordance with the requirements of Provisions D.2, D.4.b.(1), and D.4.b.(2) of this Order. The monitoring and assessment results must be submitted as part of the Transitional Monitoring and Assessment

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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.

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2. Total Maximum Daily Loads for Dissolved Copper in Shelter Island Yacht Basin

a. APPLICABILITY

(1) TMDL Basin Plan Amendment: Resolution No. R9-2005-0019

(2) TMDL Adoption and Approval Dates:

San Diego Water Board Adoption Date:	February 9, 2005
State Water Board Approval Date:	September 22, 2005
Office of Administrative Law Approval Date:	December 2, 2005
US EPA Approval Date:	February 8, 2006

(3) TMDL Effective Date: December 2, 2005

(4) Watershed Management Area: San Diego Bay

(5) Water Body: Shelter Island Yacht Basin

(6) Responsible Copermittee: City of San Diego

b. FINAL TMDL COMPLIANCE REQUIREMENTS

The final dissolved copper TMDL compliance requirements for Shelter Island Yacht Basin consist of the following:

(1) Final TMDL Compliance Date

The Responsible Copermittee must be in compliance with the final TMDL compliance requirements as of December 2, 2005.

(2) Final Water Quality Based Effluent Water Limitations

(a) Final Receiving Water Limitations

Discharges from the MS4s must not cause or contribute to the exceedance of the following receiving water limitations:

Table 2.1

Final Receiving Water Limitations Expressed as Concentrations in Shelter Island Yacht Basin

Constituent	Exposure Duration	Receiving Water Limitation	Averaging Period
Dissolved Copper	Acute	4.8 µg/L x WER*	1 hour
	Chronic	3.1 µg/L x WER*	4 days

Notes:

* The Water Effect Ratio (WER) is assumed to be 1.0 unless there is a site-specific and chemical-specific WER provided in the Basin Plan.

(b) Final Effluent Limitations

Discharges from the MS4s containing pollutant loads that do not exceed the following effluent limitations will not cause or contribute to exceedances of the receiving water limitations under Specific Provision 2.b.(2)(a):

Table 2.2

Final Effluent Limitations as Expressed as Annual Loads in MS4 Discharges to Shelter Island Yacht Basin

Constituent	Effluent Limitation
Dissolved Copper	30 kg/yr*

* If the water quality objectives for dissolved copper in Shelter Island Yacht Basin are changed in the future, then the margin of safety (MOS), TMDL and allocations will be recalculated using the *Method for Recalculation of the Total Maximum Daily Load for Dissolved Copper in the Shelter Island Yacht Basin, San Diego Bay in the Basin Plan* (p. 7-14).

(c) Best Management Practices

The Responsible Copermittee must implement BMPs to achieve the receiving water limitations under Specific Provision 2.b.(2)(a) and/or the effluent limitations under Specific Provision 2.b.(2)(b) for Shelter Island Yacht Basin. The BMPs must be incorporated into the Water Quality Improvement Plan for the San Diego Bay Watershed Management Area.

(3) Final TMDL Compliance Determination

Compliance with the final WQBELs, on or after the final TMDL compliance date, may be demonstrated via one of the following methods:

- (a) There is no direct or indirect discharge from the Responsible Copermittee's MS4s to the receiving water; OR
- (b) There are no exceedances of the final receiving water limitations under Specific Provision 2.b.(2)(a) in the receiving water at, or downstream of the Responsible Copermittee's MS4 outfalls; OR
- (c) There are no exceedances of the final effluent limitations under Specific Provision 2.b.(2)(b) at the Responsible Copermittee's MS4 outfalls; OR
- (d) The Responsible Copermittee develops and implements the Water Quality Improvement Plan as follows:
 - (i) Incorporate the BMPs required under Specific Provision 2.b.(2)(c) as part of the Water Quality Improvement Plan,

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- (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.

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3. Total Maximum Daily Loads for Total Nitrogen and Total Phosphorus in Rainbow Creek Watershed

a. APPLICABILITY

(1) TMDL Basin Plan Amendment: Resolution No. R9-2005-0036

(2) TMDL Adoption and Approval Dates:

San Diego Water Board Adoption Date:	February 9, 2005
State Water Board Approval Date:	November 16, 2005
Office of Administrative Law Approval Date:	February 1, 2006
US EPA Approval Date:	March 22, 2006

(3) TMDL Effective Date: February 1, 2006

(4) Watershed Management Area: Santa Margarita River

(5) Water Body: Rainbow Creek

(6) Responsible Copermittee: County of San Diego

b. FINAL TMDL COMPLIANCE REQUIREMENTS

The final total nitrogen and total phosphorus TMDL compliance requirements for Rainbow Creek consist of the following

(1) Final TMDL Compliance Date

The Responsible Copermittee must comply with final TMDL compliance requirements by December 31, 2021.

(2) Final Water Quality Based Effluent Water Limitations

(a) Final Receiving Water Limitations

Discharges from the MS4s must not cause or contribute to the exceedance of the following receiving water limitations by the compliance date under Specific Provision 3.b.(1):

Table 3.1
Final Receiving Water Limitations Expressed as Concentrations in Rainbow Creek

Constituent	Receiving Water Limitation
Nitrate (as N)	10 mg/L
Total Nitrogen	1 mg/L
Total Phosphorus	0.1 mg/L

(b) Final Effluent Limitations

- (i) Discharges from the MS4s containing concentrations that do not exceed the following effluent limitations by the compliance date under Specific Provision 3.b.(1) will not cause or contribute to exceedances of the receiving water limitations under Specific Provision 3.b.(2)(a):

Table 3.2

Final Effluent Limitations Expressed as Concentrations in MS4 Discharges to Rainbow Creek

Constituent	Effluent Limitation
Nitrate (as N)	10 mg/L
Total Nitrogen	1 mg/L
Total Phosphorus	0.1 mg/L

- (ii) Annual pollutant loads from given land uses discharging to and from the MS4s that do not exceed the following annual loads by the compliance date under Specific Provision 3.b.(1) will not cause or contribute to exceedances of the receiving water limitations under Specific Provision 3.b.(2)(a):

Table 3.3

Final Effluent Limitations Expressed as Annual Loads in MS4 Discharges to Rainbow Creek

Land Use	Total N	Total P
Commercial nurseries	116 kg/yr	3 kg/yr
Park	3 kg/yr	0.1 kg/yr
Residential areas	149 kg/yr	12 kg/yr
Urban areas	27 kg/yr	6 kg/yr

(c) Best Management Practices

- (i) The Responsible Copermitttee must implement BMPs to achieve the receiving water limitations under Specific Provision 3.b.(2)(a) and/or the effluent limitations under Specific Provision 3.b.(2)(b) for Rainbow Creek.
- (ii) The Responsible Copermitttee should coordinate any BMPs implemented to address this TMDL with Caltrans and other sources as possible.

(3) Final TMDL Compliance Determination

Compliance with the final WQBELs, on or after the final TMDL compliance date, may be demonstrated via one of the following methods:

- (a) There is no direct or indirect discharge from the Responsible Copermitttee's MS4s to the receiving water; OR
- (b) There are no exceedances of the final receiving water limitations under

Specific Provision 3.b.(2)(a) in the receiving water at, or downstream of the Responsible Copermittee's MS4 outfalls; OR

- (c) There are no exceedances of the final effluent limitations under Specific Provision 3.b.(2)(b)(i) at the Responsible Copermittee's MS4 outfalls; OR
- (d) The annual pollutant loads from given land uses discharging to and from the MS4s do not exceed the final effluent limitations under Specific Provision 3.b.(2)(b)(ii); OR
- (e) The Responsible Copermittee develops and implements the Water Quality Improvement Plan as follows:
 - (i) Incorporate the BMPs required under Specific Provision 3.b.(2)(c) as part of the Water Quality Improvement Plan,
 - (ii) Include an analysis in the Water Quality Improvement Plan, utilizing a watershed model or other watershed analytical tools, to demonstrate that the implementation of the BMPs required under Specific Provision 3.b.(2)(c) achieves compliance with Specific Provisions 3.b.(3)(a), 3.b.(3)(b), 3.b.(3)(c) and/or 3.b.(3)(d),
 - (iii) The results of the analysis must be accepted by the San Diego Water Board as part of the Water Quality Improvement Plan,
 - (iv) The Responsible Copermittees continue to implement the BMPs required under Specific Provision 3.b.(2)(c), AND
 - (v) The Responsible Copermittees continue to perform the specific monitoring and assessments specified in Specific Provision 3.d, to demonstrate compliance with Specific Provisions 3.b.(3)(a), 3.b.(3)(b), 3.b.(3)(c) and/or 3.b.(3)(d).

c. INTERIM TMDL COMPLIANCE REQUIREMENTS

The interim total nitrogen and total phosphorus TMDL compliance requirements for Rainbow Creek consist of the following:

(1) Interim Compliance Dates and WQBELs

The Responsible Copermittee must comply with the interim WQBELs, expressed as annual loads, by December 31 of the interim compliance year given in Table 3.4.

Table 3.4*Interim Water Quality Based Effluent Limitations Expressed as Annual Loads in MS4 Discharges from Specific Land Uses to Rainbow Creek*

Land Use	Total N Interim Effluent Limitations (kg/yr)			Total P Interim Effluent Limitations (kg/yr)		
	Interim Compliance Date			Interim Compliance Date		
	2009	2013	2017	2009	2013	2017
Commercial nurseries	390	299	196	20	16	10
Park	5	3	3	0.15	0.10	0.10
Residential areas	507	390	260	99	74	47
Urban areas	40	27	27	9	6	6

(2) Interim TMDL Compliance Determination

Compliance with interim WQBELs, on or after the interim TMDL compliance dates, may be demonstrated via one of the following methods:

- (a) There is no direct or indirect discharge from the Responsible Copermittee's MS4s to the receiving water; OR
- (b) There are no exceedances of the final receiving water limitations under Specific Provision 3.b.(2)(a) in the receiving water at, or downstream of the Responsible Copermittee's MS4 outfalls; OR
- (c) There are no exceedances of the final effluent limitations under Specific Provision 3.b.(2)(b)(i) at the Responsible Copermittee's MS4 outfalls; OR
- (d) The annual pollutant loads from given land uses discharging to and from the MS4s do not exceed the final effluent limitations under Specific Provision 3.b.(2)(b)(ii); OR
- (e) The annual pollutant loads from given land uses discharging to and from the MS4s do not exceed the interim effluent limitations under Specific Provision 3.c.(1); OR
- (f) The Responsible Copermittee has submitted and is fully implementing a Water Quality Improvement Plan, accepted by the San Diego Water Board, which provides reasonable assurance that the interim TMDL compliance requirements will be achieved by the interim compliance dates.

d. SPECIFIC MONITORING AND ASSESSMENT REQUIREMENTS

- (1) The Responsible Copermittee must incorporate into the Water Quality Improvement Plan and implement the Sampling and Analysis Plan for Rainbow Creek Nutrient Reduction TMDL Implementation Water Quality Monitoring, dated January 2010.

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- (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.

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and [Order No. R9-2015-0100](#)

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4. Total Maximum Daily Loads for Dissolved Copper, Lead, and Zinc in Chollas Creek

a. APPLICABILITY

- (1) TMDL Basin Plan Amendment: Resolution No. R9-2007-0043
- (2) TMDL Adoption and Approval Dates:

San Diego Water Board Adoption Date:	June 13, 2007
State Water Board Approval Date:	July 15, 2008
Office of Administrative Law Approval Date:	October 22, 2008
US EPA Approval Date:	December 18, 2008
- (3) TMDL Effective Date: October 22, 2008
- (4) Watershed Management Area: San Diego Bay
- (5) Water Body: Chollas Creek
- (6) Responsible Copermittees: City of La Mesa, City of Lemon Grove, City of San Diego, County of San Diego, San Diego Unified Port District

b. FINAL TMDL COMPLIANCE REQUIREMENTS

The final dissolved copper, lead, and zinc TMDL compliance requirements for Chollas Creek consist of the following:

- (1) Final TMDL Compliance Date

The Responsible Copermittees must comply with the final TMDL compliance requirements by October 22, 2028.

- (2) Final Water Quality Based Effluent Limitations

- (a) Final Receiving Water Limitations

Discharges from the MS4s must not cause or contribute to the exceedance of the following receiving water limitations by the compliance date under Specific Provision 4.b.(1):

Table 4.1*Final Receiving Water Limitations Expressed as Concentrations in Chollas Creek*

Constituent	Exposure Duration	Receiving Water Limitation (µg/L)	Averaging Period
Dissolved Copper	Acute	$(0.96) \times e^{[0.9422 \times \ln(\text{hardness}) - 1.700]} \times \text{WER}^*$	1 hour
	Chronic	$(0.96) \times e^{[0.8545 \times \ln(\text{hardness}) - 1.702]} \times \text{WER}^*$	4 days
Dissolved Lead	Acute	$[1.46203 - 0.145712 \times \ln(\text{hardness})] \times e^{[1.273 \times \ln(\text{hardness}) - 1.460]} \times \text{WER}^*$	1 hour
	Chronic	$[1.46203 - 0.145712 \times \ln(\text{hardness})] \times e^{[1.273 \times \ln(\text{hardness}) - 4.705]} \times \text{WER}^*$	4 days
Dissolved Zinc	Acute	$(0.978) \times e^{[0.8473 \times \ln(\text{hardness}) + 0.884]} \times \text{WER}^*$	1 hour
	Chronic	$(0.986) \times e^{[0.8473 \times \ln(\text{hardness}) + 0.884]} \times \text{WER}^*$	4 days

Notes:

* The Water Effect Ratio (WER) is assumed to be 1.0 unless there is a site-specific and chemical-specific WER provided in the Basin Plan.

(b) Final Effluent Limitations

Discharges from the MS4s containing pollutant loads that do not exceed the following effluent limitations by the compliance date under Specific Provision 4.b.(1) will not cause or contribute to exceedances of the receiving water limitations under Specific Provision 4.b.(2)(a):

Table 4.2*Final Effluent Limitations as Expressed Concentrations in MS4 Discharges to Chollas Creek*

Constituent	Exposure Duration	Effluent Limitation (µg/L)	Averaging Period
Dissolved Copper	Acute	$90\% \times (0.96) \times e^{[0.9422 \times \ln(\text{hardness}) - 1.700]} \times \text{WER}^*$	1 hour
	Chronic	$90\% \times (0.96) \times e^{[0.8545 \times \ln(\text{hardness}) - 1.702]} \times \text{WER}^*$	4 days
Dissolved Lead	Acute	$90\% \times [1.46203 - 0.145712 \times \ln(\text{hardness})] \times e^{[1.273 \times \ln(\text{hardness}) - 1.460]} \times \text{WER}^*$	1 hour
	Chronic	$90\% \times [1.46203 - 0.145712 \times \ln(\text{hardness})] \times e^{[1.273 \times \ln(\text{hardness}) - 4.705]} \times \text{WER}^*$	4 days
Dissolved Zinc	Acute	$90\% \times (0.978) \times e^{[0.8473 \times \ln(\text{hardness}) + 0.884]} \times \text{WER}^*$	1 hour
	Chronic	$90\% \times (0.986) \times e^{[0.8473 \times \ln(\text{hardness}) + 0.884]} \times \text{WER}^*$	4 days

Notes:

* The Water Effect Ratio (WER) is assumed to be 1.0 unless there is a site-specific and chemical-specific WER provided in the Basin Plan.

(c) Best Management Practices

- (i) The Responsible Copermittees must implement BMPs to achieve the receiving water limitations under Specific Provision 4.b.(2)(a) and/or the effluent limitations under Specific Provision 4.b.(2)(b) for Chollas Creek.
- (ii) The Responsible Copermittees should coordinate any BMPs implemented to address this TMDL with Caltrans and the U.S. Navy as possible.

(3) Final TMDL Compliance Determination

Compliance with the final WQBELs, on or after the final TMDL compliance date, may be demonstrated via one of the following methods:

- (a) There is no direct or indirect discharge from the Responsible Copermittee's MS4s to the receiving water; OR
- (b) There are no exceedances of the final receiving water limitations under Specific Provision 4.b.(2)(a) in the receiving water at, or downstream of the Responsible Copermittee's MS4 outfalls; OR
- (c) There are no exceedances of the final effluent limitations under Specific Provision 4.b.(2)(b) at the Responsible Copermittee's MS4 outfalls; OR
- (d) The Responsible Copermittees develop and implement the Water Quality Improvement Plan as follows:
 - (i) Incorporate the BMPs required under Specific Provision 4.b.(2)(c) as part of the Water Quality Improvement Plan,
 - (ii) Include an analysis in the Water Quality Improvement Plan, utilizing a watershed model or other watershed analytical tools, to demonstrate that the implementation of the BMPs required under Provision 4.b.(2)(c) achieves compliance with Specific Provisions 4.b.(3)(a), 4.b.(3)(b) and/or 4.b.(3)(c),
 - (iii) The results of the analysis must be accepted by the San Diego Water Board as part of the Water Quality Improvement Plan,
 - (iv) The Responsible Copermittees continue to implement the BMPs required under Specific Provision 4.b.(2)(c), AND
 - (v) The Responsible Copermittees continue to perform the specific monitoring and assessments specified in Specific Provision 4.d, to demonstrate compliance with Specific Provisions 4.b.(3)(a), 4.b.(3)(b) and/or 4.b.(3)(c).

c. INTERIM TMDL COMPLIANCE REQUIREMENTS

The interim dissolved copper, lead, and zinc TMDL compliance requirements for Chollas Creek consist of the following:

(1) Interim Compliance Date and WQBELs

The Responsible Copermittee must comply with the interim WQBELs, expressed as concentrations, by the interim compliance date given in Table 4.3:

Table 4.3

Interim Water Quality Based Effluent Limitations Expressed as Concentrations in MS4 Discharges to Chollas Creek

Interim Compliance Date	Constituent	Exposure Duration	Effluent Limitation (µg/L)	Averaging Period
October 22, 2018	Dissolved Copper	Acute	$1.2 \times 90\% \times (0.96) \times e^{[0.9422 \times \ln(\text{hardness}) - 1.700]} \times \text{WER}^*$	1 hour
		Chronic	$1.2 \times 90\% \times (0.96) \times e^{[0.8545 \times \ln(\text{hardness}) - 1.702]} \times \text{WER}^*$	4 days
	Dissolved Lead	Acute	$1.2 \times 90\% \times [1.46203 - 0.145712 \times \ln(\text{hardness})] \times e^{[1.273 \times \ln(\text{hardness}) - 1.460]} \times \text{WER}^*$	1 hour
		Chronic	$1.2 \times 90\% \times [1.46203 - 0.145712 \times \ln(\text{hardness})] \times e^{[1.273 \times \ln(\text{hardness}) - 4.705]} \times \text{WER}^*$	4 days
	Dissolved Zinc	Acute	$1.2 \times 90\% \times (0.978) \times e^{[0.8473 \times \ln(\text{hardness}) + 0.884]} \times \text{WER}^*$	1 hour
		Chronic	$1.2 \times 90\% \times (0.986) \times e^{[0.8473 \times \ln(\text{hardness}) + 0.884]} \times \text{WER}^*$	4 days

Notes:

* The Water Effect Ratio (WER) is assumed to be 1.0 unless there is a site-specific and chemical-specific WER provided in the Basin Plan.

(2) Interim TMDL Compliance Determination

Compliance with interim WQBELs, on or after the interim TMDL compliance date, may be demonstrated via one of the following methods:

- (a) There is no direct or indirect discharge from the Responsible Copermittee’s MS4s to the receiving water; OR
- (b) There are no exceedances of the applicable receiving water limitations under Specific Provision 4.b.(2)(a) in the receiving water at, or downstream of the Responsible Copermittee’s MS4 outfalls; OR
- (c) There are no exceedances of the final effluent limitations under Specific Provision 4.b.(2)(b) at the Responsible Copermittee’s MS4 outfalls; OR
- (d) There are no exceedances of the interim effluent limitations under Specific

Provision 4.c.(1) at the Responsible Copermittee's MS4 outfalls; OR

- (e) The Responsible Copermittees have submitted and is fully implementing a Water Quality Improvement Plan, accepted by the San Diego Water Board, which provides reasonable assurance that the interim TMDL compliance requirements will be achieved by the interim compliance date.

d. SPECIFIC MONITORING AND ASSESSMENT REQUIREMENTS

- (1) The Responsible Copermittees must implement the monitoring and assessment requirements issued under Investigation Order No. R9-2004-0277, *California Department of Transportation and San Diego Municipal Separate Storm Sewer System Copermittees Responsible for the Discharge of Diazinon into the Chollas Creek Watershed*, when it is amended to include monitoring requirements for the Total Maximum Daily Loads for Dissolved Copper, Lead, and Zinc in Chollas Creek. The monitoring reports required under Investigation Order No. R9-2004-0277 must be submitted as part of the Transitional Monitoring and Assessment Program and Water Quality Improvement Plan Annual Reports required under Provision F.3.b of this Order.
- (2) The Responsible Copermittees must monitor the effluent of the MS4 outfalls discharging to Chollas Creek for dissolved copper, lead, and zinc, and calculate or estimate the monthly and annual dissolved copper, lead, and zinc loads, in accordance with the requirements of Provisions D.2, D.4.b.(1), and D.4.b.(2) of this Order. The monitoring and assessment results must be submitted as part of the Transitional Monitoring and Assessment Program and Water Quality Improvement Plan Annual Reports required under Provision F.3.b of this Order.
- (3) For assessing and determining compliance with the concentration-based effluent limitations under Specific Provision 4.b.(2)(b) or 4.c.(1), dry and wet weather discharge concentrations may be calculated based on a flow-weighted average across all major MS4 outfalls along a water body segment or within a jurisdiction if samples are collected within a similar time period.

Order No. R9-2013-0001
 As amended by Order No. R9-2015-0001
 and [Order No. R9-2015-0100](#)

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Amended February 11, 2015
[Amended November 18, 2015](#)

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:

Order No. R9-2013-0001
 As amended by Order No. R9-2015-0001
 and Order No. R9-2015-0100

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Amended February 11, 2015
 Amended November 18, 2015

Table 5.1

*Compliance Dates to Achieve Final TMDL Compliance Requirements
 For Baby Beach in Dana Point Harbor*

Constituent	Dry Weather WLA Compliance Date	Wet Weather WLA Compliance Date
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*

Constituent	Receiving Water Limitations	
	Single Sample Maximum ^{1,2}	30-Day Geometric Mean ²
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 ^{1,2}	30-Day Geometric Mean ²
Total Coliform	10,000 MPN/100mL	1,000 MPN/100mL
Fecal Coliform	400 MPN/100mL	200 MPN/100mL
<i>Enterococcus</i>	104 MPN/100mL	35 MPN/100mL

Notes:

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

- (ii) Discharges from the MS4s containing indicator bacteria loads that do not exceed the following effluent limitations by the compliance dates under Specific Provision 5.b.(1) will not cause or contribute to exceedances of the receiving water limitations under Specific Provision 5.b.(2)(a):

Table 5.4a

Final Effluent Limitations Expressed as Bacteria Loads in MS4 Discharges to the Baby Beach in Dana Point Harbor

Constituent	Dry Weather	Wet Weather
	Final Effluent Limitation	Final Effluent Limitation
Total Coliform	0.86x10 ⁹ MPN/day	3,254x10 ⁹ MPN/30days
Fecal Coliform	0.17x10 ⁹ MPN/day	112x10 ⁹ MPN/30days
<i>Enterococcus</i>	0.03x10 ⁹ MPN/day	114x10 ⁹ MPN/30days

Table 5.4b

Final Effluent Limitations Expressed as Bacteria Loads in MS4 Discharges to the Shelter Island Shoreline Park in San Diego Bay

Constituent	Dry Weather	Wet Weather
	Final Effluent Limitation	Final Effluent Limitation
Total Coliform	0 MPN/day	198x10 ⁹ MPN/30days
Fecal Coliform	0 MPN/day	8x10 ⁹ MPN/30days
<i>Enterococcus</i>	0 MPN/day	26x10 ⁹ 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 ⁹ MPN/day	3,254x10 ⁹ MPN/30days*
Fecal Coliform	September 15, 2012	0.59x10 ⁹ MPN/day	112x10 ⁹ MPN/30days*
<i>Enterococcus</i>	September 15, 2012	0.42x10 ⁹ MPN/day	301x10 ⁹ MPN/30days
	September 15, 2016	0.03x10 ⁹ MPN/day *	207x10 ⁹ 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%**
<i>Enterococcus</i>	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 115880.³⁸ 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 event³⁹ 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.

³⁸ Commonly referred to as AB 411 monitoring

³⁹ 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)*

Watershed Management Area and Watershed	Water Body	Segment or Area	Responsible Copermittees
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 at Heisler Park - North	-City of Laguna Beach -County of Orange -Orange County Flood Control District
		at Main Laguna Beach	
	Pacific Ocean Shoreline	Laguna Beach at Ocean Avenue	-City of Aliso Viejo -City of Laguna Beach -City of Laguna Woods -County of Orange -Orange County Flood Control District
		Laguna Beach at Cleo Street	
		Arch Cove at Bluebird Canyon Road	
Laguna Beach at Dumond Drive			
South Orange County 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)

Watershed Management Area and Watershed	Water Body	Segment or Area	Responsible Copermittees
South Orange County 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 th Avenue)	
		at Salt Creek (large outlet)	
		Salt Creek Beach at Salt Creek service road	
		Salt Creek Beach at Strand Road	
South Orange County 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	
South Orange County San Clemente HA (901.30)	Pacific Ocean Shoreline	at Poche Beach	-City of Dana Point -City of San Clemente -County of Orange -Orange County Flood Control District
		Ole Hanson Beach Club Beach at Pico Drain	
		San Clemente City Beach at El Portal Street Stairs	
		San Clemente City Beach at Mariposa Street	
		San Clemente City Beach at Linda Lane	
		San Clemente City Beach at South Linda Lane	
		San Clemente City Beach at Lifeguard Headquarters	
		under San Clemente Municipal Pier	
		San Clemente City Beach at Trafalgar Canyon (Trafalgar Lane)	
		San Clemente State Beach at Riviera Beach	
		San Clemente State Beach at Cypress Shores	

Order No. R9-2013-0001
As amended by Order No. R9-2015-0001
and Order No. R9-2015-0100

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Amended February 11, 2015
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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)*

Watershed Management Area and Watershed	Water Body	Segment or Area	Responsible Copermittees
San Luis Rey River 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
Carlsbad 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
San Dieguito River 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
Penasquitos 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
Mission Bay 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			
Mission Bay Tecolote HA (906.50)	Tecolote Creek	Entire reach and tributaries	

Table 6.0 (Cont'd)
*Applicability of Total Maximum Daily Loads for Indicator Bacteria
 Project I- Twenty Beaches and Creeks in the San Diego Region (including Tecolote Creek)*

Watershed Management Area and Watershed	Water Body	Segment or Area	Responsible Copermittees
San Diego River 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
	Pacific Ocean Shoreline	at San Diego River mouth at Dog Beach	-City of San Diego -City of Santee -County of San Diego
San Diego Bay 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

Constituent	Dry Weather TMDL Compliance Date	Wet Weather TMDL Compliance Date
Total Coliform	April 4, 2021	April 4, 2031
Fecal Coliform		(April 4, 2021)
<i>Enterococcus</i>		

* [The Wet Weather TMDL Compliance Date in parenthesis applies if the applicable Water Quality Improvement Plan does not include load reduction programs for other constituents \(e.g. metals, pesticides, trash, nutrients, sediment, etc.\) together with bacteria load reduction requirements of these TMDLs.](#)

(2) Final Water Quality Based Effluent Limitations

(a) Final Receiving Water Limitations

Discharges from the MS4s must not cause or contribute to the exceedance of the following receiving water limitations by the compliance dates under Specific Provision 6.b.(1):

Table 6.2a

Final Receiving Water Limitations Expressed as Bacteria Densities and Allowable Exceedance Frequencies for Beaches

Constituent	Wet Weather Days		Dry Weather Days	
	Single Sample Maximum ^{a,b} (MPN/100mL)	Single Sample Maximum Allowable Exceedance Frequency ^c	30-Day Geometric Mean ^b (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 ^{a,b} (MPN/100mL)	Single Sample Maximum Allowable Exceedance Frequency ^c	30-Day Geometric Mean ^b (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 ^{a,b} (MPN/100mL)	Single Sample Maximum Allowable Exceedance Frequency ^c	30-Day Geometric Mean ^b (MPN/100mL)	30-Day Geometric Mean Allowable Exceedance Frequency
Total Coliform ^d	10,000	22%	1,000	0%
Fecal Coliform	400	22%	200	0%
<i>Enterococcus</i>	104 ^e / 61 ^f	22%	35 ^e / 33 ^f	0%

Notes:

- a. During wet weather days, only the single sample maximum effluent limitations are required to be achieved.
- b. During dry weather days, the single sample maximum and 30-day geometric mean effluent limitations are required to be achieved.
- c. The 22% single sample maximum allowable exceedance frequency only applies to wet weather days. For dry weather days, the dry weather bacteria densities must be consistent with the single sample maximum REC-1 water quality objectives in the Ocean Plan for discharges to beaches, and the Basin Plan for discharges to creeks and creek mouths.
- d. Total coliform effluent limitations only apply to MS4 outfalls that discharge to the Pacific Ocean Shorelines and creek mouths listed in Table 6.0.
- e. This *Enterococcus* effluent limitation applies to MS4 discharges to segments of areas of Pacific Ocean Shoreline listed in Table 6.0.
- f. 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) - Pacific Ocean Shoreline	82.82%	82.55%	96.03%	18.47%	18.98%	20.19%
	San Dieguito HU (905.00) - Pacific Ocean Shoreline	14.39%	20.72%	83.48%	4.29%	1.46%	7.72%
Penasquitos	Miramar Reservoir HA (906.10) - Pacific Ocean Shoreline	96.50%	96.59%	99.42%	1.61%	1.99%	1.93%
Mission Bay	Scripps HA (906.30) - Pacific Ocean Shoreline	96.44%	96.42%	99.25%	16.32%	21.14%	18.82%
	Tecolote HA (906.50) - Tecolote Creek	94.51%	94.59%	98.94%	16.51%	20.47%	18.15% (18.08%)**
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)	74.03%	69.44%	93.96%	38.14%	53.22%	42.74% (42.47%)**
San Diego Bay	Chollas HSA (908.22) - Chollas Creek	92.06%	92.15%	98.46%	17.82%	24.84%	21.46% (21.36%)**

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.

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(c) Best Management Practices

- (i) The Water Quality Improvement Plans for the applicable Watershed Management Areas in Table 6.0 must incorporate the [Bacteria Load Reduction Plans \(BLRPs\)](#) or Comprehensive Load Reduction Plans (CLRPs) required to be developed pursuant to Resolution No. R9-2010-0001.
- (ii) The Responsible Copermittee must implement BMPs to achieve the receiving water limitations under Specific Provision 6.b.(2)(a) and/or the effluent limitations under Specific Provision 6.b.(2)(b) for the segments or areas of the water bodies listed in Table 6.0.
- (iii) The Responsible Copermittees should coordinate any BMPs implemented to address this TMDL with Caltrans, owners/operators of small MS4s, and agricultural dischargers as possible.

(3) Final TMDL Compliance Determination

Compliance with the final WQBELs, on or after the final TMDL compliance dates, may be demonstrated via one of the following methods:

- (a) There is no direct or indirect discharge from the Responsible Copermittee's MS4s to the receiving water; OR
- (b) There are no exceedances of the final receiving water limitations under Specific Provision 6.b.(2)(a) in the receiving water at, or downstream of the Responsible Copermittee's MS4 outfalls; OR
- (c) There are no exceedances of the final effluent limitations under Specific Provision 6.b.(2)(b)(i) at the Responsible Copermittee's MS4 outfalls; OR
- (d) The pollutant load reductions for discharges from the Responsible Copermittees' MS4 outfalls are greater than or equal to the final effluent limitations under Specific Provision 6.b.(2)(b)(ii); OR
- (e) The Responsible Copermittees can demonstrate that exceedances of the final receiving water limitations under Specific Provision 6.b.(2)(a) in the receiving water are due to loads from natural sources, AND pollutant loads from the Copermittees' MS4s are not causing or contributing to the exceedances; OR
- (f) The Responsible Copermittees develop and implement the Water Quality Improvement Plan as follows:
 - (i) Incorporate the BMPs required under Specific Provision 6.b.(2)(c) as part of the Water Quality Improvement Plan,

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- (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.

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Table 6.4*Interim Compliance Dates to Achieve Interim TMDL Compliance Requirements*

Watershed Management Area and Watershed	Water Body	Segment or Area	Interim Compliance Dates	
			Interim Dry Weather WQBELs	Interim Wet Weather WQBELs
South Orange County San Joaquin Hills HSA (901.11) and Laguna Beach HSA (901.12)	Pacific Ocean Shoreline	Cameo Cove at Irvine Cove Drive – Riviera Way	April 4, 2016	April 4, 2021 (April 4, 2016)
		at Heisler Park - North		
	Pacific Ocean Shoreline	at Main Laguna Beach	April 4, 2016	April 4, 2021 (April 4, 2016)
		Laguna Beach at Ocean Avenue		
		Laguna Beach at Cleo Street		
	Arch Cove at Bluebird Canyon Road			
	Laguna Beach at Dumond Drive			
South Orange County Aliso HSA (901.13)	Pacific Ocean Shoreline	Laguna Beach at Laguna Place / Blue Lagoon Place at Aliso Beach	April 4, 2016	April 4, 2021 (April 4, 2016)
	Aliso Creek	Entire reach (7.2 miles) and associated tributaries: - Aliso Hills Channel - English Canyon Creek - Dairy Fork Creek - Sulfur Creek - Wood Canyon Creek	April 4, 2018	April 4, 2021 (April 4, 2018)
	Aliso Creek Mouth	at mouth	April 4, 2018	April 4, 2021 (April 4, 2018)
South Orange County Dana Point HSA (901.14)	Pacific Ocean Shoreline	Aliso Beach at West Street	April 4, 2016	April 4, 2021 (April 4, 2016)
		Aliso Beach at Table Rock Drive		
		100 Steps Beach at Pacific Coast Hwy at hospital (9 th Avenue)		
		at Salt Creek (large outlet)		
		Salt Creek Beach at Salt Creek service road	April 4, 2017	April 4, 2021 (April 4, 2017)
		Salt Creek Beach at Strand Road	April 4, 2017	April 4, 2021 (April 4, 2017)

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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
South Orange County Lower San Juan HSA (901.27)	Pacific Ocean Shoreline	at San Juan Creek	April 4, 2016	April 4, 2021 (April 4, 2016)
	San Juan Creek	lower 1 mile	April 4, 2018	April 4, 2021 (April 4, 2018)
	San Juan Creek Mouth	at mouth	April 4, 2016	April 4, 2021 (April 4, 2016)
South Orange County San Clemente HA (901.30)	Pacific Ocean Shoreline	at Poche Beach	April 4, 2016	April 4, 2021 (April 4, 2016)
		Ole Hanson Beach Club Beach at Pico Drain	April 4, 2016	April 4, 2021 (April 4, 2016)
		San Clemente City Beach at El Portal Street Stairs	April 4, 2017	April 4, 2021 (April 4, 2017)
		San Clemente City Beach at Mariposa Street		
		San Clemente City Beach at Linda Lane	April 4, 2016	April 4, 2021 (April 4, 2016)
		San Clemente City Beach at South Linda Lane	April 4, 2018	April 4, 2021 (April 4, 2018)
		San Clemente City Beach at Lifeguard Headquarters under San Clemente Municipal Pier	April 4, 2017	April 4, 2021 (April 4, 2017)
		San Clemente City Beach at Trafalgar Canyon (Trafalgar Lane)	April 4, 2018	April 4, 2021 (April 4, 2018)
		San Clemente State Beach at Riviera Beach	April 4, 2016	April 4, 2021 (April 4, 2016)
		San Clemente State Beach at Cypress Shores	April 4, 2017	April 4, 2021 (April 4, 2017)
		San Luis Rey River San Luis Rey HU (903.00)	Pacific Ocean Shoreline	at San Luis Rey River mouth
Carlsbad San Marcos HA (904.50)	Pacific Ocean Shoreline	at Moonlight State Beach	April 4, 2016	April 4, 2021 (April 4, 2016)
San Dieguito River San Dieguito HU (905.00)	Pacific Ocean Shoreline	at San Dieguito Lagoon mouth	April 4, 2016	April 4, 2021 (April 4, 2016)

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)

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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 [†]
Penasquitos Miramar Reservoir HA (906.10)	Pacific Ocean Shoreline	Torrey Pines State Beach at Del Mar (Anderson Canyon)	April 4, 2016	April 4, 2021 (April 4, 2016)
Mission Bay Scripps HA (906.30)	Pacific Ocean Shoreline	La Jolla Shores Beach at El Paseo Grande	April 4, 2016	April 4, 2021 (April 4, 2016)
		La Jolla Shores Beach at Caminito del Oro		
		La Jolla Shores Beach at Vallecitos		
		La Jolla Shores Beach at Avenida de la Playa		
		at Casa Beach, Children's Pool		
		South Casa Beach at Coast Boulevard		
		Whispering Sands Beach at Ravina Street		
		Windansea Beach at Vista de la Playa		
		Windansea Beach at Bonair Street		
		Windansea Beach at Playa del Norte		
		Windansea Beach at Palomar Avenue		
at Tourmaline Surf Park				
at Pacific Beach at Grand Avenue				
Mission Bay Tecolote HA (906.50)	Tecolote Creek	Entire reach and tributaries		
San Diego River Mission San Diego HSA (907.11) and Santee HSA (907.12)	Forrester Creek	lower 1 mile	April 4, 2018	April 4, 2021 (April 4, 2018)
	San Diego River	lower 6 miles		
	Pacific Ocean Shoreline	at San Diego River mouth at Dog Beach		
San Diego Bay Chollas HSA (908.22)	Chollas Creek	lower 1.2 miles	April 4, 2018	April 4, 2021 (April 4, 2018)

[†] [The Interim Compliance Dates to achieve the Interim Wet Weather WQBELs in parenthesis apply if the applicable Water Quality Improvement Plan does not include load reduction programs for other constituents \(e.g. metals, pesticides, trash, nutrients, sediment, etc.\) together with bacteria load reduction requirements of these TMDLs.](#)

(2) Interim Water Quality Based Effluent Limitations

The Responsible Copermittees for discharges to the water bodies in Table 6.0 must comply with the following interim WQBELs by the interim compliance dates given in Specific Provision 6.c.(1):

(a) Interim Receiving Water Limitations

(i) *Interim Dry Weather Receiving Water Limitations*

The Responsible Copermittee must calculate the “existing” exceedance frequencies of the 30-day geometric mean water quality objectives for each of the indicator bacteria by analyzing the available monitoring data collected between January 1, 1996 and December 31, 2002. “Existing” exceedance frequencies may be calculated by water body and/or by Watershed Management Area listed in Table 6.0. Separate “existing” exceedance frequencies must be calculated for beaches and creeks/creek mouths.

The Responsible Copermittees must achieve a 50 percent reduction in the “existing” exceedance frequency of the 30-day geometric mean WQBELs for the water bodies listed in Table 6.0 by the interim compliance dates given in Table 6.4. A 50 percent reduction in the “existing” exceedance frequency is equivalent to half of the “existing” exceedance frequency of the 30-day geometric mean WQBELs.

The “existing” exceedance frequencies and the interim dry weather allowable exceedance frequencies (i.e. interim dry weather receiving water limitations) calculated by the Responsible Copermittees must be included in the Water Quality Improvement Plans for the applicable Watershed Management Areas.

(ii) *Interim Wet Weather Receiving Water Limitations*

The Responsible Copermitees must achieve the interim wet weather receiving water limitations in Table 6.5, expressed as interim wet weather allowable exceedance frequencies, by the interim compliance dates given in Table 6.4.

Table 6.5
Interim Wet Weather Receiving Water Limitations Expressed as Interim Wet Weather Allowable Exceedance Frequencies

Watershed Management Area and Watershed		Interim Wet Weather Allowable Exceedance Frequencies			
Water Body	Segment or Area	Total Coliform	Fecal Coliform	Enterococcus	
South Orange County San Joaquin Hills HSA (901.11) and Laguna Beach HSA (901.12)	Pacific Ocean Shoreline	38%	37%	39%	
	Cameo Cove at Irvine Cove Drive – Riviera Way				
	at Heisler Park - North				
	at Main Laguna Beach				
	Laguna Beach at Ocean Avenue				
	Laguna Beach at Cleo Street				
Pacific Ocean Shoreline	Arch Cove at Bluebird Canyon Road				
	Laguna Beach at Dumond Drive				
South Orange County Aliso HSA (901.13)	Pacific Ocean Shoreline	41%	41%	42%	
	Aliso Creek	Laguna Beach at Lagunita Place / Blue Lagoon Place at Aliso Beach	41%	41%	42%
		Entire reach (7.2 miles) and associated tributaries: - Aliso Hills Channel - English Canyon Creek - Dairy Fork Creek - Sulfur Creek - Wood Canyon Creek			
Aliso Creek Mouth	at mouth	41%	41%	42%	
South Orange County Dana Point HSA (901.14)	Pacific Ocean Shoreline	36%	36%	36%	
					Aliso Beach at West Street
					Aliso Beach at Table Rock Drive
					100 Steps Beach at Pacific Coast Hwy at hospital (9 th 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
South Orange County 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%
South Orange County 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			
San Luis Rey River San Luis Rey HU (903.00)	Pacific Ocean Shoreline	at San Luis Rey River mouth	45%	44%	47%
Carlsbad San Marcos HA (904.50)	Pacific Ocean Shoreline	at Moonlight State Beach	40%	40%	41%
San Dieguito River San Dieguito HU (905.00)	Pacific Ocean Shoreline	at San Dieguito Lagoon mouth	33%	33%	36%

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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
Penasquitos Miramar Reservoir HA (906.10)	Pacific Ocean Shoreline	Torrey Pines State Beach at Del Mar (Anderson Canyon)	26%	26%	26%
Mission Bay 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			
at Pacific Beach at Grand Avenue					
Mission Bay Tecolote HA (906.50)	Tecolote Creek	Entire reach and tributaries	49%	49%	51%
San Diego River	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%
San Diego Bay 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%
	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 115880.⁴⁰ If exceedances of the applicable interim or final receiving water limitations are observed in the monitoring data, additional monitoring locations and/or other source

⁴⁰ Commonly referred to as AB 411 monitoring

identification methods must be implemented to identify the sources causing the exceedances. The additional monitoring locations must also be used to demonstrate that the bacteria loads from the identified anthropogenic sources have been addressed and are no longer causing exceedances in the receiving waters.

(b) Monitoring Procedures

- (i) The Responsible Copermittees must collect dry weather monitoring samples from the receiving water monitoring stations at least monthly. Dry weather samples collected from additional monitoring stations established to identify sources must be collected at an appropriate frequency to demonstrate bacteria loads from the identified sources have been addressed and are no longer causing exceedances in the receiving waters.
- (ii) The Responsible Copermittees must collect wet weather monitoring samples from the receiving water monitoring stations at least once within the first 24 hours of the end of a storm event⁴¹ 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

⁴¹ 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)].

wet weather monitoring data to assess whether the interim and final WQBELs for the Pacific Ocean Shoreline segments or areas listed in Table 6.0 have been achieved.

- (ii) Dry weather exceedance frequencies must be calculated as follows:
 - [a] 30-day geometric means must be calculated from the results of any dry weather samples collected from the segments or areas for each water body listed in Table 6.0;
 - [b] The method and number of samples need for calculating the 30-day geometric means must be consistent with the number of samples required by the Ocean Plan;
 - [c] Where there are multiple segments or areas associated with a water body listed in Table 6.0, the Copermittees may calculate geometric means for each segment or area, or combine the dry weather monitoring data from all the segments or areas to calculate geometric means for the water body;
 - [d] The exceedance frequency must be calculated by dividing the number of geometric means that exceed the geometric mean receiving water limitations in Table 6.2 by the total number of geometric means calculated from samples collected during the dry season.
- (iii) Wet weather exceedance frequencies must be calculated as follows:
 - [a] If only one sample is collected for a storm event, the bacteria density for every wet weather day associated with that storm event must be assumed to be equal to the results from the one sample collected;
 - [b] If more than one sample is collected for a storm event, but not on a daily basis, the bacteria density for all wet weather days of the storm event not sampled must be assumed to be equal to the highest bacteria density result reported from the samples collected;
 - [c] If there are any storm events not sampled, the bacteria density for every wet weather day of those storm events must be assumed to be equal to the average of the highest bacteria densities reported from each storm event sampled; and
 - [d] The single sample maximum exceedance frequency must be calculated by dividing the number of wet weather days that exceed the single sample maximum receiving water limitations in Table 6.2 by the total number of wet weather days during the rainy season.
 - [e] The data collected for dry weather must be used in addition to the data collected for wet weather to calculate the wet weather 30-day geometric means. The exceedance frequency of the wet weather 30-day geometric means must be calculated by dividing the number of geometric means that exceed the geometric mean

receiving water limitations in Table 6.2 by the total number of geometric means calculated from samples collected during the wet season.

- (iv) For assessing and determining compliance with the concentration-based effluent limitations under Specific Provision 6.b.(2)(b)(i), dry and wet weather discharge bacteria densities may be calculated based on a flow-weighted average across all major MS4 outfalls along a water body segment or within a jurisdiction if samples are collected within a similar time period.
- (v) The monitoring and assessment results must be submitted as part of the Transitional Monitoring and Assessment Program and Water Quality Improvement Plan Annual Reports required under Provision F.3.b of this Order.

(2) Monitoring and Assessment Requirements for Creeks and Creek Mouths

(a) Monitoring Stations

For creeks addressed by the TMDL, monitoring locations should consist of, at a minimum, a location at or near the mouth of the creek (e.g. Mass Loading Station or Mass Emission Station) and one or more locations upstream of the mouth (e.g. Watershed Assessment Station). If exceedances of the applicable interim or final receiving water limitations are observed in the monitoring data, additional monitoring locations and/or other source identification methods must be implemented to identify the sources causing the exceedances. The additional monitoring locations must also be used to demonstrate that the bacteria loads from the identified sources have been addressed and are no longer causing exceedances in the receiving waters.

(b) Monitoring Procedures

- (i) The Responsible Copermittees must collect dry weather monitoring samples from the receiving water monitoring stations in accordance with the requirements of Provision D.
- (ii) The Responsible Copermittees must collect wet weather monitoring samples from the receiving water monitoring stations within the first 24 hours of the end of a storm event⁴² during the rainy season (i.e. October 1 through April 30).

⁴² 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)].

- (iii) Samples collected from receiving water monitoring stations must be analyzed for fecal coliform and *Enterococcus* indicator bacteria.
- (iv) For creeks or creek mouths listed in Table 6.0 that have been delisted 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 Copermittee must identify and incorporate additional MS4 outfall and receiving water monitoring stations and/or adjust monitoring frequencies to identify sources causing exceedances of the receiving water WQBELs.
- (v) For assessing and determining compliance with the concentration-based effluent limitations under Specific Provision 6.b.(2)(b)(i), dry and wet weather discharge bacteria densities may be calculated based on a flow-weighted average across all major MS4 outfalls along a water body segment or within a jurisdiction if samples are collected within a similar time period.
- (vi) The monitoring and assessment results must be submitted as part of the Transitional Monitoring and Assessment Program and Water Quality Improvement Plan Annual Reports required under Provision F.3.b of this Order.

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7. Total Maximum Daily Loads for Sediment in Los Peñasquitos Lagoon

a. APPLICABILITY

- (1) TMDL Basin Plan Amendment: Resolution No. R9-2012-0033
- (2) TMDL Adoption and Approval Dates:

San Diego Water Board Adoption Date:	June 13, 2012
State Water Board Approval Date:	January 21, 2014
Office of Administrative Law Approval Date:	July 14, 2014
US EPA Approval Date:	October 30, 2014
- (3) TMDL Effective Date: July 14, 2014
- (4) Watershed Management Area: ~~Los~~ Peñasquitos
- (5) Water Body: Los Peñasquitos Lagoon
- (6) Responsible Copermittees: County of San Diego, City of San Diego, City of Del Mar, and City of Poway

b. FINAL TMDL COMPLIANCE REQUIREMENTS

The final sediment TMDL compliance requirements for Los Peñasquitos Lagoon consist of the following:

(1) Final TMDL Compliance Date

The Responsible Copermittees must be in compliance with the final TMDL compliance requirements by December 31, 2034.

(2) Final Water Quality Based Effluent Limitations

(a) Final Receiving Water Limitations

Discharges from the MS4s must not prohibit the sustainable restoration of tidal and non-tidal saltmarsh vegetation of at least 346 acres.

(b) Final Effluent Limitations

Discharges from the MS4s containing pollutant loads that do not exceed the following effluent limitations by the compliance date under Provision 7.b(1) will not cause or contribute to a failure of the receiving water condition specified under Specific Provision 7.b.(2)(a):

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Table 7.1

*Final Effluent Limitations as Expressed as Wet Season Loads in MS4 Discharges to Los Peñasquitos Lagoon**

Constituent	Effluent Limitation
Sediment	2,580 tons/wet season

* Final effluent limitations are to be achieved by the following Responsible Parties: County of San Diego, City of San Diego, City of Del Mar, City of Poway, Phase II MS4 permittees, Caltrans, general construction storm water NPDES permittees, and general industrial storm water NPDES permittees.

(c) **Best Management Practices**

- (i) The Water Quality Improvement Plan for the Los Peñasquitos Watershed Management Area must incorporate the Sediment Load Reduction Plan required to be developed pursuant to Resolution No. R9-2012-0033.
- (ii) The Responsible Copermittees must implement BMPs to achieve the receiving water limitations under Specific Provision 7.b.(2)(a) and/or the Copermittee's portion of the effluent limitations under Specific Provision 7.b.(2)(b) for Los Peñasquitos Lagoon.

(3) Final TMDL Compliance Determination

Compliance [determination](#) with the final WQBELs, on or after the final TMDL compliance date, may be demonstrated via one of the following methods:

- (a) Successful restoration of 80 percent of the 1973 acreage of tidal and non-tidal lagoon salt marsh (346 acres) [as described in Attachment A of Resolution No. R9-2010-0033](#); OR
- (b) The Responsible Copermittees develop and implement the Water Quality Improvement Plan as follows:
 - (i) Incorporate the BMPs required under Specific Provision 7.b.(2)(c)(ii) [and/or other implementation actions to achieve compliance with Specific Provision 7.b.\(3\)\(a\)](#) as part of the Water Quality Improvement Plan,
 - (ii) Include an analysis in the Water Quality Improvement Plan, utilizing a watershed model or other watershed analytical tools, to demonstrate that the implementation of the BMPs required under Provision 7.b.(2)(c)(ii) or other implementation actions [to](#) achieve compliance with Specific Provision 7.b.(3)(a),
 - (iii) The results of the analysis must be accepted by the San Diego Water Board as part of the Water Quality Improvement Plan,

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- (iv) The Responsible Copermittees continue to implement the BMPs required under Specific Provision 7.b.(2)(c)(ii) or other implementation actions, AND
- (v) The Responsible Copermittees continue to perform the specific monitoring and assessments specified in Specific Provision 7.d to demonstrate compliance with Specific Provision 7.b.(3)(a).

c. INTERIM TMDL COMPLIANCE REQUIREMENTS

The interim sediment TMDL compliance requirements for Los Peñasquitos Lagoon consist of the following:

(1) Interim Compliance Dates and WQBELs

The Responsible Copermittees must comply with the interim WQBELs, expressed as wet season loads, by December 31 of the interim compliance year set forth in Table 7.2.

Table 7.2

*Interim Water Quality Based Effluent Limitations Expressed as Wet Season Loads in MS4 Discharges**

Interim Compliance Date	Interim Effluent Limitations (tons/wet season)
December 31, 2019	6,691
December 31, 2023	5,663
December 31, 2027	4,636
December 31, 2029	3,608

* Interim effluent limitations are to be achieved by the following Responsible Parties: County of San Diego, City of San Diego, City of Del Mar, City of Poway, Phase II MS4 permittees, Caltrans, general construction storm water NPDES permittees, and general industrial storm water NPDES permittees.

(2) Interim TMDL Compliance Determination

Compliance with interim WQBELs, on or after the interim TMDL compliance dates, may be demonstrated via one of the following methods:

- (a) There is no direct or indirect discharge from the Responsible Copermittee's MS4s to the receiving water; OR
- (b) The final receiving water limitation under Specific Provision 7.b.(2)(a) is met; OR
- (c) There are no exceedances of the Copermittee's portion of interim effluent limitations under Table 7.2 at the Responsible Copermittee's MS4 outfalls; OR

- (d) The Responsible Copermittees have submitted and is fully implementing a Water Quality Improvement Plan, accepted by the San Diego Water Board, which provides reasonable assurance that the Copermittee's portion of the interim TMDL compliance requirements described in Attachment A of Resolution No. R9-2010-0033 will be achieved by the interim compliance date.

d. SPECIFIC MONITORING AND ASSESSMENT REQUIREMENTS

(1) Watershed Monitoring

The Responsible Copermittees must conduct suspended sediment, bed load, and flow monitoring to calculate total sediment loading to the Los Peñasquitos Lagoon for each wet season (October 1 thru April 30) as set forth below:

- (a) The Responsible Copermittees must monitor enough storm events throughout the season to quantify sediment loading over each wet season, and
- (b) The Responsible Copermittees must monitor at least 3 stations to quantify cumulative sediment loading into Los Peñasquitos Lagoon. Stations must be located within the Los Peñasquitos, Carroll Canyon, and Carmel Creek tributaries prior to discharging into Los Peñasquitos Lagoon.

(2) Lagoon Monitoring

The Responsible Copermittees must monitor Los Peñasquitos Lagoon each Fall for changes in the extent of the vegetation types as set forth below:

- (a) The Responsible Copermittees must acquire aerial photos of Los Peñasquitos Lagoon and digitize them at an approximate scale of 1:2,500,
- (b) The Responsible Copermittees must appropriately interpret the vegetation and classify the various types as saltmarsh, non-tidal saltmarsh, freshwater marsh, non-tidal saltmarsh –*Lolium perrene* infested, southern willow scrub/mulefat scrub, herbaceous wetland, or upland land cover.

(3) Assessment and Reporting Requirements

- (a) The Responsible Copermittees must analyze the monitoring data collected under Specific Provision 7.d(1) and 7.d(2) to assess whether the interim and final WQBELs have been achieved.
- (b) For assessing and determining compliance with the final receiving water limitations under Specific Provision 7.b.(2)(a), the Responsible

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Copermittees must use the data acquired under Specific Provision 7.d.(2) to estimate the acreage of tidal and non-tidal saltmarsh actually restored.

- (c) For assessing and determining compliance with the final effluent limitations under Specific Provision 7.b.(2)(b), the Responsible Copermittees must use the data acquired under Specific Provision 7.d.(1) to estimate sediment loading into Los Peñasquitos Lagoon. Sediment loading must be evaluated using a 3-year, weighted rolling average. The first reported average shall be calculated using data collected in the year, 2015-2016, 2016-2017, and 2017-2018 wet seasons.
- (d) The monitoring and assessment results must be submitted as part of the Water Quality Improvement Plan Annual Reports required under Provision F.3.b of this Order.

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ATTACHMENT F

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

FACT SHEET / TECHNICAL REPORT

FOR

**ORDER NO. R9-2013-0001
AS AMENDED BY ORDER NOS. R9-2015-0001 AND R9-2015-0100
NPDES NO. CAS0109266**

**NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT
AND WASTE DISCHARGE REQUIREMENTS FOR
DISCHARGES FROM THE MUNICIPAL SEPARATE STORM SEWER SYSTEMS (MS4s)
DRAINING THE WATERSHEDS WITHIN THE SAN DIEGO REGION**

**May 8, 2013
Amended ~~on~~ February 11, 2015
and November 18, 2015**

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I. FACT SHEET FORMAT

This Fact Sheet briefly sets forth the principal facts and the significant factual, legal, methodological, and policy questions that the California Regional Water Quality Control Board, San Diego Region (San Diego Water Board) considered in preparing Order No. R9-2013-0001 (Order), as amended by Order Nos. R9-2015-0001 [and R9-2015-0100](#). In accordance with the Code of Federal Regulations (CFR) Title 40 Parts 124.8 and 124.56 (40 CFR 124.8 and 40 CFR 124.56), this Fact Sheet includes, but is not limited to, the following information:

1. Contact information
2. Public process and notification procedures
3. Background of municipal storm water permits
4. Regional MS4 Permit approach
5. Economic considerations
6. Applicable statutes, regulations, plans and policies
7. Discussion of the provisions in the Order

Tentative Order No. R9-2013-0001 was distributed for public review on October 31, 2012. The San Diego Water Board accepted written comments on ~~the~~ [Tentative Order No. R9-2013-0001](#) until January 11, 2013. A public hearing was subsequently held on April 10 and 11, 2013, that was continued to May 8, 2013 to receive oral comments from interested persons. The San Diego Water Board adopted Order No. R9-2013-0001 on May 8, 2013.

[Tentative](#) Order No. R9-2015-0001, an Order amending Order No. R9-2013-0001, was distributed for public review on September 19, 2014. [The San Diego Water Board accepted written comments on Tentative Order No. R9-2015-0001 until November 19, 2014. A public hearing was held on February 11, 2015, to receive oral comments from Copermittees and interested persons. The San Diego Water Board adopted Order No. R9-2015-0001 amending Order No. R9-2013-0001 on February 11, 2015.](#) Order No. R9-2015-0001 amended the findings and provisions of Order No. R9-2013-0001 to:

- a. Enroll the County of Orange, the Orange County Flood Control District and the south Orange County Cities of Aliso Viejo, Dana Point, Laguna Beach, Laguna Hills, Laguna Niguel, Laguna Woods, Mission Viejo, Rancho Santa Margarita, San Clemente, and San Juan Capistrano as Copermittees responsible for compliance with the terms and conditions of Order No. R9-2013-0001, as amended by Order No. R9-2015-0001;
- b. Designate the San Diego Water Board to regulate all Phase I MS4 discharges within the jurisdiction of the Cities of Laguna Woods and Laguna Hills and agree to the designation of the Santa Ana Water Board to regulate all Phase I MS4 discharges within the jurisdiction of the City of Lake Forest, subject to the

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terms of the February 10, 2015 agreement between San Diego Water Board and the Santa Ana Water Board described in Finding 29 of this Order, upon the later effective date of Order No. R9-2015-0001 or Order No. R8-2015-0001 (superseding Order No. R8-2009-0030);

- c. Establish interim exceptions to land development requirements for those priority development projects that discharge to engineered channels and large river reaches as described in Provision E.3.c.(2)(e) of this Order;
- d. Incorporate the amended requirements of the State Water Resources Control Board's (State Water Board) General Exception to require that pollutant reductions be achieved within 6 years for storm water and nonpoint source discharges to ASBS within the Region;
- e. Incorporate applicable requirements of the Los Peñasquitos Lagoon Sediment TMDL; and
- f. Require the Orange County Copermittees to implement the "*Workgroup Recommendation for a Unified Beach Water Quality Monitoring and Assessment Program in South Orange County*," dated October 2014, made effective in the Monitoring and Reporting Program/Order issued pursuant to California Water Code section 13383 in the December 5, 2014 San Diego Water Board Letter Directive and subject to future revisions by the Executive Officer after appropriate public input.

~~A public hearing was held on February 11, 2015, to receive oral comments from Copermittees and interested persons. The San Diego Water Board adopted Order No. R9-2015-0001 amending Order No. R9-2013-0001 on February 11, 2015.~~

Tentative Order No. R9-2015-0100, an Order amending Order No. R9-2013-0001 as amended by Order No. R9-2015-0001, was distributed for public review on July 31, 2015. The San Diego Water Board accepted written comments on Tentative Order No. R9-2015-0100 until September 14, 2015. A public hearing was held on November 18, 2015, to receive oral comments from Copermittees and interested persons. The San Diego Water Board adopted Order No. R9-2015-0100 amending Order No. R9-2013-0001 as amended by Order No. R9-2015-0001, on November 18, 2015. Order No. R9-2015-0100 amended the findings and provisions of Order No. R9-2013-0001 as amended by Order No. R9-2015-0001 to:

- a. Enroll the County of Riverside, the Cities of Murrieta, Temecula, and Wildomar, and the Riverside County Flood Control and Water Conservation District as Copermittees responsible for compliance with the terms and conditions of Order No. R9-2013-0001, as amended by Order Nos. R9-2015-0001 and R9-2015-0100;

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- b. Continue designation of the San Diego Water Board to regulate Phase I MS4 discharges within the jurisdictions of the Cities of Murrieta and Wildomar, including areas within the Santa Ana Region; and, agree to continue designation of the Santa Ana Water Board to regulate all Phase I MS4 discharges within the jurisdiction of the City of Menifee, including areas within the San Diego Region, subject to the terms of the October 26, 2015 agreement between San Diego Water Board and the Santa Ana Water Board described in Finding 29 of this Order;
- d. Incorporate Provision B.3.c, which provides an option that allows a Copermittee to utilize the watershed-based Water Quality Improvement Plan to be deemed in compliance with the prohibitions and limitations of Provisions A.1.a, A.1.c, A.1.d, A.2, and A.3.b;
- e. Incorporate minor revisions to Provisions E.2.a.(1) and E.2.a.(2) to include San Diego Water Board Order No. R9-2015-0013 and State Water Board Order 2014-0194-DWQ into the requirements for addressing non-storm water discharges to a Copermittee's MS4;
- e. Incorporate minor revisions to Provision E.3.b.(1) to correct inconsistencies in the definition of a Priority Development Project as compared to the definitions in Order No. R9-2009-0002 (Fourth Term Orange County MS4 Permit) and Order No. R9-2010-0016 (Fourth Term Riverside County MS4 Permit), and requirements for incorporating the corrected definitions into the BMP Design Manual;
- f. Incorporate revisions to Provision E.3.e.(1)(a) to provide additional clarity on when the structural BMP performance requirements of Provision E.3.c are applicable to Priority Development Projects;
- e. Incorporate minor revisions to the Revised TMDLs for Indicator Bacteria, Project I – Twenty Beaches and Creeks in the San Diego Region and the TMDLs for Sediment in Los Peñasquitos Lagoon in Attachment E to the Order to make the requirements consistent with the Basin Plan amendments adopted by the San Diego Water Board; and
- f. Remove provisions related to allowing the Riverside County Copermittees to apply for early coverage under the Regional MS4 Permit.

The San Diego Water Board files applicable to the issuance of Order No. R9-2013-0001 and amendments thereto are incorporated into the administrative record in support of the findings and requirements of the Order.

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II. CONTACT INFORMATION

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The Order and other related documents can be downloaded from the San Diego Water Board website at

http://www.waterboards.ca.gov/sandiego/water_issues/programs/stormwater/index.shtml

The documents referenced in this Fact Sheet and in Order No. R9-2013-0001 and amendments thereto are available for public review at the San Diego Water Board office, located at the address listed above. Public records are available for inspection during regular business hours, from 8:00 am to 5:00 pm Monday through Friday. To schedule an appointment to inspect public records, contact the San Diego Water Board Records Management Officer at 619-516-1990.

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COPERMITTEES

Orange County Copermittees

- County of Orange
 - City of Aliso Viejo
 - City of Dana Point
 - City of Laguna Beach
 - City of Laguna Hills
 - City of Laguna Niguel
 - City of Laguna Woods
- City of Lake Forest *
- City of Mission Viejo
- City of Ranch Santa Margarita
- City of San Clemente
- City of San Juan Capistrano
- Orange County Flood Control District

* While not listed in the above table, the City of Lake Forest remains a Copermittee under this Order until the later effective date of this Order or Santa Ana Water Board Tentative Order No. R8-2015-0001. Thereafter, the City of Lake Forest will no longer be considered a Copermittee under this Order because its Phase I MS4 discharges will be regulated by the Santa Ana Water Board pursuant to Water Code section 13328 designation. The requirements of this Order that apply to the City of Lake Forest for the duration of this Order, consistent with the Water Code section 13228 agreement dated February 10, 2015, are described in Finding 29 and Footnote 2 to Table B-1.

Riverside County Copermittees

- County of Riverside
 - [City of Menifee**](#)
 - City of Murrieta
 - City of Temecula
- City of Wildomar
- Riverside County Flood Control and Water Conservation District

** [The City of Menifee is not regulated as a Copermittee under this Order because its Phase I MS4 discharges are regulated by Santa Ana Water Board Order No. R8-2010-0033 as it may be amended or issued pursuant to Water Code section 13228 designation. The requirements of this Order that apply to the City of Menifee for the duration of this Order, consistent with the Water Code section 13228 written agreement dated October 26, 2015, are described in Finding 29 and Footnote 3 to Table B-1.](#)

San Diego County Copermittees

- County of San Diego
 - City of Carlsbad
 - City of Chula Vista
 - City of Coronado
 - City of Del Mar
 - City of El Cajon
 - City of Encinitas
 - City of Escondido
 - City of Imperial Beach
 - City of La Mesa
 - City of Lemon Grove
- City of National City
- City of Oceanside
- City of Poway
- City of San Diego
- City of San Marcos
- City of Santee
- City of Solana Beach
- City of Vista
- San Diego County Regional Airport Authority
- San Diego Unified Port District

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III. PUBLIC PROCESS AND NOTIFICATION PROCEDURES

The San Diego Water Board followed the schedule listed below for the preparation of Order No. R9-2013-0001 [and amendments thereto](#):

San Diego County Copermittee Permit Reissuance Process

1. On February 8, 2011, the San Diego Water Board met with the San Diego County Copermittees to discuss the Report of Waste Discharge required pursuant to Order No. R9-2007-0001.
2. Between February and May 2011, the San Diego Water Board met with select San Diego County, Orange County, and Riverside County Copermittees, as well as representatives of the environmental community to discuss concepts and receive recommendations for elements to be incorporated in a Regional Municipal Separate Storm Sewer System Permit (Regional MS4 Permit).
3. On June 27, 2011 the San Diego Water Board received the Report of Waste Discharge from the San Diego County Copermittees for the renewal of their NPDES permit, Order No. R9-2007-0001.
4. On April 9, 2012, the San Diego Water Board released an administrative draft of Tentative Order No. R9-2013-0001 for preliminary informal comments and feedback.
5. On April 25, 2012, the San Diego Water Board held an informal public workshop to present the administrative draft of Tentative Order No. R9-2013-0001 and receive verbal comments.
6. Between June and August 2012, the San Diego Water Board held four (4) focused meetings with representatives of the principal stakeholders (the Copermittees, the environmental community, the development/business community, and USEPA) to discuss and receive preliminary comments and feedback about specific elements in the administrative draft of Tentative Order No. R9-2013-0001.
7. On September 5, 2012, the San Diego Water Board held an informal public workshop to present the modifications that were expected to be incorporated into the Tentative Order based on the preliminary comments and feedback received during the focused meetings held between June and August 2012.
8. Informal written comments on the administrative draft of Tentative Order No. R9-2013-0001 were accepted until September 14, 2012.
9. On October 12, 2012, the San Diego Water Board released a revised administrative draft of Tentative Order No. R9-2013-0001.

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10. On October 24, 2012, the San Diego Water Board held a focused meeting with representatives of the principal stakeholders (the Copermittees, the environmental community, the development/business community, and USEPA) to discuss modifications incorporated into the administrative draft of Tentative Order No. R9-2013-0001.
11. On October 31, 2012, the San Diego Water Board released Tentative Order No. R9-2013-0001 for formal public review and comment.
12. On November 13, 2012 and December 12, 2012, the San Diego Water Board held a formal public Board workshop to present the public draft of Tentative Order No. R9-2013-0001 and receive verbal comments.
13. Formal written comments on the public draft of Tentative Order No. R9-2013-0001 were accepted until January 11, 2013.
14. A public hearing of Tentative Order No. R9-2013-0001 was conducted on April 10 and 11, 2013, that was continued to May 8, 2013.

Orange County Copermittee Permit Reissuance Process

15. On May 20, 2014 the San Diego Water Board received the Report of Waste Discharge from the Orange County Copermittees for the renewal of their MS4 NPDES permit, Order No. R9-2009-0002.
16. On June 24, 2014, the San Diego Water Board met with the Orange County Copermittees to discuss the Report of Waste Discharge required pursuant to Order No. R9-2009-0002 and the process for enrollment as Copermittees under Regional MS4 Permit Order No. R9-2013-0001.
17. On July 1, 2014, the San Diego Water Board held a public meeting to discuss the Orange County Report of Waste Discharge and receive comments on potential modifications to Order No. R9-2013-0001. Based on comments received from the Orange County Copermittees and other interested persons at this meeting, the San Diego Water Board determined that additional public meetings were not needed prior to release of Tentative Order No. R9-2015-0001, amending Order No. R9-2013-0001 in redlined – strikeout format for public review and comment.
18. On September 19, 2014, the San Diego Water Board released Tentative Order No. R9-2015-0001 for a 60 day public review and comment period.
19. On October 8, 2014, the San Diego Water Board held a formal public workshop at a regular board meeting to receive information and discuss the proposed amendments to Order No. R9-2013-0001 described in Tentative Order No. R9-2015-0001.

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20. In accordance with State and federal laws and regulations, the San Diego Water Board notified San Diego County, Orange County and Riverside County Copermittees, and all known interested agencies and persons of its intent to adopt Tentative Order No. R9-2015-0001 and provided them with an opportunity to submit their written comments and recommendations. Written comments and recommendations on Tentative Order No. R9-2015-0001 were accepted until November 19, 2014.
21. The San Diego Water Board held a public workshop on October 8, 2014, and a public hearing on February 11, 2015, and heard and considered all comments pertaining to the adoption of Tentative Order No. R9-2015-0001 on February 11, 2015.

Riverside County Copermittee Permit Reissuance Process

22. Between April and June 2015, the San Diego Water Board held three (3) public workshops with representatives of the principal stakeholders (the Copermittees, the environmental community, the development/business community) to discuss and receive comments and feedback about amending Order No. R9-2013-0001 to incorporate a definition of prior lawful approval for Priority Development Projects, and an alternative compliance pathway for prohibitions and limitations in Provision A of the Order. A San Diego Water Board member attended the April and May 2015 public workshops, but no actions or voting took place.
23. On April 15, 2015, the San Diego Water Board met with the Riverside County Copermittees to discuss the Report of Waste Discharge required pursuant to Order No. R9-2010-0016 and the process for enrollment as Copermittees under Order No. R9-2013-0001 (Regional MS4 Permit).
24. On May 8, 2015 the San Diego Water Board received a Report of Waste Discharge from the Riverside County Copermittees for the renewal of their MS4 NPDES permit, Order No. R9-2010-0016.
25. On July 31, 2015, the San Diego Water Board released Tentative Order No. R9-2015-0100 for a formal public review and comment period.
26. Formal written comments on the public draft of Tentative Order No. R9-2015-0100 were accepted until September 14, 2015, a formal public written comment period of 46 days.
27. A public hearing to receive oral comments on Tentative Order No. R9-2015-0100 was conducted on November 18, 2015.

IV. BACKGROUND OF THE SAN DIEGO REGION MUNICIPAL STORM WATER PERMITS

In developed and developing areas, storm water runoff is commonly transported through municipal separate storm sewer systems (MS4s) and discharged into local receiving water bodies. As the storm water runs off and flows over the land or impervious surfaces (e.g., paved streets, parking lots, and building rooftops), it accumulates debris, chemicals, sediment, and other pollutants that can adversely affect receiving water quality if discharged untreated. The United States Environmental Protection Agency (USEPA) recognizes wet weather flows from urban areas as the number one source of estuarine pollution in coastal communities,¹ such as those within the San Diego Region.

The federal Clean Water Act (CWA) was amended in 1987 to address and regulate discharges of storm water associated with industrial activities and from municipal storm sewers. With the amendments, many municipalities throughout the United States were obligated for the first time to obtain National Pollutant Discharge Elimination System (NPDES) permits for discharges of storm water from their MS4s.

In response to the CWA 1987 amendment, as well as the pending federal NPDES regulations which would implement the amendment, the San Diego Water Board issued “early” MS4 permits. The San Diego Water Board adopted and issued Order Nos. 90-38, 90-42, and 90-46 to regulate storm water discharges from the MS4s in Orange County, San Diego County, and Riverside County, respectively, within the San Diego Region on July 16, 1990.

The “early” MS4 permits, or First Term Permits, were issued prior to the November 1990 promulgation of the final federal NPDES storm water regulations. By issuing these First Term Permits before the federal regulations took effect, the San Diego Water Board was able to provide the Copermittees additional flexibility in addressing and managing storm water discharges. The First Term Permits contained the essentials of the 1990 regulations, and required the Copermittees to develop and implement runoff management programs, but provided little specificity about what was required to be included in or actually achieved by those programs.

The flexibility provided in the First Term Permits was generally continued through the Second Term Permits. The combination of the lack of specificity in the First and Second Term Permits, a general lack of meaningful action by the Copermittees and a general lack of corresponding reaction (i.e. enforcement) by the San Diego Water Board during the first ten years of the storm water program, resulted in few substantive steps towards achieving improvements in the quality of receiving waters or storm water discharges from the MS4s.

¹ 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.

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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.

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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.4th 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 included requirements to further emphasize a watershed management approach and for more coordination among jurisdictional runoff management programs. In addition, the Fourth Term Permits included more requirements for assessing the effectiveness of the runoff management programs being implemented by the 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 included several new and emerging approaches for managing storm water runoff and discharges. Low impact development (LID) requirements are included for development and significant redevelopment to reduce pollutants in storm water runoff from sites through more natural processes such as infiltration and biofiltration closer to the source, rather than utilizing conventional mechanical end-of-pipe treatment systems. Hydrograph modification (hydromodification) management requirements also are included to mitigate the potential for increased erosion in receiving waters due to increased runoff rates and durations often caused by development and increased impervious surfaces. The Fourth Term Orange County and Riverside County Permits introduced requirements to identify areas of existing

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development where retrofitting with LID projects would be feasible and could be implemented to reduce storm water runoff and pollutants in storm water discharges.

The Fourth Term Orange County and Riverside County Permits included a clearer distinction between storm water and non-storm water discharges. The term “urban runoff” was completely removed, and a distinction between storm water (wet weather) runoff and non-storm water (dry weather) runoff was emphasized. This clarification was made to prevent any potential misunderstanding that regulation under the MS4 permits is limited only to urbanized areas, and to prevent non-storm water runoff from being managed in the same manner as storm water runoff. The term “urban runoff” is not defined in the Code of Federal Regulations (CFR) or Federal Register (FR) in the regulation of MS4 discharges. According to the CWA 402(p)(3)(B)(ii), MS4 permits must include a requirement to effectively prohibit non-storm water discharges into the MS4s.

Finally, for the Fourth Term Orange County and Riverside County Permits the San Diego Water Board found that non-storm water discharges to the MS4 from over application of irrigation water are sources of pollutants. The San Diego Water Board found that non-storm water discharges resulting from over-irrigation must be prohibited from entering the MS4 in accordance with the requirements of the CWA and pursuant to 40 CFR 122.26(d)(2)(iv)(B)(1).

The requirements of the Fourth Term Permits issued to the Copermittees in each county within the San Diego Region now have substantively the same core requirements such as discharge prohibitions, receiving water limitations, jurisdictional runoff management program components, and monitoring program requirements. There are, however, several inconsistencies that exist among the three Fourth Term Permits which complicate oversight and implementation of the permits by the San Diego Water Board.

The Fourth Term San Diego County Permit expired in January 2012. The Fourth Term Orange County permit expired in December 2014 and the Fourth Term Riverside County Permit ~~will~~ expired in November 2015. Issuing the Fifth Term Permits within five years for three counties under three different permits would have required the San Diego Water Board to expend significant time and resources for the issuance of the permits through three separate public proceedings, thereby greatly reducing the time and resources available to oversee implementation and compliance. Multiple permits also create confusion for determining compliance among regulated entities, especially for the land development community.

The San Diego Water Board ~~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.

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V. REGIONAL MS4 PERMIT APPROACH

The Fifth Term Permit, or Regional MS4 Permit, shifts the focus of the permit requirements from a minimum level of actions to be implemented by the Copermitees to identifying outcomes to be achieved by those actions. Order No. R9-2013-0001 represents an important paradigm shift in the approach for MS4 permits within the San Diego Region.

Historical Permitting Approach

The First and Second Term Permits were very broad and provided little specificity about what was required to be developed and implemented by the Copermitees. The Third Term Permits began to become more specific about the minimum level of implementation required by the Copermitees. The Fourth Term Permits subsequently increased in specificity. The MS4 permits have progressively become more detailed and focused on specifying the minimum level of actions expected to be implemented by the Copermitees. As detailed and specific as the MS4 permits have become, however, they include very little detail about what the desired outcomes of the required actions are expected to achieve. Compliance with the permit requirements has essentially been tracking numbers of actions and reporting, not tracking progress or actual improvements in the quality of receiving waters or discharges from the MS4s. The result has been an increase in actions being implemented by the Copermitees with little or no ability or expectations to determine whether or not improvements in water quality are being achieved.

The Fourth Term Permits result in significant resource expenditure by the Copermitees to report permit compliance information to the San Diego Water Board in the form of annual jurisdictional runoff management program, watershed program, and monitoring program reports. The San Diego Water Board ~~must then~~ [was required to](#) expend much of its limited resources on reviewing more than 50 voluminous reports submitted annually by the Copermitees. The information ~~currently~~ reported by the Copermitees ~~is~~ [was](#) of limited value when trying to measure progress toward achieving improvements in the quality of receiving waters or discharges from the MS4s. Oversight of the MS4 permits ~~is~~ [was](#) further complicated by the inconsistencies among the requirements issued to the Orange County, San Diego County, and Riverside County Copermitees under three separate MS4 permits.

Under the Fourth Term Permits, the Copermitees ~~must~~ [were required to](#) expend a significant portion of their limited resources collecting data of limited value, and putting together reports to submit that information to the San Diego Water Board. Likewise, the San Diego Water Board ~~must~~ [was required to](#) expend most of its limited resources reviewing reports, and developing permits instead of working directly with the Copermitees to identify solutions to problems causing impacts to water quality. This ~~is~~ [was](#) an unsustainable course that ~~will~~ [would have](#) continued [to](#) demand more

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resources from the Copermittees and the San Diego Water Board, and would [have](#) continuedd to result in unknown water quality benefits.

New Permitting Approach

The goal of the Regional MS4 Permit is twofold: 1) bring a consistent set of MS4 permit requirements to all of the Copermittees within the San Diego Region; and, 2) provide an MS4 permit with requirements that will allow the Copermittees to focus their efforts and resources on achieving goals and desired outcomes toward the improvement of water quality rather than completing specific actions.

The overall approach included in the Regional MS4 Permit with respect to the jurisdictional runoff management programs will not differ significantly from the current permits. The general requirements for the jurisdictional runoff management program components and compliance with those requirements will remain and be applied consistently throughout the San Diego Region under the Regional MS4 Permit.

The most significant difference in the new permitting approach is the specific manner of implementation for those jurisdictional runoff management programs. Implementation will be based on decisions made by the Copermittees in accordance with what they have identified as their highest priority water quality conditions. In other words, the Copermittees will have significant control in how to implement the jurisdictional runoff management programs to best utilize their available resources in addressing a specific set of priorities effectively, instead of trying to address all the water quality priorities ineffectively.

The Copermittees are given the responsibility of identifying their highest priority water quality conditions that they intend to address. The Copermittees will develop goals that can be used to measure and demonstrate progress or improvements toward addressing those priorities. In addition to the goals, the Copermittees will provide a schedule for achieving the goals for those highest priorities. The measurement of progress toward achieving the goals for those highest priorities requires a better defined and more focused program of monitoring and assessment than under the Fourth Term Permits.

The monitoring and assessment program must be designed to inform the Copermittees of their progress, and the need for modifications in their jurisdictional runoff management programs and schedules to achieve their goals to improve water quality. The monitoring and assessment program requirements will have a more central role in the Regional MS4 Permit than in earlier permits. The monitoring and assessment requirements must also be designed to enable the Copermittees to focus and direct their efforts in implementing their jurisdictional runoff management programs toward their stated desired outcomes to improve the quality of receiving waters and/or discharges from the MS4s.

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By providing an MS4 permit that allows the Copermittees to make more decisions about how to utilize and focus their resources, along with a better defined monitoring and assessment program to inform their water quality management decisions, the Copermittees ~~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.4th 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

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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

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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.² 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

² Los Angeles Water Board, 2003. Review and Analysis of Budget Data Submitted by the Permittees for Fiscal Years 2000-2003. P. 2.

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the requirements of this Order. This Order also does not require the Copermittees to fully implement all requirements within a single permit term. Where appropriate, the Board has provided the Copermittees with additional time outside of the permit term to implement control measures to achieve final WQBELs and/or water quality standards.

The San Diego Water Board has considered available cost information associated with compliance with this Order. It is not possible to predict accurately the cost impact of the requirements that involve an unknown level of implementation or that depend on environmental variables that are as yet undefined. Only general conclusions can be drawn from this information.

Estimated Municipal Storm Water Program Implementation Costs

The USEPA, the State Water Board, and the California Regional Water Quality Control Boards (Regional Water Boards) have attempted to evaluate the costs of implementing municipal storm water programs. The assessments have demonstrated that the true costs are difficult to ascertain and reported costs vary widely. In addition, reported fiscal analyses tend to neglect the costs incurred to municipalities when storm water and non-storm water runoff is not effectively managed, which are incurred as a result of pollution, contamination, nuisance, and damage to ecosystems, property, and human health. Nonetheless, they provide a useful context for considering the costs of requirements within Order No. R9-2013-0001.

In 1999, the USEPA reported on multiple studies it conducted to determine the cost of management programs. A study of Phase II municipalities determined that the annual cost of the Phase II program was expected to be \$9.16 per household. The USEPA also studied 35 Phase I municipalities, finding costs to be \$9.08 per household annually, similar to those anticipated for Phase II municipalities.³

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.⁴

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

³ Federal Register / Vol. 64, No. 235 / Wednesday, December 8, 1999 / Rules and Regulations. P. 68791-68792.

⁴ State Water Board, 2005. NPDES Stormwater Cost Survey. P. ii.

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Angeles Water Board estimated that average per household cost to implement the MS4 program in Los Angeles County was \$12.50.⁵

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.⁶ 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.⁷ 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.⁸ 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

⁵ Los Angeles Water Board, 2003. Review and Analysis of Budget Data Submitted by the Permittees for Fiscal Years 2000-2003. P. 2.

⁶ State Water Board, 2005. NPDES Stormwater Cost Survey. P. 58.

⁷ County of Orange, 2000. A NPDES Annual Progress Report. P. 60.

⁸ Ribaudo M.O. and D. Heelerstein. 1992, *Estimating Water Quality Benefits: Theoretical and Methodological Issues*. U.S. Department of Agriculture. Technical Bulletin No. 1808.

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

USEPA has estimated that household willingness to pay for improvements in fresh water quality for fishing and boating is approximately \$158-\$210.⁹ 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 \$180.¹⁰

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.¹¹ 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.¹²

⁹ Federal Register / Vol. 64, No. 235 / Wednesday, December 8, 1999 / Rules and Regulations. P. 68793.

¹⁰ State Water Board, 2005. NPDES Stormwater Cost Survey. P. iv.

¹¹ Los Angeles Water Board, 2004. Alternative Approaches to Stormwater Control.

¹² Federal Register / Vol. 64, No. 235 / Wednesday, December 8, 1999 / Rules and Regulations. P. 68791.

VII. APPLICABLE STATUTES, REGULATIONS, PLANS AND POLICIES

A. Legal Authorities – Federal Clean Water Act and California Water Code

This Order is issued pursuant to section 402 of the CWA and implementing regulations adopted by the USEPA and chapter 5.5, division 7 of the CWC (commencing with section 13370). This Order serves as an NPDES permit for point source discharges to surface waters. This Order also serves as waste discharge requirements pursuant to article 4, chapter 4, division 7 of the CWC (commencing with section 13260).

The objective of the CWA is “*to restore and maintain the chemical, physical, and biological integrity of the Nation’s waters.*” To carry out this objective, the CWA requires the implementation of permit programs to regulate the discharge of pollutants and dredged or fill material to the navigable waters of the U.S. and to regulate the use and disposal of sewage sludge. CWA section 402 provides the legal authority to issue a permit for the discharge of pollutants to waters of the U.S. under the NPDES. The CWA provides that NPDES permits may be issued by states which are authorized to implement the provisions of that act. California became authorized to implement the NPDES permit program on May 14, 1973.

The Porter-Cologne Water Quality Control Act (Division 7, commencing with CWC section 13000) established the State Water Resources Control Board (State Water Board) and nine Regional Water Quality Control Boards (Regional Water Boards) as the principal state agencies with primary responsibility for the coordination and control of water quality. CWC section 13200(f) established the San Diego Water Board, which has the primary responsibility for the coordination and control of water quality in the San Diego Region, which includes all the basins draining into the Pacific Ocean between the southern boundary of the Santa Ana Region and the California-Mexico boundary. The San Diego Water Board implements the CWA through Chapter 5.5 of the CWC, commencing with section 13370. CWC section 13377 provides the San Diego Water Board the legal authority to issue waste discharge requirements to ensure compliance with all applicable provisions of the CWA and acts amendatory thereof or supplementary, thereto, to implement water quality control plans, or for the protection of beneficial uses, or to prevent nuisance.

CWA section 402(p) requires the USEPA or authorized state to issue NPDES permits for storm water discharges from MS4s to waters of the U.S. CWA section 402(p)(3)(B)(ii) requires that NPDES permits for storm water discharges from MS4s “*effectively prohibit non-storm water discharges*” into the MS4s. CWA section 402(p)(3)(B)(iii) requires that NPDES permits for storm water discharges from MS4s to “*require controls to reduce the discharge of pollutants [in storm water] to the maximum extent practicable [MEP], including management practices, control techniques and system, design and engineering methods, and such other provisions as the Administrator or the State determines appropriate for the control of such pollutants.*”

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The USEPA published implementing regulations (Code of Federal Regulations [CFR] Title 40, Part 122 [40 CFR 122]), which prescribe permit application requirements for storm water discharges from MS4s pursuant to CWA 402(p), on November 16, 1990. The USEPA published an Interpretive Policy Memorandum on Reapplication Requirements for Municipal Separate Storm Sewer Systems, which provided guidance on permit application requirements for regulated MS4s, on May 17, 1996. The federal regulations in 40 CFR 122 and guidance issued by USEPA serve as the foundation for the provisions of Order No. R9-2013-0001. The legal authorities provided by the above statutes and regulations are included as part of the discussions in Section VIII of this Fact Sheet.

B. Legal Authority for the Permit Issued on a Region-wide Basis

CWA section 402(p)(3)(B) provides the San Diego Water Board the legal authority to issue an NPDES permit for the San Diego Region as compared to separate MS4 permits based upon County- and partial County-wide boundaries as they existed within the San Diego Region. CWA section 402(p)(3)(B) states that “*Permits for discharges from municipal storm sewers- (i) may be issued on a system- or jurisdiction-wide basis ...*” The federal regulations in 40 CFR 122.26(a)(1)(v) also state that the San Diego Water Board “*may designate dischargers from municipal separate storm sewers on a system-wide or jurisdiction-wide basis. In making this determination, the [San Diego Water Board] may consider the following factors: (A) the location of the discharge with respect to waters of the United States; (B) the size of the discharge; (C) the quantity and nature of the pollutants discharged to waters of the United States; and (D) other relevant factors.*”

More specifically, the federal regulations provide that for large and medium MS4 systems, the San Diego Water Board may issue a regional permit. Specifically, the federal regulation in 40 CFR 122.26(a)(3) provide:

- "(ii) *The Director may either issue one system-wide permit covering all discharges from municipal separate storm sewers within a large or medium municipal storm sewer system or issue distinct permits for appropriate categories of discharges within a large or municipal separate storm sewer system including, but not limited to: all discharges owned or operated by the same municipality; located within the same jurisdiction; all discharges within a system that discharge to the same watershed; discharges within a system that are similar in nature; or for individual discharges from municipal separate storm sewers within the system.*
- (iii) *The operator of a discharge from a municipal separate storm sewer which is part of a large or medium municipal separate storm sewer system must either: (A) Participate in a permit application (to be a permittee or a co-permittee) with one or more other operator of discharges from the large or medium municipal storm sewer system which covers all, or a portion of all, discharges from the municipal separate storm sewer system; (B) Submit a distinct permit application which only covers discharges from the municipal separate storm sewers for*

which the operator is responsible; or (C) A regional authority may be responsible for submitting a permit application under the following guidelines...

- (iv) One permit application may be submitted for all or a portion of all municipal separate storm sewers within adjacent or interconnected large or medium municipal separate storm sewer systems. The Director may issue one systemwide permit covering all, or a portion of all municipal separate storm sewers in adjacent or interconnected large or medium municipal separate storm sewer systems.*
- (v) Permits for all or a portion of all discharges from large or medium municipal separate storm sewer systems that are issued on a system-wide, jurisdiction-wide, watershed or other basis may specify different conditions relating to different discharges covered by the permit, including different management programs for different drainage areas which contribute storm water to the system."*

Based on these regulations, the San Diego Water Board may issue a region-wide MS4 permit. The regulations also clarify that the permit may include different conditions for separate discharges covered by the permit. This allows the San Diego Water Board to ensure that suitable water quality conditions and provisions are identified for each watershed.

The USEPA's responses to comments in the Final Rule for the above-mentioned regulations also make it clear that the permitting authority, in this case the San Diego Water Board, has the flexibility to establish system- or region-wide, permits. In the Final Rule published in the Federal Register and containing the responses to comments, USEPA notes that 40 CFR 122.26(a)(3)(iv) would allow an entire system in a geographical region under the purview of a State agency to be designated under a permit.¹³ 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.¹⁴

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.

¹³ 55 Federal Register 47990-01, 48042.

¹⁴ 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)

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- Industrial Service Supply (IND)
- Ground Water Recharge (GWR)
- Contact Water Recreation (REC1)
- Non-contact Water Recreation (REC2)
- Warm Freshwater Habitat (WARM)
- Cold Freshwater Habitat (COLD)
- Wildlife Habitat (WILD)
- Rare, Threatened, or Endangered Species (RARE)
- Freshwater Replenishment (FRSH)
- Hydropower Generation (POW)
- Preservation of Biological Habitats of Special Significance (BIOL)

The following additional existing and potential beneficial uses are identified for coastal waters of the San Diego Region:

- Navigation (NAV)
- Commercial and Sport Fishing (COMM)
- Estuarine Habitat (EST)
- Marine Habitat (MAR)
- Aquaculture (AQUA)
- Migration of Aquatic Organisms (MIGR)
- Spawning, Reproduction, and/or Early Development (SPWN)
- Shellfish Harvesting (SHELL)

Pursuant to Water Code sections 13263 and 13377, the requirements of this Order implement the Basin Plan.

Water Quality Control Plan for Ocean Waters of California, California Ocean Plan

In 1972, the State Water Board adopted the Water Quality Control Plan for Ocean Waters of California, California Ocean Plan (Ocean Plan). The State Water Board adopted the most recent amended Ocean Plan on [October 16, 2012](#) ~~September 15, 2009~~. The Office of Administrative Law approved it on [July 3, 2013](#) ~~March 10, 2010~~. ~~On October 8, 2010, USEPA approved the 2009 Ocean Plan.~~ [The amended Ocean Plan became effective on August 19, 2013.](#) The Ocean Plan is applicable, in its entirety, to ocean waters of the State. In order to protect beneficial uses, the Ocean Plan establishes water quality objectives and a program of implementation. Pursuant to Water Code sections 13263 and 13377, the requirements of this Order implement the Ocean Plan. The Ocean Plan identifies the beneficial uses of ocean waters of the State to be protected as summarized below:

- Industrial water supply
- Water contact and non-contact recreation, including aesthetic enjoyment; navigation

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- Commercial and sport fishing
- Mariculture
- Preservation and enhancement of designated Areas of Special Biological Significance
- Rare and endangered species
- Marine habitat
- Fish spawning and shellfish harvesting

On March 20, 2012, the State Water Board approved Resolution No. 2012-0012 approving an exception to the Ocean Plan prohibition against discharges to Areas of Special Biological Significance (ASBS) for certain nonpoint source discharges and NPDES permitted municipal storm water discharges. On June 19, 2012, the State Water Board adopted Order No. 2012-0031, amending Order No. 2012-0012 to require pollutant load reductions to be achieved within six years for the ASBS Compliance Plans, section A.2.d(2) and ASBS Pollution Prevention Plans, section B.2.b(2). The State Water Board Resolution No. 2012-0012, as amended requires monitoring and testing of marine aquatic life and water quality in several ASBS to protect California's coastline during storms when rain water overflows into coastal waters. Specific terms, prohibitions, and special conditions were adopted to provide special protections for marine aquatic life and natural water quality in ASBS. The City of San Diego's municipal storm water discharges to the San Diego Marine Life Refuge in La Jolla, and the City of Laguna Beach's municipal storm water discharges to the Heisler Park ASBS are subject terms and conditions of State Water Board Resolution No. 2012-0012, as amended. The Special Protections contained in Attachment B to State Water Board Resolution No. 2012-0012, as amended, applicable to these discharges, are incorporated in Attachment A of this Order. Requirements of this Order implement the Ocean Plan.

Water Quality Control Plan for Enclosed Bays and Estuaries – Part 1 Sediment Quality

On September 16, 2008, the State Water Board adopted the Water Quality Control Plan for Enclosed Bays and Estuaries – Part 1 Sediment Quality (Sediment Quality Control Plan). The Sediment Quality Control Plan became effective on August 25, 2009. The Sediment Quality Control Plan establishes 1) narrative sediment quality objectives for benthic community protection from exposure to contaminants in sediment and to protect human health, and 2) a program of implementation using a multiple lines of evidence approach to interpret the narrative sediment quality objectives. Requirements of this Order implement the Sediment Quality Control Plan.

Antidegradation Policy

Federal regulations (40 CFR 131.12) require that the state water quality standards include an antidegradation policy consistent with the federal antidegradation policy. The State Water Board established California's antidegradation policy in State Water Board Resolution No. 68-16 ("Statement of Policy with Respect to Maintaining the Quality of

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the Waters of the State”). State Water Board Resolution No. 68-16 incorporates the federal antidegradation policy where the federal policy applies under federal law.

The San Diego Water Board’s Basin Plan implements and incorporates by reference both the State and federal antidegradation policies. State Water Board Resolution No. 68-16 and 40 CFR 131.12 require the San Diego Water Board to maintain high quality waters of the State unless degradation is justified based on specific findings. First, the Board must ensure that “existing instream uses and the level of water quality necessary to protect the existing uses” are maintained and protected. Second, if the baseline quality of a water body for a given constituent exceeds levels necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water, that quality shall be maintained and protected through the requirements of the Order unless the Board makes findings that (1) any lowering of the water quality is necessary to accommodate important economic or social development in the area in which the waters are located; (2) water quality adequate to protect existing uses fully is assured; and (3) the highest statutory and regulatory requirements for all new and existing point sources and all cost-effective and reasonable best management practices for nonpoint source control are achieved. The San Diego Water Board must also comply with any requirements of State Water Board Resolution No. 68-16 beyond those imposed through incorporation of the federal antidegradation policy. In particular, the Board must find that not only present, but also anticipated future uses of water are protected, and must ensure best practicable treatment or control of the discharges. The baseline quality considered in making the appropriate findings is the best quality of the water since 1968, the year of the adoption of Resolution No. 68-16, or a lower level if that lower level was allowed through a permitting action that was consistent with the federal and state antidegradation policies. ~~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 as set forth below. ~~Many of the water bodies within the area covered by this Order are of high quality. The Order requires the Copermittees to meet best practicable treatment or control to meet water quality standards. As required by 40 CFR 122.44(a), the Copermittees 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.~~

1. Many of the waters within the area covered by this Order are impaired for multiple pollutants discharged through MS4s and are not high quality waters with regard to these pollutants. In most cases, there is insufficient data to determine whether these water bodies were impaired as early as 1968, but the limited available data shows

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impairment dating back for more than two decades. Many such water bodies are 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 ensures that existing instream (beneficial) water uses and the level of water quality necessary to protect the existing uses is maintained and protected. This Order requires the 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 further requires compliance with receiving water limitations to meet water quality standards in the receiving water either by demonstrating compliance pursuant to Provision A and the Copermitees' monitoring and assessment program pursuant to Provision D of this Order, or by implementing Provision B.3.c with a schedule to achieve compliance with receiving water limitations. This Order includes requirements to develop and implement storm water management programs, achieve WQBELs, and effectively prohibit non-storm water discharges into the MS4. The issuance of this Order does not authorize an increase in the amount of discharge of waste.

2. To the extent that water bodies within the area covered by this Order are high quality waters with regard to some constituents, this Order finds as follows:

- a. Allowing limited degradation of high quality water bodies through MS4 discharges is necessary to accommodate important economic or social development in the area and is consistent with the maximum benefit to the people of the state. The discharge of storm water in certain circumstances is to the maximum benefit to the people of the state because it can assist with maintaining instream flows that support beneficial uses, may spur the development of multiple-benefit projects, and may be necessary for flood control, and public safety as well as to accommodate development in the area. The alternative – capturing all storm water from all storm events – would be an enormous opportunity cost that would preclude MS4 permittees from spending substantial funds on other important social needs. The Order ensures that any limited degradation does not affect existing and anticipated future uses of the water and does not result in water quality less than established standards. The Order requires compliance with receiving water limitations that act as a floor to any limited degradation.
- b. The Order requires the highest statutory and regulatory requirements and requires that the Copermitees meet best practicable treatment or control. The Order prohibits all non-storm water discharges, with a few enumerated exceptions, through the MS4 to the receiving waters. As required by 40 CFR section 122.44(a), the Copermitees must comply with the "maximum extent practicable" technology-based standard set forth in CWA section 402(p), and implement extensive minimum control measures in a storm water management program. Recognizing that best practicable treatment or control may evolve over time, the Order includes new and more specific requirements as compared to the prior Phase I MS4 permits for the San Diego County, Orange County and Riverside County Copermitees. The Order incorporates options to implement

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Water Quality Improvement Plans that must specify detailed structural and non-structural storm water controls that must be implemented in accordance with an accepted proposed time schedule. The Order contains provisions to encourage, wherever feasible, retention of the storm water from the 85th percentile 24-hour storm event.

Anti-Backsliding Requirements

CWA sections 402(o) and 303(d)(4) and federal regulations at 40 CFR 122.44(l) prohibit backsliding in NPDES permits. These anti-backsliding provisions require effluent limitations in a reissued permit to be as stringent as those in the previous permit, with some exceptions where limitations or conditions may be relaxed. ~~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 Copermittees, the Orange County Copermittees, and the Riverside County Copermittees.~~ While this Order allows implementation of an alternative compliance pathway option in Provision B.3.c to constitute compliance with receiving water limitations under certain circumstances, the availability of that alternative and the corresponding availability of additional time to come into compliance with receiving water limitations, does not violate the anti-backsliding provisions. The receiving water limitations provisions of this Order are imposed under section 402(p)(3)(B) of the Clean Water Act rather than based on best professional judgment, or based on section 301(b)(1)(C) or sections 303(d) or (e), and are accordingly not subject to the anti-backsliding requirements of section 402(o). Although the non-applicability is less clear with respect to the regulatory anti-backsliding provisions in 40 CFR 122.44(l), the regulatory history suggests that USEPA's intent was to establish the anti-backsliding regulations with respect to evolving technology standards for traditional point sources. (See, e.g., 44 Fed.Reg. 32854, 32864 (Jun. 7, 1979)). It is unnecessary, however, to resolve the ultimate applicability of the regulatory anti-backsliding provisions, because the alternative compliance pathway option in Provision B.3.c qualifies for an exception to backsliding as based on new information.

The alternative compliance pathway option in Provision B.3.c of this Order was informed by new information available to the Board from experience and knowledge gained through storm water permitting at the Regional Water Boards in the last ten years. There has been a statewide paradigm shift in storm water management. State Water Board Order WQ 2015-0075 directed all of the Regional Water Boards to consider the Los Angeles Water Board's alternative compliance path to receiving water limitations in all Phase I MS4 permits going forward (State Water Board Order WQ 2015-0075 at page 51), and the Los Angeles Water Board's process of developing over 30 watershed-based TMDLs and implementing several TMDLs since the adoption of the previous permits. In particular, the Los Angeles Water Board recognized the significance of allowing time to plan, design, fund, operate and maintain watershed-based BMPs necessary to attain water quality improvements and additionally recognized the potential for municipal storm water to benefit water supply. Similarly, the San Diego Water Board's experience developing and implementing the Fourth Term MS4 Permits and TMDLs that apply on a region-wide scale (e.g. TMDLs for Indicator

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Bacteria, Project I – Twenty Beaches and Creeks in the San Diego Region) has resulted in a similar recognition of the need for a watershed-based approach that allows time to plan, design, fund, operate and maintain BMPs to address impaired waters that have been impacted by MS4 discharges. Thus, even if the receiving water limitations are subject to anti-backsliding requirements, they were revised based on new information that would support an exception to the anti-backsliding provisions. (33 U.S.C. § 1342(o)(2)(B)(i); 40 C.F.R. § 122.44(l)(1); 40 C.F.R. §122.44(l)(2)(i)(B)(1)).

Clean Water Act Section 303(d) List

CWA section 303(d)(1) requires each State to identify specific water bodies within its boundaries where water quality standards are not being met or are not expected to be met after implementation of technology-based effluent limitations on point sources. Water bodies that do not meet water quality standards are considered impaired and are placed on the state's "303(d) List." Periodically, USEPA approves the State's 303(d) List.

Most recently, USEPA approved the State's 2010 303(d) List of impaired water bodies on October 11, 2011, which includes certain receiving waters in the San Diego Region. For each listed water body, the state or USEPA is required to establish a TMDL of each pollutant impairing the water quality standards in that water body. A TMDL is a tool for implementing water quality standards and is based on the relationship between pollution sources and in-stream water quality conditions. The TMDL establishes the allowable pollutant loadings for a water body and thereby provides the basis to establish water quality-based controls. These controls should provide the pollution reduction necessary for a water body to meet water quality standards.

A TMDL is the sum of the allowable pollutant loads of a single pollutant from all contributing point sources (the waste load allocations or WLAs) and non-point sources (load allocations of LAs) plus the contribution from background sources and a margin of safety (40 CFR 130.2(i)). MS4 discharges are considered point source discharges. For 303(d)-listed water bodies and pollutants in the San Diego Region, the San Diego Water Board or USEPA develops and adopts TMDLs that specify these requirements.

Since 2002, the San Diego Water Board has established seven (7) TMDLs to remedy water quality impairments in various water bodies within the San Diego Region (see Attachment E to the Order). These TMDLs identify MS4 discharges as a source of pollutants to these water bodies, and, as required, establish WLAs for MS4 discharges to reduce the amount of pollutant discharged to receiving waters. CWA section 402(p)(3)(B)(iii) requires the San Diego Water Board to impose permit conditions, including: "management practices, control techniques and system, design and engineering methods, and *such other provisions as the Administrator or the State determines appropriate for the control of such pollutants.*" (Emphasis added.) CWA section 402(a)(1) also requires states to issue permits with conditions necessary to carry out the provisions of the CWA. Federal regulations also require that NPDES permits contain WQBELs consistent with the assumptions and requirements of all available WLAs (40 CFR 122.44(d)(1)(vii)(B)). CWC section 13377 also requires that

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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* (9th Cir. 1992) 966 F.2d 1292, 1308, fn. 17.)

The authority exercised under this Order is not reserved state authority under the CWA’s savings clause (cf. *Burbank v. State Water Resources Control Bd.* (2005) 35

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Cal.4th 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.4th 1377, 1389; *Building Industry Ass’n of San Diego Co. v. State Water Resources Control Bd.* (2004) 124 Cal.App.4th 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.4th 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)).

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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* (9th 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.4th 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.4th

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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.4th 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.4th 794, 812, citing *Connell v. Sup. Ct.* (1997) 59 Cal.App.4th 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,¹⁵ contamination,¹⁶ and nuisance¹⁷ are defined under CWC 13050. Provision A.1.c incorporates all the waste discharge prohibitions of the Basin Plan into the requirements of the Order. The waste discharge prohibitions from the Basin Plan have been reproduced and provided in Attachment A to the Order.

Provision A.1.b requires non-storm water discharges into the MS4s to be effectively prohibited, consistent with the requirements of the CWA for MS4 permits to “*effectively prohibit non-stormwater discharges into the storm sewers.*” The effective prohibition is required to be implemented by each Copermittee within its jurisdiction through the illicit discharge detection and elimination requirements under Provision E.2. The prohibition does not apply to NPDES permitted discharges into the Copermittees’ MS4s.

The CWA employs the strategy of prohibiting the discharge of any pollutant from a point source into waters of the United States unless the discharger of the pollutant(s) obtains an NPDES permit pursuant to CWA Section 402. The 1987 amendment to the CWA includes provision 402(p) that specifically addresses NPDES permitting requirements for storm water discharges from MS4s. CWA section 402(p) prohibits the discharge of pollutants from specified MS4s to waters of the U.S. except as authorized by an NPDES permit and identifies two substantive standards for MS4 storm water permits. MS4 permits (1) “*shall include a requirement to effectively prohibit non-stormwater discharges into the storm sewers*” and (2) “*shall require controls to reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques and system, design and engineering methods, and such other provisions as the Administrator or State determines appropriate for the control of such pollutants.*” (CWA section 402(p)(3)(B)(ii)-(iii).)

In November 1990, the USEPA published regulations addressing storm water discharges from MS4s (55 FR 47990 and following (Nov. 16, 1990) (Phase I Final Rule)). The regulations establish minimum requirements for MS4 permits, and generally focus on the requirement that MS4s implement programs to reduce the amount of pollutants found in storm water discharges to the MEP. The CWA’s municipal storm water MEP standard does not require storm water discharges to strictly meet water quality standards, as is required for other NPDES permitted

¹⁵ 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.’”

¹⁶ 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.”

¹⁷ 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.”

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discharges. Compliance is achieved through an iterative approach of continuous implementation of improved BMPs. This distinction reflects Congress's recognition that variability in flow and intensity of storm events render difficult strict compliance with water quality standards by MS4 permittees. In describing the controls that permits must include to reduce pollutants in storm water discharges to the MEP, the statute (CWA section 402(p)(3)(B)(iii)) states that the controls shall include: "*management practices, control techniques and system, design and engineering methods, and such other provisions as the [permit writer] determines appropriate for the control of such pollutants.*"

In contrast, non-storm water discharges from the MS4 that are not authorized by separate NPDES permits are subject to requirements under the NPDES program, including discharge prohibitions, technology based effluent limitations and water quality-based effluent limitations (40 CFR 122.44). The regulations also require the Copermitee's program to include an element to detect and remove illicit discharges and improper disposal into the storm sewer (40 CFR 122.26(d)(2)(iv)(B)).

While "non-storm water" is not defined in the CWA or federal regulations, the federal regulations (at 40 CFR 122.26(b)(2)) define "*illicit discharge*" as "*any discharge to a municipal separate storm sewer that is not composed entirely of storm water and that is not covered by an NPDES permit (other than the NPDES permit for discharges from the municipal separate storm sewer and discharges resulting from fire fighting activities).*" This definition is the most closely applicable definition of "non-storm water" contained in federal law. As stated in the Phase I Final Rule, USEPA added the illicit discharge program requirement to begin implementation of the 'effective prohibition' requirement to detect and control non-storm water discharges to their municipal system.

Thus, federal law mandates that permits issued to MS4s must require management practices that will result in reducing storm water pollutants to the MEP yet at the same time requires that non-storm water discharges be effectively prohibited from entering the MS4. "Effectively" prohibit does not mean that non-storm water discharges are authorized to be discharged into and from the Copermitees' MS4s. The Phase I Final Rule clarifies what "effectively prohibit" means (55 FR 47995):

"Section 402(p)(3)(B) requires that permits for discharges from municipal separate storm sewers require the municipality to "effectively prohibit" non-storm water discharges from the municipal separate storm sewer... Ultimately, such non-storm water discharges through a municipal separate storm sewer must either be removed from the system or become subject to an NPDES permit (other than the permit for the discharge from the municipal separate storm sewer)" [Emphasis added].

Consistent with federal law, unless non-storm water discharges to the MS4 are authorized by a separate NPDES permit, non-storm water discharges are

appropriately subject to the effective prohibition requirement in the CWA and Regional Water Boards are not limited by the iterative MEP approach to storm water regulation in crafting appropriate regulations for non-storm water discharges.

The federal regulations (40CFR122.26(d)(2)(i)(B)) require the Copermitees to establish the legal authority which authorizes or enables the Copermitees to prohibit illicit discharges to the MS4s. The federal regulations (40 CFR 122.26(d)(2)(vi)(B)(1)) require the Copermitees to “*implement and enforce an ordinance, order or similar means*” to prevent non-storm water discharges to their MS4s. Thus, the Copermitees are required to “*effectively*” prohibit non-storm water discharges to their MS4s through enforcing their legal authority established under “*ordinance, order or similar means*” and either remove those discharges to their MS4s, or require those discharges to obtain coverage under a separate NPDES permit. More detail about the program that must be implemented to “*effectively*” prohibit non-storm water discharges to the Copermitees’ MS4s is provided under the discussion for Provision E.2.

Provision A.1.d was included to be consistent with Resolution No. 2012-0012, adopted by the State Water Board on March 20, 2012. Provision A.1.d prohibits discharges from MS4s to Areas of Special Biological Significance (ASBS), except for storm water discharges from the City of San Diego’s MS4 to the San Diego Marine Life Refuge in La Jolla, and the City of Laguna Beach to the Heisler Park ASBS subject to the Special Protections contained in Attachment B to State Water Board Resolution No. 2012-0012. The pertinent Special Protections contained in Attachment B to State Water Board Resolution No. 2012-0012 are provided in Attachment A to the Order.

Provision A.2 (Receiving Water Limitations) specifies the condition of the receiving waters that must be achieved when there are discharges from the Copermitees’ MS4s. Receiving water limitations are included in all NPDES permits issued pursuant to the CWA section 402. CWA section 402(p)(3)(B)(iii) authorizes the inclusion of “*such other provisions as the Administrator or the State determines appropriate for the control of such pollutants.*” This requirement gives USEPA or the State permitting authority, in this case the San Diego Water Board, discretion to determine what permit conditions are necessary to control pollutants.

In its Phase I Final Rule (see 55 FR 47990, 47994 (Nov. 16, 1990)), USEPA elaborated on these requirements, stating that, “*permits for discharges from municipal separate storm sewer systems must require controls to reduce the discharge of pollutants to the maximum extent practicable, and where necessary water quality-based controls.*” USEPA reiterated in its Phase II Final Rule (64 FR 68722, 68737), that MS4 “*permit conditions must provide for attainment of applicable water quality standards (including designated uses), allocations of pollutant loads established by a TMDL, and timing requirements for implementation of a TMDL.*” CWC section 13377 also requires that NPDES permits include limitations necessary to implement water quality control plans. Both the State Water Board and the San Diego Water Board have previously concluded that discharges from the MS4 contain pollutants that have

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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* (9th 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.

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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.4th 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*

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concerning the relationship between effluent limitations and water quality.” The TMDLs identify sources of the pollutants causing the impairments and assign portions of the TMDL as WLAs to point sources, which include MS4s.

WLAs must be expressed in NPDES permits as WQBELs, which may include one or more numeric components such as numeric effluent limits, and/or receiving water limitations, and/or BMP requirements. Because numeric targets for TMDLs typically include a component that will be protective of water quality standards, a TMDL will likely include one or more numeric receiving water limitations and/or effluent limitations as part of the assumptions or requirements of the TMDL. Any numeric receiving water limitations and/or effluent limitations developed as part of the assumptions or requirements of a TMDL must be incorporated and included as part of WQBELs for the MS4s.

Because the development and approval of new TMDLs, or modification of existing TMDLs, may occur during the term of this Order, the specific provisions of those TMDLs, including effluent limitations applicable to MS4s are provided within Attachment E to the Order. Attachment E will be updated with new TMDLs and modifications to existing TMDLs in a timely manner as they occur.

Provision A.4 (Compliance with Discharge Prohibitions and Receiving Water Limitations) describes the process required to be implemented by the Copermittees if compliance with the discharge prohibitions of Provisions A.1.a and A.1.c and receiving water limitations of Provision A.2.a are not being achieved under current conditions.

In its Phase II Stormwater Regulations, Final Rule, USEPA states that MS4 *“permit conditions must provide for attainment of applicable water quality standards (including designated uses), allocations of pollutant loads established by a TMDL, and timing requirements for implementation of a TMDL.”*¹⁸ 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.¹⁹ 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.”*²⁰

¹⁸ Phase II Stormwater Regulations, Final Rule, 64 Fed. Reg. 68722, 68737.

¹⁹ 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.

²⁰ NRDC v. County of Los Angeles (9th 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.4th 866, 884-886, citing *Defenders of Wildlife v. Browning*, (9th Cir. 1999) 191 F.3d 1159.)

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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* (9th Cir. 1999) 191 F.3d 1159.) This Order prohibits discharges that cause or contribute to violations of water quality standards.

The discharge prohibitions under Provisions A.1.a and A.1.c and receiving water limitations under Provision A.2.a are included in this Order to ensure that discharges from the MS4s do not cause or contribute to exceedances of water quality objectives necessary to protect the beneficial uses of the receiving waters.

Provision A.4 is consistent with the precedent-setting language in State Water Board Order WQ 99-05 required to be included in municipal storm water permits. State Water Board Order WQ 2001-15 refined Order WQ 99-05 by requiring an iterative approach to compliance with water quality standards involving ongoing assessments and revisions, referred to as the “iterative process.” The “iterative process” is a fundamental NPDES requirement for municipal storm water permits to achieve the objectives of the CWA.

The State Water Board and Regional Water Boards have stated that the provisions under Provisions A.1.a, A.1.c, A.2.a, and A.4 are independently applicable, meaning that compliance with one provision does not provide a “safe harbor” where there is non-compliance with another provision (i.e., compliance with the Provision A.4 does not shield a 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

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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.²¹

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

²¹ 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.

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discharges and reduced storm water pollutant discharges to the MEP, but their discharges are still causing or contributing to violations of water quality standards, Provision A.4 provides a clear “iterative process” for the Copermittees to follow.

Provision A.4 essentially requires the Copermittees to implement additional BMPs until MS4 discharges no longer cause or contribute to a violation of water quality standards.

In assessing compliance and potential enforcement actions, the San Diego Water Board looks at the Copermittees’ efforts in total to meet the requirements of Provisions A.1.a, A.1.c, A.2.a and Provision A.4. The Copermittees need to demonstrate that they are making improvements to their programs and making progress toward achieving the discharge prohibitions and receiving water limitations in Provisions A.1.a, A.1.c, and A.2.a by implementing the requirements of Provision A.4. The San Diego Water Board would consider these efforts prior to strictly enforcing the requirements of Provisions A.1.a, A.1.c, and A.2.a. Causes of exceedances of the receiving water limitations can often be more difficult to identify and attribute solely to the Copermittees’ MS4s. The intent of the Order is to provide the Copermittees more clarity and flexibility in addressing these exceedances through the iterative approach and adaptive management process until the requirements under Provisions A.1.a, A.1.c, and A.2.a are fully achieved.

An exception to the iterative approach and adaptive management process would be in receiving waters subject to adopted and approved TMDLs. For TMDLs that are incorporated into the Order, there is a specific date for compliance to be achieved, after which the iterative approach and adaptive management process required under Provision A.4 no longer provides the flexibility to achieve compliance. Where compliance dates for a TMDL have passed, compliance with the WQBELs incorporated into the Order established by a TMDL in Attachment E to protect water quality standards is required. Thus, after the interim or final compliance dates for a TMDL have passed, if the discharges from the Copermittees’ MS4s are causing or contributing to a violation of WQBELs, exceedances of WQBELs must be strictly enforced by the San Diego Water Board. In the meantime, however, the Copermittees are in compliance with the interim or final TMDL requirements in Attachment E as long as the interim or final WQBELs are being achieved in accordance with the interim or final compliance dates.

[In addition, this Order includes an optional pathway that incorporates the requirements of Provision A.4 and would allow a Copermittee to be deemed in compliance with the requirements under Provisions A.1.a, A.1.c, A.1.d, A.2, and A.3.b during implementation of a Water Quality Improvement Plan that incorporates specific additional requirements. This alternative compliance pathway and the additional specific requirements are described below under the discussion for Provision B.3.c.](#)

B. Water Quality Improvement Plans

Purpose: Since 1990, the Copermittees have been developing and implementing programs and BMPs intended to effectively prohibit non-storm water discharges to the MS4s and control pollutants in storm water discharges from the MS4s to receiving waters. As a result, several water body / pollutant combinations have been de-listed from the CWA Section 303(d) List, beach closures have been significantly reduced, and public awareness of water quality issues has increased. The Copermittees have been able to achieve improvements in water quality in some respects, but significant improvements to the quality of receiving waters and discharges from the MS4s are still necessary to meet the requirements and objectives of the Clean Water Act.

Provision B includes requirements for the Copermittees to develop and implement Water Quality Improvement Plans to ultimately comply with the prohibitions and limitations under Provision A. The Water Quality Improvement Plans will provide the Copermittees a comprehensive program that can achieve the requirements and further the objectives of the CWA. Implementation of the Water Quality Improvement Plans will also improve the quality of the receiving waters in the San Diego Region.

The Water Quality Improvement Plan is the backbone of the Regional MS4 Permit requirements. Provision B provides the guidance, criteria, and minimum expectations and requirements for the elements of the Water Quality Improvement Plan to be developed and implemented by the Copermittees. The Water Quality Improvement Plans will be implemented in the Watershed Management Area by the Copermittees within their jurisdictions through their jurisdictional runoff management programs.

The Water Quality Improvement Plan also incorporates a program to monitor and assess the progress of the Copermittees' jurisdictional runoff management programs toward improving the quality of discharges from the MS4s, as well as tracking improvements to the quality of receiving waters. A process to adapt and improve the effectiveness of the Water Quality Improvement Plans has also been incorporated into the requirements of Provision B to be consistent with the "iterative approach" required to achieve compliance with discharge prohibitions of Provisions A.1.a and A.1.c and receiving water limitations of Provision A.2.a, pursuant to the requirements of Provision A.4.

The Water Quality Improvement Plans have also been structured to incorporate the requirements of any TMDLs that have been adopted for the San Diego Region. Incorporating the requirements of the TMDLs into the requirements of Provision B allows the Copermittees to develop a single plan, instead of separate plans, to coordinate their non-storm water and storm water runoff management programs. The Water Quality Improvement Plans allow the Copermittees to meet the requirements of this Order, as well as fulfill the requirements of the TMDLs.

As an added benefit, if the Copermitees demonstrate that impaired water bodies within the Watershed Management Area listed on the 303(d) List will be addressed with their Water Quality Improvement Plans in a reasonable period of time, the San Diego Water Board may be able to remove the water bodies from the 303(d) List, which would greatly reduce the need for the San Diego Water Board to develop additional TMDLs that would have to be incorporated into the Order and implemented by the Copermitees.

Discussion: The federal NPDES regulations require the Copermitees to develop a proposed management program (40 CFR 122.26(d)(2)(iv)). The proposed management program must include “a *comprehensive planning process*” and “*where necessary intergovernmental coordination*” for the “*duration of the permit.*” The Water Quality Improvement Plan is the Copermitees’ “*comprehensive planning process*” document for the proposed management program that will be implemented within a Watershed Management Area. Implementation of the Water Quality Improvement Plan requires “*intergovernmental coordination*” among the Copermitees for at least the “*duration of the permit,*” and likely into and beyond the next iteration of the permit.

Developing Water Quality Improvement Plans based upon watersheds is consistent with federal regulations that support the development of permit conditions, as well as implementation of storm water management programs, at a watershed scale (40 CFR 122.26(a)(3)(ii), 122.26(a)(3)(v), and 122.26(d)(2)(iv)). In 2003, USEPA issued a Watershed-Based NPDES Permitting Policy Statement (USEPA, 2003) that defines watershed-based permitting as an approach that produces NPDES permits that are issued to point sources on a geographic or watershed basis. In this policy statement, USEPA explains that “[*t*]he utility of this tool relies heavily on a detailed, integrated, and inclusive watershed planning process.” USEPA identifies a number of important benefits of watershed permitting, including more environmentally effective results, the ability to emphasize measuring the effectiveness of targeted actions on improvements in water quality, reduced cost of improving the quality of the nation’s waters and more effective implementation of watershed plans, including TMDLs, among others.

An emphasis on watersheds is appropriate at this stage in the San Diego Region’s MS4 program to shift the focus to more targeted, water quality driven planning and implementation. Addressing discharges on a watershed scale focuses on water quality results by emphasizing the receiving waters in the watershed. The conditions of the receiving waters drive management actions, which in turn focus measures to address pollutant contributions from MS4 discharges.

The Water Quality Improvement Plan gives the Copermitees the responsibility of developing a comprehensive plan to coordinate the efforts of their jurisdictional runoff management programs for addressing the problems related to MS4 discharges causing impacts to water quality in the Watershed Management Area. The development of the plan provides the Copermitees the opportunity to provide

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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~~ ~~were expected to be~~ phased in as their respective NPDES municipal storm water permits expired. ~~Because~~ Order No. R9-2007-0001 expired in January 2012, ~~and~~ the San Diego County Copermittees ~~were~~ ~~became~~ covered under the Regional MS4 Permit on June 27, 2013, the effective date of the Order. ~~Because~~ Order No. R9-2009-0002 expired in December 2014, ~~and~~ the Orange County Copermittees ~~are~~ ~~became~~ covered under the Regional MS4 Permit on April 1, 2015, the effective date of Order No. R9-2013-0001 as amended by Order No. R9-2015-0001. [Order No. R9-2010-0016 expired in November 2015, and the Riverside County Copermittees became covered under the Regional MS4 Permit on January 7, 2016, the effective](#)

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~~After the San Diego Water Board receives and considers the Report of Waste Discharge required to be submitted by the Riverside County Copermittees pursuant to the requirements of their current permit, and makes any necessary changes to the Order, the Riverside County Copermittees will be covered under the Regional MS4 Permit after Order No. R9-2010-0016 expires in December 2015.~~

~~The 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.~~

The [Cities](#) of Laguna Woods, ~~and~~ Laguna Hills, [Murrieta, and Wildomar](#) are located partially within the jurisdictions of both the California Regional Water Quality Control Board, Santa Ana Region (Santa Ana Water Board) and the San Diego Water Board. Written requests for designation of a single Regional Water Board to regulate matters pertaining to permitting of Phase I MS4 discharges were submitted to the San Diego Water Board and the Santa Ana Water Board by the City of Laguna Woods by letter dated September 8, 2014, ~~and~~ the City of Laguna Hills by letter dated March 12, 2014, [the City of Murrieta by letter dated June 22, 2015, and the City of Wildomar by letter dated June 23, 2015.](#) The Cities of Laguna Woods, ~~and~~ Laguna Hills, [Murrieta, and Wildomar](#) requested designation of the San Diego Water Board pursuant to CWC section 13228.

The Cities of Laguna Woods, ~~and~~ Laguna Hills, [Murrieta, and Wildomar](#) reported that management and implementation of municipal programs to comply with two different Phase I MS4 permits creates a significant administrative and financial burden and inhibits their ability to contribute to greater overall water quality improvements in either Region. In an effort to address these concerns, the San Diego Water Board and the Santa Ana Water Board have entered into ~~an~~ [written](#) agreements ~~s~~ [dated February 10, 2015,](#) whereby the San Diego Water Board is designated to regulate Phase I MS4 discharges within the [jurisdiction](#)s of the Cities of Laguna Woods, ~~and~~ Laguna Hills, [Murrieta, and Wildomar](#) including [areas the portions of the jurisdictions with](#) in the

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Santa [Ana Region](#). [The San Diego Water Board and the Santa Ana Water Board entered into an agreement dated February 10, 2015 to designate the San Diego Water Board to regulate Phase I MS4 discharges within the jurisdictions of the Cities of Laguna Woods and Laguna Hills, including the portions of the jurisdictions within the Santa Ana Region, upon the later effective date of ~~this~~ Order No. R9-2015-0001 or Santa Ana Water Board Tentative Order No. R8-2015-0001. \[The San Diego Water Board and the Santa Ana Water Board entered into an agreement dated October 26, 2015 to designate the San Diego Water Board to regulate Phase I MS4 discharges within the jurisdictions of the Cities of Murrieta and Wildomar, including the portions of the jurisdictions within the Santa Ana Region upon the effective date of Order R9-2015-0100.\]\(#\)](#)

Under the terms of the [agreements](#), each Regional Water Board retains the authority to enforce provisions of the Phase I MS4 permits issued to each city but compliance will be determined based upon the Phase I MS4 permit in which a particular city is regulated as a Copermittee (Water Code section 13228 (b)). Also under the terms of the [agreements](#), any TMDL and associated MS4 permit requirements issued by the San Diego Water Board or the Santa Ana Water Board which include the Cities of Laguna Woods, ~~or~~ Laguna Hills, [Murrieta, or Wildomar](#) as a responsible party, will be incorporated into the appropriate Phase I MS4 permit by reference. Enforcement of the applicable TMDL would remain with the Regional Water Board which has jurisdiction over the targeted impaired water body. Applicable TMDLs subject to the terms of the agreement include, but are not limited to, the Santa Ana Water Board's San Diego Creek/Newport Bay TMDL [and Lake Elsinore/Canyon Lake Nutrient TMDLs](#), and the San Diego Water Board's Indicator Bacteria Project I Beaches and Creeks TMDL.

In conformance with the [agreements](#), ~~a~~ [footnotes](#) to Table B-1 ~~has been~~ [are](#) included to specify coverage under Order No. R9-2013-0001 for those Phase I MS4 discharges within the jurisdictional boundaries of the Cities of Laguna Woods, ~~and~~ Laguna Hills, [Murrieta, and Wildomar](#) within the Santa Ana Region. ~~The~~ [Footnote 1 to Table B-1](#) specifies that the [Cities](#) of Laguna Woods and Laguna Hills are identified as responsible Copermittees in the San Diego Creek/Newport Bay TMDL in the Santa Ana Region and remain obligated to comply with the San Diego Creek/Newport Bay TMDL pursuant to section XVIII of Tentative Order No. R8-2015-0001 (NPDES No. CAS618030) and any reissuance thereof. [Footnote 4 to Table B-1 specifies that the Cities of Murrieta and Wildomar are identified as responsible Copermittees in the Lake Elsinore/Canyon Lake Nutrient TMDLs in the Santa Ana Region and remain obligated to comply with the Lake Elsinore/Canyon Lake Nutrient TMDLs pursuant to section VI.D.2 of Order No. R8-2010-0033 \(NPDES No. CAS618030\) or corresponding section as it may be amended or reissued.](#)

The [Cities](#) of Lake Forest ~~is~~ [and Menifee are](#) located partially within the jurisdictions of both the Santa Ana Water Board and the San Diego Water Board. [Written requests for designation of a single Regional Water Board to regulate matters pertaining to](#)

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~~[permitting of Phase I MS4 discharges were submitted to the San Diego Water Board and the Santa Ana Water Board by the City of Lake Forest by letters dated January 14, 2013 and April 4, 2014, and the City of Menifee by letter dated June 25, 2015. The Cities of Lake Forest and Menifee requested designation of the San Ana Water Board pursuant to CWC section 13228. By letters dated January 14, 2013 and April 4, 2014 the City of Lake Forest submitted a written request, pursuant to CWC section 13228, to the San Diego Water Board and the Santa Ana Water Board requesting the Santa Ana Water Board be designated to regulate matters within the City of Lake Forest pertaining to permitting of their Phase I MS4 discharges.](#)~~

The ~~Cities~~ of Lake Forest [and Menifee](#) reported that management and implementation of municipal programs to comply with two different Phase I MS4 permits creates a significant administrative and financial burden and inhibits their ability to contribute to greater overall water quality improvements in either Region. In an effort to address these concerns, the San Diego Water Board and the Santa Ana Water Board have entered into ~~an-written~~ [agreements dated February 10, 2015](#), whereby the Santa Ana Water Board is designated to regulate Phase I MS4 discharges within the jurisdiction~~s~~ of the ~~Cities~~ of Lake Forest [and Menifee including the portions of the jurisdictions](#) within the San Diego Region. [The San Diego Water Board and the Santa Ana Water Board entered into an agreement dated February 10, 2015 to designate the San Ana Water Board to regulate Phase I MS4 discharges within the jurisdiction of the City of Lake Forest, including portions of the jurisdiction within the Santa Diego Region,](#) upon the later date of ~~this~~ Order [No. R9-2015-0001](#) or Santa Ana Water Board Tentative Order No. R8-2015-0001. [The San Diego Water Board and the Santa Ana Water Board entered into an agreement dated October 26, 2015 to designate the San Ana Water Board to regulate Phase I MS4 discharges within the jurisdiction of the City of Menifee, including portions of the jurisdiction within the San Diego Region, under Order No. R8-2010-0033 \(NPDES No. CAS618030\) as it may be amended or reissued upon the effective date of Order No. R9-2015-0100.](#)

Under the terms of the [agreements](#), each Regional Water Board retains the authority to enforce provisions of the Phase I MS4 permits issued to each city but compliance will be determined based upon the Phase I MS4 permit in which a particular city is regulated as a Copermittee (Water Code section 13228 (b)). Also under the terms of the [agreements](#), any TMDL and associated Phase I MS4 permit requirements issued by the San Diego Water Board or the Santa Ana Water Board which include the ~~Cities~~ of Lake Forest [or Menifee](#) as a responsible party, will be incorporated into the appropriate Phase I MS4 permit by reference. Enforcement authority for the applicable TMDL would remain with the Regional Water Board which has the jurisdiction over the targeted impaired water body. Applicable TMDLs subject to the terms of the agreement include, but are not limited to, the Santa Ana Water Board's San Diego Creek/Newport Bay TMDL [and Lake Elsinore/Canyon Lake Nutrient TMDLs](#), and the San Diego Water Board's Indicator Bacteria Project I Beaches and Creeks TMDL.

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In conformance with the ~~is~~ [agreements](#), ~~a-f~~ [Footnote 2](#) to Table B-1 has been included to specify that Phase I MS4 discharges within the jurisdictional boundaries of the City of Lake Forest located within the San Diego Region will be regulated under Santa Ana Water Board Order No. R8-2015-0001 (NPDES No. CAS618030) and any reissuance thereof. The footnote specifies that the City of Lake Forest is an identified responsible Copermittee in the Indicator Bacteria Project I Beaches and Creeks TMDL (Bacteria TMDL) in the San Diego Region and remains obligated to comply with the Bacteria TMDL pursuant to Attachment E of Order No. R9-2013-0001 and any reissuance thereto. The City [of Lake Forest](#) is also identified as a responsible Copermittee in the San Diego Creek/Newport Bay TMDL established by the Santa Ana Water Board. The City remains obligated to comply with the San Diego Creek/New Port Bay TMDL pursuant to the Santa Ana Water Board's Phase I MS4 Permit (Tentative Order No. R8-2015-0001 (NPDES No. CAS618030), [as it may be amended or reissued](#)). Under the terms of the agreement, the City of Lake Forest must retain and continue implementation of the over irrigation prohibition in Title 15, Chapter 15, Section 14.030, List (b) of the City Municipal Code throughout its jurisdiction. Also under the terms of the agreement, the City of Lake Forest must actively participate in the development and implementation of the ~~Aliso Creek~~ [South Orange County](#) Watershed Management Area Water Quality Improvement Plan required pursuant to Order No. R9-2013-0001, and any reissuance thereof.

[Footnote 3 to Table B-1 has been included to specify that Phase I MS4 discharges within the jurisdictional boundaries of the City of Menifee located within the San Diego Region will be regulated under Santa Ana Water Board Order No. R8-2010-0033 \(NPDES No. CAS618033\) and any reissuance thereof. At this time, the City of Menifee is not identified as a responsible Copermittee for any TMDLs established by the San Diego Water Board. Under the terms of the agreement, the City of Menifee must actively participate in the development and implementation of the Santa Margarita River Watershed Management Area Water Quality Improvement Plan required pursuant to Order No. R9-2013-0001, and any reissuance thereof.](#)

The basis supporting the Cities of Laguna Woods, Laguna Hills, ~~and~~ [Lake Forest, Menifee, Murrieta, and Wildomar](#) requests to designate a specific Regional Water Board for regulatory oversight of Phase I MS4 discharges may change under future conditions and circumstances, therefore the San Diego Water Board will periodically review the effectiveness of the [agreements](#) during each MS4 permit reissuance. Based on this periodic review the San Diego Water Board may terminate ~~the one or~~ [both of the](#) [agreements](#) with the Santa Ana Water Board or otherwise modify the [agreements](#) subject to the approval of the Santa Ana Water Board.

Provision B.2 (Priority Water Quality Conditions) requires the Copermittees in each Watershed Management Area to identify the highest priority water quality conditions which will be the focus of the Water Quality Improvement Plan implementation.

Provisions B.2.a and B.2.b provide the criteria that must be assessed when

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characterizing the receiving water quality and potential impacts from MS4 discharges of the receiving waters within the Watershed Management Area. The criteria are based primarily on the requirements in 40 CFR 122.26(d)(1)(iv)(C) and (C)(1)-(9). Characterizing the receiving water quality and identifying the potential impacts caused by MS4 discharges to receiving waters in the Watershed Management Area is necessary to identify the impacts to receiving waters associated with MS4 discharges that are of the most concern to the Copermittees.

Based on the information required to be considered under Provisions B.2.a and B.2.b, Provision B.2.c requires to Copermittees to identify the highest priority water quality conditions related to discharges from the MS4s that will be the primary focus of the Water Quality Improvement Plan in the Watershed Management Area. Addressing and improving these highest priority water quality conditions will become the focus of each Copermittee's jurisdictional runoff management program as the Water Quality Improvement Plan is implemented in the Watershed Management Area. The highest priority water quality conditions are expected to include sources of pollutants and/or stressors, and/or receiving water conditions, that the Copermittees consider the highest threats or most likely to have adverse impacts on the physical, chemical, and biological integrity of receiving waters. Addressing these threats and/or adverse impacts should restore the physical, chemical, and biological integrity of receiving waters, and result in the restoration and protection of the beneficial uses of the receiving waters in the Watershed Management Area.

Provision B.2.d requires the Copermittees to identify known and suspected sources of pollutants and/or stressors contributing to the highest priority water quality conditions. The requirements of Provision B.2.d are based primarily on the requirements in 40 CFR 122.26(d)(1)(iii)(B)(1)-(6). The Copermittees are required to evaluate several factors in the identification of those sources. The Copermittees must consider and evaluate the following: (1) the land uses that may contribute toward impacts to receiving waters, (2) the locations of the Copermittees' MS4s that can convey and discharge runoff and pollutants to receiving waters, (3) other sources that discharge into the Copermittees' MS4s and receiving waters, and (4) other information and data that can help the Copermittees to evaluate the relative importance of or contribution from those sources toward the highest priority water quality conditions. Identifying the known and suspected sources, and their relative contribution toward the highest priority water quality conditions, will help the Copermittees to focus, direct, and prioritize their resources and implementation efforts within their jurisdictions.

Provision B.2.e requires the Copermittees to identify potential strategies that can result in improvements to water quality in MS4 discharges and/or receiving waters within the Watershed Management Area. Potential water quality improvement strategies will not necessarily be implemented by the Copermittees, but provide a "menu" of options that the Copermittees will consider for implementation. The public participation process that will be implemented during the development of the Water Quality Improvement Plan is where the potential water quality improvement strategies will be identified.

Provision B.3 (Water Quality Improvement Goals, Strategies and Schedules) requires the Copermittees in each Watershed Management Area to identify the goals that the Copermittees' jurisdictional runoff management programs will work toward achieving to address and improve the highest priority water quality conditions identified under Provision B.2.c; the strategies that will be implemented by the Copermittees within their jurisdictions and the Watershed Management Area to achieve the goals; and, the schedules for implementing the strategies and achieving the goals. The element of the Water Quality Improvement Plan required under Provision B.3 is where the "*comprehensive planning*" and "*intergovernmental coordination*" [40 CFR 122.26(d)(2)(iv)] of the Copermittees' actions for the proposed management programs within the Watershed Management Area is required to be described.

Provision B.3.a requires the Copermittees to identify interim and final numeric goals, and schedules to achieve those goals as part of the Water Quality Improvement Plans. Provision B.3.a.(1) requires the Copermittees to identify two types of numeric goals to be achieved:

- (1) Final numeric goals in the receiving waters and/or MS4 discharges that will result in the protection of the water quality standards of the receiving waters for the highest priority water quality conditions identified by the Copermittees for Provision B.2.c. These final numeric goals are the ultimate goals for the Water Quality Improvement Plan, and the achievement and maintenance of these final numeric goals will indicate that one or more beneficial uses have been successfully restored and/or protected from MS4 discharges.
- (2) Interim numeric goals that can be used by the Copermittees to demonstrate progress toward achieving the final numeric goals in the receiving waters and/or MS4 discharges for the highest priority water quality conditions in the Watershed Management Area. Achievement of the interim numeric goals will demonstrate to the San Diego Water Board that the Copermittees' implementation efforts are progressing toward achieving the final numeric goals.

Provision B.3.a.(1) does not specify what the interim and final numeric goals must be based on, but they essentially must be designed to achieve compliance with water quality standards in the receiving waters. To that end, the interim goals must be based on measureable criteria or indicators capable of demonstrating progress toward achieving the numeric goals.

The interim and final numeric goals can be based on the water quality objectives in the Basin Plan. The water quality objectives in the Basin Plan, however, consist of numeric and narrative water quality objectives. Numeric water quality objectives can be directly used as numeric goals. Narrative water quality objectives, on the other hand, will require some interpretation to identify numeric goals. The achievement of multiple numeric goals based on the water quality objectives, used in combination,

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may be necessary to demonstrate that beneficial uses have been restored and/or protected.

The Copermittees could also propose other numeric goals that are not necessarily water quality objectives from the Basin Plan. For example, the Copermittees could propose a numeric goal that consists of achieving some percent improvement of a measureable indicator, such as acreage of a specific habitat or increase in a specific plant or animal species population. Other examples may include pollutant load reductions, number of impaired waterbodies delisted from the List of Water Quality Impaired Segments, Index of Biological Integrity (IBI) scores, etc.

The Copermittees may choose to develop interim numeric goals based on the final numeric goals they develop, such as incremental steps toward ultimately achieving the final numeric goals. The Copermittees may also choose to develop interim numeric goals that are based on other measureable indicators that can indirectly indicate improvements and progress toward the final numeric goals.

There are no limits to the types of interim numeric goals that could be proposed by the Copermittees, other than the goals must be based on measureable criteria or indicators capable of demonstrating progress toward achieving the numeric goals. Likewise, there are no limits to the types of final numeric goals that could be proposed by the Copermittees, other than the goals must “*restore and protect the water quality standards of the receiving waters.*”

Finally, Provision B.3.a.(2) also requires the Copermittees to develop schedules for measuring progress and achieving the interim and final numeric goals. Several criteria are included for the development of the schedules, but the Copermittees are required to achieve the numeric goals as soon as possible, consistent with federal NPDES regulations (40 CFR 122.47(a)(1)).

The Copermittees are also required to incorporate any compliance schedules for applicable ASBS or TMDL requirements. Applicable ASBS and TMDL compliance schedules are set forth in Attachment A and Attachment E to the Order, respectively. The information provided by the Copermittees under Provision B.3.a.(2) will be used by the Copermittees and the San Diego Water Board to gauge and track the progress of the Copermittees’ efforts in addressing the highest priority water quality conditions identified in the Water Quality Improvement Plan.

Provision B.3.b requires the Copermittees to identify the strategies and schedules to implement those strategies as part of the Water Quality Improvement Plans. Provision B.3.b requires the Copermittees to identify the water quality improvement strategies that will be and may be implemented within the Watershed Management Area to 1) reduce pollutants in storm water discharged from the MS4 to the MEP, 2) effectively prohibit non-storm water discharges from entering the MS4, 3) protect water quality standards in receiving waters by controlling MS4 discharges so that they do not cause

or contribute to exceedances of receiving water limitations, and 4) achieve applicable WQBELs that implement TMDLs. The Copermittees will select the strategies to be implemented based on the likely effectiveness and efficiency of the potential water quality improvement strategies identified under Provision B.2.e to effectively prohibit non-storm water discharges to the MS4, reduce pollutants in storm water discharges from the MS4 to the MEP, and/or achieve the interim and final numeric goals identified under Provision B.3.a.

Provision B.3.b.(1) requires each Copermittee to identify the strategies that will be or may be implemented within its jurisdiction. Each Copermittee is required to describe the strategies it is committed to implementing as part of its jurisdictional runoff management requirements under Provisions E.2 through E.7, and the optional jurisdictional strategies that the Copermittee will implement, as necessary, to achieve the numeric goals.

Each Copermittee is expected to implement the optional jurisdictional strategies identified under Provisions B.3.b.(1)(b) when the jurisdictional strategies it has committed to implement under Provision B.3.b.(1)(a) are not making adequate progress toward the interim and final numeric goals in accordance with the schedules established under Provision B.3.a. Provision B.3.b.(1)(b)(v) requires each Copermittee to describe the circumstances necessary to trigger implementation of the optional jurisdictional strategies, in addition to the requirements of Provisions B.3.b.(1)(a).

The San Diego Water Board recognizes that there may be optional jurisdictional strategies that will likely require funding and/or resources for planning, permitting, procurement of labor and materials, and implementation. Thus, Provision B.3.b.(1)(b)(iv) requires each Copermittee to describe the funding and/or resources that are necessary to implement these optional jurisdictional strategies. This information may provide interested groups and members of the public an understanding of the resources that they could provide or assist in obtaining to implement these optional jurisdictional strategies.

Provision B.3.b.(2) requires the Copermittees in the Watershed Management Area to identify the regional or multi-jurisdictional strategies that may be implemented, as necessary, to achieve the numeric goals. Similar to the requirements of Provision B.3.b.(1)(b), these regional or multi-jurisdictional strategies will likely require funding and/or resources for planning, permitting, procurement of labor and materials, and implementation, and San Diego Water Board recognizes that these strategies may be difficult to implement with only Copermittee resources. Thus, Provision B.3.b.(2)(d) requires the Copermittees to describe the funding and/or resources necessary to implement these optional regional or multi-jurisdictional strategies. This information may provide interested groups and members of the public an understanding of the resources that they could provide or assist in obtaining to implement these optional regional or multi-jurisdictional strategies.

Provision B.3.b.(3) requires the Copermittees to develop and include schedules in the Water Quality Improvement Plan for implementing the water quality improvement strategies identified under Provisions B.3.b.(1) and B.3.b.(2). The schedule for implementing the water quality improvement strategies will be used by the Copermittees and San Diego Water Board to measure and demonstrate the progress of the Copermittees' implementation efforts toward reducing pollutants in storm water discharged from the MS4 to the MEP, and eliminating illicit non-storm water discharges from entering the MS4.

Provision B.3.b.(4) provides the Copermittees in each Watershed Management Area the option of implementing watershed-specific structural BMP requirements for Priority Development Projects. Historically, storm water permits have included very specific performance standards for permanent, structural BMPs. These standards describe the expectation for the capture or treatment of pollutants and control of excessive flow before storm water is discharged from a site. The Copermittees were also allowed to develop waiver programs for Priority Development Projects to avoid implementing the structural BMPs; however, the waiver programs were not necessarily tied into any sort of holistic watershed strategy. The result is that implementation of BMP requirements is largely done on a site-by-site basis. This requires proper design on the part of the Priority Development Project and strict oversight on the part of the Copermittee.

Provision B.3.b.(4) promotes the evaluation of multiple strategies for water quality improvement, in addition to the implementation of permanent structural BMPs, on a watershed-scale versus the site-by-site approach. In a report issued by the Southern California Coastal Water Research Project (SCCWRP) and several other research institutions, the report emphasized that a successful hydromodification management program will involve watershed analysis as a first step, and that integrating multiple watershed-based strategies is preferable over a site-by-site approach. Indeed, the report states that the watershed analysis "*...should lead to identification of existing opportunities and constraints that can be used to help prioritize areas of greater concern, areas of restoration potential, infrastructure constraints, and pathways for potential cumulative effects.*"²² 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,

²² 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.

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culverts, and flood management basins). Once this information is collected, the Copermittees must produce GIS layers (maps) that include this information.

From there, the Copermittees must use the results of the Watershed Management Area Analysis to identify and compile a list of candidate projects that could potentially be used as alternative compliance options for Priority Development Projects. Such projects include, for example, opportunities for stream or riparian area rehabilitation, opportunities for retrofitting existing infrastructure to incorporate storm water retention or treatment, and opportunities for regional BMPs, among others. Once these candidate projects are identified, Copermittees may allow Priority Development Projects to fund, partially fund, or completely implement these candidate projects. The Copermittees must first find that implementing such a candidate project would provide greater overall benefit to the watershed than requiring implementation of the structural BMPs onsite, and also enter into a voluntary agreement with the Priority Development Project that authorizes this arrangement. The Copermittees may use Provision B.3.b.(4) as both 1) a mechanism to reach their stated goals of the Water Quality Improvement Plan by using Priority Development Projects to either fund or implement projects that will provide water quality benefit, and 2) an alternative to requiring strict adherence to the structural BMP design standards.

Additionally, Provision B.3.b.(4) allows the Copermittees to use the results of the Watershed Management Area Analysis to identify areas within the Watershed Management Area where it is appropriate to allow Priority Development Projects to be exempt from the hydromodification management BMP performance requirements. Provision E.3.c.(2) already allows exemptions for Priority Development Projects that discharge to a conveyance channel whose bed and bank are concrete lined from the point of discharge to an enclosed embayment or the Pacific Ocean. However, there may be cases where further exemptions are warranted. The Copermittees may identify such cases on a watershed basis and include them in the Watershed Management Area Analysis; however, they must provide the supporting rationale to support all claims for exemptions.

Provision B.3.b.(4) provides an innovative pathway for Copermittees to regulate their land development programs by allowing alternative compliance in lieu of implementing structural BMPs on each and every Priority Development Project. This approach facilitates the integration of watershed-scale solutions for improving overall water quality and assisting Copermittees to achieve their stated goals of the Water Quality Improvement Plan. The San Diego Water Board understands, however, that undertaking this approach, which involves extensive planning, could be resource intensive for the Copermittees. Therefore, the Watershed Management Area Analysis is optional and not a requirement. The Copermittees can choose not to perform the watershed planning and mapping exercise described in Provision B.3.b.(4), and instead choose to require strict implementation of the structural BMPs onsite, pursuant to Provision E.3.c.

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Provision B.3.c is included to provide the Copermittees an option that allows the Copermittees to be deemed in compliance with the prohibitions and limitations (receiving water limitations) of Provisions A.1.a, A.1.c, A.1.d, A.2, and A.3.b. One or more Copermittees within a Watershed Management Area can choose to implement this option. This option is only expected to be utilized by a Copermittee that wishes to be deemed in compliance with the requirements of Provisions A.1.a, A.1.c, A.1.d, A.2, and A.3.b.

The alternative compliance pathway option included in Provision B.3.c is consistent with the approach described in Order WQ 2015-0075, *In the Matter of Review of Order No. R4-2012-0175, NPDES Permit No. CAS004001, Waste Discharge Requirements for Municipal Separate Storm Sewer System (MS4) Discharges within the Coastal Watersheds of Los Angeles County, Except Those Discharges Originating from the City of Long Beach MS4*, adopted by the State Water Board on June 16, 2015. State Water Board Order WQ 2015-0075 directs the Regional Water Boards to consider a watershed-based planning and implementation approach to compliance with receiving water limitations when issuing Phase I MS4 permits going forward. Order WQ 2015-0075 included seven principles that the Regional Water Boards are expected to follow when incorporating an alternative compliance pathway into a MS4 permit. The San Diego Water Board incorporated the seven principles stipulated in State Water Board Order WQ 2015-0075 into the Regional MS4 Permit as follows:

1. Provision A of this Order continues to require compliance with water quality standards in the receiving water and does not deem good faith engagement in the iterative process to constitute compliance with receiving water limitations. Provision A of this Order continues to be consistent with the receiving water limitations provisions from State Water Board Order WQ 99-05.
2. Compliance with Provision B.3.c constitutes compliance with the requirements of the Provision A.3.b, which requires compliance with the WQBELs of the TMDLs in Attachment E to the Order, and is considered compliance with receiving water limitations for those TMDL water body-pollutant combinations.
3. Provision B.3.c is an ambitious, rigorous, and transparent alternative compliance pathway that allows a Copermittee appropriate time to come into compliance with receiving water limitations without being in violation of the receiving water limitations during implementation of the compliance alternative.
4. Provision B.3.c requirements are incorporated into a Water Quality Improvement Plan. Water Quality Improvement Plans are a watershed-based planning and implementation approach, which address multiple contaminants, and incorporate TMDL requirements.
5. The strategies required to be included in the Water Quality Improvement Plans promote and incentivize the use of green infrastructure and requires the implementation of low impact development principles.

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6. The strategies required to be included in the Water Quality Improvement Plans encourage multi-benefit regional projects that capture, infiltrate, and reuse storm water and support a local sustainable water supply.
7. The alternative compliance pathway of Provision B.3.c includes rigor and accountability. The Copermittee is required, through a transparent public process, to demonstrate that water quality issues in the watershed have been analyzed and prioritized, and that appropriate solutions are proposed. The Copermittee is also required, through a transparent process, to monitor the results and return to their analysis to verify assumptions and update the solutions. The Copermittee is required to conduct this type of adaptive management on its own initiative without waiting for direction from the San Diego Water Board.

In order for a Copermittee to utilize this option, the Copermittee is required to include three components in the Water Quality Improvement Plan. The first component is a comprehensive set of numeric goals and schedules that will demonstrate the requirements of Provisions A.1.a, A.1.c, A.1.d, A.2, and A.3.b will be achieved within a specified period of time. The criteria provided in the Order will require the Copermittee to demonstrate that the discharges from its MS4s will not cause or contribute to exceedances of water quality objectives in the receiving waters, and/or the receiving waters will be adequately protected from adverse impacts attributable to the Copermittee's MS4 discharges. The Copermittee is also required to specify annual milestones to be achieved each year, which adds rigor, accountability, and transparency to the process. The annual milestones may consist of water quality improvement strategy implementation phases, interim numeric goals, and other acceptable metrics, which are expected to build upon previous milestones and lead to the achievement of the final numeric goals.

The second component is an analysis to demonstrate that implementation of the water quality improvement strategies required under Provision B.3.b will achieve the numeric goals within the established schedules required under Provisions B.3.a and B.3.c.(1). Because the development of the analysis may require significant resources, the Order allows the Copermittees in each Watershed Management Area that choose to implement this option to perform the analysis individually, or pool their resources for the analysis collectively.

The analysis must "reasonably" and "quantitatively" demonstrate that the implementation of the water quality improvement strategies can achieve the numeric goals within the established schedules. However, as more data and information are collected during implementation of the Water Quality Improvement Plan to demonstrate progress toward achieving the numeric goals, the numeric goals, water quality improvement strategies and schedules may need to be modified. If the data and information indicate that modification is needed, the Copermittee must also update the analysis. With the exception of numeric goals and schedules associated with

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TMDLs from Attachment E to the Order, the modification to the analysis would be allowed as part of the adaptive management process of the Water Quality Improvement Plan. For TMDLs, modification of numeric goals or schedules would likely require an amendment to the Basin Plan and Attachment E to the Order before the analysis and Water Quality Improvement Plan could include such modifications.

Thus, the third component is the key component that allows a Copermittee to demonstrate the implementation of the water quality improvement strategies within its jurisdiction is making progress toward achieving the final numeric goals. Each Copermittee must specify the monitoring and assessments that will be performed to confirm that implementation of the water quality improvement strategies are making progress toward achieving the numeric goals within the established schedules, and whether the interim and final numeric goals have been achieved.

These three components must then be reviewed by the Water Quality Improvement Consultation Panel. The Water Quality Improvement Consultation Panel is required to be formed as part of the public participation process for the development of the Water Quality Improvement Plans. The Water Quality Improvement Consultation Panel is described under Provision F.1.a.(1)(b). Review by the Water Quality Improvement Consultation Panel is included to provide an additional layer of input, support, and accountability for the implementation of this option.

Compliance with the requirements of Provisions A.1.a, A.1.c, A.1.d, A.2, and A.3.b begins when the Water Quality Improvement Plan, incorporating the requirements of Provision B.3.c.(1), is accepted by the San Diego Water Board. Each Copermittee that chooses to implement and continues to implement this option will be deemed in compliance with the requirements of Provisions A.1.a, A.1.c, A.1.d, A.2, and A.3.b as long as the Copermittee continues to implement the strategies, monitoring and assessments as incorporated in the Water Quality Improvement Plan in accordance with Provision B.3.c.(1), and the Copermittee reports the achievement of the annual milestones each year, or provides acceptable rationale and recommends appropriate modifications to the interim numeric goals, and/or water quality improvement strategies, and/or schedules to improve the rate of progress toward achieving the final numeric goals. The Copermittee continues to be deemed in compliance with the requirements of Provisions A.1.a, A.1.c, A.1.d, A.2, and A.3.b during the time the San Diego Water Board reviews the rationale and recommended modifications to the interim numeric goals, and/or water quality improvement strategies, and/or schedules. If and when the San Diego Water Board determines that it does not accept the rationale or recommendations, the Copermittee will be notified they are no longer deemed in compliance with Provisions A.1.a, A.1.c, A.1.d, A.2, and A.3.b.

Provision B.4 (Water Quality Improvement Monitoring and Assessment) requires the Copermittees to develop an integrated monitoring and assessment program to track the progress of the Water Quality Improvement Plan toward meeting the implementation goals and schedules, and improving the water quality of the

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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

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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.²³

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,²⁴ 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.²⁵ 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

²³ 40 CFR 130.7(b)(1)

²⁴ USEPA, 2005. Guidance for 2006 Assessment, Listing and Reporting Requirements Pursuant to Sections 303(d), 305(b) and 314 of the Clean Water Act

²⁵ Ibid

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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.²⁶

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.”²⁷ 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 Copermittees’ MS4s. The Water Quality Improvement Plans also include requirements that are expected to attain water quality standards in a reasonable period of time. The San Diego Water Board considers the Water Quality Improvement Plans to be a commitment by the Copermittees to

²⁶ Ibid

²⁷ CWA section 502(19)

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develop, plan, budget for, and implement pollution controls that will attain water quality standards in receiving waters in a reasonable period of time, or as soon as possible. The results of the Copermittees' efforts in implementing the Water Quality Improvement Plans can be used to re-evaluate the condition of the impaired water bodies during the next update to the 303(d) List.

After the Copermittees submit the Water Quality Improvement Plans and demonstrate that water quality standards are being attained or will be attained in a reasonable period of time, the San Diego Water Board may re-evaluate the water bodies on the 303(d) List. These water bodies on the 303(d) List may be re-evaluated and placed into Category 4b or Category 4c in the Integrated Report. The water bodies placed in Category 4b or Category 4c in the Integrated Report must show a record that the water bodies are attaining water quality standards or supporting the identified beneficial uses, or will attain water quality standards or support identified beneficial uses in a reasonable period of time, in order for the water bodies to be appropriately removed from the 303(d) List.

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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.

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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.

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If the source of a non-storm water discharge is identified as a category of non-storm water specified in Provisions E.2.a.(1)-(5), the NALs can be used to determine if the category of non-storm water discharges is a source of pollutants. For other non-storm water discharges not specified in Provisions E.2.a.(1)-(5), the CWA requires those discharges to be “*effectively*” prohibited by removing the discharge to the MS4 through enforcement of the Copermittees’ legal authority established under “*ordinance, order or similar means*” to prohibit illicit discharges to the MS4s.

If there are non-storm water discharges that are not required to be addressed as illicit discharges, those discharges must comply, at a minimum, with the discharge prohibitions and receiving water limitations of Provision A. Thus, the non-storm water discharges from the MS4 must be at levels that will not cause or contribute to a condition of pollution, contamination, or nuisance (Provision A.1.a), and must not cause or contribute to a violation of water quality standards in receiving waters (Provision A.2.a) to be consistent with the discharge prohibitions and receiving water limitations of Provisions A.1.a and A.2.a.

Furthermore, the San Diego Region has predominantly intermittent and ephemeral rivers and streams which vary in flow volume and duration at spatial and temporal scales. For most of these river and stream systems, non-storm water discharges from the MS4 are likely to be the most significant or the only source contributing to surface flows present within the receiving water, especially during the dry season.

Therefore, because of the prohibitions and limitations of Provision A.1.a and A.2.a, and the likelihood that non-storm water discharges from the MS4 are the most significant or only source contributing to surface flows present within the receiving water, NALs generally must be consistent with the water quality objectives found within the Basin Plan. Non-storm water discharges that are meeting the NALs would not be expected to cause or contribute to an exceedance of water quality objectives in receiving waters, which would be consistent with the discharge prohibitions and receiving water limitations of Provisions A.1.a and A.2.a.

Exceedances of the NALs would then provide an indication of the relative severity of a pollutant in non-storm water discharges from the MS4 contributing to potential or observed receiving water quality impacts. The relative severity or significance of a pollutant in non-storm water discharges from the MS4 will provide the Copermittees a valuable source of information that can be used to identify priority water quality conditions within a Watershed Management Area and within each Copermittee’s jurisdiction.

Tables C-1 through C-4 under Provision C.1.a specify numeric NALs for several parameters or pollutant constituents for non-storm water discharges from the MS4 to several water body types. The NALs for MS4 discharges given under Provision C.1.a are based on the water quality objectives for inland surface waters in the Basin Plan, and the water quality objectives for ocean waters in the Ocean Plan. The NALs for

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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*

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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.²⁸ 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

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

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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 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:

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- (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'

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collective implementation efforts to reduce receiving water impacts that may be caused by the discharges from the MS4s. The preference of the San Diego Water Board is for the Copermittees to spend their resources achieving tangible and observable improvements in receiving water conditions instead of collecting samples and analyzing data that has consistently indicated that receiving water conditions are degraded and require improvement. In general, the ability to measure potential improvements in receiving water conditions due to any actions implemented by the Copermittees as part of the Water Quality Improvement Plan may require several years before a response can be observed. Thus, the frequency of collecting receiving water monitoring data has been kept to a minimum.

During the transitional period between adoption of this Order and San Diego Water Board acceptance of a Water Quality Improvement Plan, the Copermittees must conduct receiving water monitoring in accordance with Provision D.1.a. This approach to collecting receiving water data is different from what was required in the Fourth Term Permits, but one that truly embraces the concept of an integrated, cost-effective, streamlined receiving water monitoring approach.

Provision D.1.a requires Copermittees to continue performing the receiving water monitoring programs required in Order Nos. R-2007-0001, R9-2009-002, and R9-2010-0016; plus participation in: hydromodification management plan monitoring approved by the San Diego Water Board, monitoring plans as part of load reduction plans (either Bacteria Load Reduction Plans or Comprehensive Load Reduction Plans) for TMDLs in Attachment E of the Order, Storm Water Monitoring Coalition Regional Monitoring, Southern California Bight Regional Monitoring, Sediment Quality Monitoring, and ASBS Monitoring as applicable to a Watershed Management Area.

Provision D.1.a also provides an opportunity for the Copermittees to use third party data to meet receiving water monitoring requirements where feasible. Allowing the Copermittees to use the data currently collected through its participation in existing regional receiving water programs and that of third parties provides an efficiency of resources in obtaining the data necessary to inform the Copermittees and the San Diego Water Board about the physical, chemical, and biological conditions of the receiving waters, which can also help to focus the receiving water monitoring during the implementation of the Water Quality Improvement Plan. Once a Water Quality Improvement Plan is developed for a Watershed Management Area in compliance with Provision B of this Order, the transitional period is over and Copermittees are required to conduct receiving water monitoring according to the requirements of Provisions D.1.b-e.

Provision D.1.b requires each Copermittee to identify at least one long term receiving water monitoring station to be representative of receiving water quality within each Watershed Management Area. Long term receiving water monitoring stations can be located at any existing mass loading stations, temporary watershed assessment stations, bioassessment stations, and stream assessment stations previously established by the Copermittees. The requirements under Provision D.1.b. are

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consistent with 40 CFR 122.26(d)(2)(iii)(D), which specifies that a “*monitoring program for representative data collection for the term of the permit*” may include “*instream locations*.” For each Watershed Management Area, at least one long term watershed monitoring station is required to be established and monitored. The Copermittees may choose to establish additional long term monitoring stations where necessary to support the implementation and adaptation of the Water Quality Improvement Plan.

Provision D.1.b. requires the Copermittees to locate the long term receiving water monitoring station at one of these existing receiving water monitoring stations to provide the Copermittees an opportunity to experience monitoring cost savings while continuing to collect the necessary data to assess the status and trends of receiving water quality conditions in 1) coastal water, 2) enclosed bays, harbors, estuaries, and lagoons, and 3) streams under both dry weather and wet weather conditions. Ideally these stations will continue to be monitored as part of the receiving water monitoring for each Watershed Management Area to maintain a consistent set of locations and a period of data that can be built upon with the monitoring required under this Order.

The receiving water monitoring requirements are separated into monitoring required during dry weather conditions pursuant to Provision D.1.c, and wet weather conditions pursuant to Provision D.1.d.

At each long term monitoring station the Copermittees must conduct at least three dry weather monitoring events as required pursuant to Provision D.1.c and at least three wet weather monitoring events as required pursuant to Provision D.1.d per permit term. Provisions D.1.c and D.1.d require the Copermittees to monitor priority water quality conditions identified in the Water Quality Improvement Plan, constituents listed as causing impairment of receiving waters in the Watershed Management Area, applicable NALs, toxicity, constituents listed in Tables D-2 and D-3, and constituents for implementation plans (e.g. Bacteria Load Reduction Plans and Comprehensive Load Reduction Plans). Required toxicity monitoring was changed to reflect an updated understanding of the unique challenges associated with sampling storm water for toxicity. Copermittees are required to sample receiving water for toxicity during each dry weather and each wet weather event pursuant to Provision D.1.c.(4) and D.1.d.(4). Required toxicity monitoring is now consistent with the State Water Resources Control Board Policy for Toxicity Assessment and Control (Draft June 2012) and recently adopted MS4 permits for Caltrans and Los Angeles Water Board. Receiving water monitoring efforts in this Order have been streamlined to redirect resources to monitoring efforts that better support pollutant reduction solutions with an increasing emphasis on MS4 outfall monitoring, source identification, and source abatement activities.

In addition to the receiving water monitoring requirements under Provisions D.1.b-d, Provision D.1.e requires the Copermittees participate in and/or conduct other types of receiving water monitoring. As recommended and requested by the Copermittees, Provision D.1.e.(1) requires the Copermittees to participate in existing regional monitoring, as applicable to each Watershed Management Area. Existing regional

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monitoring includes monitoring conducted by the Storm Water Monitoring Coalition and for the Southern California Bight. Participation in and use of monitoring data collected from these existing regional water quality monitoring programs provide the Copermittees a greater opportunity for efficiency in the use of their resources to manage their storm water programs and those controllable discharges under their authority.

Provision D.1.e.(1)(c) requires the south Orange County MS4 Copermittees to participate in “unified regional beach water quality monitoring.” This monitoring replaces requirements to conduct “core monitoring” of beach water quality, as provided for in Appendix III of the Ocean Plan.

Several different public agencies currently conduct routine, ongoing beach water quality monitoring in south Orange County in accordance with several different sets of requirements. The monitoring programs implemented to meet those requirements overlap temporally and spatially. These monitoring programs are partially but not fully integrated. In November 2010, the State Water Board adopted Resolution No. 2010-0053, which directed Regional Water Boards to work with dischargers to modify beach water quality monitoring programs required by Regional Water Board-issued permits in order to eliminate redundancies and incorporate beach water quality monitoring required by beach water quality statutes, where appropriate.

In April 2012, the San Diego Water Board requested that its staff review beach water quality monitoring conducted in south Orange County. To assist in responding to that request, staff of the Board convened a workgroup that included representatives of the three public agencies that currently conduct almost all of the routine, ongoing beach water quality monitoring in south Orange County, i.e., South Orange County Wastewater Authority (SOCWA), Orange County Public Works, and Orange County Health Care Agency (OCHCA). The workgroup also included other interested parties, including representatives of the Sierra Club and Surfrider Foundation. In December 2012, the San Diego Water Board adopted Resolution No. R9-2012-0069, which endorsed the San Diego Water Board staff report entitled “A Framework for Monitoring and Assessment in the San Diego Region,” dated November 2012.

The unified program is consistent with and will meet or exceed the minimum requirements for beach water quality monitoring and related public notification and reporting established by State law, including the Ocean Plan. The unified program is consistent with State Water Board Resolution No. 2010-0053. The unified program is also consistent with and will help implement, “A Framework for Monitoring and Assessment in the San Diego Region,” which emphasizes the need for question-driven, beneficial use-oriented monitoring and assessment. The primary purpose of the unified program will be to answer the question “Does beach water quality meet standards for the beneficial use of water contact recreation?”

The unified program is intended to be protective; it will help protect the health of swimmers, surfers, and others who use south Orange County beach waters for water

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contact recreational activities. The unified program is also intended to be reasonable; it will eliminate duplicative monitoring and will include triggers for public notification and additional sampling at all sampling stations year-round. The unified program is intended to be equitable; responsibility for implementation of the unified program will be shared and the responsible agencies will jointly make arrangements to implement the program and will have the flexibility to jointly make short and/or long term changes in those arrangements.

The San Diego Water Board Executive Officer issued a written directive on December 5, 2014, pursuant to California Water Code section 13383, for SOCWA and the south Orange County MS4 Copermittees to implement the unified program in cooperation with OCHCA. The Executive Officer may make revisions to the unified program, provided that the unified program, as revised, continues to be consistent with and meet the requirements of State law, including the Ocean Plan, for beach water quality monitoring and related public notification and reporting. Following a thirty day public comment period, and subject to a request for a hearing before the San Diego Water Board, any such revision shall take effect as specified in a written directive issued by the Executive Officer pursuant to CWC section 13383. The program and any Executive Officer issued revisions to the program are subject to CWC section 13320 right of review from the date of issuance.

The unified program will supersede the existing routine, ongoing, beach water quality monitoring programs in south Orange County that are conducted in accordance with the existing requirements of the NPDES permits for discharges from the SOCWA ocean outfalls and the south Orange County MS4s. The requirement to participate in “regional monitoring” of beach water quality replaces requirements to conduct “core monitoring” of beach water quality, as provided for in Appendix III of the Ocean Plan.

The State Water Resources Control Board adopted the Water Quality Control Plan for Enclosed Bays and Estuaries of California – Part 1 Sediment Quality which became effective August 25, 2009 (Sediment Quality Monitoring Policy). Provision D.1.e.(2) requires any Copermittees with MS4 discharges to an enclosed bay or estuary to monitor the sediments in the enclosed bay or estuary receiving water in accordance with the sediment quality monitoring procedures as prescribed in the Sediment Quality Monitoring Policy.

The State Water Board adopted Resolution No. 2012-0012 which approved exceptions to the California Ocean Plan for selected discharges into Areas of Special Biological Significance (ASBS), including special protections for beneficial uses. State Board Resolution No. 2012-0012 became effective on March 20, 2012, and Attachment B to the Resolution established limitations on point source storm water discharges to ASBS. Copermittees with MS4s that discharge to an ASBS must monitor its discharge to assure compliance with State Board Resolution No. 2012-0012 as required pursuant to Provision D.1.e.(3).

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The San Diego Water Board is developing a regional monitoring strategy to assess the conditions of receiving waters in the San Diego Region. The monitoring requirements of Provision D.1 are expected to be incorporated or serve as a foundation of this regional monitoring strategy, but may require some modifications. When the San Diego Water Board develops an alternative regional monitoring strategy, the Copermittees will be required to participate in the development and implementation of the alternative regional monitoring program pursuant to Provision D.1.f.

Provision D.2 (MS4 Outfall Discharge Monitoring Requirements) specifies the minimum MS4 outfall discharge monitoring requirements that the Copermittees must incorporate and implement as part of the Water Quality Improvement Plan.

The dry weather MS4 outfall discharge monitoring requirements are included under Provisions D.2.a.(2) and D.2.b. The dry weather MS4 outfall discharge monitoring requirements are part of the “*program, including a schedule, to detect and remove (or require the discharger to the municipal separate storm sewer to obtain a separate NPDES permit for) illicit discharges and improper disposal into the storm sewer*” required by 40 CFR 122.26(d)(2)(iv)(B), which is expected to achieve compliance with the CWA section 402(p)(3)(B)(ii) statutory requirement for municipal storm water permits to require the Copermittees to “*effectively prohibit non-storm water discharges into the storm sewers.*” The dry weather MS4 outfall discharge monitoring data collection requirements are based on requirements under 40 CFR 122.26(d)(1)(iv)(D) and 122.26(d)(2)(iv)(B)(3).

The dry weather MS4 outfall discharge monitoring requirements are designed to provide wide spatial and temporal coverage of each jurisdiction to better understand the extent and magnitude of non-storm water discharges to receiving waters, and make a distinction between persistent and transient non-storm water flows. This information is expected to allow each Copermittee to focus its resources on eliminating and controlling the highest priority threats to receiving water quality, as well as integrating other elements of the storm water programs (e.g. complaint call response) and third party data to efficiently and effectively assist in efforts to eliminate non-storm water discharges.

The dry weather MS4 outfall discharge monitoring requirements of Provision D.2.a.(2) and D.2.b are separated into monitoring required before and after the San Diego Water Board accepts the Copermittees’ Water Quality Improvement Plan. Outfall monitoring conducted prior to acceptance of the Water Quality Improvement Plan is referred to in the Order as Transitional MS4 Outfall Discharge Monitoring. Provision D.2.a.(2) includes the transitional dry weather MS4 outfall discharge monitoring requirements.

The requirements under Provision D.2.a.(2) are based on the requirements under 40 CFR 122.26(d)(1)(iv)(D), (d)(1)(v)(B) and (d)(2)(iv)(B), which include the requirements for a monitoring program to identify, detect, and eliminate illicit connections and illegal discharges to the MS4s. The federal regulations (40 CFR 122.26(d)(1)(iv)(D)) require

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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

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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

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useful to improving the effectiveness of their jurisdictional runoff management programs.

Provision D.3.a.(1) requires the Copermitees to develop and conduct at least two special studies per Watershed Management Area, to be determined by the Copermitees. 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 Copermitees 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 Copermitees 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 Copermitees 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 Copermitees to improve the Water Quality Improvement Plan or implementation of the Copermitees' jurisdictional runoff management programs to address the highest priority water quality conditions.

Provision D.3.a.(2) requires the Copermitees 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 Copermitees to improve the Water Quality Improvement Plan or implementation of the Copermitees' 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 Copermitees 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 Copermitees 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 Copermitees assess the progress of the

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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

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Reduction Assessments include specific assessment requirements applicable to each Copermitttee.

As each Copermitttee collects and analyzes the data collected pursuant to dry weather MS4 outfall discharges monitoring requirements of Provisions D.2.a.(2) and D.2.b, Provision D.4.b.(1) requires each Copermitttee to assess the progress, assess the effectiveness of its current actions, and identify modifications necessary to increase the effectiveness of its actions toward reducing and eliminating non-storm water and illicit discharges to its MS4. The findings from these assessments are expected to be utilized by the Copermitttee as part of its procedures to prioritize the non-storm water discharges that will be addressed by its Illicit Discharge Detection and Elimination program required pursuant to Provision E.2.

The assessment requirements of Provision D.4.a.(1) are consistent with 40 CFR 122.26(d)(2)(iv)(B) and 122.26(d)(2)(iv)(B)(3) which require *“procedures...to investigate portions of the separate storm sewer system that, based on the results of the field screen, or other appropriate information [emphasis added], indicate a reasonable potential of contain illicit discharges or other sources of non-storm water”* as part of a *“program...to detect and remove...illicit discharges and improper disposal into the storm sewer.”* The assessment requirements of Provision D.4.a.(1) are also consistent with 40 CFR 122.42(c)(1) requires the Copermitttees to annually report the *“status of implementing the components of the storm water management program that are established as permit conditions.”*

The Storm Water Pollutant Discharges Reduction Assessment is how the Copermitttees in each Watershed Management Area will demonstrate that their jurisdictional runoff management program implementation efforts are achieving the CWA requirement to *“reduce the discharge of pollutants [in storm water] to the maximum extent practicable.”* Provision D.4.b.(2) requires the Copermitttees in each Watershed Management Area to assess and report the progress of the Copermitttees’ efforts to reduce pollutants in storm water discharges from the MS4s to the MEP. The Storm Water Pollutant Discharges Reduction Assessments include specific assessment requirements during both the transitional monitoring period and after acceptance of the Water Quality Improvement Plan applicable to the Watershed Management Area and each Copermitttee.

As the Copermitttees collect and analyze the data collected pursuant to wet weather MS4 outfall discharges monitoring requirements of Provisions D.2.a.(3) and D.2.c, Provision D.4.b.(2) requires the Copermitttees to assess runoff conditions during the transitional period, and the progress of the Water Quality Improvement Plan strategies toward reducing pollutants in storm water from the MS4 to the MEP. The findings from these assessments are expected to be utilized by the Copermitttees to identify any modifications to the wet weather MS4 outfall discharge monitoring locations and frequencies necessary to identify sources of pollutants in storm water discharges from the MS4s, as well as focus, modify, and improve the water quality improvement

strategies implemented by each Copermittee within its jurisdiction to reduce pollutants in storm water discharges to the MEP.

The assessment requirements of Provision D.4.b.(2) are consistent with 40 CFR 122.26(d)(2)(iii)(B) which requires “[e]stimates of the annual pollutant load of the cumulative discharges to waters of the United States from all identified municipal outfalls...during a storm event...accompanied by a description of the procedures for estimating constituent loads and concentrations, including any modeling, data analysis, and calculation methods.” The assessment requirements of Provision D.4.a.(2) are consistent with 40 CFR 122.26(d)(2)(v) which requires that each Copermittee assesses the “estimated reductions in loadings of pollutants from discharges of municipal storm sewer constituents from municipal storm sewer systems expected as the result of the municipal storm water quality management program.” The assessment requirements of Provision D.4.b.(2) are also consistent with 40 CFR 122.42(c)(1) which requires the Copermittees to annually report the “status of implementing the components of the storm water management program that are established as permit conditions.”

Provision D.4.c includes the special studies assessment requirements. Performing special studies are how the Copermittees will address data gaps identified during the development of and updates to the Water Quality Improvement Plan. The relevant findings from the special studies assessments are expected to be incorporated as part of the applicable receiving water assessments, MS4 outfall discharge assessments, and integrated water quality improvement assessments required in Provision D.4.a, D.4.b, and D.4.d, respectively.

The assessment requirements in Provision D.4.d are part of the iterative approach and adaptive management process required by Provision A.4. The Copermittees are required to integrate the data collected pursuant to Provisions D.4.a-c, and information collected during the implementation of the jurisdictional runoff management programs required pursuant to Provision E to re-evaluate the Water Quality Improvement Plan.

The monitoring data collected pursuant to Provisions D.1 and D.2, and the results of the assessment required pursuant to Provisions D.4.a-c, will be used to determine whether the Water Quality Improvement Plan and each Copermittee’s jurisdictional runoff management program are effective, or require modifications or improvements to become more effective to achieve the requirements of the CWA. The assessments required by Provision D.4.d are consistent with 40 CFR 122.42(c)(1) which requires that the Copermittees to report the “[t]he status of implementing the components of the storm water management program that are established as permit conditions.”

E. Jurisdictional Runoff Management Programs

Purpose: Provision E includes the requirements for the jurisdictional runoff management programs to be implemented by each of the Copermittees. Compliance with the requirements for the jurisdictional runoff management programs will allow the Copermittees to demonstrate that they are implementing programs to effectively prohibit non-storm water discharges to the MS4 and reduce pollutants in storm water discharges from the MS4 to the MEP. The jurisdictional runoff management program document prepared by each Copermittee will also provide the details for implementing the water quality improvement strategies identified in the Water Quality Improvement Plan specifically within its jurisdiction.

Discussion: Implementation of the jurisdictional runoff management program requirements under Provision E is how the Copermittees “*effectively prohibit non-stormwater discharges into the storm sewer,*” and outlines the “*controls to reduce the discharge of pollutants to the maximum extent practicable*” consistent with the federal regulations under 40 CFR 122.26. The jurisdictional runoff management program is part of the “*comprehensive planning process*” that is required pursuant to 40 CFR 122.26(d)(2)(iv). Where the Water Quality Improvement Plan is the “*comprehensive planning process*” on a Watershed Management Area scale, requiring “*intergovernmental coordination,*” the jurisdictional runoff management program document is the “*comprehensive planning process*” on a jurisdictional scale that should be coordinated with the other Copermittees in the Watershed Management Area to achieve the goals of the Water Quality Improvement Plan.

The jurisdictional runoff management program requirements are included to provide each Copermittee criteria that can be used to demonstrate that its storm water management program is implementing the “*comprehensive planning process*” within its jurisdiction to “*effectively prohibit non-stormwater discharges into the storm sewers,*” and to identify and implement the most effective “*controls to reduce the discharge of pollutants to the maximum extent practicable*” in accordance with the performance standards given in the CWA.

Provision E includes the requirements for each of the components that must be included in the Copermittee’s jurisdictional runoff management program document that will be implemented by the Copermittee within its jurisdiction. Implementation of the components of each Copermittee’s jurisdictional runoff management program must incorporate the water quality improvement strategies identified by each Copermittee in the Water Quality Improvement Plans, described pursuant to Provision B.3.b.(1)(a).

More specific and detailed discussions of the requirements of Provision E are provided below.

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Provision E.1 (Legal Authority Establishment and Enforcement) requires each Copermitttee 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 Copermitttee 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 Copermitttee 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 Copermitttee by Provision E.1.b is included to provide the San Diego Water Board additional documentation that each Copermitttee has established the legal authorities consistent with Provision E.1.a and 40 CFR 122.26(d)(2)(i)(A)-(F), and the Copermitttee can “*operate pursuant to legal authority established by statute, ordinance or series of contracts.*”

Provision E.2 (Illicit Discharge Detection and Elimination) requires each Copermitttee to implement an illicit discharge detection and elimination program to effectively prohibit non-storm water discharges to the MS4 by actively detecting and eliminating illicit discharges and disposal into its MS4. [If the San Diego Water Board finds that a Copermitttee is fully implementing the requirements of Provision E.2, then the Copermitttee is deemed in compliance with the effective prohibition of non-storm water discharges to the MS4 required under Provision A.1.b.](#)

Provision E.2 establishes the minimum requirements that each Copermitttee 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 Copermitttee to establish the legal authority to prohibit illicit discharges to its MS4s. Under 40 CFR 122.26(d)(2)(iv)(B), each Copermitttee 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

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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.

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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.”

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“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:

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“The Carlsbad Watershed Management Area (WMA) collective watershed strategy identifies bacteria, sediment, and nutrients as high priority water quality pollutants in the Agua Hedionda (904.3 – bacteria and sediment), Buena Vista (904.2 – bacteria), and San Marcos Creek (904.5 – nutrients) Hydrologic Areas. Bacteria, sediment, and nutrients have been identified as potential discharges from over-irrigation.”

- **2007-2008 San Diego Bay Watershed Urban Runoff Management Program Annual Report**

The San Diego Bay Watershed Urban Runoff Management Program 2007-2008 Annual Report was submitted by the San Diego Bay Watershed Copermittees (Cities of Chula Vista, Coronado, Imperial Beach, La Mesa, Lemon Grove, National City, and San Diego, the County of San Diego, the Port of San Diego, and the San Diego County Airport Authority). In Appendix D of the Annual Report, titled “Likely Sources of Pollutants,” the San Diego Bay Watershed Copermittees identified over-irrigation of lawns as a pollutant generating activity from business and/or residential land uses for bacteria, pesticides, and sediment.

- **Copermittee Public Education Materials**

The Orange County Public Works *Tips for Landscape & Gardening* public education brochure states: *“Fertilizers, pesticides and other chemicals that are left on yards or driveways can be blown or washed into storm drains that flow to the ocean. Overwatering lawns can also send materials into storm drains.”*

The Riverside County Flood Control and Water Conservation District *Landscape and Garden* public education brochure states: *“Soil, yard wastes, over-watering and garden chemicals become part of the urban runoff mix that winds its way through streets, gutters and storm drains before entering lakes, rivers, streams, etc. Urban runoff pollution contaminates water and harms aquatic life!”*

- **Los Peñasquitos Lagoon Sedimentation/Siltation TMDL Technical Report**

The Los Peñasquitos Lagoon Sedimentation/Siltation TMDL technical report was prepared for the City of San Diego and USEPA in October 2010. The technical report was included as a technical supporting document attached to the Sediment TMDL for Los Peñasquitos Lagoon staff report prepared by the San Diego Water Board, dated June 13, 2012. Under the Source Assessment section, the technical report states the following:

“Dry weather loading is dominated by nuisance flows from urban land use activities such as car washing, sidewalk washing, and lawn over-irrigation, which pick up and transport sediment into receiving waters.”

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These documents confirm that non-storm water discharges associated with over-irrigation are a source of pollutants and should be addressed as illicit discharges to the MS4. Prohibiting non-storm water discharges associated with over-irrigation, however, is not a new requirement for the Copermittees because it is also consistent with and required by the Water Conservation in Landscaping Act (AB 1881, Laird).

The Water Conservation in Landscaping Act required the Department of Water Resources (DWR) to prepare a Model Water Efficient Landscape Ordinance for use by local agencies (e.g. the Copermittees). All local agencies were required to adopt a water efficient landscape ordinance by January 1, 2010. Local agencies could adopt the Water Efficient Landscape Ordinance developed by DWR, or an ordinance considered at least as effective as the Model Ordinance. The Water Efficient Landscape Ordinance includes a requirement that local agencies prohibit runoff from irrigation (§ 493.2):

“Local agencies shall prevent water waste resulting from inefficient landscape irrigation by prohibiting runoff from leaving the target landscape [emphasis added] due to low head drainage, overspray, or other similar conditions where water flows onto adjacent property, non-irrigated areas, walks, roadways, parking lots, or structures. Penalties for violation of these prohibitions shall be established locally.”

Furthermore, non-storm water discharges from over-irrigation not only transport and discharge pollutants to receiving waters, but are also a likely source of the dry weather flows causing changes to habitat within and along the receiving water bodies. Examples of habitat changes from the dry weather flows include perennialization of ephemeral streams, and conversion of saltwater and brackish water marsh habitats to freshwater marsh habitats (e.g. Los Peñasquitos Lagoon). Both of these examples have resulted in the promotion of invasive species in several areas of the San Diego Region.

The removal of the over-irrigation discharges categories does not require the Copermittees to strictly prohibit lawn and landscape irrigation, but does require the prohibition of excessive irrigation water that results in non-storm water discharges to the MS4. Non-storm water discharges to the MS4 from over-irrigation must be addressed as illicit discharges by the Copermittees pursuant to the requirements of Provision E.2.

The remaining non-storm water categories listed in 40 CFR 122.26(d)(2)(iv)(B)(1) are listed under Provisions E.2.a.(1) through E.2.a.(5) and generally fall into four categories: (1) non-storm water discharges subject to existing San Diego Water Board waste discharge requirements and NPDES permits; (2) non-storm water discharges generally not expected to be a source of pollutants to receiving waters; (3) non-storm water discharges likely to contain pollutants requiring some form of control to address

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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

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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.

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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.

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Provision E.2.c requires each Copermittee to conduct field screening and monitoring of MS4 outfalls and other portions of its MS4 within its jurisdiction to detect non-storm water and illicit discharges and connections to the MS4. Field screening is a required element of the program to detect and eliminate illicit discharges and connections to the MS4, pursuant to 40 CFR 122.26(d)(2)(iv)(B)(2). The field screening requirement will be implemented through the dry weather MS4 outfall discharge monitoring required under Provisions D.2.a.(2) and D.2.b.(1).

Provision E.2.d specifies the measures each Copermittee must implement to eliminate illicit discharges and connections to its MS4. Elimination of illicit discharges and connections to the MS4 is consistent with the requirement of 40 CFR 122.26(d)(2)(iv)(B) *“to detect and remove [emphasis added]...illicit discharges and improper disposal into the storm sewer”* and will achieve the CWA requirement for MS4 permits to *“effectively prohibit non-storm water discharges into the storm sewers.”*

Generally, each Copermittee is responsible for prioritizing its efforts to eliminate non-storm water and illicit discharges or connections to its MS4 based on field screening and monitoring data, NALs, illicit discharge investigation records, and the known or suspected sources. Sources of non-storm water and illicit discharges or connections must be eliminated by enforcing the legal authority established by each Copermittee pursuant to Provision E.1.

Provision E.3 (Development Planning) requires each Copermittee to use its land use and planning authority to implement a development planning program to control and reduce the discharge of pollutants in storm water from new development and significant redevelopment to the MEP. Proper implementation of the development planning program will also contribute toward effectively prohibiting non-storm water discharges from development projects to the MS4.

Pursuant to 40 CFR 122.26(d)(2)(iv), each Copermittee is required to implement a *“management program...to reduce the discharge of pollutants to the maximum extent practicable using management practices, control techniques and system, design and engineering methods, and other such provisions where applicable.”* As part of the management program, 40 CFR 122.26(d)(2)(iv)(A)(2) requires *“planning procedures including a comprehensive master plan to develop, implement and enforce controls to reduce the discharge of pollutants from municipal storm sewers which receive discharges from areas of new development and significant redevelopment.”*

Land development generally alters the natural conditions of the land by removing vegetative cover, compacting soil, and/or placement of concrete, asphalt, or other impervious surfaces. These impervious surfaces concentrate urban pollutants (such as pesticides, petroleum hydrocarbons, heavy metals, and pathogens) that are otherwise not found in high concentrations in the natural environment. Pollutants that

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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.²⁹ 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.³⁰ 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.”³¹ 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.

²⁹ Assessing the Health of Southern California Streams, Stormwater Monitoring Coalition, Fact Sheet

³⁰ Schueler and Holland, 2000. Storm Water Strategies for Arid and Semi-Arid Watersheds (Article 66). The Practice of Watershed Protection.

³¹ 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.

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This is consistent with what USEPA has noted, that “[m]ost stormwater runoff is the result of the man-made hydrologic modifications that normally accompany development. The addition of impervious surfaces, soil compaction, and tree and vegetation removal result in alterations to the movement of water through the environment. As interception, evapotranspiration, and infiltration are reduced and precipitation is converted to overland flow, these modifications affect not only the characteristics of the developed site but also the watershed in which the development is located. Stormwater has been identified as one of the leading sources of pollution for all waterbody types in the United States. Furthermore, the impacts of stormwater pollution are not static; they usually increase with more development and urbanization.”³²

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.

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

Structural BMPs and site design features should incorporate design, construction, and maintenance principles to promote drainage within 96 hours to minimize standing water available to mosquitoes. Nuisances and public health impacts resulting from vector breeding can be prevented with close collaboration and cooperative effort between municipalities and local vector control agencies and the CDPH during the development and implementation of storm water runoff management programs. The CDPH also has issued guidance for BMP implementation that will minimize potential nuisances and public health impacts resulting from vector breeding.³³

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.”³⁴ 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

³³ 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>)

³⁴ www.lowimpactdevelopment.org

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project plan to reduce the generation of pollutants, and address potential impacts from hydromodification.

The Priority Development Project categories are based on the requirements of the Fourth Term Permits for Orange County and Riverside County (Order Nos. R9-2009-0002 and R9-2010-0016, respectively), and do not differ significantly from the Fourth Term Permit for San Diego County. Furthermore, the Priority Development Project categories are consistent with Santa Ana Water Board Order Nos. R8-2009-0030 and R8-2010-0033 (Orange County and Riverside County MS4 Permits, respectively), and Los Angeles Water Board Order No. R4-2010-0108 (Ventura County MS4 Permit).

Because of the impact of relatively small increases in watershed impervious surfaces to receiving waters, Provision E.3.b.(1)(c)(iv) has been updated to include large driveways that are 5,000 square feet or more. The San Diego Water Board finds that large driveways can exacerbate altered flow regimes if not properly controlled.

Provision E.3.b.(3) describes projects that are exempt from Priority Development Project status. These include new or retrofit paved sidewalks, bicycle lanes, or trails that are designed and constructed to direct runoff to vegetated areas or be hydraulically disconnected from paved areas. The exemptions have been provided to encourage these types of projects because they provide multiple environmental benefits, such as promoting walking rather than driving, which will in turn improve air quality. Additionally, retrofitting of existing alleys, streets, or roads are exempt from Priority Development Project status if they are constructed using USEPA Green Streets guidance.³⁵ 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

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

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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 85th percentile storm event (“design capture volume”) is the design standard to which Priority Development Projects must comply. Since the 85th percentile storm event has previously been used as the numeric design standard for treatment control BMPs, this same size storm event is used as the numeric design standard for storm water retention. This is the MEP standard recognized by the San Diego Water Board and is consistent with the Fourth Term Permits for Orange County and Riverside County (Order Nos. R9-2009-0002 and R9-2010-0016, respectively), as well as Santa Ana Water Board Order Nos. R8-2009-0030 and R8-2010-0033 (Orange County and Riverside County MS4 Permits, respectively), Los Angeles Water Board Order No. R4-2010-0108 (Ventura County MS4 Permit), and Los Angeles Water Board Order No. R4-2012-0175 (Los Angeles County MS4 Permit).

The 85th 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 85th 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 85th 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 85th percentile storm). Most jurisdictions in the San Diego Region have already developed isopluvial maps that can provide this type of information. The 85th 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.*³⁶ This implies that the “first flush” of a rainy season and the first storm events after long antecedent dry periods tend to have the highest pollutant loads. Capturing and retaining the pollutant loads of the “first flush” of a rainy season and the first storm events after long antecedent dry periods will reduce a significant portion of the pollutants in storm water discharged to and from the MS4.

The San Diego Water Board, however, acknowledges that in some situations retention of the full design capture volume onsite may not be technically feasible. In this event, the Copermittee may allow the Priority Development Project to use biofiltration BMPs to treat 1.5 times the design capture volume not reliably retained onsite, or biofiltration BMPs with a flow-thru design that has a total volume, including pore spaces and pre-filter detention volume, sized to hold at least 0.75 times the portion of the design capture volume not reliably retained onsite.

The 1.5 multiplier is based on the finding in the Ventura County Technical Guidance Manual that biofiltration of 1.5 times the design capture volume not retained onsite will provide approximately the same pollutant removal as retention of the design capture volume on an annual basis.³⁷ This standard is consistent with the Los Angeles Water Board’s Los Angeles County and Ventura County municipal storm water permits (Order Nos. R4-2012-0175 and R4-2010-0108, respectively). The flow-thru design of 0.75 times the portion of the design capture volume not reliably retained onsite is consistent with the San Diego Water Board’s Fourth Term Permits for Orange County and Riverside County (Order Nos. R9-2009-0002 and R9-2010-0016, respectively). In either case, the biofiltration BMPs must be designed with an appropriate hydraulic loading rate to maximize storm water retention and pollutant removal, as well as to prevent erosion, scour, and channeling within the BMP. Each Copermittee is required to update its BMP Design Manual to provide guidance for hydraulic loading rates and other biofiltration design criteria necessary to maximize storm water retention and pollutant removal.

The San Diego Water Board further recognizes that, in addition to not being technically feasible, retention of the full design capture storm onsite may be cost prohibitive, or may not provide as much water quality benefit to the Watershed Management Area as would implementing BMPs elsewhere in the watershed. Thus, Provision E.3.c.(1)(b) allows for the use of a combination of onsite retention BMPs, and the implementation of an Alternative Compliance Program described in Provision E.3.c.(3). Provision E.3.c.(3) is discussed in more detail below.

If the full design capture volume is not retained onsite either because biofiltration is not technically feasible, or a Copermittee grants a Priority Development Project permission

³⁶ 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.

³⁷ Ventura Countywide Stormwater Management Program. 2011. Ventura Technical Guidance Manual, Manual Update, 2011.

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to utilize the Alternative Compliance Program, then the pollutants in the portion of the design capture volume that are not reliably retained onsite must still be reduced to the MEP. Thus, flow-thru treatment control BMPs are required to be implemented on Priority Development Projects in addition to the retention BMPs. The requirements of Provisions E.3.c.(1)(a)(ii)[a]-[c] include the performance standards for flow-thru treatment control BMPs, consistent with the Fourth Term Permits in the San Diego Region.

Whereas the purpose of the requirements under Provision E.3.c.(1) is to reduce pollutants in storm water runoff to the MEP, the purpose of the requirements under Provision E.3.c.(2) is to maintain or restore more natural hydrologic flow regimes to prevent accelerated, unnatural erosion in downstream receiving waters, also to the MEP standard. Provision E.3.c.(2) describes hydromodification management BMP requirements that must be implemented by all Priority Development Projects.

The performance criteria for the implementation of hydromodification management BMPs on Priority Development Projects are consistent with the requirements in the Fourth Term Permits for Orange and Riverside Counties (Order Nos. R9-2009-0002 and R9-2010-0016, respectively). Modifications to the Orange County and Riverside County Hydromodification Management Plans (HMPs) will likely be minor, or may not be necessary. The HMP for San Diego County will likely require some minor modifications to incorporate the requirements of Provision E.3.c.(2) and become consistent with the Orange County and Riverside County HMPs. The San Diego Water Board does not, however, expect that it will be necessary for the San Diego County Copermittees to develop a new approach or significantly re-write the San Diego County HMP. This is because the premise of the hydromodification management BMP requirements, which are to control storm water runoff conditions (flow rates and durations) for Copermittee-defined range of flows, is unchanged from all Fourth Term Permits in the San Diego Region.

Provision E.3.c.(2)(a) requires that post-project runoff conditions mimic the *pre-development* runoff conditions, and not the *pre-project* runoff conditions. Fundamentally, the San Diego Water Board believes that using a hydrology baseline that approximates that of an undeveloped, natural watershed is the only way to facilitate the return of more natural hydrological conditions to already built-out watersheds, and ultimately improved stream health. On the other hand, using the *pre-project* hydrology as a baseline for redevelopment projects results in propagating the unnatural hydrology of urbanized areas. Propagating the urbanized flow regime does not support conditions for restoring degraded or channelized stream segments, and would forever sentence such streams to the degraded state. Furthermore, reducing the volume of storm water runoff associated with the urbanized flow regime will also result in reducing the discharge of pollutants into receiving waters, since storm water runoff from impervious surfaces contains untreated pollutants.

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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 Copermitees to approximate pre-development runoff conditions using the parameters of a *pervious* area rather than an *impervious* area. This means that for redevelopment sites, approximating pre-development runoff conditions equates to using existing onsite grade and assuming the infiltration characteristics of the underlying soil. A redevelopment Priority Development Project must not use runoff coefficients of concrete or asphalt to estimate pre-development runoff conditions. Rather, redevelopment projects must use available information pertaining to existing underlying soil type (such as soil maps published by the National Resource Conservation Service), onsite existing grade, and any other readily available pertinent information to estimate pre-development runoff conditions.

The San Diego Water Board understands, indeed asserts, that the pre-development hydrology of an area in question can only be roughly estimated and cannot be precisely known. However, using the hydrology of a natural condition, even if not precisely known, will provide significant benefit to receiving waters over using the hydrology associated with impervious (developed) surfaces. Therefore in order to achieve the goals of the Clean Water Act, which are to “*restore and maintain the chemical, physical, and biological integrity of the nation’s waters* [emphasis added],” the most appropriate standard to use for hydromodification management is the standard associated with the pre-development condition.

Provision E.3.c.(2)(b) requires Priority Development Projects to avoid known critical sediment yield areas or implement measures that would allow coarse sediment to be discharged to receiving waters, such that the natural sediment supply is unaffected by the project. This is necessary because the availability of coarse sediment supply is as much an issue for causing erosive conditions to receiving streams as are accelerated flows.

The San Diego Water Board recognizes that in some situations implementing the hydromodification management BMP requirements for flow control fully onsite may not be technically feasible, may be cost prohibitive, or may not provide any overall water quality benefits to the Watershed Management Area. Thus, Provision E.3.c.(2)(c) allows for the use of a combination of onsite hydromodification management BMPs for flow control and alternative compliance options described in Provision E.3.c.(3).

Provision E.3.c.(3) allows for alternative compliance in instances where the Copermitee 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*,³⁸ the report states:

“An effective [hydromodification] management program will likely include combinations of on-site measures (e.g., low-impact development techniques, flow-control basins), in-stream measures (e.g., stream habitat restoration), floodplain and riparian zone actions, and off-site measures. Off-site measures may include compensatory mitigation measures at upstream locations that are designed to help restore and manage flow and sediment yield in the watershed.”

Consistent with the ideas brought forth in the report, in the Watershed Management Area Analysis of Provision B.3.b.(4), which is optional, the Copermittees will develop watershed maps that include as much detail about factors that affect the hydrology of the watershed as is available. Such factors included identification of areas suitable for infiltration, coarse sediment supply areas, and locating stream channel structures and constrictions. Once these factors are mapped and studied, the Copermittees can identify areas in the watershed where candidate projects may be implemented that are expected to improve water quality in the watershed by providing more opportunity for infiltration, slowing down storm water flows, or attenuation of pollutants naturally via healthy stream habitat. These candidate projects may be in the form of retrofitting existing development, rehabilitating degraded stream segments, identifying regional BMPs, purchasing land to preserve valuable floodplain functions, and any other project(s) that the Copermittees identify.

Under the Alternative Compliance Program, Priority Development Projects may be allowed to fund, partially fund, or implement a candidate project, in lieu of implementing structural BMPs onsite, if they enter into a voluntary agreement with the governing Copermittee permitting this arrangement. Project proponents may also propose an alternative project not previously identified by the Copermittees. In either case, whether a project proponent implements a candidate project identified by the Copermittees or a separate alternative compliance project, the governing Copermittee must determine that implementation of the project will have a greater overall water

³⁸ 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.

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quality benefit for the Watershed Management Area than fully implementing structural BMPs onsite. Determination of greater overall water quality benefits associated with alternative compliance projects would be accomplished by utilizing Water Quality Equivalency calculations developed pursuant to Provision E.3.c.(3)(a). Water Quality Equivalency calculations are necessary to establish a regional and technical basis for determining water quality benefits associated with alternative compliance projects, which can be consistently used by all Copermittees in the San Diego Region. Finally, if alternative compliance involves funding or implementing a project that is outside the jurisdiction of the governing Copermittee, then that Copermittee may enter into an inter-agency agreement with the appropriate jurisdiction.

Finally, Provision E.3.c.(2)(d) allows Priority Development Projects to be exempt from the hydromodification management BMP requirements if there is no threat of erosion to downstream receiving waters (i.e. the receiving stream is concrete lined from the point of discharge all the way to water storage reservoirs, lakes, enclosed embayments, or the Pacific Ocean). If the Copermittees believe that more exemptions are warranted, then they must perform the optional Watershed Management Area Analysis of Provision B.3.b.(4). Additional exemptions other than those specified in this Order may be established on a watershed basis, provided the Copermittees perform the analysis, provide supporting rationale for the exemptions, and complete the Water Quality Improvement Plan approval process pursuant to Provision F.1.

To facilitate the transition to this Order from the Fourth Term Permits for Orange and Riverside County Copermittees, Provision E.3.c.(2)(e) allows two additional temporary exemptions from hydromodification management BMP implementation. The first temporary exemption allows relief from hydromodification management BMP implementation for Priority Development Projects discharging directly to an engineered channel conveyance system with a capacity to convey peak flows generated by the 10-year storm event all the way from the point of discharge to water storage reservoirs, lakes, enclosed embayments, or the Pacific Ocean. Similar to the exemption allowed for concrete-lined channels, this exemption is premised on the concept that there is little threat of erosion to these types of engineered channel systems.

The second temporary exemption allows relief from hydromodification management BMP implementation for Priority Development Projects discharging directly to large river reaches with drainage areas larger than 100 square miles and a 100-year flow capacity in excess of 20,000 cubic feet per second. If this exemption is claimed, then properly sized energy dissipation is required at all discharge points associated with the Priority Development Project. This exemption is premised on the concept that large river reaches can essentially assimilate the accelerated flow rates associated with individual Priority Development Projects because they are inconsequential compared

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to the flow rate in the large river reach. Both of these exemptions are included in the Hydromodification Management Plan for San Diego County³⁹.

These temporary exemptions are allowed as a means to facilitate Orange and Riverside County Copermittees' transition to this Order from the Fourth Term Permits and are not meant to reside as permanent exemptions without additional rigorous technical analyses specific to each County. Therefore, these exemptions will no longer apply once the Copermittees' land development programs are fully updated to reflect the requirements of this Order, i.e., upon implementation of the BMP Design Manual pursuant to Provision F.2.b. If the Copermittees believe that these or other exemptions are warranted in the context of water quality improvement and stream restoration opportunities, then the Copermittees must perform the optional Watershed Management Area Analysis of Provision B.3.b.(4) and provide supporting rationale for the exemptions. The San Diego County Copermittees are also required to perform the optional Watershed Management Area Analysis to provide supporting rationale to justify use of these and other exemptions. Updated BMP Design Manuals including rationale to justify use of exemptions will be reviewed by the San Diego Water Board pursuant to Provision F.2.b.

Provisions E.3.c.(4) and E.3.c.(5) were included under the BMP requirements applicable to all development projects in the Fourth Term Permits for San Diego, Orange, and Riverside Counties (Order Nos. R9-2007-0001, R9-2009-0002, and R9-2010-0016, respectively). In this Order, the long-term BMP maintenance and infiltration and groundwater protection requirements apply to structural BMPs implemented by Priority Development Projects only.

Provision E.3.d requires the Copermittees to update their BMP Design Manual as needed to incorporate the requirements of Provision E.3. The BMP Design Manual is formerly known as the Standard Storm Water Mitigation Plan, or SSMP, and was renamed so that the title has a more accurate description of the document content. The contents of the BMP Design Manual are largely unchanged from the previous Standard Storm Water Mitigation Plans required under the Fourth Term Permits. The BMP Design Manual fulfills the 40 CFR 122.26(d)(2)(iv)(A)(2) requirement that the Copermittee's development planning program includes "*a comprehensive master plan to develop, implement and enforce controls to reduce the discharge of pollutants from municipal storm sewers which receive discharges from areas of new development and significant redevelopment.*"

As part of the "*planning procedures,*" 40 CFR 122.26(d)(2)(iv)(A)(2) requires the procedures to "*address controls to reduce pollutants in discharges from municipal separate storm sewers after construction is completed.*" The requirements applicable to the implementation and oversight of structural BMPs at Priority Development Projects are provided under Provision E.3.e.

³⁹ Final Hydromodification Management Plan Prepared for County of San Diego, March 2011

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Proper installation of the structural BMPs approved for a Priority Development Project is necessary to ensure that pollutants in storm water discharges will be reduced to the MEP after the project is completed. In addition to the proper installation of structural BMPs, the maintenance of structural BMPs on Priority Development Projects is necessary to ensure that pollutants in storm water discharges will continue to be reduced to the MEP. Provision E.3.e.(1) includes the minimum requirements that each Copermittee must implement to ensure structural BMPs are properly installed and will be properly maintained.

[Provisions E.3.e.\(1\)\(a\)\(i\)-\(ii\) have been included to provide additional clarification regarding when a Copermittee may allow land development requirements from earlier MS4 permits to apply to a Priority Development Project. Since the MS4 permits issued from 2001 to the adoption of Order No. R9-2015-0001 amending Order No. R9-2013-0001 \(Regional MS4 Permit\), a Copermittee could allow development projects with “prior lawful approval” to be “grandfathered” into implementing BMP requirements from previous MS4 permits. The Copermittees were given the discretion to use their land use authority to determine when it was appropriate to allow a development project with prior lawful approval to implement BMP requirements from the previous MS4 permits, and when the most recent BMP requirements should be required to achieve the reduction of pollutants in storm water runoff from development projects to the MEP. However, the San Diego Water Board has found that the Copermittees and the development community frequently disagree about when a development project has prior lawful approval and what is necessary to reduce pollutants in storm water runoff from development projects to the MEP.](#)

[Therefore, Provisions E.3.e.\(1\)\(a\)\(i\)-\(ii\) were included to provide more clarity and certainty for the Copermittees, the land development community, and the general public about when the structural BMP performance standards of earlier MS4 permits may be allowed to be implemented. A Copermittee may allow a Priority Development Project to implement BMP requirements of the previous MS4 permit only if all requirements of Provisions E.3.e.\(1\)\(a\)\(i\)\[a\]-\[d\] have been met. Otherwise, the Copermittees must require all Priority Development Projects to incorporate the BMP requirements of Provision E.3 into the project to reduce pollutants in storm water runoff from development projects to the MEP.](#)

[Provisions E.3.e.\(1\)\(a\)\(i\)\[a\]-\[d\] are dependent upon the effective date of the BMP Design Manual. Unless otherwise directed by the San Diego Water Board, the effective date of the BMP Design Manual is December 24, 2015 for the San Diego County Copermittees, September 28, 2017 for the Orange County Copermittees, and July 5, 2018 for the Riverside County Copermittees.](#)

[Alternatively, if the Copermittee can demonstrate a lack of land use authority or legal authority to require a Priority Development Project to implement the requirements of Provision E.3, the Copermittee may allow land development requirements from the](#)

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previous MS4 permits to apply. However, under these circumstances the San Diego Water Board expects the Copermittee to utilize its available land use authority or legal authority to require the implementation of as much of Provision E.3 as possible to reduce the discharge of pollutants in storm water from development and redevelopment projects within its jurisdiction to the MEP.

In cases where BMP requirements from the earlier MS4 permits govern the structural BMP design requirements of a Priority Development Project, the San Diego Water Board expects the Copermittees to be able to demonstrate, in a programmatic audit or other means, that a Priority Development Project met all the requirements listed under Provisions E.3.e.(1)(a)(i)[a]-[d], or have evidence that the Copermittee did not have the land use or legal authority to require the implementation of Provision E.3 for a Priority Development Project.

The requirements under Provision E.3.e.(2)-(3) are necessary to demonstrate each Copermittee is implementing a program that complies with Provisions E.3.b-c and E.3.e.(1), and ensure structural BMPs at Priority Development Project will continue to be able to reduce pollutants in storm water discharges to the MEP.

Pursuant to 40 CFR 122.26(d)(1)(ii) and 40 CFR 122.26(d)(2)(i), each Copermittee must have sufficient “*legal authority to control discharges to the municipal separate storm sewer system.*” Where enforcement is necessary for any development projects to compel compliance with the requirements of Provision E.3 and ensure the pollutants in storm water discharges from the MS4 are reduced and continue to be reduced to the MEP, Provision E.3.f requires each Copermittee to enforce its legal authority established pursuant to Provision E.1, and in accordance with its Enforcement Response Plan required to be developed pursuant to Provision E.6.

Provision E.4 (Construction Management) requires each Copermittee to implement a construction management program to control and reduce the discharge of pollutants in storm water from construction sites to the MEP. Proper implementation of the construction management program will also contribute toward effectively prohibiting non-storm water discharges from construction sites to the MS4.

Pursuant to 40 CFR 122.26(d)(2)(iv), each Copermittee is required to implement a “*management program...to reduce the discharge of pollutants to the maximum extent practicable using management practices, control techniques and system, design and engineering methods, and other such provisions where applicable.*” As part of the management program, 40 CFR 122.26(d)(2)(iv)(D) requires “*a program to implement and maintain structural and non-structural best management practices to reduce pollutants in storm water runoff from construction sites to the municipal storm sewer system.*”

Construction sites can be significant sources of sediment, trash, and other pollutants to receiving waters. Although sediment is naturally occurring in the natural

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environment, the discharge of sediment under unnatural conditions is problematic to receiving waters. Fine sediment in creeks causes high turbidity that interferes with the functionality of native flora and fauna in local creeks. For example, turbidity interferes with both photosynthesis of water-philic plants, as well as successful foraging and reproduction of benthic macroinvertebrates. Sediment can also make it difficult for fish to breathe because it clogs fish gills. Other pollutants such as heavy metals or pesticides can adhere to sediment and are transported to receiving waters during storm events, where they dissolve in the water column and become bioavailable to aquatic organisms. Sediment is recognized as a major stressor to surface waters and is responsible for the impairment of several lagoons and creeks in the San Diego Region.

Provision E.4 includes requirements that each Copermittee must implement to minimize the discharge of sediment and other pollutants from construction sites to the MS4 within its jurisdiction. The requirements under Provision E.4 are consistent with the Fourth Term Permits for San Diego, Orange, and Riverside Counties. Therefore, Copermittees are expected to implement the requirements seamlessly, with minimal changes to their existing construction management programs. The Copermittees, however, are given more flexibility to run their programs as needed to maximize efficiency, and also to be consistent with the Water Quality Improvement Plan for the Watershed Management Area.

As part of the construction management program, 40 CFR 122.26(d)(2)(iv)(D)(1) requires “*procedures for site planning which incorporate consideration of potential water quality impacts.*” Provision E.4.a describes the minimum elements each Copermittee is required to include as part of the construction site planning and project approval process. The construction site planning and approval process is based primarily on ensuring each project had an adequate site-specific pollution control, construction BMP, and/or erosion and sediment control plan that will be implemented to minimize the discharge of pollutants in storm water to the MEP, and minimize impacts to receiving waters.

The requirements under Provision E.4.b provide the data and information necessary to identify “*priorities for inspecting sites and enforcing control measures*” required pursuant to 40 CFR 122.26(d)(2)(iv)(D)(3). Under Provision E.4.b, each Copermittee must identify construction sites that are considered a high threat to downstream surface waters. Designation of “high threat to water quality” construction sites will necessitate the Copermittees to develop criteria to identify such sites. Provision E.4.b.(2) describes a list of factors that must be considered when the Copermittee considers threat to water quality. For example, a Copermittee must identify sites as “high threat to water quality” if it is located within a hydrologic subarea where sediment is known or suspected to contribute to the highest priority water quality conditions, according to the Water Quality Improvement Plan. This ensures that construction management program implementation is compatible with the Copermittee’s identified highest priority water quality conditions.

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Pursuant to 40 CFR 122.26(d)(2)(iv)(D)(2) each Copermittee is required describe “*requirements for nonstructural and structural best management practices*” at construction sites. Provision E.4.c includes the types of construction site BMPs that the Copermittees must implement, or require the implementation of, at each construction site to reduce pollutants in storm water discharges to the MEP.

Each Copermittee is expected to require the implementation of appropriate BMPs given specific site conditions, the season and likelihood of rain events, and construction phase (i.e. grading vs. vertical construction). This means that throughout the life of the project construction, the appropriate BMPs will vary, especially if the construction of the project spans multiple wet seasons. As opposed to describing specific minimum BMPs that must be implemented, the Order describes major BMP categories that should be considered for each site.

Each Copermittee is expected to use its 20 years of storm water experience and knowledge to require implementation of appropriate BMPs from the various categories at each construction site within its jurisdiction. For example, the San Diego Water Board expects that each site will be required to implement erosion control and sediment control. The San Diego Water Board also expects each Copermittee to require implementation of active/passive sediment treatment systems at sites where other BMPs have been tried and are known to be inadequate, and discharges of sediment are causing or contributing to water quality impairment downstream. Each Copermittee is granted flexibility in specifying the minimum level of BMP requirements at each site, but the San Diego Water Board expects each site to be capable of controlling pollutants in storm water discharges to the MEP and preventing illicit discharges.

The requirements under Provision E.4.d are necessary to demonstrate that each Copermittee is implementing a program that complies with Provisions E.4.a and E.4.c and ensure BMPs at construction sites will reduce pollutants in storm water discharges to the MEP.

Provision E.4.d does not include minimum required inspection frequencies for construction sites. Each Copermittee must use its experience and knowledge to specify an appropriate inspection frequency for both high priority and lower priority sites in their jurisdictional runoff management program documents, and in accordance with the Water Quality Improvement Plan. Appropriate inspection frequencies may vary by Copermittee, but the San Diego Water Board expects that the stated frequency will be adequate for each Copermittee to properly oversee the construction sites within its jurisdiction, confirm BMPs are implemented to reduce pollutants in storm water discharges from constructions sites to the MEP, and make needed changes to its program on an ongoing basis as necessary.

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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.

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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.

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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

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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.

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USEPA also recognizes that discharges from unpaved roads pose a significant potential threat to water quality. USEPA guidance⁴⁰ 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,⁴¹ the US Forest Service,⁴² the University of California,⁴³ and others, that include design and construction specifications and BMPs that are readily available for implementation by public entities. Implementing design and other source control BMPs for unpaved roads in the region is necessary to reduce and minimize the impacts of sediment discharged during storm events from unpaved roads to the MS4s and receiving waters.

Provision E.5.c describes existing development site inspection frequency, content, and tracking that each Copermittee must incorporate into their existing development management programs. The requirements under Provision E.5.c are necessary to demonstrate each Copermittee is implementing a program that complies with Provision E.5.b and ensure BMPs implemented in areas of existing development will reduce pollutants in storm water discharges to the MEP. Provision E.5.c has been modified to include a minimum of once every 5 years for all inventoried facilities and areas of existing development, utilizing one or more methods of inspection.

In addition to onsite inspections, the methods of inspection have been expanded to include drive-by inspections. Inspections may be performed by the Copermittee’s municipal and contract staff, or by volunteer monitoring or patrol programs. Volunteer monitoring or patrol programs are not expected to enforce the Copermittee’s ordinances, or to inspect areas or facilities where members of the public are not allowed access. Volunteer monitoring or patrol programs must be trained by the Copermittee, and are only expected to collect visual observations. By utilizing drive-by inspections and volunteer monitoring or patrol programs, the Copermittees will be able to maximize and efficiently use their resources to identify and address sources of pollutants in areas of existing development.

⁴⁰ USEPA, 2006. Environmentally Sensitive Maintenance for Dirt and Gravel Roads. Gesford and Anderson, USEPA-PA-2005.

⁴¹ Ibid

⁴² US Forest Service, 1996. Forest Service Specifications for Construction of Roads & Bridges. EM-7720-100. Revised August 1996.

⁴³ University of California Division of Agriculture and Natural Resources, 2007. Rural Roads: A Construction and Maintenance Guide of California Landowners. Publication 8262.

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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.

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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

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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,

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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.⁴⁴ For instance, the fiscal analysis requirements do not address city-wide fiscal benefits of protection (e.g., public health, tourism, property values, economic activity, beneficial uses, etc.), even though many costs currently reported to the San Diego Water Board are for related activities. This type of assessment may help Copermittees improve the allocation of resources and it may help the Copermittees secure adequate funding for the program. Qualitative assessments, however, could be overly subjective and most Copermittees likely lack the ability to provide accurate quantitative assessments. The San Diego Water Board encourages the Copermittees to consider means for conducting assessments of fiscal

⁴⁴ National Association of Flood and Stormwater Management Agencies. 2006. *Guidance for Municipal Stormwater Funding*. Prepared under a grant provided by the USEPA.

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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.⁴⁵

⁴⁵ State Water Board, 2005. NPDES Stormwater Cost Survey.

F. Reporting

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

Discussion: Provision F requires the Copermittees to prepare several documents and reports that must be provided to the San Diego Water Board and made available to the public. The reporting requirements have been significantly reduced compared to the Fourth Term Permit reporting requirements. The reduction in reporting requirements was recommended by the San Diego County Copermittees in the Report of Water Discharge submitted in June 2011.

More specific and detailed discussions of the requirements of Provision F are provided below.

Provision F.1 (Water Quality Improvement Plans) requires the Copermittees in each Watershed Management Area to develop and submit a Water Quality Improvement Plan in accordance with the requirements of Provision B.

Of all the requirements of Provision F, the Water Quality Improvement Plans will likely be the documents requiring the most significant effort to develop. The content of the Water Quality Improvement Plans, however, is expected to include content that should already have been developed for the Watershed Plans and several elements that are included in the Monitoring and Reporting Programs required under the Fourth Term Permits.

Because the Water Quality Improvement Plan is part of the “*comprehensive planning process which involves public participation*,” Provision F.1 includes requirements to give multiple opportunities to the public to provide input on the content of the plans.

Provision F.1.a.(1) specifies the elements that the Copermittees must include in the public participation process for the development of the Water Quality Improvement Plans. In order for the public to be aware of the opportunities to provide input, Provision F.1.a.(1)(a) requires the Copermittees to develop a publicly available and noticed schedule of the opportunities for the public to participate and provide comments during the development of the Water Quality Improvement Plan. These opportunities are when the public can provide the data, information, and recommendations that the Copermittees can consider during the development of the Water Quality Improvement Plans.

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The San Diego Water Board recognizes, however, that the Copermittees cannot be expected to incorporate all the data, information, and recommendations that the public may provide into the Water Quality Improvement Plans. The Copermittees will have to review the data, information, and recommendations received and make some decisions on what to incorporate into the Water Quality Improvement Plans. Before the Copermittees finalize their decisions, members of the public should be allowed to review the Copermittees' decisions. Thus, Provision F.1.a.(1)(b) requires the Copermittees to form a Water Quality Improvement Consultation Panel (Panel).

The Panel will consist of a member from the environmental community and a member from the development community familiar with the Watershed Management Area. A representative from the San Diego Water Board staff will also be part of the Panel. The Copermittees may choose to include additional members, but the Panel is only required to include three panel members.

The Panel will serve as an additional public participation and input mechanism during the development of the Water Quality Improvement Plans. The knowledge and expertise from these Panel members are expected to provide the Copermittees valuable direction during their decision-making process. The Copermittees will review the content of their planned submittals with the Panel members to receive recommendations. If the Panel provides recommendations, the Copermittees must consider revisions to the Water Quality Improvement Plan submittals.

The San Diego Water Board recognizes that the development of multiple Water Quality Improvement Plans concurrently may limit the ability of the public to review and provide comments to the Copermittees. Thus, Provision F.1.a.(1)(c) requires the Copermittees to coordinate the schedules for the public participation process among the Watershed Management Areas to provide the public time and opportunity to participate during the development of the Water Quality Improvement Plans.

Provision F.1.a.(2) requires the Copermittees to develop and submit the first Water Quality Improvement Plan component, in accordance with the requirements of Provision B.2, which includes the identification of the priority water quality conditions and potential water quality improvement strategies. The public must be provided an opportunity to provide data, information and recommendations to be utilized in the development and identification of the priority water quality conditions and potential water quality improvement strategies for the Watershed Management Area. The Copermittees must consult with the Panel and consider making revisions. The Copermittees may submit the requirements of Provision B.2 as early as 6 months and no later than 12 months after the commencement of coverage under this Order. After the requirements of Provision B.2 are submitted to the San Diego Water Board, the public will be provided another opportunity to provide comments.

Provision F.1.a.(3) requires the Copermittees to develop and submit the second Water Quality Improvement Plan component, in accordance with the requirements of Provision B.3, which includes the identification of the numeric goals for the highest

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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

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runoff management program document. Provision F.2.a requires each Copermittee to update its jurisdictional runoff management program document to be consistent with the requirements of Provision E concurrent with the submittal of the Water Quality Improvement Plan.

Likewise, each Copermittee must continue to require new development and redevelopment projects to implement BMPs to control pollutants in storm water runoff. The control of pollutants in storm water runoff from development and redevelopment projects within each Copermittee's jurisdiction is guided and directed by its BMP Design Manual, formerly known as a Standard Storm Water Mitigation Plan (SSMP). Provision F.2.b requires each Copermittee to update its BMP Design Manual to be consistent with the requirements of Provision E.3 concurrent with the submittal of the Water Quality Improvement Plan.

[For situations where the San Diego Water Board may amend the requirements of Provisions E.3.a-d after a Copermittee has updated its BMP Design Manual pursuant to Provision F.2.b.\(1\), Provision F.2.b.\(4\) gives the Copermittee up to 90 days to incorporate the amended requirements of Provision E.3.a-d into its BMP Design Manual. The San Diego Water Board Executive Officer has discretion to modify the 90-day time period depending on the complexity of the amendments or other information that warrants a change in the 90-day time period.](#)

In general, the requirements of the Order should not necessitate a complete rewrite of each Copermittee's jurisdictional runoff management program document or BMP Design Manual, as was required by the Third Term Permits. The jurisdictional runoff management program and BMP Design Manual requirements of this Order are not significantly different than the requirements of the Fourth Term Permits. Thus, only sections of the Order which are new or have been significantly changed should warrant revisions to specific sections of the Copermittee's jurisdictional runoff management program document and BMP Design Manual.

Finally, the Water Quality Improvement Plans are expected to require updates as the iterative approach and adaptive management process included in the Water Quality Improvement Plan, as required under Provision B.5, is implemented by the Copermittees. Provision F.2.c.(1) requires the Copermittees to implement a public participation process for the proposed updates, review the proposed updates with the Panel, and submit the updates to the Water Quality Improvement Plan as part of the Annual Reports required under Provision F.3.b.

Also, because TMDLs are likely to be developed, adopted and approved during the term of the Order, Provision F.2.c.(2) has been included to expedite the incorporation of TMDLs into the Copermittees' Water Quality Improvement Plans as part of the update process, potentially before the Order is re-opened to incorporate the requirements of the new TMDLs.

Provision F.3 (Progress Reporting) requires the Copermittees to report on the progress of implementing the Water Quality Improvement Plans.

The requirements of Provision F.3 are to report the progress toward improving water quality that the Copermittees are achieving with the implementation of the Water Quality Improvement Plans and each Copermittee's jurisdictional runoff management program. The Progress Report Presentations required under Provision F.3.a are included to provide the Copermittees an opportunity to communicate directly with the San Diego Water Board and the public. The Progress Report Presentations will also provide the members of the San Diego Water Board and members of the public an opportunity to become more acquainted with the Copermittees and their projects and programs to address non-storm water and storm water discharges into and from their MS4s.

The Annual Report requirements of Provision F.3.b are a consolidation of several reporting requirements from the Fourth Term Permits, including the Jurisdictional Runoff Management Program Annual Reports, the Watershed Annual Reports, and the Monitoring and Reporting Program Annual Reports. Furthermore, the Annual Report requirements are consistent with the requirements under 40 CFR 122.42(c).

Pursuant to 40 CFR 122.42(c), “[t]he operator of a large or medium municipal separate storm sewer system or a municipal separate storm sewer that has been designated by the Director...must submit an annual report”, which must include the following:

- (1) *The status of implementing the components of the storm water management program that are established as permit conditions* [40 CFR 122.42(c)(1)];
- (2) *Proposed changes to the storm water management programs that are established as permit conditions* [40 CFR 122.42(c)(2)];
- (3) *Revisions, if necessary, to the assessment of controls and fiscal analysis* [40 CFR 122.42(c)(3)];
- (4) *A summary of data, including monitoring data, that is accumulated throughout the reporting year* [40 CFR 122.42(c)(4)];
- (5) *Annual expenditures and budget for year following each annual report* [40 CFR 122.42(c)(5)];
- (6) *A summary describing the number and nature of enforcement actions, inspections, and public education programs* [40 CFR 122.42(c)(6)];
- (7) *Identification of water quality improvements or degradation* [40 CFR 122.42(c)(7)].

Under the Fourth Term Permits, each Copermittee is responsible for submitting a Jurisdictional Runoff Management Program Annual Report; the Copermittees in each

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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

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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

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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.

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~~Because the 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 a Report of Waste Discharge pursuant to the requirements of their current permit 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 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

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H. Modification of Order

Purpose: Provision H provides the conditions under which modifications to Order No. R9-2013-0001, as amended, may occur.

Discussion: Provision H allows for modifications to Order No. R9-2013-0001, as amended, for bases in addition to modifications (minor and major) allowed under the federal regulations at 40 CFR 122.62 and 122.63.

Modifications to the Order require re-opening the Order (see Water Code section 13223), subject to the requirements of 40 CFR 122.44, 122.62 to 122.64, and 124.5, but only for the specific provisions subject to the modification. Proposed modifications of the Order will be made available for public review, a public notice and comment period, and a public hearing if requested. Comments on the provisions not subject to the proposed modifications are not required to be considered in the San Diego Water Board's responses to comments or during the public hearing.

Provision H.4 was included to specify that the Order will be re-opened for modifications if ~~the 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 Copermitees or the Riverside County Copermitees submit a complete Report of Waste Discharge pursuant to the requirements of their current Orders~~

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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.

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IX. ATTACHMENTS

The attachments to the Order are discussed below. The discussions describe the content of the attachments.

Attachment A – Discharge Prohibitions and Special Protections

Section 1 of Attachment A includes the Waste Discharge Prohibitions from the Basin Plan. They have been provided verbatim in their entirety.

Section 2 of Attachment A includes the “*Special Protections for Areas of Special Biological Significance, Governing Point Source Discharges of Storm Water and Nonpoint Source Waste Discharges*” applicable to permitted point source discharges of storm water, adopted under State Water Board Resolution No. 2012-0012, as amended by Resolution No. 2012-0031. The terms, prohibitions, and special conditions (collectively referred to as special conditions) are established as limitations on point source storm water discharges. These special conditions provide Special Protections for marine aquatic life and natural water quality in ASBS, as required for State Water Quality Protection Areas pursuant to California Public Resources Code sections 36700(f) and 36710(f). These Special Protections were adopted by the State Water Board as part of the Ocean Plan General Exception.

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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.

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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.

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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

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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

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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.

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Attachment E – Specific Provisions for Total Maximum Daily Loads

Attachment E provides specific provisions for implementing the load allocations (LAs) and wasteload allocations (WLAs) of Total Maximum Daily Loads (TMDLs) adopted by the San Diego Water Board and approved by USEPA in which the Copermitees are identified as responsible for discharges subject to the requirements of the TMDLs. Federal regulations require that NPDES requirements incorporate water quality based effluent limitations (WQBELs) that must be consistent with the requirements and assumptions of any available WLAs,⁴⁶ 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.⁴⁷ Where the TMDL includes WLAs that provide numeric pollutant load or pollutant parameter objectives, the WLA has been, where feasible, translated into numeric WQBELs.⁴⁸

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

⁴⁶ 40 CFR 122.44(d)(1)(vii)(B)

⁴⁷ 40 CFR 122.44(k)(2) and 40 CFR 122.44(k)(3)

⁴⁸ November 26, 2014 Memorandum from the USEPA, Revisions to the November 22, 2002 Memorandum "Establishing Total Maximum Daily Load (TMDL) Wasteload Allocations (WLAs) for Storm Water Sources and NPDES Permit Requirements Based on Those WLA"

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requirements under Provision D of the Order, the additional requirements are included in this section.

The requirements of the TMDLs are based on and consistent with the assumptions and requirements of any available adopted and approved TMDLs that have been incorporated into the Basin Plan. Modifications to the requirements for the TMDLs in Attachment E cannot be made unless the TMDLs are modified in the Basin Plan.

A modification to any aspect of a TMDL in the Basin Plan requires a Basin Plan amendment. A Basin Plan amendment to modify a TMDL will require the San Diego Water Board to adopt a resolution to amend the Basin Plan, which includes a separate public process. When the San Diego Water Board adopts a Basin Plan amendment, it subsequently requires approval from the State Water Board, the Office of Administrative Law, and the USEPA before it becomes effective.

If and when the TMDLs are modified in the Basin Plan, the San Diego Water Board will revise the requirements of the Order in accordance with the Basin Plan amendment. When a Basin Plan amendment to modify a TMDL becomes effective, the San Diego Water Board will modify the requirements of the Order pursuant to the requirements of Provision H.4 of the Order as soon as possible.

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-)
2015-0100, an Order Amending Order No. R9-)
2013-0001, NPDES No. CAS0109266, as)
Amended by Order No. R9-2015-0001, 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)

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

REQUEST FOR OFFICIAL NOTICE

**COUNTY OF ORANGE &
ORANGE COUNTY FLOOD
CONTROL DISTRICT**

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December 18, 2015

Petitioners, County of Orange and the Orange County Flood Control District (“Petitioners”) hereby submit this Request for Official Notice in support of the Petitioner’s Petition for Review (“Petition”) submitted pursuant to Water Code § 13320 and 23 C.C.R. § 2050 for review of Order No. R9-2015-0100, adopted by the California Regional Water Quality Control Board, San Diego Region (“Regional Board”), on November 18, 2015, which is an Order Amending Order No. R9-2013-0001, NPDES No. CAS0109266, as Amended by Order No. R9-2015-0001, 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 (“Permit”).

Petitioners request that the State Water Resources Control Board (“State Board”) take official notice of the following documents pursuant to 23 C.C.R. § 648.2 and Evidence Code § 452(c). Evidence Code § 452(c) allows the State Board to take notice of “[o]fficial acts of the legislative, executive, and judicial departments of the United States and of any state of the United States.” “Official acts” under Evidence Code § 452(c) include “records, reports and orders of administrative agencies.”¹

Pursuant to 23 C.C.R. § 648.2, the Petitioners respectfully request that the State Board take notice of the following documents:

1. A copy of a letter from Laurie Walsh, Senior Water Resource Control Engineer, Regional Board to the San Diego County Principal Watershed Permittees, dated August 5, 2015 regarding general comments on final water quality improvement plans and notice of noncompliance. This letter demonstrates that certain San Diego County permittees covered under the Permit are not in compliance with the Permit during the water quality improvement plan (“WQIP”) development process and are subject to Regional Board enforcement and revision

¹ *Rodin v. Spiegel*, 87 Cal.App.4th 513, 518 (2001).

or rescission of applicable waste discharge requirements. This letter is offered to show the need for compliance during the development process of the WQIP, and the unfairness of being subject to enforcement while those plans are being developed. This letter is also offered to show the likelihood of noncompliance for the Petitioners for a period greater than the 2-year development period contemplated by the Permit based on the rigorousness of the WQIP process.

This letter is not offered to demonstrate the adequacy of the WQIPs submitted by the San Diego County permittees or the merits of any positions for or against WQIP approval by the Regional Board, as those matters are potentially separate proceedings outside the scope of the Petition.

A true and correct copy of this document, which was obtained from the San Diego County Permittees, is attached as Exhibit A.

2. Relevant portions of a MS4 permit adopted by the California Regional Water Quality Control Board, San Francisco Bay Region (“San Francisco Bay Water Board”), on November 19, 2015. This document demonstrates that the San Francisco Bay Water Board has provided an alternative compliance path, providing permittees with protection from violation of various receiving water limitations concerning several pollutants while they are implementing provisions in the permit to address such pollutants. The San Francisco Bay Water Board adopted this permit to provide such protection without any gap period from adoption of the permit. By contrast, as set forth in the Petition, the San Diego Regional Board has expressly refused to provide the Petitioners with compliance during the development period while they are preparing their watershed planning documents, thus exposing the Petitioners to potential liability for discharges that violate receiving water limitations and discharge prohibition provisions in the Permit until their WQIP is approved, some years into the Permit’s term.

The excerpt of the San Francisco Bay MS4 permit further demonstrates that other regional water boards are taking a position contrary to that of the San Diego Regional Board.


A true and correct copy of this document, which was obtained from the San Francisco Bay Water Board's website, is attached as Exhibit B.

3. Relevant portions of Tentative Order R8-2015-0001 pending before the California Regional Water Quality Control Board, Santa Ana Region ("Santa Ana Water Board"). This document demonstrates that Santa Ana Water Board staff is currently recommending an alternative compliance path, providing the Petitioners in its North Orange County MS4 permit with protection from violation of various receiving water limitations concerning several pollutants while they are implementing provisions in the permit to address such pollutants. By contrast, as set forth in the Petition, the San Diego Regional Board has expressly refused to provide Petitioners with compliance during the development period while they are preparing their watershed planning documents, thus exposing Petitioners to potential liability for discharges that violate receiving water limitations and discharge prohibition provisions in the Permit until their WQIP is approved, some years into the Permit's term.

The excerpt of the Santa Ana Tentative Order further demonstrates that other water boards are likely to take a position contrary to that of the San Diego Regional Board.

A true and correct copy of this document, which was obtained from the Santa Ana Regional Board's website, is attached as Exhibit C.

Respectfully submitted,
LEON J. PAGE
COUNTY COUNSEL

By 
Ryan M. F. Baron, Senior Deputy

San Diego Regional Water Quality Control Board

August 5, 2015

Via Email Only

San Diego County Principal Watershed Copermittees

In reply refer to / attn:
PIN :786088:LWalsh

**Subject: General Comments on Final Water Quality Improvement Plans
and Notice of Noncompliance**

San Diego County Principal Watershed Copermittees:

The California Regional Water Quality Control Board, San Diego Region (San Diego Water Board) received the Water Quality Improvement Plans (Plans) from the San Diego County Copermittees (Copermittees) on or before June 26, 2015, as required pursuant to Provision F.1.b.(1) of Order No. R9-2013-0001, *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* (Order).

The Plans are the product of more than two years of concentrated Plan development efforts by the Copermittees. These Plans were prepared in phases and the Copermittees received regular input from the San Diego Water Board, industry professionals, non-governmental environmental organizations, and community members as part of feedback from the Water Quality Improvement Consultation Panel groups and the public at large during multiple public workshops. While the San Diego Water Board recognizes this is the first time the Copermittees have prepared such Plans and acknowledges their efforts to comply with the requirements of the Order, some of the Plans did a better job of meeting the requirements of the Order than others.

The San Diego Water Board is confident that once the Plans are in compliance with the requirements of the Order and accepted by the San Diego Water Board, the Copermittees' jurisdictional runoff management programs (JRMPs) will have the greatest potential to achieve significant reductions in pollutant loads in MS4 discharges and improvements in receiving water quality to the level supportive of beneficial uses within the shortest possible time.

In addition to reviewing the Plans for compliance with the requirements of the Order, the San Diego Water Board reviewed the acceptability of the Plans. The Order allows the Copermittees to develop Plans that prioritize the water quality conditions to address

sooner rather than later, and to set numeric goals and schedules to address the highest priorities. However, not all proposed priorities, goals, and schedules will be determined acceptable, especially if the San Diego Water Board determines that a Plan will not achieve water quality improvements within a reasonable period of time. While the elements of a Plan may meet the requirements of the Order, those elements must also meet the intent of the Order which is instrumental to achieving the goals of the San Diego Water Board's Practical Vision.

The San Diego Water Board has not yet completed a detailed review of each Plan. At this time, the San Diego Water Board is providing general comments for all the Plans because there are several issues of concern already identified that make the Plans unacceptable, as well as noncompliant with the requirements of the Order. When the detailed reviews are completed the San Diego Water Board staff will schedule a time to meet with the Copermittees for each Watershed Management Area, as soon as practicable and anticipated to be before the end of August 2015, to discuss specific issues that need to be addressed in each Plan. At the meetings, the San Diego Water Board may have Plan-specific comments in addition to the issues identified below.

Until then, the issues identified below must be adequately addressed for the Plans to be considered acceptable by the San Diego Water Board, and to be in compliance with the requirements of Order. Not all of the following comments and areas of noncompliance are applicable to every Plan or to every Copermittee, so the San Diego County Copermittees should review the Plans to determine where the following issues are applicable to their watershed and their jurisdiction.

PRIORITY WATER QUALITY CONDITIONS

1. Identification of Priority Water Quality Conditions

Requirements: Provisions B.2.a through B.2.c of the Order require the Copermittees to identify the priority water quality conditions that will be evaluated to determine which of those conditions will be the highest priorities to be addressed by the Plan. Provisions B.2.a through B.2.c require the Copermittees to consider several sources of data and information to identify priority water quality conditions within the Watershed Management Area, and whether there is a potential that MS4 discharges may be causing or contributing to those conditions.

Issues of Concern: Each Plan includes a description of the process to review different sources of data and information, including input from the public, to identify priority water quality conditions. The San Diego Water Board, however, has found the following general issues of concern:

- a) In several Plans, the San Diego Water Board did not find a fully inclusive list of all priority water quality conditions (i.e. pollutants, stressors, receiving water conditions) that should have been identified in data and information that were required to be considered pursuant to Provisions B.2.a and B.2.b. Pursuant to

Provision B.2.c.(1), a fully inclusive list was required to be evaluated to identify which of those conditions were the highest threat to receiving water quality, or most adversely affect the quality of receiving waters.

- b) In at least one Plan, there was not enough description or information that allowed the San Diego Water Board to determine if all the factors under Provisions B.2.a and B.2.b were adequately considered or not.
- c) A few Plans have identified bacteria as a highest priority water quality condition based on the Revised Total Maximum Daily Loads (TMDLs) for Indicator Bacteria, Project I – Twenty Beaches and Creek in the San Diego Region (Beaches and Creeks Bacteria TMDLs), but the segment which the highest priority water quality condition is based on is no longer identified as impaired on the Clean Water Act Section 303(d) List (303(d) List).

Noncompliant Priority Water Quality Conditions: In several Plans, there was a notable absence of one or more pollutants or conditions of concern known to the San Diego Water Board (e.g. trash, hydromodification, benthic alteration, stream or riparian habitat degradation) that were also identified in reports, plans, and data cited and reviewed by the Copermittees (e.g. 2011 Long Term Effectiveness Assessment). In a few Plans, there was also a notable absence of pollutants or conditions of concern identified by the public at workshops or Water Quality Improvement Plan Consultation Panel meetings, and in written comments from stakeholders and the public. The lists developed pursuant to Provision B.2.c.(1) that do not acknowledge and include these notably absent pollutants and conditions of concern are not in compliance with the requirements of Provisions B.2.a-c.

Unacceptable Priority Water Quality Conditions: A few Plans have bacteria as a highest priority water quality condition only because of the Beaches and Creeks Bacteria TMDLs, but there is no longer an impairment identified on the 303(d) List. If there are no strategies proposed to be implemented other than the requirements of Provisions E.2 through E.7 to address bacteria, or there are no load reductions quantified for other pollutants in addition to bacteria, or both, the Plans are not acceptable to the San Diego Water Board.

WATER QUALITY IMPROVEMENT GOALS

2. Final Numeric Goals

Requirements: Provision B.3.a.(1)(a) of the Order requires the Copermittees to include final numeric goals in the Plan to address the highest priority water quality conditions. Each final numeric goal must either demonstrate the discharges from the Copermittees' MS4s will not cause or contribute to exceedances of water quality standards in receiving waters, or the receiving waters are protected from the Copermittees' MS4 discharges, or both (see Provisions B.3.a.(1)(a)(i)-(iii)).

Issues of Concern: Each Plan includes final numeric goals for the highest priority water quality conditions. The San Diego Water Board, however, has found the following general issues of concern:

- a) Several Plans include proposed final numeric goals expressed in a manner that is difficult for the San Diego Water Board to determine the final numeric goal is a criterion or indicator capable of demonstrating one or more of the criteria given in Provisions B.3.a.(1)(a)(i)-(iii). In addition, the San Diego Water Board questions how some of these proposed final numeric goals could be measured by the Copermittees.
- b) Several proposed final numeric goals appear to be in conflict with the prohibitions and limitations in Provision A of the Order. For example, there are Plans with proposed final numeric goals associated with reducing non-storm water discharges from the MS4s, but the San Diego Water Board cannot determine how achievement of the proposed final numeric goal is in compliance with the requirement to effectively prohibit non-storm water discharges to the MS4 (Provision A.1.b).
- c) There are proposed final numeric goals that are difficult for the San Diego Water Board to establish a link between achieving the final numeric goal and addressing the highest priority water quality condition. For example, there are Plans with proposed final numeric goals associated with reducing non-storm water discharges from the MS4s to achieve reductions of pollutants in MS4 discharges (e.g. bacteria) during wet weather and dry weather conditions; however, the MS4 discharge reduction metric (e.g. flow) does not quantify the pollutant reduction that will be achieved during wet weather or dry weather conditions.
- d) Some proposed final numeric goals did not meet the criteria of Provision B.3.a.(1)(a), but could be acceptable interim numeric goals.

Noncompliant Final Numeric Goals: Final numeric goals that are not numeric, AND measureable, AND capable of demonstrating the Copermittees' MS4s will not cause or contribute to exceedances of receiving water limitations, or the receiving waters are protected from the Copermittees' MS4 discharges, or both, are not in compliance with the requirements of Provision B.3.a.(1)(a).

Unacceptable Final Numeric Goals: The following proposed final numeric goals are not acceptable to the San Diego Water Board:

- a) Final numeric goals that are not consistent or do not demonstrate compliance with the prohibitions and limitations of the Provision A.

- b) Final numeric goals with a metric that is unclear about how it will be measured, and lacks any description of, or reference to the data that will be collected to measure the metric.
- c) Final numeric goals that do not clearly demonstrate achievement of the final numeric goal will result in MS4 discharges that do not cause or contribute to exceedances of water quality standards in receiving waters, or the receiving waters are protected from the Copermittees' MS4 discharges, or both.
- d) Final numeric goals that do not have a metric that clearly demonstrates a link to addressing the highest priority water quality conditions.

3. Interim Numeric Goals

Requirements: Provision B.3.a.(1)(b) of the Order requires the Copermittees to include interim numeric goals in the Plan for each final numeric goal. The Copermittees are allowed to propose as many interim numeric goals for each final numeric goal as they determine appropriate (Provision B.3.a.(b)(i)), but must include at least one interim numeric goal that is expressed as a reasonable increment of the final numeric goal. This interim numeric goal is expected to be in the same or a similar metric as the final numeric goal (Provision B.3.a.(b)(ii)). At least one interim numeric goal is required to be established during each 5 year period between the acceptance of the Plan and the achievement of the final numeric goal (Provision B.3.a.(b)(iii)).

Issues of Concern: In at least one Plan, the San Diego Water Board has found proposed final numeric goals that do not have interim numeric goals that are expressed in the same or similar metric as the final numeric goals.

Noncompliant Interim Numeric Goals: Final numeric goals that do not have at least one interim numeric goal expressed as a reasonable increment in the same or similar metric as the final numeric goal are not in compliance with Provision B.3.a.(1)(b)(ii).

WATER QUALITY IMPROVEMENT STRATEGIES

4. Identification of Potential Water Quality Improvement Strategies

Requirements: Provision B.2.e of the Order requires the Copermittees to identify potential strategies that can result in improvements to water quality. Provision F.1.a.(2)(f) requires the Copermittees consider revisions to potential water quality improvement strategies they propose in the Plan based on public comments.

Issues of Concern: Most Plans include lists of water quality improvement strategies that may be implemented by the Copermittees. The San Diego Water Board, however, has found the following general issues of concern:

- a) In at least one Plan, the San Diego Water Board was not able to locate the list of potential water quality improvement strategies developed during the public participation process in the Plan.
- b) In at least one Plan, the San Diego Water Board could not find all the potential water quality improvement strategies suggested or recommended in public comments.

Noncompliant Potential Water Quality Improvement Strategies: Plans that do not identify all potential strategies that were considered for implementation to improve water quality are not in compliance with the requirements of Provision B.2.e. Plans that did not consider all the potential water quality improvement strategies submitted in public comments are also not in compliance with the requirements of Provision B.2.e.

5. Optional Jurisdictional Strategies

Requirements: Provision B.3.b.(1)(b) of the Order requires each Copermittee to identify the optional jurisdictional strategies that will be implemented within its jurisdiction, as necessary, to achieve final numeric goals. Each Copermittee is required to identify water quality improvement strategies that are in addition to the best management practice (BMP) implementation, inspection, enforcement, and education activities that are already required by Provisions E.2 through E.7 (Provision B.3.b.(1)(b)(i)). Optional jurisdictional strategies to encourage or implement retrofit projects and channel and habitat rehabilitation projects are also required to be provided (Provisions B.3.b.(1)(b)(ii) and (iii)). For each optional jurisdictional strategy that a Copermittee includes in the Plan, descriptions of the funds and/or resources needed, and the circumstances needed to trigger implementation of the strategy are also required (Provisions B.3.b.(1)(b)(iv) and (v), respectively).

Issues of Concern: All the Plans lacked enough information for the San Diego Water Board to make a determination that all the requirements of Provision B.3.b.(1)(b) have been met. The San Diego Water Board has found the following general issues of concern:

- a) Several Copermittees did not include any proposed optional jurisdictional strategies to be implemented within their jurisdictions, as necessary, to effectively prohibit non-storm water discharges to the MS4, reduce pollutants in storm water discharges from the MS4 to the maximum extent practicable (MEP), protect beneficial uses of receiving waters from MS4 discharges, or achieve proposed interim and final numeric goals.
- b) Most Copermittees did not include an incentive or program to encourage or implement projects to retrofit areas of existing development within its jurisdiction.

Pursuant to Provision E.5.e.(1)(a), every Copermittee is required to identify areas of existing development within its jurisdiction as candidates for retrofitting. Therefore, every Copermittee should have some incentive or program to encourage implementation of retrofit projects in the areas of existing development identified in its JRMP document pursuant to Provision E.5.e.(1)(a), unless there is an acceptable rationale in the Plan describing why it is infeasible to encourage or implement such retrofit projects.

- c) Most Copermittees did not include an incentive or program to encourage or implement projects that will rehabilitate the conditions of channels or habitats within its jurisdiction. Pursuant to Provision E.5.e.(2)(a), every Copermittee is required to identify streams, channels, and/or habitats in areas of existing development within its jurisdiction as candidates for rehabilitation. Therefore, every Copermittee should have some incentive or program to encourage implementation of projects to rehabilitate the conditions of channels or habitats within its jurisdiction identified in JRMP document pursuant to Provision E.5.e.(2)(a), unless there is an acceptable rationale in the Plan describing why it is infeasible to encourage or implement such rehabilitation projects.
- d) Of the Copermittees that did include proposed optional jurisdictional strategies, adequate information about the funds and/or resources needed to implement the strategy (e.g. plans to be developed, studies to be conducted, data to be collected, personnel needed, equipment needed, administrative structures required, contracts needed, land to be acquired, etc.) was not provided.
- e) Of the Copermittees that did include proposed optional jurisdictional strategies, adequate information about the circumstances necessary to trigger implementation of the strategy (e.g. funding availability, obtain approval from city councils, findings from assessments or studies, etc.) was not provided.
- f) Many proposed optional jurisdictional strategies did not appear to be a BMP, an incentive, or a program that could be implemented to effectively prohibit non-storm water discharges to the MS4, reduce pollutants in storm water discharges from the MS4 to the MEP, protect beneficial uses of receiving waters from MS4 discharges, or achieve proposed interim and final numeric goals. Implementation of an optional jurisdictional strategy is expected to result in an improvement of water quality.

Noncompliant Optional Jurisdictional Strategies: The San Diego Water Board found that the proposed optional jurisdictional strategies in the Plans do not comply with the requirements of Provision B.3.b.(1)(b) as follows:

- a) A Copermittee that did not propose any optional jurisdictional strategies to be implemented within its jurisdiction, 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 beneficial uses of receiving waters from MS4

discharges, or achieve proposed interim and final numeric goals, in addition to the BMP implementation, inspection, enforcement, and education activities that are already required by Provisions E.2 through E.7 is not in compliance with the requirements of Provision B.3.b.(1)(b)(i).

- b) Unless acceptable data or rationale are provided in the Plan, a Copermittee that did not propose any incentives or programs to encourage or implement projects to retrofit areas of existing development within its jurisdiction as optional jurisdictional strategies is not in compliance with the requirements of Provision B.3.b.(1)(b)(ii). A Copermittee that has not identified areas of existing development within its jurisdiction as candidates for retrofitting in its JRMP document also is not in compliance with Provision E.5.e.(1)(a), unless acceptable data or rationale is provided.
- c) Unless acceptable data or rationale are provided in the Plan, a Copermittee that did not propose any incentives or programs to encourage or implement projects to rehabilitate channels or habitats within its jurisdiction as optional jurisdictional strategies is not in compliance with the requirements of Provision B.3.b.(1)(b)(iii). A Copermittee that has not identified projects to rehabilitate the conditions of channels or habitats within its jurisdiction in its JRMP document also is not in compliance with Provision E.5.e.(2)(a), unless acceptable data or rationale are provided.
- d) A Copermittee that does not have any optional jurisdictional strategies in the Plan or has proposed an optional jurisdictional strategy without an adequate description of the funds and/or resources needed to implement the strategy is not in compliance with the requirements of Provision B.3.b.(1)(b)(iv).
- e) A Copermittee that does not have any optional jurisdictional strategies in the Plan or has proposed an optional jurisdictional strategy without an adequate description of the circumstances needed to trigger implementation of the strategy is not in compliance with the requirements of Provision B.3.b.(1)(b)(v).

Unacceptable Optional Jurisdictional Strategies: The following proposed optional jurisdictional strategies are not acceptable to the San Diego Water Board:

- a) Many proposed optional jurisdictional strategies are described using terms such as “consider”, “evaluate”, “investigate”, or “develop” a BMP, incentive, or program. These terms indicate to the San Diego Water Board that the Copermittee is only preparing for the implementation of a BMP, incentive, or program. Provision B.3.b.(1)(b) requires each Copermittee identify that optional jurisdictional strategies that ***will be*** implemented. Preparation for a strategy does not meet the requirement of a strategy that will be implemented.
- b) Many proposed optional jurisdictional strategies describe development of a plan, conducting a special study or an assessment, or collecting data. Plans, special

studies, assessments, and data collection are necessary steps to implement a strategy, but are not in and of themselves a strategy that will result in the effective prohibition of non-storm water discharges to the MS4, reduction of pollutants in storm water discharges from the MS4 to the MEP, protection of beneficial uses of receiving waters from MS4 discharges, or achievement of proposed interim and final numeric goals.

- c) Several proposed optional jurisdictional strategies appear to be BMP implementation, inspection, enforcement, and education activities that are already being implemented or required to be implemented by the Copermittee pursuant to Provisions E.2 through E.7. Optional jurisdictional strategies are required in addition to the requirements of Provisions E.2 through E.7.

6. Watershed Management Area Strategies

Requirements: Provision B.3.b.(2) of the Order requires the Copermittees to identify Watershed Management Area strategies that will be implemented, as necessary, to achieve final numeric goals. The Copermittees are required to identify regional or multi-jurisdictional scale water quality improvement strategies (Provision B.3.b.(2)(a)). Watershed Management Area strategies to encourage or implement retrofit projects and channel and habitat rehabilitation projects are also required to be provided in the Plan (Provisions B.3.b.(2)(b) and (c)). For each Watershed Management Area strategy that the Copermittees includes in the Plan, descriptions of the funds and/or resources needed, and the circumstances needed to trigger implementation of the strategy are also required (Provisions B.3.b.(2)(d) and (e), respectively).

Issues of Concern: All the Plans lacked enough information about Watershed Management Area strategies to meet the requirements of Provision B.3.b.(2).

Noncompliant Watershed Management Area Strategies: The San Diego Water Board found that the Watershed Management Area strategies in the Plans do not comply with the requirements of Provision B.3.b.(2) as follows:

- a) A Plan that did not propose any Watershed Management Area strategies to be implemented on a regional or multi-jurisdictional scale, 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 beneficial uses of receiving waters from MS4 discharges, or achieve proposed interim and final numeric goals is not in compliance with the requirements of Provision B.3.b.(2)(a).
- b) Unless acceptable data or rationale are provided in the Plan, a Plan that did not propose any incentives or programs to encourage or implement projects to retrofit areas of existing development as a Watershed Management Area strategy is not in compliance with the requirements of Provision B.3.b.(2)(b).

- c) Unless acceptable data or rationale are provided in the Plan, a Plan that did not propose any incentives or programs to encourage or implement projects to rehabilitate channels, streams, or habitats as a Watershed Management Area strategy is not in compliance with the requirements of Provision B.3.b.(2)(c).
- d) A Plan without Watershed Management Area strategies or a Plan that has a proposed Watershed Management Area strategy without information about the funds and/or resources needed to implement a Watershed Management Area strategy is not in compliance with the requirements of Provision B.3.b.(2)(d).
- e) A Plan without Watershed Management Area strategies or a Plan that has a proposed Watershed Management Area strategy without a description of the circumstances needed to trigger implementation of Watershed Management Area strategy is not in compliance with the requirements of Provision B.3.b.(2)(e).

WATER QUALITY IMPROVEMENT SCHEDULES

7. Schedules for Achieving Numeric Goals

Requirement: Provision B.3.a.(2) of the Order requires the Copermittees to develop and incorporate schedules for achieving interim and final numeric goals. Provision B.3.a.(2) requires the schedules to incorporate TMDL compliance dates, incorporate ASBS compliance schedules, and be designed to achieve the interim and final numeric goals in the shortest time practicable taking into account the time required to implement water quality improvement strategies.

Issues of Concern: Each Plan includes schedules to achieve interim and final numeric goals. The San Diego Water Board, however, has found the following general issues of concern:

- a) For Plans where the Beaches and Creeks Bacteria TMDLs are applicable and bacteria is the only highest priority water quality condition identified, and only final numeric goals are established for bacteria, the Plan is a Bacteria Load Reduction Plan (BLRP) not a Comprehensive Load Reduction Plan (CLRP). According to the Beaches and Creeks Bacteria TMDLs, the wet weather and dry weather dates for compliance with the final wasteload allocations (WLAs) must be no later than 10 years after the effective date of the TMDLs, which is April 4, 2021. For the Copermittees to have until April 4, 2031 (i.e. 20 years after the effective date of the TMDLs) to achieve the Beaches and Creeks Bacteria TMDLs WLAs, the Plan needs to be a CLRP and incorporate load reduction programs with quantified load reductions for other pollutants of concern in addition to bacteria.

- b) Several Plans propose more than 20 years from the date the Plan was submitted to achieve final numeric goals if there are no applicable TMDL compliance dates. Schedules proposing to achieve final numeric goals in more than 20 years appear to be relying primarily on BMP implementation, inspection, enforcement, and education activities that are required to be implemented by the Copermittees pursuant to Provisions E.2 through E.7, with few, if any, commitments to implement optional jurisdictional strategies within the first 10 or more years.

Noncompliant Schedules for Achieving Numeric Goals: There are several Plans that have a proposed date to achieve compliance with the Beaches and Creeks Bacteria TMDLs by April 4, 2031. Unless the Plan includes quantified load reductions for pollutants in addition to bacteria, the April 4, 2031 date to achieve the final numeric goals for bacteria is not in compliance with the requirement to incorporate CLRPs into the Plan pursuant to Attachment E, Specific Provision 6.b.(2)(c)(i).

Unacceptable Schedules for Achieving Numeric Goals: The following proposed schedules to achieve numeric goals are not acceptable to the San Diego Water Board:

- a) Schedules of 10 years or more to address only one highest priority water quality condition are not acceptable, unless there is information provided that allows the San Diego Water Board to make a determination that the schedules are clearly based on the time reasonably required to implement proposed optional jurisdictional strategies.
- b) Schedules of 10 years or more to achieve final numeric goals without optional jurisdictional strategies proposed to be implemented within the next 5 years are not acceptable.
- c) Schedules of 5 years or more to achieve final numeric goals for only addressing one highest priority water quality condition by eliminating unauthorized non-storm water discharges to and from the MS4 without optional jurisdictional strategies proposed to be implemented within the next 5 years are not acceptable.

8. Schedules for Implementing Strategies

Requirements: Provision B.3.b.(3) of the Order requires the Copermittees to develop reasonable schedules for implementing the jurisdictional, optional jurisdictional, and Watershed Management Area strategies to achieve interim and final numeric goals. Provision B.3.b.(3) requires the schedules for implementing strategies to describe: 1) when jurisdictional strategies required pursuant to Provisions E.2 through E.7 will be implemented (Provision B.3.b.(3)(a)(i) and (ii)), 2) the shortest practicable time to secure funds and procure resources to initiate implementation of each optional jurisdictional strategy (Provision B.3.b.(3)(a)(iii)), and the shortest practicable time to secure funds and procure resources to initiate

implementation of each Watershed Management Area strategy (Provision B.3.b.(3)(b)(i)). The schedules are also required to provide information about whether a strategy is expected to be a continuously implemented strategy (Provisions B.3.b.(3)(a)(iv) and B.3.b.(3)(b)(ii)) or strategy to be completed within a schedule (Provisions B.3.b.(3)(a)(v) and B.3.b.(3)(b)(iii)).

Issues of Concern: Each Plan includes schedules to implement strategies. The San Diego Water Board, however, has found the following general issues of concern:

- a) In most Plans there were several proposed strategies that did not have any schedules associated with them, other than “to be determined.”
- b) Most Plans lacked enough information about the shortest practicable time to secure funds and procure resources of initiate implementation of optional jurisdictional strategies and Watershed Management Area strategies.
- c) For several strategies that appeared to be limited timeframe or structural projects, they lacked the information about the anticipated time to complete the project based on a realistic assessment of the shortest practicable time required.

Noncompliant Schedules for Implementing Strategies: The San Diego Water Board found that the schedules in the Plans for implementing strategies do not comply with the requirements of Provision B.3.b.(3) as follows:

- a) Strategies that do not have a schedule are not in compliance with the requirements of Provision B.3.b.(3).
- b) A Copermittee that does not have any optional jurisdictional strategies or has proposed an optional jurisdictional strategy without a description of the shortest practicable time to secure funds and procure resources to initiate implementation of the optional jurisdictional strategy is not in compliance with the requirements of Provision B.3.b.(3)(a)(iii).
- c) A Plan without Watershed Management Area strategies or has a proposed Watershed Management Area strategy without a description of the shortest practicable time to secure funds and procure resources to initiate implementation of the optional jurisdictional strategy is not in compliance with the requirements of Provision B.3.b.(3)(b)(i).
- d) Strategies that are expected to be completed within a limited timeframe without information about the anticipated time to complete the project based on a realistic assessment of the shortest practicable time required are not in compliance with the requirements of Provision B.3.b.(3)(a)(v) or B.3.b.(3)(b)(iii).

OTHER ISSUES

9. Hydromodification Management Exemptions

Requirements: Provision E.3.c.(2)(d) of the Order describes situations where the Copermittees have the discretion to exempt Priority Development Projects from the hydromodification management BMP performance requirements. Exemptions may be granted to projects that discharge to 1) existing underground storm drains discharging directly to water storage reservoirs, lakes, enclosed embayments, or the Pacific Ocean, or 2) 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. The Copermittees may also propose additional exemptions via the optional Watershed Management Area Analysis.

Issues of Concern: Most Plans proposed additional exemptions via the optional Watershed Management Area Analysis. The San Diego Water Board, however, has found issues of concern with proposed exemptions in Plans for two different Watershed Management Areas:

- a) As part of the Watershed Management Area Analysis, the City of Carlsbad included a report entitled “*Hydromodification Exemption Analysis for Select Carlsbad Watersheds*” (Report). Based on the Report, the Copermittees in the Carlsbad Watershed Management Area proposed to add drainage areas upstream of the Buena Vista, Agua Hedionda, and Batiquitos Lagoons as exempt from hydromodification management BMP requirements. Instead of evaluating the drainage areas leading to the lagoons using an erosion potential (or equivalent) analysis, the Report studies the lagoons using the criteria for exemptions outlined in the Hydromodification Management Plan for the San Diego Region (HMP) that was approved by the San Diego Water Board in July, 2010. However, the HMP is predicated on requirements of the previous MS4 permit. When the Order was adopted in 2013, the only exemptions retained were those cited in Provision E.3.c.(2)(d), meaning exemptions are essentially limited to concrete-lined or underground drainage channels. Any additional exemptions, including “non-erodible drainage networks” as described in the Report, must be evaluated from an erosion potential (or equivalent) point of view and included in the optional Watershed Management Area Analysis.

The Report describes rationale for exempting areas draining to Agua Hedionda and Batiquitos Lagoon, and different rationale for exemptions for areas draining to Buena Vista Lagoon. The discussions regarding the areas draining to Agua Hedionda and Batiquitos Lagoons indicate that these areas may meet the Order’s requirement of being concrete lined all the way from the point of discharge to an enclosed embayment (lagoon). However, whether or not drainage conveyances from these areas act like “concrete lined channels” is unclear because the discussion is centered on criteria applicable to the HMP and not the Order.

For Buena Vista Lagoon, the Report states that: *“As long as a project discharges into a non-erodible drainage network that is continuous to a lagoon outlet, it is potentially eligible for a hydromodification exemption.”* The Report continues to explain that in drainage areas upstream of Buena Vista Lagoon, *“... the intervening ground is densely vegetated and or naturally armored. The City Engineer found no evidence of erosion at or near the water’s edge of the lagoon. Consequently, this area is identified as exempt....”*

In order for the San Diego Water Board to accept a conclusion that a conveyance system can be exempt from hydromodification management BMP requirements, the Report must include an analysis demonstrating that the natural area under review would not experience erosion for the range of storms considered to be geomorphically significant. Although these areas are presented as “naturally armored,” because they are not concrete-lined, the systems must be evaluated from an erosion potential (or equivalent) point of view to determine if an exemption is appropriate.

- b) In the San Diego River Water Quality Improvement Plan, the Watershed Management Area Analysis includes a proposed methodology for demonstrating that hydromodification management BMPs are not needed upstream of Forrester Creek, a channel stabilized with materials other than concrete. The proposed methodology includes a process for classifying additional channels as “stabilized,” and thus allowing exemptions for areas upstream of these channels. The San Diego Water Board is supportive of allowing exemptions for such stabilized channels, provided that the exemptions are supported and the proposed process is clear and repeatable.

The Watershed Management Area Analysis includes a discussion of erosion potential in Forrester Creek under several different flow rates, all of which suggest that Forrester Creek would not experience erosion caused by land development occurring in the upstream watershed, even in a fully built-out condition. The discussion includes analyses using various methods to verify the assertion that the channel is stable in the range of flows considered to be geomorphically significant. Because the discussion includes several lines of evidence, the San Diego Water Board agrees that Forrester Creek can be considered stable and therefore the proposed exemption is appropriate.

The Watershed Management Area Analysis appears to rationalize a more succinct and less rigorous analysis for including exemptions for future proposed channel segments. Absent a similar, thorough, and multiple lines of evidence approach analysis as was included for Forrester Creek, the San Diego Water Board disagrees and cannot support the less rigorous analysis. The San Diego Water Board supports the concept of introducing additional stabilized channel reaches that are exempt from hydromodification management BMP requirements, but only if an erosion potential analysis using continuous simulation modeling demonstrates that the channel segment would not erode in the range of flows determined to be geomorphically significant. Additionally, the analysis would need to include flows expected from a fully-built out watershed

condition, and would have to consider erosion potential at the channel's most susceptible location(s). Finally, the criteria and process to qualify for an exemption should be clear so that future proposals for exemptions for additional channel segments include all the required elements.

Unacceptable Hydromodification Management Exemptions: The following proposed exemptions are not acceptable to the San Diego Water Board:

- a) Without an appropriate and acceptable analysis of the potential of erosion for the range of storms considered to be geomorphically significant, the additional exemptions proposed for Agua Hedionda Lagoon, Batiquitos Lagoon, and Buena Vista Lagoon are not acceptable.
- b) Without an erosion potential analysis using continuous simulation modeling that shows a channel will not erode in the range of geomorphically significant flows for the fully built out condition of the drainage area at the most sensitive channel segment(s) included in the Watershed Management Area Analysis, future proposals for exemptions from the hydromodification management BMP requirements will not be acceptable.

10. Loma Alta Slough Resolution Implementation Requirements

Requirements: Provision A.1.b of the Order requires the Copermittees to effectively prohibit non-storm water discharges into the MS4. Provision B.3.a requires the Copermittees to develop interim and final numeric goals and schedules to achieve those goals for the highest priority water quality conditions. Resolution No. R9-2014-0020, a *Resolution of Commitment to an Alternative Process for Achieving Water Quality Objectives for Biostimulatory Substances in Loma Alta Slough* (Resolution), was adopted by the San Diego Water Board on June 26, 2014. The Resolution includes numeric targets, a compliance schedule, and monitoring which are expected to be implemented through the Carlsbad Watershed Management Area Water Quality Improvement Plan (Carlsbad WMA Plan).

Issues of Concern: A number of items in the Carlsbad WMA Plan are not consistent with the Resolution. The San Diego Water Board chose to adopt the Resolution as a practical, measureable, and timely approach for directing actions to remedy the Slough through a productive collaboration with the community to address an important water quality challenge. The Copermittees must implement the elements of the Resolution, or the San Diego Water Board will reinstate the process of considering adoption of the Phosphorus TMDL for Loma Alta Slough. The San Diego Water Board has found the following issues of concern:

- a) The Resolution includes numeric targets for both surface water macroalgal biomass and surface water macroalgal cover, which represent attainment of the biostimulatory water quality objective for Loma Alta Slough. These numeric targets were developed through a multi-year stakeholder process, and were

based on special studies specific to the Slough and water quality modeling. The numeric targets are to be achieved by 2023.

According to the source and linkage analysis for which the numeric targets are based, the primary sources of the impairment in Loma Alta Slough are dry-weather discharges from irrigation runoff and other illicit dry weather discharges conveyed by the MS4 to Loma Alta Slough. Nutrient loading, specifically phosphorus, into the Slough from dry weather flows results in excessive algal growth. Further, modeling results cited in the staff report (which served as the technical basis for the Resolution) suggests that reductions of dry weather flows in excess of 96 percent are needed to achieve the targeted reductions in phosphorus loading. As such, the Resolution relies on the Order, specifically the prohibitions of dry weather non-storm water discharges, and development and implementation of a Plan that includes the Loma Alta Creek watershed, to achieve the necessary reductions in phosphorus loading and restore the beneficial uses.

In contrast to the approach for which the Resolution is based, the Carlsbad WMA Plan proposes interim numeric goals that fall short of achieving the prohibitions on dry weather discharges. The Carlsbad WMA Plan describes the interim goals as:

- 50 percent reduction in anthropogenic persistent dry weather flows at the three outfalls addressed through 2018, and
- 25 percent reduction in additional (other outfalls in watershed) anthropogenic persistent flows identified during dry weather monitoring program implemented in 2015 and in subsequent years.

The interim goals as expressed in the Carlsbad WMA Plan are not consistent with the Resolution because there is no mention in the Resolution that the City of Oceanside would only first reduce flows by 50 percent, followed by an additional 25 percent in subsequent years, and no explicit attempt to comply with the requirement to effectively eliminate non-storm water discharges into the MS4. Additionally, Finding 20 of the Resolution states that the City of Oceanside, in a comment letter dated May 5, 2014 committed to:

- Using the numeric targets, developed through the stakeholder process as numeric goals in the Water Quality Improvement Plan for the Loma Alta Creek watershed, and
- Develop and implement a Water Quality Improvement Plan to effectively prohibit the City's non-storm water discharges into the MS4 system.

The San Diego Water Board expects the City of Oceanside to honor its commitment as stated in the letter dated May 5, 2014, and therefore expected the interim and final numeric goals in the Carlsbad WMA Plan to incorporate the prohibition of dry weather non-storm water discharges into the MS4 for reducing phosphorus loading to Loma Alta Slough. Further, there must also be interim

numeric goals expressed as an increment toward achieving the final numeric goals.

- b) The Carlsbad WMA Plan does not include the required Loma Alta Slough Monitoring Plan. Table 2 of Resolution No. R9-2014-0022 describes the City of Oceanside's *Tentative Proposed Schedule to Address the Eutrophication Impairment in Loma Alta Slough*. According to this Table, in 2015, "the City was to submit a Water Quality Improvement Plan, including the Loma Alta Slough Monitoring Plan, to the San Diego Water Board."

Section 3.1.4 of the Carlsbad WMA Plan describes a special study whose objectives are "to develop a water quality monitoring program for the Loma Alta Slough (Slough Monitoring Plan) that will allow the City of Oceanside to track progress toward reducing nutrient discharges into the Slough and eliminate the eutrophication impairment." The monitoring is to occur every summer from 2016 to 2022.

In a letter dated May 5, 2014, the City of Oceanside indicated that it would incorporate the slough monitoring requirements proposed in Tentative Investigative Order No. R9-2014-0022 into the Carlsbad WMA Plan¹. The San Diego Water Board's expectation was that the Slough Monitoring Plan would be fully developed and included in the Carlsbad WMA Plan, as stated in the City's letter and described in Table 2 of the Resolution. The City of Oceanside has not submitted any correspondence to the San Diego Water Board suggesting a need to amend the schedule described in Table 2 since Resolution No. R9-2014-0020 was adopted on June 26, 2014.

Noncompliant Loma Alta Slough Resolution Implementation Requirements:

The San Diego Water Board found that the Carlsbad WMA Plan does not comply with the requirements of Provisions A.1.b and B.3.a.(1) as follows:

- a) The interim numeric goals as expressed are not consistent with the Resolution and not in compliance with the requirements of Provisions A.1.b and B.3.a.(1)(b).
- b) Each final numeric goal that does not have an interim numeric goal expressed as a reasonable increment in the same or similar metric as the final numeric goal is not in compliance with Provision B.3.a.(1)(b)(ii).

Unacceptable Loma Alta Slough Resolution Implementation Requirements:

The City of Oceanside committed to incorporating slough monitoring requirements proposed in Tentative Investigative Order No. R9-2014-0022 into the Carlsbad WMA Plan. Without the slough monitoring requirements proposed in Tentative Investigative Order No. R9-2014-0022 in the monitoring and assessment program for the Carlsbad Watershed Management Area, the Carlsbad WMA Plan is not acceptable to the San Diego Water Board.

¹ Tentative Investigative Order No. R9-2014-0022 was replaced by Resolution No. R9-2014-0020.

11. Items of Additional Concern

Pursuant to Provision F.1.b.(2), the Copermittees are required to consider revisions to the Plans based on written comments received by the close of the public comment period. Pursuant to Provision F.1.b.(3), the Copermittees are required to submit any revisions to the Plans no later than 60 days after the close of the comment period, or by September 29, 2015.

Pursuant to Provisions E and F.2.a.(2) of the Order each Copermittee was required to update its JRMP document to incorporate the requirements of Provision E concurrently with the submittal of the Plans. Pursuant to Provisions E.3.d and F.2.b.(1) of the Order each Copermittee was also required to update its BMP Design Manual to incorporate the requirements of Provisions E.3.a-d. Each Copermittee's JRMP document updated with the requirements of Provision E became effective with the submittal of the Plans. In addition, each Copermittee must begin implementing its updated BMP Design Manual within 180 days of submittal of the Plans, unless directed otherwise by the San Diego Water Board.

Until the Plans are accepted by the San Diego Water Board, any exemptions to the hydromodification management BMP requirements of Provisions E.3.c.(2)(a)-(c), proposed in the Plans pursuant to Provision B.3.b.(4)(c), are not authorized to be applied to any Priority Development Projects within a Copermittee's jurisdiction. Likewise, a Copermittee is not authorized to implement an Alternative Compliance Program (pursuant to Provision E.3.c.(3)) for any Priority Development Project within its jurisdiction until the optional Watershed Management Area Analysis developed pursuant to Provision B.3.b.(4) has been accepted as part of the Plans.

12. Potential Future Enforcement Options

The areas of noncompliance identified herein began on the due date to submit the Plans (June 26, 2015) and may be subject to additional future enforcement by the San Diego Water Board or State Water Resources Control Board, including a potential civil liability assessment of up to \$10,000 per day of violation (Water Code section 13385) until the violations are corrected and/or pursue any of the following enforcement actions:

Other Potential Enforcement Options	Applicable Water Code Sections
Technical or Investigative Order	Sections 13267 or 13383
Cleanup and Abatement Order	Section 13304
Cease and Desist Order	Sections 13301-13303
Time Schedule Order	Sections 13300, 13308

In addition, the San Diego Water Board may consider revising or rescinding applicable waste discharge requirements, if any, referring the matter to other resource agencies, or referring the matter to the State Attorney General for injunctive relief, as applicable.

The San Diego Water Board is available to assist the Copermitees with refining the Plans to become acceptable, and to be in compliance with the requirements of the Order. In the subject line of any response, please include the information located in the heading of this letter: "in reply refer to." Please contact Wayne Chiu at (619) 521-3354 or Wayne.Chiu@waterboards.ca.gov, or Christina Arias at (619) 521-3351 or Christina.Arias@waterboards.ca.gov with any questions or concerns.

Respectfully,



Laurie Walsh, P.E.
Senior Water Resource Control Engineer
Storm Water Management Unit

Tech Staff Info & Use	
Order No.	R9-2013-0001
Party (CIWQS) ID	536787
NPDES No.	CAS0109266
Reg. Measure ID	387335
PIN ID	786088

California Regional Water Quality Control Board San Francisco Bay Region Municipal Regional Stormwater NPDES Permit

Order No. R2-2015-0049
NPDES Permit No. CAS612008
November 19, 2015

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C.1. Compliance with Discharge Prohibitions and Receiving Waters Limitations

The Permittees shall comply with Discharge Prohibitions A.1 and A.2 and Receiving Water Limitations B.1 and B.2 through the timely implementation of control measures and other actions as specified in Provisions C.2 through C.15. Compliance with Provisions C.9 through C.12 and C.14 of this Order, which prescribe requirements and schedules for Permittees identified therein to manage their discharges that may cause or contribute to violations of water quality standards (WQS) for pesticides, trash, mercury, polychlorinated biphenyls (PCBs), and bacteria, shall constitute compliance during the term of this Order with Receiving Water Limitations B.1 and B.2 for the pollutants and the receiving waters identified in the provisions. Compliance with Provision C.10, which prescribes requirements and schedules for Permittees to manage their discharges of trash, shall also constitute compliance with Discharge Prohibitions A.1 and A.2 during the term of this Order for discharges of trash. If exceedance(s) of (WQS), except for exceedances of water quality standards for pesticides, trash, mercury, PCBs, and bacteria that are managed pursuant to Provisions C.9 through C.12 and C.14, persist in receiving waters notwithstanding the implementation of the required controls and actions, the Permittees shall comply with the following procedure:

- a. Upon a determination by either the Permittee(s) or the Water Board that discharges are causing or contributing to an exceedance of an applicable (WQS), the Permittee(s) shall notify, within no more than 30 days, and thereafter submit a report to the Water Board that describes controls or best management practices (BMPs) that are currently being implemented, and the current level of implementation, and additional controls or BMPs that will be implemented, and/or an increased level of implementation, to prevent or reduce the discharge of pollutants that are causing or contributing to the exceedance of water quality standards. The report may be submitted in conjunction with the Annual Report, unless the Water Board directs an earlier submittal, and shall constitute a request to the Water Board for amendment of this NPDES Permit. The report and application for amendment shall include an implementation schedule. The Water Board may require modifications to the report and application for amendment; and
- b. Submit any modifications to the report required by the Water Board within 30 days of notification.

As long as Permittees have complied with the procedures set forth above, they do not have to repeat the same procedure for continuing or recurring exceedances of the same receiving water limitations unless directed by the Water Board to develop additional control measures and BMPs and reinitiate the Permit amendment process.

C.2. Municipal Operations

The purpose of this provision is to ensure implementation of appropriate BMPs by all Permittees to control and reduce non-stormwater and polluted stormwater discharges to storm drains and watercourses during operation, inspection, and routine repair and maintenance activities of municipal facilities and infrastructure.

C.2.a. Street and Road Repair and Maintenance

i. Task Description – Asphalt/Concrete Removal, Cutting, Installation, and Repair

The Permittees shall implement appropriate BMPs at street and road repair and/or maintenance sites to control debris and waste materials during road and parking lot installation, repaving, or repair maintenance activities, such as those described in the California Stormwater Quality Association's (CASQA's) Handbook for Municipal Operations.

ii. Implementation Levels

- (1) The Permittees shall require proper management of concrete slurry and wastewater, asphalt, pavement cutting, and other street and road maintenance materials and wastewater to avoid discharge to storm drains from such work sites. The Permittees shall coordinate with sanitary sewer agencies to determine if disposal to the sanitary sewer system is available for the wastewater generated from these activities provided that appropriate approvals are obtained and pretreatment standards are met.
- (2) The Permittees shall require sweeping and/or vacuuming to remove debris, concrete, or sediment residues from such work sites upon completion of work. The Permittees shall require cleanup of all construction debris, spills, and leaks using dry methods (e.g., absorbent materials, rags, pads, and vacuuming), as described in the Bay Area Stormwater Management Agencies Association's (BASMAA's) Blueprint for a Clean Bay.

iii. Reporting – The Permittees shall report on implementation of and compliance with these BMPs in the Annual Report.

C.2.b. Sidewalk/Plaza Maintenance and Pavement Washing

- i. Task Description – The Permittees shall implement and require to be implemented BMPs that prevent the discharge of polluted wash water and non-stormwater to storm drains for pavement washing; sidewalk and plaza cleaning; mobile cleaning; pressure washing operations in locations such as parking lots and garages; trash areas; and gas station fueling areas. The Permittees shall implement the BMPs included in BASMAA's Mobile Surface Cleaner Program. The Permittees shall coordinate with sanitary sewer agencies to determine if disposal to the sanitary sewer is available for the wastewater generated from these activities provided that appropriate approvals and pretreatment standards are met.**

- ii. **Reporting** – The Permittees shall report on implementation of and compliance with these BMPs in their Annual Report.

C.2.c. Bridge and Structure Maintenance and Graffiti Removal

i. Task Description

- (1) The Permittees shall implement appropriate BMPs to prevent polluted stormwater and non-stormwater discharges from bridges and structural maintenance activities directly over water or into storm drains.
- (2) The Permittees shall implement BMPs for graffiti removal that prevent non-stormwater and wash water discharges into storm drains.

ii. Implementation Levels

- (1) The Permittees shall prevent all debris, including structural materials and coating debris, such as paint chips, and other debris and pollutants generated in bridge and structure maintenance or graffiti removal from entering storm drains or water courses.
 - (2) The Permittees shall protect nearby storm drain inlets before removing graffiti from walls, signs, sidewalks, or other structures. The Permittees shall prevent any discharge of debris, cleaning compound waste, paint waste, or wash water due to graffiti removal from entering storm drains or watercourses.
 - (3) The Permittees shall use proper disposal methods for wastes generated from these activities. The Permittees shall train their employees and/or specify in contracts the proper capture and disposal methods for the wastes generated.
- iii. **Reporting** – The Permittees shall report on implementation of and compliance with these BMPs in their Annual Report.

C.2.d. Stormwater Pump Stations

- i. **Task Description** – The Permittees shall implement measures to operate, inspect, and maintain stormwater pump stations to eliminate non-stormwater discharges containing pollutants, and to reduce pollutant loads in stormwater discharges to comply with WQSSs.
- ii. **Implementation Levels** – The Permittees shall comply with the following at Permittee-owned or -operated pump stations:
 - (1) Upon becoming aware that the discharge from a pump station has a dissolved oxygen (DO) concentration below 3.0 mg/L, implement corrective actions, such as continuous pumping at a low flow rate, aeration, or other appropriate methods to maintain DO concentrations of the discharge above 3 milligrams per liter (mg/L) and verify the effectiveness of the corrective actions with monitoring. Corrective actions do not need to be implemented on discharges from pump stations that

- remain in the stormwater collection system or infiltrate into a dry creek immediately downstream.
- (2) Ensure that pump stations are free from debris and trash and replace any oil absorbent booms, as needed, and investigate and abate illicit discharges. Pump stations excluded from C.2.d.ii.(1) above are not excluded from this requirement.
 - (3) The Permittees shall maintain records of inspection, maintenance, implementation of corrective actions, and any monitoring records at Permittee-owned or -operated pumped stations. These records shall be made available to Water Board staff or its representatives during inspections and audits, or otherwise upon request.

C.2.e. Rural Public Works Construction and Maintenance

i. Task Description – Rural Road and Public Works Construction and Maintenance

For the purpose of this provision, rural means any watershed or portion thereof that is developed with large lot home-sites, such as one acre or larger, or with primarily agricultural, grazing, or open space uses. The Permittees shall implement and require contractors to implement BMPs for erosion and sediment control during and after construction for maintenance activities on rural roads, particularly in or adjacent to stream channels or wetlands. The Permittees shall notify the Water Board, the California Department of Fish and Wildlife (CDFW), and the U.S. Army Corps of Engineers, where applicable, and obtain appropriate agency permits for rural public works activities before work in or near creeks and wetlands.

ii. Implementation Level

- (1) The Permittees shall continue to implement BMPs for erosion and sediment control measures during construction and maintenance activities on rural roads, including developing and implementing appropriate training and technical assistance resources for rural public works activities.
- (2) The Permittees shall implement appropriate BMPs for the following activities. BMPs shall minimize impacts on streams and wetlands in the course of rural road and public works maintenance and construction activities:
 - (a) Road design, construction, maintenance, and repairs in rural areas that prevent and control road-related erosion and sediment transport;
 - (b) Identification and prioritization of rural road maintenance on the basis of soil erosion potential, slope steepness, and stream habitat resources;
 - (c) Construction of roads and culverts that do not impact creek functions. New or replaced culverts shall not create a migratory fish passage barrier, where migratory fish are present, or lead to stream instability;

- (d) Implementation of an inspection program to maintain rural roads' structural integrity and prevent impacts to water quality;
 - (e) Maintenance of rural roads adjacent to streams and riparian habitat to reduce erosion, replace damaging shotgun culverts, and address excessive erosion;
 - (f) Re-grading of unpaved rural roads to slope outward where consistent with road engineering safety standards, and installation of water bars as appropriate; and
 - (g) Replacement of existing culverts or design of new culverts or bridge crossings shall use measures to reduce erosion, provide fish passage, and maintain natural stream geomorphology in a stable manner.
- (3) The Permittees shall incorporate existing training and guidance on permitting requirements for rural public works activities so as to stress the importance of proper planning and construction to avoid water quality impacts.
 - (4) The Permittees shall provide training incorporating these BMPs to rural public works maintenance staff at least twice within this Permit term.
- iii. **Reporting** – The Permittees shall report on the implementation of and compliance with BMPs for the rural public works construction and maintenance activities in their Annual Report, including reporting on increased maintenance in priority areas.

C.2.f. Corporation Yard BMP Implementation

i. Task Description – Corporation Yard Maintenance

- (1) The Permittees shall implement and maintain a site-specific Stormwater Pollution Prevention Plan (SWPPP) for corporation yards, including municipal vehicle maintenance, heavy equipment, and maintenance vehicle parking areas, and material storage facilities, to comply with water quality standards. Each SWPPP shall incorporate all applicable BMPs that are described in the California Stormwater Quality Association's (CASQA's) Handbook for Municipal Operations and the Caltrans Storm Water Quality Handbook Maintenance Staff Guide, May 2003, and its addenda, as appropriate.
- (2) The requirements in this provision shall apply only to facilities that are not covered under the State Water Board's Industrial Stormwater NPDES General Permit.

ii. Implementation Level

- (1) Implement BMPs to minimize pollutant discharges in stormwater and prohibit non-stormwater discharges, such as wash waters and street sweeper, vactor, and other related equipment wash water. Pollution control actions shall include, but not be limited to, good housekeeping practices, material and waste storage control, and vehicle leak and spill control.

- (2) Routinely inspect corporation yards to ensure that non-stormwater discharges are not entering the storm drain system and pollutant discharges are prevented to the maximum extent practicable. At a minimum, each corporation yard shall be fully inspected each year between September 1 and September 30, beginning the 2016-2017 reporting year. Active non-stormwater discharges shall cease immediately. Corrective actions shall be implemented before the next rain event, but no longer than 10 business days after the potential and/or actual discharges are discovered. Corrective actions can be temporary and more time can be allowed for permanent corrective actions. If more than 10 business days are required for compliance, a rationale shall be recorded.
- (3) Plumb all vehicle and equipment wash areas to the sanitary sewer after coordination with the local sanitary sewer agency and equip with a pretreatment device (if necessary) in accordance with the requirements of the local sanitary sewer agency.
- (4) Use dry cleanup methods when cleaning debris and spills from corporation yards. If wet cleaning methods must be used (e.g., pressure washing), the Permittee shall ensure that wash water is collected and disposed in the sanitary sewer after coordination with the local sanitary sewer agency and in accordance with the requirements of the local sanitary sewer agency. Any private companies hired by the Permittee to perform cleaning activities on Permittee-owned property shall follow the same requirements. In areas where sanitary sewer connection is not available, the Permittees shall collect and haul the wash water to a municipal wastewater treatment plant, or implement appropriate BMPs and dispose of the wastewater to land in a manner that does not adversely impact surface water or groundwater.
- (5) Outdoor storage areas containing pollutants shall be covered and/or bermed to prevent discharges of polluted stormwater runoff or run-on to storm drain inlets.

iii. Reporting

- (1) In the 2015-2016 Annual Report, Permittees shall report on implementation of SWPPPs, the results of inspections, and any followup actions in their Annual Report.
- (2) Beginning with the 2016-2017 Annual Report, Permittees shall list activities conducted in the corporation yards that have BMPs in the site-specific SWPPP, date of inspections, the results of inspections, and any followup actions, including the date of any necessary corrective actions implemented, in their Annual Report.

C.3. New Development and Redevelopment

The goal of Provision C.3 is for the Permittees to use their planning authorities to include appropriate source control, site design, and stormwater treatment measures in new development and redevelopment projects to address stormwater runoff pollutant discharges and prevent increases in runoff flows from new development and redevelopment projects. This goal is to be accomplished primarily through the implementation of low impact development (LID) techniques.

C.3.a. New Development and Redevelopment Performance Standard Implementation

i. Task Description – At a minimum, each Permittee shall:

- (1) Have adequate legal authority to implement all requirements of Provision C.3;
- (2) Have adequate development review and permitting procedures to impose conditions of approval or other enforceable mechanisms to implement the requirements of Provision C.3. For projects discharging directly to CWA section 303(d)-listed waterbodies, conditions of approval must require that post-development runoff not exceed pre-development levels for such pollutants that are listed;
- (3) Evaluate potential water quality effects and identify appropriate mitigation measures when conducting environmental reviews, such as under CEQA;
- (4) Provide training adequate to implement the requirements of Provision C.3 for staff, including interdepartmental training;
- (5) Provide outreach adequate to implement the requirements of Provision C.3, including providing education materials to municipal staff, developers, contractors, construction site operators, and owner/builders, early in the planning process and as appropriate;
- (6) For all new development and redevelopment projects that are subject to the Permittee's planning, building, development, or other comparable review, but not regulated by Provision C.3, encourage the inclusion of adequate site design measures that may include minimizing land disturbance and impervious surfaces (especially parking lots); clustering of structures and pavement; directing roof runoff to vegetated areas; use of micro-detention, including distributed landscape-based detention; preservation of open space; protection and/or restoration of riparian areas and wetlands as project amenities;
- (7) For all new development and redevelopment projects that are subject to the Permittee's planning, building, development, or other comparable review, but not regulated by Provision C.3, encourage the inclusion of adequate source control measures to limit pollutant generation, discharge, and runoff. These source control measures should include:
 - Storm drain inlet stenciling.

- Landscaping that minimizes irrigation and runoff, promotes surface infiltration where possible, minimizes the use of pesticides and fertilizers, and incorporates appropriate sustainable landscaping practices and programs, such as Bay-Friendly Landscaping.
 - Appropriate covers, drains, and storage precautions for outdoor material storage areas, loading docks, repair/maintenance bays, and fueling areas.
 - Covered trash, food waste, and compactor enclosures.
 - Plumbing of the following discharges to the sanitary sewer, subject to the local sanitary sewer agency's regulations and standards:
 - Discharges from indoor floor mat/equipment/hood filter wash racks or covered outdoor wash racks for restaurants.
 - Dumpster drips from covered trash and food compactor enclosures.
 - Discharges from outdoor covered wash areas for vehicles, equipment, and accessories.
 - Swimming pool water, if discharge to onsite vegetated areas is not a feasible option.
 - Fire sprinkler test water, if discharge to onsite vegetated areas is not a feasible option.
- (8) Revise, as necessary, General Plans to integrate water quality and watershed protection with water supply, flood control, habitat protection, groundwater recharge, and other sustainable development principles and policies (e.g., referencing the Bay-Friendly Landscape Guidelines).
- ii. **Reporting** – Provide a brief summary of the method(s) of implementation of Provisions C.3.a.i.(1)–(8) in the 2016 Annual Report.

C.3.b. Regulated Projects

- i. **Task Description** – The Permittees shall require all projects fitting the category descriptions listed in Provision C.3.b.ii. below (hereinafter called Regulated Projects) to implement LID source control, site design, and stormwater treatment onsite or at a joint stormwater treatment facility¹ in accordance with Provisions C.3.c. and C.3.d., unless the Provision C.3.e. alternate compliance options are invoked. For adjacent Regulated Projects that will discharge runoff to a joint stormwater treatment facility, the treatment facility must be completed by the end of construction of the first Regulated Project that will be discharging runoff to the joint stormwater treatment facility.
- (1) Any Regulated Project that has been approved with stormwater treatment measures in compliance with Provision C.3.d. under a previous MS4

¹ **Joint stormwater treatment facility** – Stormwater treatment facility built to treat the combined runoff from two or more Regulated Projects.

permit is exempt from the requirements of Provision C.3.c. (low impact development requirements).

- (2) Any Regulated Project that was approved with no Provision C.3. stormwater treatment requirements under a previous MS4 permit and that has not begun construction by the effective date of this permit, shall be required to fully comply with the requirements of C.3.c. and C.3.d. Permittees may grant exemptions from this requirement as follows:
 - (a) An exemption may be granted to:
 - (i) Any Regulated Project that was previously approved with a vesting tentative map that confers a vested right to proceed with development in substantial compliance with the ordinance, policies, and standards in effect at the time the vesting tentative map was approved or conditionally approved, as allowed by State law.
 - (ii) Any Regulated Project for which the Permittee has no legal authority to require changes to previously granted approvals, such as projects that have been granted building permits.
 - (b) An exemption from the LID requirements of Provision C.3.c. may be granted to any Regulated Project as long as stormwater treatment with media filters is provided that comply with the hydraulic sizing requirements of Provision C.3.d.

Regulated Projects, as they are defined in this Provision, do not include detached single-family home projects that are not part of a larger plan of development.

ii. Regulated Projects are defined in the following categories:

- (1) **Special Land Use Categories**
 - (a) **New Development or redevelopment projects** that fall into one of the categories listed below and that create and/or replace 5000 square feet or more of impervious surface (collectively over the entire project site). This category includes development projects of the following four types on public or private land that fall under the planning and building authority of a Permittee:
 - (i) Auto service facilities, described by the following Standard Industrial Classification (SIC) Codes: 5013, 5014, 5541, 7532-7534, and 7536-7539;
 - (ii) Retail gasoline outlets;
 - (iii) Restaurants (SIC Code 5812); or
 - (iv) Stand-alone uncovered parking lots and uncovered parking lots that are part of a development project if the parking lot creates and/or replaces 5,000 square feet or more of impervious surface. This category includes the top uncovered portion of parking structures, unless drainage from the uncovered portion is

connected to the sanitary sewer along with the covered portions of the parking structure.

- (b) For redevelopment projects in the categories specified in Provision C.3.b.ii.(1)(a)(i)-(iv), specific exclusions are:
- (i) Interior remodels; and
 - (ii) Routine maintenance or repair such as:
 - roof or exterior wall surface replacement, and/or
 - pavement resurfacing within the existing footprint.
- (c) Where a redevelopment project in the categories specified in Provision C.3.b.ii.(1)(a)(i)-(iv) results in an alteration of **50 percent or more** of the impervious surface of a previously existing development that was not subject to Provision C.3, the entire project, consisting of all existing, new, and/or replaced impervious surfaces, must be included in the treatment system design (i.e., stormwater treatment systems must be designed and sized to treat stormwater runoff from the entire redevelopment project).
- (d) Where a redevelopment project in the categories specified in Provision C.3.b.ii.(1)(a)(i)-(iv) results in an alteration of **less than 50 percent** of the impervious surface of a previously existing development that was not subject to Provision C.3, only the new and/or replaced impervious surface of the project must be included in the treatment system design (i.e., stormwater treatment systems must be designed and sized to treat stormwater runoff from the new and/or replaced impervious surface of the project).

(2) **Other Development Projects**

New development projects that create 10,000 square feet or more of impervious surface (collectively over the entire project site) including commercial, industrial, residential housing subdivisions (i.e., detached single-family home subdivisions, multi-family attached subdivisions (town homes), condominiums, and apartments), mixed-use, and public projects. This category includes development projects on public or private land that fall under the planning and building authority of a Permittee. Detached single-family home projects that are not part of a larger plan of development are specifically excluded.

(3) **Other Redevelopment Projects**

Redevelopment projects that create and/or replace 10,000 square feet or more of impervious surface (collectively over the entire project site) including commercial, industrial, residential housing subdivisions (i.e., detached single-family home subdivisions, multi-family attached subdivisions (town homes), condominiums, and apartments), mixed-use, and public projects. Redevelopment is any land-disturbing activity that results in the creation, addition, or replacement of exterior impervious surface area on a site on which some past development has occurred. This

category includes redevelopment projects on public or private land that fall under the planning and building authority of a Permittee.

Specific exclusions to this category are:

- Interior remodels; and
- Routine maintenance or repair such as:
 - roof or exterior wall surface replacement, and/or
 - pavement resurfacing within the existing footprint.

- (a) Where a redevelopment project results in an alteration of **50 percent or more** of the impervious surface of a previously existing development that was not subject to Provision C.3, the entire project, consisting of all existing, new, and/or replaced impervious surfaces, must be included in the treatment system design (i.e., stormwater treatment systems must be designed and sized to treat stormwater runoff from the entire redevelopment project).
- (b) Where a redevelopment results in an alteration of **less than 50 percent** of the impervious surface of a previously existing development that was not subject to Provision C.3., only the new and/or replaced impervious surface of the project must be included in the treatment system design (i.e., stormwater treatment systems must be designed and sized to treat stormwater runoff from the new and/or replaced impervious surface of the project).

(4) Road Projects

Any of the following types of road projects that create 10,000 square feet or more of newly constructed contiguous impervious surface and that fall under the building and planning authority of a Permittee:

- (a) Construction of new streets or roads, including sidewalks and bicycle lanes built as part of the new streets or roads.
- (b) Widening of existing streets or roads with additional traffic lanes.
 - (i) Where the addition of traffic lanes results in an alteration of more than 50 percent of the impervious surface of an existing street or road within the project that was not subject to Provision C.3, the entire project, consisting of all existing, new, and/or replaced impervious surfaces, shall be included in the treatment system design (i.e., stormwater treatment systems must be designed and sized to treat stormwater runoff from the entire street or road that had additional traffic lanes added).
 - (ii) Where the addition of traffic lanes results in an alteration of less than 50 percent of the impervious surface of an existing street or road within the project that was not subject to Provision C.3, only the new and/or replaced impervious surface of the project must be included in the treatment system design (i.e., stormwater treatment systems must be designed and sized to treat

stormwater runoff from only the new traffic lanes). However, if the stormwater runoff from the existing traffic lanes and the added traffic lanes cannot be separated, any onsite treatment system shall be designed and sized to treat stormwater runoff from the entire street or road. If an offsite treatment system is installed or in-lieu fees paid in accordance with Provision C.3.e, the offsite treatment system or in-lieu fees must address only the stormwater runoff from the added traffic lanes.

- (c) Construction of impervious trails that are greater than 10 feet wide or are creek-side (within 50 feet of the top of bank).
- (d) Specific exclusions to Provisions C.3.b.ii.(4)(a)-(c) include the following:
 - Sidewalks built as part of new streets or roads and built to direct stormwater runoff to adjacent vegetated areas.
 - Bicycle lanes built as part of new streets or roads but are not hydraulically connected to the new streets or roads and that direct stormwater runoff to adjacent vegetated areas.
 - Impervious trails built to direct stormwater runoff to adjacent vegetated areas, or other non-erodible permeable areas, preferably away from creeks or towards the outboard side of levees.
 - Sidewalks, bicycle lanes, or trails constructed with permeable surfaces.²
 - Caltrans highway projects and associated facilities.

iii. **Implementation Level** – All elements of Provision C.3.b.i.-ii. shall be fully implemented immediately, including a database or equivalent tabular format that contains all the information listed under Reporting (Provision C.3.b.iv.)

iv. **Reporting**

(1) **C.3.b.i.(2) Reporting**

In the 2017 Annual Report, each Permittee shall provide a complete list of the development projects that are subject to the requirements of Provision C.3.b.i.(2). For each such project, the Permittee shall indicate the type of stormwater treatment system required or the specific exemption granted, pursuant to Provision C.3.b.i.(2)(a) and (b). If a Permittee has no projects subject to Provision C.3.b.i.(2), it shall so state in the 2017 Annual Report.

(2) **Annual Reporting – C.3.b.ii. Regulated Projects**

For each Regulated Project approved during the fiscal year reporting period, the following information shall be reported electronically in the

² Permeable surfaces include pervious concrete, porous asphalt, unit pavers, and granular materials.

fiscal year Annual Report, in tabular form (as set forth in the attached Provision C.3.b. Sample Reporting Table):

- (a) Project Name, Number, Location (cross streets), and Street Address;
- (b) Name of Developer, Phase No. (if project is being constructed in phases, each phase should have a separate entry), Project Type (e.g., commercial, industrial, multi-unit residential, mixed-use, public), and description;
- (c) Project watershed;
- (d) Total project site area and total area of land disturbed;
- (e) Total new impervious surface area and/or total replaced impervious surface area;
- (f) If redevelopment or road widening project, total pre-project impervious surface area and total post-project impervious surface area;
- (g) Status of project (e.g., application date, application deemed complete date, project approval date);
- (h) Source control measures;
- (i) Site design measures;
- (j) All post-construction stormwater treatment systems installed onsite, at a joint stormwater treatment facility, and/or at an offsite location;
- (k) Operation and maintenance responsibility mechanism for the life of the project;
- (l) Hydraulic Sizing Criteria used;
- (m) Alternative compliance measures for Regulated Project (if applicable)
 - (i) If alternative compliance will be provided at an offsite location in accordance with Provision C.3.e.i.(1), include information required in Provision C.3.b.iv.(2)(a) – (l) for the offsite project; and
 - (ii) If alternative compliance will be provided by paying in-lieu fees in accordance with Provision C.3.e.i.(2), provide information required in Provision C.3.b.iv.(2)(a) – (l) for the Regional Project. Additionally, provide a summary of the Regional Project's goals, duration, estimated completion date, total estimated cost of the Regional Project, and estimated monetary contribution from the Regulated Project to the Regional Project; and
- (n) Hydromodification (HM) Controls (see Provision C.3.g.) – If not required, state why not. If required, state control method used.

C.3.c. Low Impact Development (LID)

The goal of LID is to reduce runoff and mimic a site's predevelopment hydrology by minimizing disturbed areas and impervious cover and then infiltrating, storing,

detaining, evapotranspiring, and/or biotreating stormwater runoff close to its source. LID employs principles such as preserving and recreating natural landscape features and minimizing imperviousness to create functional and appealing site drainage that treats stormwater as a resource, rather than a waste product. Practices used to adhere to these LID principles include measures such as rain barrels and cisterns, green roofs, permeable pavement, preserving undeveloped open space, and biotreatment through rain gardens, bioretention units, bioswales, and planter/tree boxes.

Task Description

i. The Permittees shall, at a minimum, implement the following LID requirements:

(1) **Source Control Requirements**

Require all Regulated Projects to implement source control measures onsite that, at a minimum, shall include the following:

(a) Minimization of stormwater pollutants of concern in urban runoff through measures that may include plumbing of the following discharges to the sanitary sewer, subject to the local sanitary sewer agency's regulations and standards:

- Discharges from indoor floor mat/equipment/hood filter wash racks or covered outdoor wash racks for restaurants;
- Dumpster drips from covered trash, food waste, and compactor enclosures;
- Discharges from covered outdoor wash areas for vehicles, equipment, and accessories;
- Swimming pool water, if discharge to onsite vegetated areas is not a feasible option; and
- Fire sprinkler test water, if discharge to onsite vegetated areas is not a feasible option;

(b) Properly designed covers, drains, and storage precautions for outdoor material storage areas, loading docks, repair/maintenance bays, and fueling areas;

(c) Properly designed trash storage areas;

(d) Landscaping that minimizes irrigation and runoff, promotes surface infiltration, minimizes the use of pesticides and fertilizers, and incorporates other appropriate sustainable landscaping practices and programs such as Bay-Friendly Landscaping;

(e) Efficient irrigation systems; and

(f) Storm drain system stenciling or signage.

(2) **Site Design and Stormwater Treatment Requirements**

(a) Require each Regulated Project to implement at least the following design strategies onsite:

- (i) Limit disturbance of natural water bodies and drainage systems; minimize compaction of highly permeable soils; protect slopes

and channels; and minimize impacts from stormwater and urban runoff on the biological integrity of natural drainage systems and water bodies;

- (ii) Conserve natural areas, including existing trees, other vegetation, and soils;
 - (iii) Minimize impervious surfaces;
 - (iv) Minimize disturbances to natural drainages; and
 - (v) Minimize stormwater runoff by implementing one or more of the following site design measures:
 - Direct roof runoff into cisterns or rain barrels for reuse.
 - Direct roof runoff onto vegetated areas.
 - Direct runoff from sidewalks, walkways, and/or patios onto vegetated areas.
 - Direct runoff from driveways and/or uncovered parking lots onto vegetated areas.
 - Construct sidewalks, walkways, and/or patios with pervious pavement systems.³
 - Construct driveways, bike lanes, and/or uncovered parking lots with pervious pavement systems.
- (b) Permittees shall collectively, on a regional or countywide basis, develop and adopt design specifications for pervious pavement systems, subject to the Executive Officer's approval. If countywide design specifications have been adopted and are contained in countywide stormwater handbooks, Permittees may reference these documents in the Annual Reports.
- (c) Require each Regulated Project to treat 100% of the amount of runoff identified in Provision C.3.d for the Regulated Project's drainage area with LID treatment measures onsite or with LID treatment measures at a joint stormwater treatment facility.
- (i) LID treatment measures are harvesting and use, infiltration, evapotranspiration, and biotreatment.
 - (ii) Biotreatment (or bioretention) systems shall be designed to have a surface area no smaller than what is required to accommodate a 5 inches/hour stormwater runoff surface loading rate, infiltrate runoff through biotreatment soil media at a minimum of 5 inches per hour, and maximize infiltration to the native soil during the life of the Regulated Project. The soil media for biotreatment (or bioretention) systems shall be designed to sustain healthy, vigorous plant growth and maximize stormwater runoff retention

³ Pervious pavement systems include pervious asphalt, pervious concrete, pervious pavers, and grid pavers.

and pollutant removal. Permittees shall ensure that Regulated Projects use biotreatment soil media that meet the minimum specifications set forth in Attachment L of the previous permit (Order No. R2-2009-0074), dated November 28, 2011. Permittees may collectively (on an all-Permittee scale or countywide scale) develop and adopt revisions to the soil media minimum specifications, subject to the Executive Officer's approval.

- (iii) Green roofs may be considered biotreatment systems that treat roof runoff only if they meet certain minimum specifications. Permittees shall ensure that green roofs installed at Regulated Projects meet the following minimum specifications:
 - (i) The green roof system planting media shall be sufficiently deep to provide capacity within the pore space of the media for the required runoff volume specified by Provision C.3.d.i.(1).
 - (ii) The green roof system planting media shall be sufficiently deep to support the long term health of the vegetation selected for the green roof, as specified by a landscape architect or other knowledgeable professional.
- (d) Require any Regulated Project that does not comply with Provision C.3.c.i.(2)(c) above to meet the requirements established in Provision C.3.e for alternative compliance.

ii. Reporting

- (1) Permittees shall collectively submit in the 2016 Annual Report, design specifications for pervious pavement systems that have been developed and adopted on a regional or countywide basis. If Permittees within a countywide program are using countywide design specifications that have been adopted and are contained in a countywide stormwater handbook, those Permittees may reference the countywide stormwater handbook in-lieu of submitting the actual design specifications.
- (2) For specific tasks listed above that are reported using the reporting tables required for Provision C.3.b.iv, a reference to those tables will suffice.

C.3.d. Numeric Sizing Criteria for Stormwater Treatment Systems

- i. **Task Description** – The Permittees shall require that stormwater treatment systems constructed for Regulated Projects meet at least one of the following hydraulic sizing design criteria:
 - (1) **Volume Hydraulic Design Basis** – Treatment systems whose primary mode of action depends on volume capacity shall be designed to treat stormwater runoff equal to:
 - (a) The maximized stormwater capture volume for the area, on the basis of historical rainfall records, determined using the formula and volume capture coefficients set forth in Urban Runoff Quality Management, WEF Manual of Practice No. 23/ASCE Manual of Practice No. 87, (1998), pages 175–178 (e.g., approximately the 85th percentile 24-hour storm runoff event); or
 - (b) The volume of annual runoff required to achieve 80 percent or more capture, determined in accordance with the methodology set forth in Section 5 of CASQA’s Stormwater Best Management Practice Handbook, New Development and Redevelopment (2003), using local rainfall data.
 - (2) **Flow Hydraulic Design Basis** – Treatment systems whose primary mode of action depends on flow capacity shall be sized to treat:
 - (a) 10 percent of the 50-year peak flow rate;
 - (b) The flow of runoff produced by a rain event equal to at least two times the 85th percentile hourly rainfall intensity for the applicable area, based on historical records of hourly rainfall depths; or
 - (c) The flow of runoff resulting from a rain event equal to at least 0.2 inches per hour intensity.
 - (3) **Combination Flow and Volume Design Basis** – Treatment systems that use a combination of flow and volume capacity shall be sized to treat at least 80 percent of the total runoff over the life of the project, using local rainfall data.
- ii. **Reporting** – Permittees shall use the reporting tables required in Provision C.3.b.iv.(2)
- iii. **Limitations on Use of Infiltration Devices in Stormwater Treatment Systems**
 - (1) For Regulated Projects, each Permittee shall review planned land use and proposed treatment design to verify that installed stormwater treatment systems with no under-drain, and that function primarily as infiltration devices, should not cause or contribute to the degradation of groundwater quality at project sites. An infiltration device is any structure that is designed to infiltrate stormwater into the subsurface and, as designed, bypass the natural groundwater protection afforded by surface soil.

Infiltration devices include dry wells, injection wells, and infiltration trenches (includes french drains).

- (2) For any Regulated Project that includes plans to install stormwater treatment systems which function primarily as infiltration devices, the Permittee shall require that:
 - (a) Appropriate pollution prevention and source control measures are implemented to protect groundwater at the project site, including the inclusion of a minimum of two feet of suitable soil to achieve a maximum 5 inches/hour infiltration rate for the infiltration system;
 - (b) Adequate maintenance is provided to maximize pollutant removal capabilities;
 - (c) The vertical distance from the base of any infiltration device to the seasonal high groundwater mark is at least 10 feet. (Note that some locations within the Permittees' jurisdictions are characterized by highly porous soils and/or high groundwater tables. In these areas, a greater vertical distance from the base of the infiltration device to the seasonal high groundwater mark may be appropriate, and treatment system approvals should be subject to a higher level of analysis that considers the potential for pollutants (such as from onsite chemical use), the level of pretreatment to be achieved, and other similar factors in the overall analysis of groundwater safety);
 - (d) Unless stormwater is first treated by a method other than infiltration, infiltration devices are not approved as treatment measures for runoff from areas of industrial or light industrial activity; areas subject to high vehicular traffic (i.e., 25,000 or greater average daily traffic on a main roadway or 15,000 or more average daily traffic on any intersecting roadway); automotive repair shops; car washes; fleet storage areas (e.g., bus, truck); nurseries; and other land uses that pose a high threat to water quality;
 - (e) Infiltration devices are not placed in the vicinity of known contamination sites unless it has been demonstrated that increased infiltration will not increase leaching of contaminants from soil, alter groundwater flow conditions affecting contaminant migration in groundwater, or adversely affect remedial activities; and
 - (f) Infiltration devices are located a minimum of 100 feet horizontally away from any known water supply wells, septic systems, and underground storage tanks with hazardous materials. (Note that some locations within the Permittees' jurisdictions are characterized by highly porous soils and/or high groundwater tables. In these areas, a greater horizontal distance from the infiltration device to known water supply wells, septic systems, or underground storage tanks with hazardous materials may be appropriate, and treatment system approvals should be subject to a higher level of analysis that considers the potential for pollutants (such as from onsite chemical use), the

level of pretreatment to be achieved, and other similar factors in the overall analysis of groundwater safety).

C.3.e. Alternative or In-Lieu Compliance with Provision C.3.b.

- i. The Permittees may allow a Regulated Project to provide alternative compliance with Provision C.3.b in accordance with one of the two options listed below:

(1) Option 1: LID Treatment at an Offsite Location

Treat a portion of the amount of runoff identified in Provision C.3.d for the Regulated Project's drainage area with LID treatment measures onsite or with LID treatment measures at a joint stormwater treatment facility **and** treat the remaining portion of the Provision C.3.d runoff with LID treatment measures at an offsite project in the same watershed. The offsite LID treatment measures must provide hydraulically-sized treatment (in accordance with Provision C.3.d) of an equivalent quantity of both stormwater runoff and pollutant loading and achieve a net environmental benefit.

(2) Option 2: Payment of In-Lieu Fees

Treat a portion of the amount of runoff identified in Provision C.3.d for the Regulated Project's drainage area with LID treatment measures onsite or with LID treatment measures at a joint stormwater treatment facility **and** pay equivalent in-lieu fees⁴ to treat the remaining portion of the Provision C.3.d runoff with LID treatment measures at a Regional Project.⁵ The Regional Project must achieve a net environmental benefit.

- (3)** For the alternative compliance options described in Provision C.3.e.i.(1) and (2) above, offsite and Regional Projects must be completed within three years after the end of construction of the Regulated Project. However, the timeline for completion of a Regional Project may be extended, up to five years after the completion of the Regulated Project, with prior Executive Officer approval. Executive Officer approval will be granted contingent upon a demonstration of good faith efforts to implement the Regional Project, such as having funds encumbered and applying for the appropriate regulatory permits.

ii. Special Projects

- (1)** When considered at the watershed scale, certain land development projects characterized as smart growth, high density, or transit-oriented development can either reduce existing impervious surfaces, or create less "accessory" impervious areas and automobile-related pollutant impacts.

⁴ **In-lieu fees** – Monetary amount necessary to provide both hydraulically-sized treatment (in accordance with Provision C.3.d) with LID treatment measures of an equivalent quantity of stormwater runoff and pollutant loading, and a proportional share of the operation and maintenance costs of the Regional Project.

⁵ **Regional Project** – A regional or municipal stormwater treatment facility that discharges into the same watershed as the Regulated Project.

Incentive LID Treatment Reduction Credits approved by the Water Board may be applied to these Special Projects, which are Regulated Projects that meet the specific criteria listed below in Provision C.3.e.ii.(2). For any Special Project, the allowable incentive LID Treatment Reduction Credit is the maximum percentage of the amount of runoff identified in Provision C.3.d. for the Special Project's drainage area, that may be treated with one or a combination of the following two types of non-LID treatment systems:

- Tree-box-type high flowrate biofilters
- Vault-based high flowrate media filters

The allowed LID Treatment Reduction Credit recognizes that density and space limitations for the Special Projects identified herein may make 100% LID treatment infeasible.

- (2) Prior to granting any LID Treatment Reduction Credits, Permittees must first establish all the following:
- (a) The infeasibility of treating 100% of the amount of runoff identified in Provision C.3.d for the Regulated Project's drainage area with LID treatment measures onsite;
 - (b) The infeasibility of treating 100% of the amount of runoff identified in Provision C.3.d for the Regulated Project's drainage area with LID treatment measures offsite or paying in-lieu fees to treat 100% of the Provision C.3.d runoff with LID treatment measures at an offsite or Regional Project; and
 - (c) The infeasibility of treating 100% of the amount of runoff identified in Provision C.3.d for the Regulated Project's drainage area with some combination of LID treatment measures onsite, offsite, and/or paying in-lieu fees towards at an offsite or Regional Project.

For each Special Project, a Permittee shall document the basis of infeasibility used to establish technical and/or economic infeasibility.

Under Provision C.3.e.vi, each Permittee is required to report on the infeasibility of 100% LID treatment in each scenario described in Provision C.3.e.ii.(2)(a)-(c) above, for each of the Special Projects for which LID Treatment Reduction Credit was applied.

- (3) Category A Special Project Criteria
- (a) To be considered a Category A Special Project, a Regulated Project must meet all of the following criteria:
 - (i) Be built as part of a Permittee's stated objective to preserve or enhance a pedestrian-oriented type of urban design.
 - (ii) Be located in a Permittee's designated central business district, downtown core area or downtown core zoning district, neighborhood business district or comparable pedestrian-

- oriented commercial district, or historic preservation site and/or district.
- (iii) Create and/or replace one half acre or less of impervious surface area.
 - (iv) Include no surface parking, except for incidental surface parking. Incidental surface parking is allowed only for emergency vehicle access, Americans with Disabilities Act (ADA) accessibility, and passenger and freight loading zones.
 - (v) Have at least 85% coverage for the entire project site by permanent structures. The remaining 15% portion of the site is to be used for safety access, parking structure entrances, trash and recycling service, utility access, pedestrian connections, public uses, landscaping, and stormwater treatment.
- (b) Any Category A Special Project may qualify for 100% LID Treatment Reduction Credit, which would allow the Category A Special Project to treat up to 100% of the amount of runoff identified in Provision C.3.d. for the Project's drainage area with either one or a combination of the two types of non-LID treatment systems listed in Provision C.3.e.ii.(1) above.
- (4) **Category B Special Project Criteria**
- (a) To be considered a Category B Special Project, a Regulated Project must meet all of the following criteria:
 - (i) Be built as part of a Permittee's stated objective to preserve or enhance a pedestrian-oriented type of urban design.
 - (ii) Be located in a Permittee's designated central business district, downtown core area or downtown core zoning district, neighborhood business district or comparable pedestrian-oriented commercial district, or historic preservation site and/or district.
 - (iii) Create and/or replace greater than one-half acre but no more than 2 acres of impervious surface area.
 - (iv) Include no surface parking, except for incidental surface parking. Incidental surface parking is allowed only for emergency vehicle access, ADA accessibility, and passenger and freight loading zones.
 - (v) Have at least 85% coverage for the entire project site by permanent structures. The remaining 15% portion of the site is to be used for safety access, parking structure entrances, trash and recycling service, utility access, pedestrian connections, public uses, landscaping, and stormwater treatment.
 - (b) For any Category B Special Project, the maximum LID Treatment Reduction Credit allowed is determined based on the density achieved by the Project in accordance with the criteria listed below. Density is

expressed in Floor Area Ratios (FARs⁶) for commercial development projects, in Dwelling Units per Acre (DU/Ac) for residential development projects, and in FARs and DU/Ac for mixed-use development projects.

(i) 50% Maximum LID Treatment Reduction Credit

- For any commercial Category B Special Project with an FAR of at least 2:1, up to 50% of the amount of runoff identified in Provision C.3.d. for the Project's drainage area may be treated with either one or a combination of the two types of non-LID treatment systems listed in Provision C.3.e.ii.(1) above.
- For any residential Category B Special Project with a gross density⁷ of at least 50 DU/Ac, up to 50% of the amount of runoff identified in Provision C.3.d. for the Project's drainage area may be treated with either one or a combination of the two types of non-LID treatment systems listed in Provision C.3.e.ii.(1) above.
- For any mixed use Category B Special Project with an FAR of at least 2:1 or a gross density of at least 50 DU/Ac, up to 50% of the amount of runoff identified in Provision C.3.d. for the Project's drainage area may be treated with either one or a combination of the two types of non-LID treatment systems listed in Provision C.3.e.ii.(1) above.

(ii) 75% Maximum LID Treatment Reduction Credit

- For any commercial Category B Special Project with an FAR of at least 3:1, up to 75% of the amount of runoff identified in Provision C.3.d. for the Project's drainage area may be treated with either one or a combination of the two types of non-LID treatment systems listed in Provision C.3.e.ii.(1) above.
- For any residential Category B Special Project with a gross density of at least 75 DU/Ac, up to 75% of the amount of runoff identified in Provision C.3.d. for the Project's drainage area may be treated with either one or a combination of the two types of non-LID treatment systems listed in Provision C.3.e.ii.(1) above.
- For any mixed use Category B Special Project with an FAR of at least 3:1 or a gross density of at least 75 DU/Ac, up to 75% of the amount of runoff identified in Provision C.3.d. for the Project's drainage area may be treated with either one or a combination of the two types of non-LID treatment systems listed in Provision C.3.e.ii.(1) above.

(iii) 100% Maximum LID Treatment Reduction Credit

⁶ **Floor Area Ratio** – The ratio of the total floor area on all floors of all buildings at a project site (except structures, floors, or floor areas dedicated to parking) to the total project site area.

⁷ **Gross Density** – The total number of residential units divided by the acreage of the entire site area, including land occupied by public right-of-ways, recreational, civic, commercial and other non-residential uses.

- For any commercial Category B Special Project with an FAR of at least 4:1, up to 100% of the amount of runoff identified in Provision C.3.d. for the Project's drainage area may be treated with either one or a combination of the two types of non-LID treatment systems listed in Provision C.3.e.ii.(1) above.
 - For any residential Category B Special Project with a gross density of at least 100 DU/Ac, up to 100% of the amount of runoff identified in Provision C.3.d. for the Project's drainage area may be treated with either one or a combination of the two types of non-LID treatment systems listed in Provision C.3.e.ii.(1) above.
 - For any mixed use Category B Special Project with an FAR of at least 4:1 or a gross density of at least 100 DU/Ac, up to 100% of the amount of runoff identified in Provision C.3.d. for the Project's drainage area may be treated with either one or a combination of the two types of non-LID treatment systems listed in Provision C.3.e.ii.(1) above.
- (5) **Category C Special Project Criteria (Transit-Oriented Development)**
- (a) **Transit-Oriented Development** refers to the clustering of homes, jobs, shops and services in close proximity to rail stations, ferry terminals or bus stops offering access to frequent, high-quality transit services. This pattern typically involves compact development and a mixing of different land uses, along with amenities like pedestrian-friendly streets. To be considered a Category C Special Project, a Regulated Project must meet all of the following criteria:
- (i) Be characterized as a non-auto-related land use project. That is, Category C specifically excludes any Regulated Project that is a stand-alone surface parking lot; car dealership; auto and truck rental facility with onsite surface storage; fast-food restaurant, bank or pharmacy with drive-through lanes; gas station, car wash, auto repair and service facility; or other auto-related project unrelated to the concept of Transit-Oriented Development.
 - (ii) If a commercial development project, achieve at least an FAR of 2:1.
 - (iii) If a residential development project, achieve at least a gross density of 25 DU/Ac.
 - (iv) If a mixed use development project, achieve at least an FAR of 2:1 or a gross density of 25 DU/Ac.
- (b) For any Category C Special Project, the total maximum LID Treatment Reduction Credit allowed is the sum of three different types of credits that the Category C Special Project may qualify for, namely: Location, Density and Minimized Surface Parking Credits.

- (c) Location Credits
- (i) A Category C Special Project may qualify for the following Location Credits:
 - a. 50% Location Credit: Located within a ¼ mile radius of an existing or planned transit hub.
 - b. 25% Location Credit: Located within a ½ mile radius of an existing or planned transit hub.
 - c. 25% Location Credit: Located within a planned Priority Development Area (PDA), which is an infill development area formally designated by the Association of Bay Area Government's / Metropolitan Transportation Commission's FOCUS regional planning program. FOCUS is a regional incentive-based development and conservation strategy for the San Francisco Bay Area.
 - (ii) Only one Location Credit may be used by an individual Category C Special Project, even if the project qualifies for multiple Location Credits.
 - (iii) At least 50% or more of a Category C Special Project's site must be located within the ¼ or ½ mile radius of an existing or planned transit hub to qualify for the corresponding Location Credits listed above. One hundred percent of a Category C Special Project's site must be located within a PDA to qualify for the corresponding Location Credit listed above.
 - (iv) Transit hub is defined as a rail, light rail, or commuter rail station, ferry terminal, or bus transfer station served by three or more bus routes (i.e., a bus stop with no supporting services does not qualify). A planned transit hub is a station on the MTC's Regional Transit Expansion Program list, per MTC's Resolution 3434 (revised April 2006), which is a regional priority funding plan for future transit stations in the San Francisco Bay Area.
- (d) Density Credits: To qualify for any Density Credits, a Category C Special Project must first qualify for one of the Location Credits listed in Provision C.3.e.ii.(5)(c) above.
- (i) A Category C Special Project that is a commercial or mixed-use development project may qualify for the following Density Credits:
 - a. 10% Density Credit: Achieve an FAR of at least 2:1.
 - b. 20% Density Credit: Achieve an FAR of at least 4:1.
 - c. 30% Density Credit: Achieve an FAR of at least 6:1.
 - (ii) A Category C Special Project that is a residential or mixed-use development project may qualify for the following Density Credits:

- a. 10% Density Credit: Achieve a gross density of at least 30 DU/Ac.
- b. 20% Density Credit: Achieve a gross density of at least 60 DU/Ac.
- c. 30% Density Credit: Achieve a gross density of at least 100 DU/Ac.
- (iii) Commercial Category C Projects do not qualify for Density Credits based on DU/Ac and residential Category C Projects do not qualify for Density Credits based on FAR. Mixed use Category C Projects may use Density Credits based on either DU/Ac or FAR, but not both.
- (iv) Only one Density Credit may be used by an individual Category C Special Project, even if the project qualifies for multiple Density Credits.
- (e) Minimized Surface Parking Credits: To qualify for any Minimized Surface Parking Credits, a Category C Special Project must first qualify for one of the Location Credits listed in Provision C.3.e.ii.(5)(c) above.
 - (i) A Category C Special Project may qualify for the following Minimized Surface Parking Credits:
 - a. 10% Minimized Surface Parking Credit: Have 10% or less of the total post-project impervious surface area dedicated to at-grade surface parking. The at-grade surface parking must be treated with LID treatment measures.
 - b. 20% Minimized Surface Parking Credit: Have no surface parking except for incidental surface parking. Incidental surface parking is allowed only for emergency vehicle access, ADA accessibility, and passenger and freight loading zones.
 - (ii) Only one Minimized Surface Parking Credit may be used by an individual Category C Special Project, even if the project qualifies for multiple Minimized Surface Parking Credits.
- (6) Any Regulated Project that meets all the criteria for multiple Special Projects Categories (i.e., a Regulated Project that may be characterized as a Category B or C Special Project) may only use the LID Treatment Reduction Credit allowed under one of the Special Projects Categories (i.e., a Regulated Project that may be characterized as a Category B or C Special Project may use the LID Treatment Reduction Credit allowed under Category B or Category C, but not the sum of both.).

iii. Implementation Level

- (1) Provisions C.3.e.i-ii supersede any Alternative Compliance Policies previously approved by the Executive Officer.

- (2) The definitions of FAR and gross density applicable to Provisions C.3.e.ii.(4) and (5) are effective July 1, 2016, and shall apply to all Special Projects granted final discretionary approval on or after July 1, 2016.
- (3) For all offsite projects and Regional Projects installed in accordance with Provision C.3.e.i-ii, the Permittees shall meet the Operation & Maintenance (O&M) requirements of Provision C.3.h.

iv. Reporting – Annual reporting shall be done in conjunction with reporting requirements under Provision C.3.b.iv.(2).

Any Permittee choosing to require 100% LID treatment onsite for all Regulated Projects and not allow alternative compliance under Provision C.3.e, shall include a statement to that effect in each Annual Report.

v. Reporting on Special Projects

- (1) Permittees shall track any identified potential Special Projects, including those projects that have submitted planning applications but that have not received final discretionary approval.
- (2) In each Annual Report, Permittees shall report to the Water Board on these tracked potential Special Projects using Table 3.1 found at the end of Provision C.3. All the required column entry information listed in Table 3.1 shall be reported for each potential Special Project. Any Permittee with no Special Projects shall so state.

For each Special Project listed in Table 3.1, Permittees shall include a narrative discussion of the feasibility or infeasibility of 100% LID treatment onsite, offsite, and at a Regional Project. The narrative discussion shall address each of the following:

- (a) The infeasibility of treating 100% of the amount of runoff identified in Provision C.3.d for the Regulated Project's drainage area with LID treatment measures onsite.
- (b) The infeasibility of treating 100% of the amount of runoff identified in Provision C.3.d for the Regulated Project's drainage area with LID treatment measures offsite or paying in-lieu fees to treat 100% of the Provision C.3.d runoff with LID treatment measures at a Regional Project.
- (c) The infeasibility of treating 100% of the amount of runoff identified in Provision C.3.d for the Regulated Project's drainage area with some combination of LID treatment measures onsite, offsite, and/or paying in-lieu fees towards a Regional Project.

Both technical and economic feasibility or infeasibility shall be discussed, as applicable. The discussion shall also contain enough technical and/or economic detail to document the basis of infeasibility used.

- (3) Once a Special Project has final discretionary approval, it shall be reported in the Provision C.3.b. Reporting Table in the same reporting year that the project was approved. In addition to the column entries contained in the

Provision C.3.b. Reporting Table, the Permittees shall provide the following supplemental information for each approved Special Project:

- (a) **Submittal Date:** Date that a planning application for the Special Project was submitted.
- (b) **Description:** Type of project, number of floors, number of units (commercial, mixed-use, residential), type of parking, and other relevant information.
- (c) **Site Acreage:** Total site area in acres.
- (d) **Gross Density in DU/Ac:** Number of dwelling units per acre.
- (e) **Density in FAR:** Floor Area Ratio.
- (f) **Special Project Category:** For each applicable Special Project Category, list the specific criteria applied to determine applicability. For each non-applicable Special Project Category, indicate n/a.
- (g) **LID Treatment Reduction Credit:** For each applicable Special Project Category, state the maximum total LID Treatment Reduction Credit applied. For Category C Special Projects also list the individual Location, Density, and Minimized Surface Parking Credits applied.
- (h) **Stormwater Treatment Systems:** List all proposed stormwater treatment systems and the corresponding percentage of the total amount of runoff identified in Provision C.3.d. for the Project's drainage area that will be treated by each treatment system.
- (i) **List of Non-LID Stormwater Treatment Systems:** List all non-LID stormwater treatment systems approved. For each type of non-LID treatment system, indicate: (1) the percentage of the total amount of runoff identified in Provision C.3.d. for the Special Project's drainage area, and (2) whether the treatment system either meets minimum design criteria published by a government agency or received certification issued by a government agency, and reference the applicable criteria or certification.

C.3.f. Alternative Certification of Stormwater Treatment Systems

- i. **Task Description** – In lieu of reviewing a Regulated Project's adherence to Provision C.3.d, a Permittee may elect to have a third party conduct detailed review and certify the Regulated Project's adherence to Provision C.3.d. The third party reviewer must be a Civil Engineer or a Licensed Architect or Landscape Architect registered in the State of California or staff of another Permittee subject to the requirements of this Permit.
- ii. **Implementation Level** – Any Permittee accepting third-party reviews must make a reasonable effort to ensure that the third party has no conflict of interest with regard to the Regulated Project in question. That is, any consultant or contractor (or his/her employees) hired to design and/or construct a stormwater treatment system for a Regulated Project shall not also be the certifying third party. The Permittee must verify that the third party certifying any Regulated Project has current training on stormwater treatment system design (within three

years of the certification signature date) for water quality and understands the groundwater protection principles applicable to Regulated Project sites.

Training conducted by an organization with stormwater treatment system design expertise (such as a college or university, the American Society of Civil Engineers, American Society of Landscape Architects, American Public Works Association, California Water Environment Association (CWEA), BASMAA, National Association of Flood & Stormwater Management Agencies, CASQA, or the equivalent, may be considered qualifying training.

- iii. **Reporting** – Projects reviewed by third parties shall be noted in reporting tables for Provision C.3.b.

C.3.g. Hydromodification Management

- i. **Hydromodification Management (HM) Projects** are Regulated Projects that create and/or replace one acre or more of impervious surface except where one of the following applies. All HM Projects shall meet the Hydromodification Management Standard of Provision C.3.g.ii.

- (1) The post-project impervious surface area is less than, or the same as, the pre-project impervious surface area.
- (2) The project is located in a catchment that drains to a hardened (e.g., continuously lined with concrete) engineered channel or channels or enclosed pipes that extend continuously to the Bay, Delta, or flow-controlled reservoir, or drains to channels that are tidally influenced.
- (3) The project is located in a catchment or subwatershed that is highly developed (i.e., that is 70% or more impervious).⁸

The Hydromodification Applicability Maps developed by the Permittees in the Alameda, Santa Clara, San Mateo, and Fairfield-Suisun Programs, and the City of Vallejo, under the Previous Permit remain in effect and are provided in Attachment C to this Permit. Permittees that do not have the location-based applicability criteria (Provision C.3.g.i.(2) – (3)) shown on existing maps shall develop, or require to be developed, new maps, overlays to existing maps, or other equivalent information that demonstrates whether a project falls under one of those two criteria. Such maps, overlays, or other equivalent information shall be acceptable to the Executive Officer and shall not be effective until accepted by the Executive Officer.

ii. **HM Standard**

Stormwater discharges from HM Projects shall not cause an increase in the erosion potential of the receiving stream over the pre-project (existing) condition. Increases in runoff flow and volume shall be managed so that post-

⁸ The Permittees' maps accepted for the Previous Permit were prepared using this standard, adjusted to 65% imperviousness to account for the presence of vegetation on the photographic references used to determine imperviousness. Thus, the maps for the Previous Permit are accepted as meeting the 70% requirement.

project runoff shall not exceed estimated pre-project rates and durations, where such increased flow and/or volume is likely to cause increased potential for erosion of creek beds and banks, silt pollutant generation, or other adverse impacts on beneficial uses due to increased erosive force. The demonstration that post-project stormwater runoff does not exceed estimated pre-project runoff rates and durations shall include the following:

- (1) **Range of Flows to Control:** For Alameda, Contra Costa, San Mateo, and Santa Clara Permittees, and the City of Vallejo, HM controls shall be designed such that post-project stormwater discharge rates and durations match pre-project discharge rates and durations from 10 percent of the pre-project 2-year peak flow⁹ up to the pre-project 10-year peak flow. For Fairfield-Suisun Permittees, HM controls shall be designed such that post-project stormwater discharge rates and durations shall match from 20 percent of the 2-year peak flow up to the pre-project 10-year peak flow.
- (2) **Goodness of Fit Criteria:** The post-project flow duration curve shall not deviate above the pre-project flow duration curve by more than 10 percent over more than 10 percent of the length of the curve corresponding to the range of flows to control.
- (3) **Standard HM Modeling:** Permittees shall use, or shall cause to be used, a continuous simulation hydrologic computer model to simulate pre-project and post-project runoff, or sizing factors or charts developed using such a model, to design onsite or regional HM controls. The Permittees shall compare, or shall cause to be compared, the pre-project and post-project model output for a long-term rainfall record and shall show that applicable performance criteria in C.3.g.ii.(1)-(3) above are met. HM controls designed using the Bay Area Hydrology Model (BAHM) and site-specific input data shall be considered to meet the HM Standard. Such use must be consistent with directions and options set forth in the most current BAHM User Manual. Modifications to the BAHM shall be acceptable to the Executive Officer, shall be consistent with the requirements of this Provision, and shall be reported as required below:
 - **Precipitation Data:** Precipitation data used in the modeling of HM controls shall, at a minimum, be 30 years of hourly rainfall data representative of the area being modeled. Where a longer rainfall record is available, the longer record shall be used.
 - **Calculating Post-Project Runoff:** Retention and detention basins shall be considered impervious surfaces for purposes of calculating

⁹ Where referred to in this Order, the 2-year peak flow is determined using a flood frequency analysis based on USGS Bulletin 17 B to obtain the peak flow statistically expected to occur at a 2-year recurrence interval. In this analysis, the appropriate record of hourly rainfall data (e.g., 35-50 years of data) is run through a continuous simulation hydrologic model, the annual peak flows are identified, rank ordered, and the 2-year peak flow is estimated. Such models include U.S. EPA's Hydrologic Simulation Program—Fortran (HSPF), the U.S. Army Corps of Engineers' Hydrologic Engineering Center-Hydrologic Modeling System (HEC-HMS), and U.S. EPA's Storm Water Management Model (SWMM).

post-project runoff. Pre- and post-project runoff shall be calculated and compared for the entire site, without separating or excluding areas that may be considered self-retaining.

iii. HM Standard – Methodology for Direct Simulation of Erosion Potential

The Permittees may, collectively, propose an additional method, using direct simulation of erosion potential, by which to meet the HM Standard in Provision C.3.g.ii. Such a method shall be submitted to the Water Board for review and shall not be effective until approved by the Executive Officer. At a minimum, a proposal to use this additional method shall demonstrate that stormwater discharges from HM Projects using the method will not cause an increase in the erosion potential of the receiving stream over the pre-project (existing) condition, and that increases in runoff flow and volume will be managed so that post-project runoff does not exceed estimated pre-project rates and durations, where such increased flow and/or volume is likely to cause increased potential for erosion of creek beds and banks, silt pollutant generation, or other adverse impacts on beneficial uses due to increased erosive force. Such demonstration shall include, but not be limited to:

- (1) An appropriately detailed discussion of the theoretical approach behind the method and the results for the areas to which it is proposed to be applied;
- (2) Appropriate continuous simulation hydrologic modeling using Region-specific field data, including creek data (cross sections, longitudinal data, etc.), precipitation data (a record of at least 30 years of hourly data that is appropriately representative of the areas where the method is to be applied), safety factor(s), and HM control designs; and
- (3) A description of how the method will be applied, including any models produced and how they will be used by the Permittees and/or project proponents. Such description shall include a listing of HM controls that may be used to comply with the HM requirements of this Permit, a description, with appropriate technical support, of how they will be sized to comply and how the Permittees will ensure appropriate implementation of the method, and all other necessary information, as appropriate.

iv. Types of HM Controls

Projects shall meet the HM Standard using any of the following HM controls or a combination thereof:

- (1) **Onsite HM controls** are flow duration control structures, LID features and facilities, and hydrologic source controls that collectively result in the HM Standard being met at the point(s) where stormwater runoff discharges from the project site.
- (2) **Regional HM controls** are flow duration control structures that collect stormwater runoff discharge from multiple projects (each of which shall incorporate hydrologic source control measures as well) and are designed

such that the HM Standard is met for all the projects at the point where the regional HM control discharges.

- (3) **In-stream measures** shall be an option only where the stream, which receives runoff from the project, is already impacted by erosive flows and shows evidence of excessive sediment, erosion, deposition, or is a hardened channel.

In-stream measures involve modifying the receiving stream channel slope and geometry so that the stream can convey the new flow regime without increasing the potential for erosion and aggradation. In-stream measures are intended to improve long-term channel stability and prevent erosion by reducing the erosive forces imposed on the channel boundary.

In-stream measures, or a combination of in-stream and onsite controls, shall be designed to achieve the HM Standard from the point where the project(s) discharge(s) to the stream to the mouth of the stream or to achieve an equivalent degree of flow control mitigation (based on amount of impervious surface mitigated) as part of an in-stream project located in the same watershed. Designing in-stream controls requires a hydrologic and geomorphic evaluation (including a longitudinal profile) of the stream system downstream and upstream of the project. As with all in-stream activities, other regulatory permits must be obtained by the project proponent.¹⁰

v. Implementation Level

All HM Projects shall meet the HM Standard in Provision C.3.g.ii immediately. For Contra Costa Permittees, Projects receiving final planning entitlements on or before January 3, 2018, may be allowed to use the Contra Costa design standards from the Previous Permit. After January 3, 2018, for Contra Costa Permittees, Projects shall comply with the Contra Costa design standards, including any modifications made.

vi. Reporting

- (1) New HM Applicability Maps or equivalent information prepared pursuant to Provision C.3.g.i, for those Permittees who do not have an approved Map, shall be submitted, acceptable to the Executive Officer, not later than the second Annual Report following the Permit's effective date.
- (2) Contra Costa Permittees shall, with the 2017 Annual Report, submit a technical report, acceptable to the Executive Officer, consisting of an HM Management Plan describing how Contra Costa will implement the Permit's HM requirements (e.g., how it will update or modify its practices to meet Permit requirements). At a minimum, the technical report shall

¹⁰ In-stream control projects require a Stream Alteration Agreement from CDFW, a CWA section 404 permit from the U.S. Army Corps of Engineers, and a section 401 certification from the Water Board. Early discussions with these agencies on the acceptability of an in-stream modification are necessary to avoid project delays or redesign.

provide additional analysis and discussion as to how existing data appropriately evaluates how existing practices available for use meet the Permit's HM requirements, including limit conditions. The report shall, as necessary, propose modifications to Contra Costa's current HM practices, or propose alternate practices that have been accepted by the Water Board, to meet the Permit's HM requirements. The report may also: provide additional data on monitored installations; provide additional analysis and discussion as to how existing and additional data appropriately evaluates existing practices, including limit conditions and the range of conditions present across Contra Costa County; and provide other information or discussion, as appropriate.

- (3) Reporting of HM projects shall be as described in Provision C.3.b.
- (4) Permittees shall report collectively, with each Annual Report, a listing, summary, and date of modifications made to the BAHM, including the technical rationale. This shall be prepared at the countywide program level and submitted on behalf of participating Permittees.
- (5) In addition, for each HM Project approved during the reporting period, Permittees shall collect and make available the following information. Information shall be reported electronically, and, where appropriate, in tabular form.
 - Device(s) or method(s) used to meet the HM Standard, such as detention basin(s), bioretention unit(s), regional detention basin, or in-stream control(s);
 - Method used by the project proponent to design and size the device or method used to meet the HM Standard;
 - Site plans identifying impervious areas, surface flow directions for the entire site, and location(s) of HM measures;
 - For projects using standard sizing charts, a summary of sizing calculations used;
 - For projects using the BAHM, a listing of model inputs; and
 - For projects using custom modeling, a summary of the modeling calculations with a corresponding graph showing curve matching (existing, post-project, and post-project-with HM controls curves).

C.3.h. Operation and Maintenance of Stormwater Treatment Systems

- i. **Task Description** – Each Permittee shall implement an Operation and Maintenance (O&M) Verification Program.
- ii. **Implementation Level** – At a minimum, the O&M Verification Program shall include the following elements:

- (1) Conditions of approval or other legally enforceable agreements or mechanisms for all Regulated Projects that, at a minimum, require at least one of the following from all project proponents and their successors in control of the Project or successors in fee title:
 - (a) The project proponent's signed statement accepting responsibility for the O&M of the installed pervious pavement system(s) (if any), onsite, joint, and/or offsite stormwater treatment system(s), and HM control(s) (if any) until such responsibility is legally transferred to another entity;
 - (b) Written conditions in the sales or lease agreements or deed for the project that requires the buyer or lessee to assume responsibility for the O&M of the pervious pavement system(s) (if any), onsite, joint, and/or offsite installed stormwater treatment system(s), and HM control(s) (if any) until such responsibility is legally transferred to another entity;
 - (c) Written text in project deeds, or conditions, covenants and restrictions (CCRs) for multi-unit residential projects that require the homeowners association or, if there is no association, each individual owner to assume responsibility for the O&M of the installed pervious pavement system(s) (if any), onsite, joint, and/or offsite stormwater treatment system(s), and HM control(s) (if any) until such responsibility is legally transferred to another entity; or
 - (d) Any other legally enforceable agreement or mechanism, such as recordation in the property deed, that assigns the O&M responsibility for the installed pervious pavement system(s) (if any), onsite, joint, and/or offsite treatment system(s) and HM control(s) (if any) to the project owner(s) or the Permittee.
- (2) Coordination with the appropriate mosquito and vector control agency with jurisdiction to establish a protocol for notification of installed stormwater treatment systems and HM controls.
- (3) Conditions of approval or other legally enforceable agreements or mechanisms for all Regulated Projects that require the granting of site access to all representatives of the Permittee, local mosquito and vector control agency staff, and Water Board staff, for the sole purpose of performing O&M inspections of the installed pervious pavement system(s) (if any), stormwater treatment system(s) and HM control(s) (if any).
- (4) A database or equivalent tabular format of the following:
 - (a) All pervious pavement system(s) that total 3000 square feet or more installed at Regulated Projects, offsite, or at a Regional Project. The total square footage should not include pervious pavement systems installed as private-use patios for single family homes, townhomes, or condominiums.
 - (b) All stormwater treatment systems installed onsite at Regulated Projects, offsite, or at a joint or Regional Project.

- (c) All HM controls installed onsite at Regulated Projects, offsite, or at a joint or Regional Project.
- (5) The database or equivalent tabular format required in Provision C.3.h.ii.(4) shall include the following information for each Regulated Project, offsite project, and Regional Project:
 - (a) Name and address of the project;
 - (b) Names of the owner(s) and responsible operator(s) of the installed pervious pavement system(s) (if any), stormwater treatment system(s), and/or HM control(s);
 - (c) Specific description of the location (or a map showing the location) of the installed pervious pavement system(s) (if any), stormwater treatment system(s), and HM control(s) (if any);
 - (d) Date(s) that the pervious pavement system(s) (if any), stormwater treatment system(s), and HM controls (if any) was/were installed;
 - (e) Description of the type and size of the pervious pavement systems (if any), stormwater treatment system(s), and HM control(s) (if any) installed;
 - (f) Detailed information on O&M inspections. For each inspection, include the following:
 - (i) Date of inspection.
 - (ii) Type of inspection (e.g., installation, annual, followup, spot).
 - (iii) Type(s) of pervious pavement systems inspected (e.g., pervious concrete, pervious asphalt, pervious pavers).
 - (iv) Type(s) of stormwater treatment systems inspected (e.g., swale, bioretention unit, tree well) and an indication of whether the treatment system is an onsite, joint, or offsite system.
 - (v) Type of HM controls inspected.
 - (vi) Inspection findings or results (e.g., proper installation, proper operation and maintenance, system not operating properly because of plugging, bypass of stormwater because of improper installation or maintenance, maintenance required immediately).
 - (vii) Enforcement action(s) taken, if any (e.g., verbal warning, notice of violation, compliance schedule, administrative citation, administrative order).
- (6) A prioritized O&M Inspection Plan for inspecting all pervious pavement systems that total 3,000 square feet or more (excluding private-use patios for single family homes, townhomes, or condominiums), stormwater treatment systems and HM controls installed at Regulated Projects, offsite locations, and/or at joint or Regional Projects. For residential subdivisions with pervious pavement systems that include individual driveways, inspection of a representative number of driveways is sufficient.

At a minimum, the O&M Inspection Plan must specify the following for each fiscal year:

- (a) Inspection by the Permittee of all newly installed pervious pavement systems that total 3,000 square feet or more (excluding private-use patios for single family homes, townhomes, or condominiums), stormwater treatment systems, and HM controls (at Regulated Projects, offsite locations, and/or at joint or Regional Projects) at the completion of installation to ensure approved plans have been followed. For residential subdivisions with pervious pavement systems that include individual driveways, inspection of a representative number of driveways is sufficient;
- (b) Inspection by the Permittee of an average of 20 percent, but no less than 15 percent, of the total number (at the end of the preceding fiscal year) of Regulated Projects, offsite projects, or Regional Projects. Each inspection shall include inspection of all pervious pavement systems that total 3,000 square feet or more (excluding private-use patios for single family homes, townhomes, or condominiums), stormwater treatment systems, and HM controls installed at the Regulated Project, offsite project, or Regional Project. For residential subdivisions with pervious pavement systems that include individual driveways, inspection of a representative number of driveways is sufficient;
- (c) Inspection by the Permittee of all Regulated Projects, offsite projects, or Regional Projects at least once every five years. Each inspection shall include inspection of all pervious pavement systems that total 3,000 square feet or more (excluding private-use patios for single family homes, townhomes, or condominiums), stormwater treatment systems, and HM controls installed at the Regulated Project, offsite project, or Regional Project. For residential subdivisions with pervious pavement systems that include individual driveways, inspection of a representative number of driveways is sufficient; and
- (d) For vault-based stormwater treatment systems, Permittees may accept 3rd party inspection reports in lieu of conducting Permittee O&M inspections only if the 3rd party inspections are conducted at least annually. Information from each 3rd party inspection shall be included in the database or tabular format required in Provision C.3.h.ii.(5) and each inspection shall be clearly identified as a 3rd party inspection.

Each 3rd party inspection report must clearly document the following:

- (i) Name of 3rd party inspection company.
- (ii) Date of inspection.
- (iii) Condition of the treatment unit(s) at the time of inspection.
- (iv) Description of maintenance activities performed during the inspection.

- (v) Date- and time-stamped photographs of the inside of the vault unit(s) before and after maintenance activities.
- (7) An Enforcement Response Plan (ERP) for all O&M inspections that serves as a reference document for inspection staff so that consistent enforcement actions can be taken to bring development projects into compliance. At a minimum, the ERP must contain the following:
 - (a) Enforcement Procedures – A description of the Permittee’s procedures from the discovery of problems through the confirmation of implementation of corrective actions. This shall include guidance for recognizing common problems with the different types of pervious pavement systems, stormwater treatment systems, and/or HM controls, remedies for the problems, and appropriate enforcement actions, followup inspections, and appropriate time periods for implementation of corrective actions, and the roles and responsibilities of staff responsible for implementing the ERP.
 - (b) Enforcement Tools and Field Scenarios – A discussion of the various, escalating enforcement tools appropriate for different field scenarios of problems identified with the pervious pavement systems, stormwater treatment systems, and/or HM controls as well as for different types of inadequate response to enforcement actions taken.
 - (c) Timely Correction of Identified Problems – A description of the Permittee’s procedures for assigning due dates for corrective actions. Permittees shall require timely correction of all identified problems with the pervious pavement systems, stormwater treatment systems, and/or HM controls.

Corrective actions shall be implemented no longer than 30 days after a problem is identified by an inspector. Corrective actions can be temporary and more time may be allowed for permanent corrective actions. If more than 30 days are required for compliance, a rationale shall be recorded in the electronic database or equivalent tabular system.

iii. Due Date for Implementation: Immediate, except as follows:

- (1) July 1, 2016, for Provision C.3.h.ii.(6) and all requirements pertaining to pervious pavement systems in Provisions C.3.h.ii.(1)-(5), C.3.h.iv., and C.3.h.v.
- (2) July 1, 2017, for Provision C.3.h.ii.(7).

iv. Maintenance Approvals: The Permittees shall ensure that all pervious pavement systems that total 3,000 square feet or more (excluding private-use patios for single family homes, townhomes, or condominiums), stormwater treatment systems, and HM controls installed onsite, offsite, or at a joint or Regional Project by development proponents are properly operated and maintained for the life of the projects. In cases where the responsible party for a pervious pavement system, stormwater treatment system or HM control has

worked diligently and in good faith with the appropriate State and federal agencies to obtain approvals necessary to complete maintenance activities, but these approvals are not granted, the Permittees shall be deemed to be in compliance with this Provision. Permittees shall ensure that constructed wetlands installed by Regulated Projects and used for urban runoff treatment shall abide by the Water Board's Resolution No. 94-102: Policy on the Use of Constructed Wetlands for Urban Runoff Pollution Control and the O&M requirements contained therein.

v. Reporting

- (1) The database or equivalent tabular format required in Provisions C.3.b.ii.(4) and (5) shall be maintained by the Permittees. Upon request from the Executive Officer, information from this database or equivalent tabular format shall be submitted to Water Board staff for review. The requested information may include specific details on each inspection conducted within particular timeframes, such as several fiscal years.
- (2) On an annual basis, before the wet season, provide a list of newly installed (installed within the reporting period) stormwater treatment systems and HM controls to the local mosquito and vector control agency and the Water Board. This list shall include the facility locations and a description of the stormwater treatment measures and HM controls installed.
- (3) Each Permittee shall report the following information in the Annual Report each year:
 - (a) Total number of Regulated Projects in the Permittee's database or tabular format as of the end of the reporting period (fiscal year).
 - (b) Total number of Regulated Projects, offsite projects, and Regional Projects inspected during the reporting period (fiscal year).
 - (c) Percentage of the total number of Regulated Projects that were inspected during the reporting period (fiscal year).
 - (d) A discussion of the inspection findings for the year and any common problems encountered with various types of pervious pavement systems, treatment systems and/or HM controls. This discussion should include a general comparison to the inspection findings from the previous year.
 - (e) A discussion of the effectiveness of the Permittee's O&M Program and any proposed changes to improve the O&M Program (e.g., changes in prioritization plan or frequency of O&M inspections, other changes to improve effectiveness of program).
 - (f) For the 2016 Annual Report, Permittees may report on the total number and percentage of treatment and HM controls inspected, and exclude discussion of inspection findings for pervious pavement systems.
- (4) Each Permittee shall certify in the 2017 Annual Report that an Enforcement Response Plan has been completed by July 1, 2017.

C.3.i. Required Site Design Measures for Small Projects and Detached Single-Family Home Projects

i. **Task Description** – The Permittees shall require all development projects, which create and/or replace $\geq 2,500 \text{ ft}^2$ to $< 10,000 \text{ ft}^2$ of impervious surface, and detached single-family home projects,¹¹ which create and/or replace 2,500 square feet or more of impervious surface, to install one or more of the following site design measures:

- Direct roof runoff into cisterns or rain barrels for reuse.
- Direct roof runoff onto vegetated areas.
- Direct runoff from sidewalks, walkways, and/or patios onto vegetated areas.
- Direct runoff from driveways and/or uncovered parking lots onto vegetated areas.
- Construct sidewalks, walkways, and/or patios with permeable surfaces.²
- Construct bike lanes, driveways, and/or uncovered parking lots with permeable surfaces.²

This provision applies to all development projects that require approvals and/or permits issued under the Permittees' planning, building, or other comparable authority.

ii. **Reporting** – On an annual basis, discuss the implementation of the requirements of Provision C.3.i, including ordinance revisions, permit conditions, development of standard specifications and/or guidance materials, and staff training.

C.3.j. Green Infrastructure Planning and Implementation

The Permittees shall complete and implement a Green Infrastructure Plan for the inclusion of low impact development drainage design into storm drain infrastructure on public and private lands, including streets, roads, storm drains, parking lots, building roofs, and other storm drain infrastructure elements.

The Plan is intended to serve as an implementation guide and reporting tool during this and subsequent Permit terms to provide reasonable assurance that urban runoff TMDL wasteload allocations (e.g., for the San Francisco Bay mercury and PCBs TMDLs) will be met, and to set goals for reducing, over the long term, the adverse water quality impacts of urbanization and urban runoff on receiving waters. For this Permit term, the Plan is being required, in part, as an alternative to expanding the definition of Regulated Projects prescribed in Provision C.3.b to include all new and redevelopment projects that create or replace 5,000 square feet or more of impervious surface areas and road projects that just replace existing impervious surface area. It also provides a mechanism to establish and implement alternative or

¹¹ **Detached single-family home project** – The building of one single new house or the addition and/or replacement of impervious surface to one single existing house, which is not part of a larger plan of development.

in-lieu compliance options for Regulated Projects and to account for and justify Special Projects in accordance with Provision C.3.e.

Over the long term, the Plan is intended to describe how the Permittees will shift their impervious surfaces and storm drain infrastructure from gray, or traditional storm drain infrastructure where runoff flows directly into the storm drain and then the receiving water, to green—that is, to a more-resilient, sustainable system that slows runoff by dispersing it to vegetated areas, harvests and uses runoff, promotes infiltration and evapotranspiration, and uses bioretention and other green infrastructure practices to clean stormwater runoff.

The Plan shall also identify means and methods to prioritize particular areas and projects within each Permittee’s jurisdiction, at appropriate geographic and time scales, for implementation of green infrastructure projects. Further, it shall include means and methods to track the area within each Permittee’s jurisdiction that is treated by green infrastructure controls and the amount of directly connected impervious area. As appropriate, it shall incorporate plans required elsewhere within this Permit, and specifically plans required for the monitoring of and to ensure appropriate reductions in trash, PCBs, mercury, and other pollutants.

The Permittees may comply with any requirement of this Provision through a collaborative effort.

i. Green Infrastructure Program Plan Development

Each Permittee shall:

- (1) Prepare a framework or workplan that describes specific tasks and timeframes for development of its Green Infrastructure Plan. This framework or workplan shall be approved by the Permittee’s governing body, mayor, city manager, or county manager by June 30, 2017. At a minimum, the framework or workplan shall include a statement of purpose, tasks, and timeframes to complete the elements listed in Provision C.3.j.i.(2) below.
- (2) Prepare a Green Infrastructure Plan, subject to Executive Officer approval, that contains the following elements:
 - (a) A mechanism (e.g., SFEI’s GreenPlanIT tool or another tool) to prioritize and map areas for potential and planned projects, both public and private, on a drainage-area-specific basis, for implementation over the following time schedules, which are consistent with the timeframes for assessing load reductions specified in Provisions C.11. and C.12:
 - (i) By 2020;
 - (ii) By 2030; and
 - (iii) By 2040.

The mechanism shall include criteria for prioritization (e.g., specific logistical constraints, water quality drivers (e.g., TMDLs), opportunities to treat runoff from private parcels in retrofitted street

right-of-way) and outputs (e.g., maps, project lists) that can be incorporated into the Permittee's long-term planning and capital improvement processes.

- (b) Outputs from the mechanism described above, including, but not limited to, the prioritization criteria, maps, lists, and all other information, as appropriate. Individual project-specific reviews completed using these mechanisms are not required to be submitted with the Plan, but shall be made available upon request.
- (c) Targets for the amount of impervious surface, from public and private projects, within the Permittee's jurisdiction to be retrofitted over the following time schedules, which are consistent with the timeframes for assessing load reductions specified in Provisions C.11. and C.12:
 - (i) By 2020;
 - (ii) By 2030; and
 - (iii) By 2040.
- (d) A process for tracking and mapping completed projects, public and private, and making the information publically available (e.g., SFEI's GreenPlanIT tool).
- (e) General guidelines for overall streetscape and project design and construction so that projects have a unified, complete design that implements the range of functions associated with the projects. For example, for streets, these functions include, but are not limited to, street use for stormwater management, including treatment, safe pedestrian travel, use as public space, for bicycle, transit, vehicle movement, and as locations for urban forestry. The guidelines should call for the Permittee to coordinate, for example, street improvement projects so that related improvements are constructed simultaneously to minimize conflicts that may impact green infrastructure.
- (f) Standard specifications and, as appropriate, typical design details and related information necessary for the Permittee to incorporate green infrastructure into projects in its jurisdiction. The specifications shall be sufficient to address the different street and project types within a Permittee's jurisdiction, as defined by land use and transportation characteristics.
- (g) Requirement(s) that projects be designed to meet the treatment and hydromodification sizing requirements in Provisions C.3.c. and C.3.d. For street projects not subject to Provision C.3.b.ii. (i.e., non-Regulated Projects), Permittees may collectively propose a single approach with their Green Infrastructure Plans for how to proceed should project constraints preclude fully meeting the C.3.d sizing requirements. The single approach can include different options to address specific issues or scenarios. That is, the approach shall identify the specific constraints that would preclude meeting the sizing requirements and the design approach(es) to take in that

- situation. The approach should also consider whether a broad effort to incorporate hydromodification controls into green infrastructure, even where not otherwise required, could significantly improve creek health and whether such implementation may be appropriate, plus all other information, as appropriate (e.g., how to account for load reduction for the PCBs or mercury TMDLs).
- (h) A summary of the planning documents the Permittee has updated or otherwise modified to appropriately incorporate green infrastructure requirements, such as: General Plans, Specific Plans, Complete Streets Plans, Active Transportation Plans, Storm Drain Master Plans, Pavement Work Plans, Urban Forestry Plans, Flood Control or Flood Management Plans, and other plans that may affect the future alignment, configuration, or design of impervious surfaces within the Permittee's jurisdiction, including, but not limited to, streets, alleys, parking lots, sidewalks, plazas, roofs, and drainage infrastructure. Permittees are expected to complete these modifications as a part of completing the Green Infrastructure Plan, and by not later than the end of the permit term.
 - (i) To the extent not addressed above, a workplan identifying how the Permittee will ensure that green infrastructure and low impact development measures are appropriately included in future plans (e.g., new or amended versions of the kinds of plans listed above).
 - (j) A workplan to complete prioritized projects identified as part of a Provision C.3.e Alternative Compliance program or part of Provision C.3.j Early Implementation.
 - (k) An evaluation of prioritized project funding options, including, but not limited to: Alternative Compliance funds; grant monies, including transportation project grants from federal, State, and local agencies; existing Permittee resources; new tax or other levies; and other sources of funds.
- (3) Adopt policies, ordinances, and/or other appropriate legal mechanisms to ensure implementation of the Green Infrastructure Plan in accordance with the requirements of this provision.
 - (4) Conduct outreach and education in accordance with the following:
 - (a) Conduct public outreach on the requirements of this provision, including outreach coordinated with adoption or revision of standard specifications and planning documents, and with the initiation and planning of infrastructure projects. Such outreach shall include general outreach and targeted outreach to and training for professionals involved in infrastructure planning and design.
 - (b) Train appropriate staff, including planning, engineering, public works maintenance, finance, fire/life safety, and management staff on the requirements of this provision and methods of implementation.

- (c) Educate appropriate Permittee elected officials (e.g., mayors, city council members, county supervisors, district board members) on the requirements of this provision and methods of implementation.
- (5) Report on Green Infrastructure Planning as follows:
 - (a) Each Permittee shall submit documentation in the 2017 Annual Report that its framework or workplan for development of its Green Infrastructure Plan was approved by its governing body, mayor, city manager, or county manager by June 30, 2017.
 - (b) Each Permittee shall submit its completed Green Infrastructure Plan with the 2019 Annual Report.
 - (c) Each Permittee shall submit documentation of its legal mechanisms to ensure implementation of its Green Infrastructure Plan with the 2019 Annual Report.
 - (d) Each Permittee shall submit a summary of its outreach and education efforts in each Annual Report.

ii. Early Implementation of Green Infrastructure Projects (No Missed Opportunities)

Each Permittee shall:

- (1) Prepare and maintain a list of green infrastructure projects, public and private, that are already planned for implementation during the permit term and infrastructure projects planned for implementation during the permit term that have potential for green infrastructure measures.
- (2) Submit the list with each Annual Report and a summary of planning or implementation status for each public green infrastructure project and each private green infrastructure project that is not also a Regulated Project as defined in Provision C.3.b.ii. Include a summary of how each public infrastructure project with green infrastructure potential will include green infrastructure measures to the maximum extent practicable during the permit term. For any public infrastructure project where implementation of green infrastructure measures is not practicable, submit a brief description of the project and the reasons green infrastructure measures were impracticable to implement.

iii. Participate in Processes to Promote Green Infrastructure

- (1) The Permittees shall, individually or collectively, track processes, assemble and submit information, and provide informational materials and presentations as needed to assist relevant regional, State, and federal agencies to plan, design, and fund incorporation of green infrastructure measures into local infrastructure projects, including transportation projects. Issues to be addressed include coordinating the timing of funding from different sources, changes to standard designs and design criteria, ranking and prioritizing projects for funding, and implementation of cooperative in-lieu programs.

- (2) In each Annual Report, Permittees shall report on the goals and outcomes during the reporting year of work undertaken to participate in processes to promote green infrastructure.
- (3) In the 2019 Annual Report, Permittees shall submit a plan and schedule for new and ongoing efforts to participate in processes to promote green infrastructure.

iv. Tracking and Reporting Progress

- (1) The Permittees shall, individually or collectively, develop and implement regionally-consistent methods to track and report implementation of green infrastructure measures including treated area and connected and disconnected impervious area on both public and private parcels within their jurisdictions. The methods shall also address tracking needed to provide reasonable assurance that wasteload allocations for TMDLs, including the San Francisco Bay PCBs and mercury TMDLs, and reductions for trash, are being met.
- (2) In each Annual Report, Permittees shall report progress on development and implementation of the tracking methods.
- (3) In the 2019 Annual Report, Permittees shall submit the tracking methods and report implementation of green infrastructure measures including treated area, and connected and disconnected impervious area on both public and private parcels within their jurisdictions.

Table 3.1 Standard Tracking and Reporting Form for Potential Special Projects

Project No.	Permittee	Address	Application Submittal Date	Description	Site Total Acreage	Gross Density DU/Ac	FAR	Special Project Category	LID Treatment Reduction Credit	Stormwater Treatment Systems

Project No: Number of the Special Project as it appears in Table 3.1

Permittee: Name of the Permittee in whose jurisdiction the Special Project will be built.

Address: Address of the Special Project; if no street address, state the cross streets.

Submittal Date: Date that a planning application for the Special Project was submitted; if a planning application has not been submitted, include a projected application submittal date.

Description: Type of project (commercial, mixed-use, residential), number of floors, number of units, type of parking, and other relevant information.

Site Acreage: Total site area in acres.

Gross Density in DU/Ac: Number of dwelling units per acre.

FAR: Floor Area Ratio

Special Project Category: For each Special Project Category, indicate applicability. If a Category is applicable, list the specific criteria applied to determine applicability.

LID Treatment Reduction Credit: For each applicable Special Project Category, state the maximum total LID Treatment Reduction Credit available. For Category C Special Projects also list the individual Location, Density, and Minimized Surface Parking Credits available.

Stormwater Treatment Systems: List all proposed stormwater treatment systems and the corresponding percentage of the total amount of runoff runoff identified in Provision C.3.d. for the Project's drainage area that will be treated by each treatment system.

C.4. Industrial and Commercial Site Controls

Each Permittee shall implement an industrial and commercial site control program at all sites that could reasonably be considered to cause or contribute to pollution of stormwater runoff. Permittees shall conduct inspections, effective followup, and enforcement to abate potential and actual non-stormwater discharges, consistent with each Permittee's respective Enforcement Response Plan. These combined efforts will prevent the discharge of pollutants and impacts to beneficial uses of receiving waters. Inspections shall confirm implementation of appropriate and effective BMPs and other pollutant controls by industrial and commercial site operators.

C.4.a. Legal Authority for Effective Site Management

- i. Task Description** – Permittees shall have sufficient legal authority to inspect, require effective stormwater pollutant control, and implement progressively stricter enforcement to achieve expedient compliance and pollutant abatement at commercial and industrial sites within their jurisdiction.
- ii. Implementation Level** – Permittees shall have the legal authority to oversee, inspect, and require expedient compliance and pollution abatement at all industrial and commercial sites which may be reasonably considered to cause or contribute to pollution of stormwater runoff. Permittees shall have the legal authority to require implementation of appropriate BMPs at industrial and commercial facilities to address pollutant sources associated with outdoor process and manufacturing areas; outdoor material storage areas; outdoor waste storage and disposal areas; outdoor vehicle and equipment storage and maintenance areas; outdoor parking areas and access roads; outdoor wash areas; outdoor drainage from indoor areas, rooftop equipment; and contaminated and erodible surface areas; and other sources determined by the Permittees or the Water Board Executive Officer to have a reasonable potential to contribute to pollution of stormwater runoff.

C.4.b. Industrial and Commercial Business Inspection Plan (Inspection Plan)

- i. Task Description** – Permittees shall continue to update and implement an Inspection Plan that will serve as a prioritized inspection workplan. This Inspection Plan will allow inspection staff to categorize the commercial and industrial sites within the Permittee's jurisdiction by pollutant threat and inspection frequency, change inspection frequency based on site performance, and add and remove sites as businesses open and close.

- ii. Implementation Level**

- (1) Facilities For Prioritization Into Inspection Plan**

Commercial and industrial facilities with the functional aspects and types described below, and other facilities identified by the Permittees as reasonably likely to contribute to pollution of stormwater runoff, shall be prioritized for inspection on the basis of the potential for water quality impact using criteria such as pollutant sources on site, pollutants of

concern, proximity to a waterbody, potential and actual discharge history of the facility, and other relevant factors. The following are some of the functional aspects of businesses and types of businesses that shall be included in the Inspection Plan:

- (a) Sites that include the following types of functions that may produce pollutants when exposed to stormwater include, but are not limited to:
 - Outdoor process and manufacturing areas
 - Outdoor material storage areas
 - Outdoor waste storage and disposal areas
 - Outdoor vehicle and equipment storage and maintenance areas
 - Outdoor wash areas
 - Outdoor drainage from indoor areas
 - Rooftop equipment
 - Other sources determined by the Permittee or Water Board as reasonably likely to contribute to pollution of stormwater runoff.
 - (b) The following types of industrial and commercial businesses that have a reasonable likelihood to be sources of pollutants to stormwater and non-stormwater discharges:
 - Industrial facilities, as defined at 40 CFR 122.26(b)(14), including those subject to the Statewide NPDES General Permit for Stormwater Discharges Associated with Industrial Activity (hereinafter the Industrial General Permit);
 - Vehicle Salvage yards;
 - Metal and other recycled materials collection facilities, and waste transfer facilities;
 - Vehicle mechanical repair, maintenance, fueling, or cleaning facilities;
 - Building trades central facilities or yards, corporation yards;
 - Nurseries and greenhouses;
 - Building material retailers and storage;
 - Plastic manufacturers; and
 - Other facilities designated by the Permittee or Water Board to be reasonably likely to contribute to pollution of stormwater runoff.
- (2) Inspection Plan – The Inspection Plan shall be updated annually and shall contain the following information:
- (a) A description of the process for prioritizing inspections and frequency of inspections. The prioritization criteria shall assign a more frequent inspection schedule to the highest priority facilities per Provision C.4.b.ii.(1). If any geographical areas are to be targeted for

inspections due to high potential for stormwater pollution, these areas should be indicated in the Inspection Plan.

- (b) Assign appropriate inspection frequency for each industrial and commercial facility based on the priority established in Provision C.4.b.ii.(2)(a) above, potential for contributing pollution to stormwater runoff, and commensurate with the threat to water quality.
 - (c) A mechanism to include new businesses that warrant inspections.
 - (d) Total number and a list of all industrial and commercial facilities requiring inspections, within each Permittee's jurisdiction, based on the prioritization criteria established in Provision C.4.(b)ii.(2)(a). This list shall be updated annually.
 - (e) List of facilities scheduled for inspection each fiscal year of the MRP permit term. Each fiscal year's inspection list shall be added to the Inspection Plan at the beginning of the fiscal year as part of the annual update. Previous fiscal years' inspection lists shall remain in the Inspection Plan.
- (3) **Record Keeping** – For each facility identified in Provision C.4.b.ii.(2)(d), the Permittee shall maintain a database or equivalent tabular system of at least the following information:
- (a) Name and address of the business and local business operator;
 - (b) A brief description of business activity or pollutant source, including SIC code. Examples: outdoor process/manufacturing areas, outdoor material storage areas, outdoor waste storage and disposal areas, outdoor vehicle and equipment storage and maintenance areas, outdoor parking areas and access roads, outdoor wash areas, rooftop equipment, and outdoor drainage from indoor areas;
 - (c) Inspection priority and inspection frequency; and
 - (d) If coverage under the Industrial General Permit is required.
- iii. **Reporting** – The Permittees shall include the list of all industrial and commercial facilities requiring inspections identified in Provision C.4.b.ii.(2)(d) in each Annual Report.

C.4.c. Enforcement Response Plan (ERP)

- i. **Task Description** – Each Permittee shall implement and update, as needed, its ERP – a reference document for inspection staff to take consistent actions to achieve timely and effective compliance from all commercial and industrial site operators.
- ii. **Implementation Level** – The ERP shall contain the following:
 - (1) **Enforcement Procedures** – A description of the Permittee's procedures, from the discovery of problems through the confirmation of implementation of corrective actions. This shall include guidance for appropriate enforcement actions, followup inspections, referrals to another agency, appropriate time periods for implementation of corrective actions,

and the roles and responsibilities of staff responsible for implementing the ERP.

- (2) **Enforcement Tools and Field Scenarios** – A discussion of the various, escalating enforcement tools for different field scenarios, including, but not limited to potential discharges (e.g., housekeeping issues, evidence of actual non-stormwater discharges, lack of BMPs, inadequate BMPs, and inappropriate BMPs), actual non-stormwater discharges, non-compliance with previous enforcement actions, and sites with a history of potential and/or actual non-stormwater discharges.
- (3) **Timely Correction of Potential and Actual Non-stormwater Discharges** – A description of the Permittee’s procedures for assigning due dates for corrective actions. Permittees shall require timely correction of all potential and actual non-stormwater discharges. Permittees shall require active non-stormwater discharges to cease immediately. Corrective actions shall be implemented before the next rain event, but no longer than 10 business days after the potential and/or actual non-stormwater discharges are discovered. Corrective actions can be temporary and more time can be allowed for permanent corrective actions. If more than 10 business day are required for compliance, a rationale shall be recorded in the electronic database or equivalent tabular system.
- (4) **Referral and Coordination with Other Agencies** – Each Permittee shall enforce its stormwater ordinances to achieve compliance at sites with observed potential and actual non-stormwater discharges required in Discharge Prohibition A.1. For cases in which Permittee enforcement tools are inadequate to remedy the noncompliance, the Permittee shall refer the case to the Water Board, district attorney, or other relevant agencies for additional enforcement.

C.4.d. Inspections

- i. Task Description** – Each Permittee shall conduct inspections according to the Inspection Plan in Provision C.4.b.ii.(2) and the ERP in Provision C.4.c.ii. to enforce its ordinance to prevent stormwater pollution.
- ii. Implementation Level**
 - (1) **Inspections** – Inspections shall be conducted to include at least the following activities:
 - (a) Observations for appropriate BMPs to prevent stormwater runoff pollution or illicit discharge;
 - (b) Observations for evidence of unauthorized discharges, illicit connections, and potential discharge of pollutants to stormwater;
 - (c) Observations for noncompliance with Permittee ordinances and other local requirements; and
 - (d) Verification of coverage under the Industrial General Permit, if applicable.

- (2) Record Keeping – Permittees shall maintain adequate records to demonstrate compliance and appropriate followup enforcement responses for facilities inspected. Permittees shall maintain an electronic database or equivalent tabular system that contains the following information regarding industrial and commercial site inspections:
 - (a) Name of facility/site inspected
 - (b) Inspection date
 - (c) Industrial General Permit coverage required (Yes or No)
 - (d) Compliance status
 - (e) Specific problems
 - (f) Type of enforcement (if applicable)
 - (g) Problem resolution date
 - (h) Additional comments

The electronic database or equivalent tabular system shall be made readily available to Water Board staff or its representative during inspections and audits.

- (3) Data Evaluation – Permittees shall evaluate the frequency of potential and actual non-stormwater discharges by business category. Note trends and, as needed, implement focused inspections or education in subsequent years to address trends.

iii. Reporting

- (1) Permittees shall include the following information in the 2015-2016 Annual Report:
 - (a) Number of inspections conducted, Number of violations issued (excluding verbal warnings), Percentage of sites inspected in violation, and number and percent of violations resolved within 10 working days or otherwise deemed resolved in a longer, but still timely manner;
 - (b) Frequency and types/categories of violations observed, Frequency and type of enforcement conducted;
 - (c) Summary of types of violations noted by business category; and
 - (d) Facilities that are required to have coverage under the Industrial General Permit, but have not filed for coverage.
- (2) Beginning with the 2016-2017 Annual Report, Permittees shall include the following information in each Annual Report:
 - (a) Number of inspections conducted;
 - (b) Number of each type of enforcement action, as listed in each Permittee's ERP, issued;
 - (c) Number of enforcement actions or discreet number of potential and actual discharges fully resolved within 10 working days or otherwise deemed resolved in a longer, but still timely manner;

- (d) Frequency of potential and actual non-stormwater discharges by business category; and
- (e) A list of facilities that are required to have coverage under the Industrial General Permit, but have not filed for coverage.

C.4.e. Staff Training

- i. **Task Description** – Permittees shall provide focused training for industrial and commercial site inspectors and illicit discharge detection and elimination inspectors annually. Trainings may be program-wide, region-wide, or Permittee-specific.
- ii. **Implementation Level** – At a minimum, provide inspection training, within the 5-year term of this Permit, in the following topics:
 - (1) Urban runoff pollution prevention;
 - (2) Inspection procedures;
 - (3) Business Inspection Plan;
 - (4) Enforcement Response Plan;
 - (5) Illicit Discharge Detection and Elimination; and
 - (6) Appropriate BMPs to be used at different industrial and commercial facilities.
- iii. **Reporting** – The Permittees shall include the following information in each Annual Report:
 - (1) Dates of training;
 - (2) Training topics covered;
 - (3) Percentage of industrial and commercial site inspectors attending training; and
 - (4) Percentage of Illicit Discharge, Detection, and Elimination inspectors attending training.

C.5. Illicit Discharge Detection and Elimination

The purpose of this provision is to implement the illicit discharge prohibition and to ensure illicit discharges are detected and controlled that are not otherwise controlled under provisions C.4. – Industrial and Commercial Site Controls and C.6. – Construction Site Controls. Permittees shall implement an illicit discharge program that includes an active surveillance component and a centralized complaint collection and followup component to detect and eliminate illicit discharges into the MS4. Permittees shall maintain a complaint tracking and followup data system as their primary accountability reporting for this provision.

C.5.a. Legal Authority

- i. Task Description** – Permittees shall have the legal authority to prohibit and control illicit discharges and implement progressively stricter enforcement to achieve expedient compliance.
- ii. Implementation Level**
 - (1) Permittees shall have adequate legal authority to address illicit discharges to the MS4, including, but not limited to, the following:
 - (a) Sewage;
 - (b) Discharges of wash water resulting from the cleaning of exterior surfaces and pavement, or the equipment and other facilities of any commercial business, or any other public or private facility, including discharges from mobile cleaning businesses;
 - (c) Discharges of runoff from material storage areas, including those containing chemicals, fuels, or other potentially polluting or hazardous materials;
 - (d) Discharges of pool or fountain water containing chlorine, biocides, or other chemicals; discharges of pool or fountain filter backwash water;
 - (e) Discharges of sediment, pet waste, vegetation clippings, or other landscape or construction-related wastes; and
 - (f) Discharges of food-related wastes (e.g., grease, fish processing wastes, restaurant kitchen mat and trash bin wash water).
 - (2) Permittees shall have adequate legal authority to prohibit, discover through inspection and surveillance, and eliminate illicit connections and discharges to the MS4.
 - (3) Permittees shall have adequate legal authority to control the discharge of spills, dumping, or disposal of materials other than storm water to the MS4.

C.5.b. Enforcement Response Plan (ERP)

- i. Task Description** – Each Permittee shall implement and update, as needed, its ERP – a reference document for inspection staff to take consistent actions to

achieve timely and effective abatement of illicit discharges and compliance from responsible parties.

ii. Implementation Level – The ERP shall contain the following:

- (1) **Enforcement Procedures** – A description of the Permittee’s procedures from the discovery of a problem through the confirmation of implementation of corrective actions. This shall include guidance for appropriate enforcement actions, followup inspections, referrals to another agency, appropriate time periods for implementation of corrective actions, and the roles and responsibilities of staff responsible for implementing the ERP.
- (2) **Enforcement Tools and Field Scenarios** – A discussion of the various, escalating enforcement tools for different field scenarios, including, but not limited to potential discharges (e.g., housekeeping issues, evidence of actual discharges, lack of BMPs, inadequate BMPs, and inappropriate BMPs), actual discharges, non-compliance with previous enforcement actions, and sites with a history of potential and/or actual discharges.
- (3) **Timely Correction of Potential and Actual Discharges** – A description of the Permittee’s procedures for assigning due dates for corrective actions. Each Permittee shall require timely correction of all potential and/or actual discharges. Active discharges shall be required to cease immediately. Corrective actions shall be implemented before the next rain event, but no longer than 10 business days after the potential and/or actual discharges are discovered. Corrective actions can be temporary and more time can be allowed for permanent corrective actions. If more than 10 business days are required for compliance, a rationale shall be recorded in the electronic database or equivalent tabular system.

C.5.c. Spill, Dumping, and Complaint Response Program

i. Task Description – Each Permittee shall implement a program to respond to spills, dumping, and complaints.

ii. Implementation Level

- (1) Each Permittee shall have a central contact point for the public and Permittee’s staff to report spills, dumping, and complaints. At a minimum, this central contact point shall include a phone number. Permittee shall also include, as feasible, user friendly web reporting for spills and dumping.
- (2) Each Permittee shall publicize the phone number and web reporting address, if used, to internal Permittee’s staff and the public. The Permittee’s website shall be one of the places the central contact point is publicized. The Permittee’s website shall be updated with the central contact point to report spills and dumping by June 30, 2016. This central contact point shall be readily searchable on the Permittee’s website.

- (3) Each Permittee shall require its municipal staff conducting routine maintenance and inspection activities to report illicit discharges found during their activities to the central contact point so that illicit discharge staff can investigate and track.
 - (4) Each Permittee shall maintain and update, as needed, a spill, dumping, and complaint response flow chart and/or phone tree for the Permittee's staff responsible for the spill and dumping response program. At a minimum, this flow chart and/or phone tree shall identify staff or positions responsible for receiving the complaints and investigating and abating the complaints.
 - (5) Each Permittee shall maintain and update, as needed, a spill, dumping, and complaint response flow chart and phone tree or contact list for internal use that shows the various responsible agencies and their contacts, who would be involved in illicit discharge incident response that goes beyond the Permittee's immediate capabilities.
 - (6) Each Permittee shall conduct reactive inspections in response to spill, dumping, and complaint reports and shall also conduct followup inspections, as needed, to ensure that corrective measures have been effectively implemented to achieve and maintain compliance.
- iii. **Reporting** – Permittees shall provide the following information in the 2016 and 2020 Annual Reports:
- (1) The spill and dumping reporting phone number and the web address, if used;
 - (2) A screen shot of the Permittee's website showing the central contact point; and
 - (3) A discussion of how the central contact point – spill and dumping reporting phone number and, if used, the web address – is being publicized to Permittees' staff and the public.

C.5.d. Tracking and Case Followup

- i. **Task Description** – All incidents or discharges reported to the spill, dumping, and complaints central contact point, that might discharge into the MS4, shall be logged to track followup and response through problem resolution. The data collected shall be sufficient to demonstrate escalating responses for repeated problems and inter/intra-agency coordination, where appropriate. It is not necessary to track and report data according to this provision if they are tracked and reported according to State Water Resource Control Board Order No. 2006-0003-DWQ.
- ii. **Implementation Level** – Maintain a water quality spills, dumping, and complaints tracking and followup in an electronic database or equivalent tabular system.

The spill and discharge complaint tracking system shall contain the following information:

- (1) Complaint information:
 - (a) Date and time of complaint,
 - (b) Type of pollutant, and
 - (c) Problem Status (potential or actual discharge.).
- (2) Investigation information:
 - (a) Date and time started,
 - (b) Type of pollutant,
 - (c) Entered storm drain and/or receiving water,
 - (d) Date and time abated, and
 - (e) Type of enforcement based on the Permittee's ERP.

The electronic database or equivalent tabular system shall be made available to Water Board staff or representatives during audits or inspections.

iii. **Reporting** – Permittees shall provide the following information in the Annual Report:

- (1) Number of discharges reported;
- (2) Number of discharges reaching storm drains and/or receiving waters; and
- (3) Number discharges resolved in a timely manner.

C.5.e. Control of Mobile Sources

- i. **Task Description** – Permittees shall have oversight and control of pollutants associated with mobile businesses.
- ii. **Implementation Level** – Each Permittee shall implement a program to reduce the discharge of pollutants from mobile businesses.
 - (1) The program shall include the following:
 - (a) Implementation of minimum standards and BMPs for each of the various types of mobile businesses, such as automobile washing, power washing, steam cleaning, and carpet cleaning.
 - (b) Implementation of an enforcement strategy that specifically addresses the unique characteristics of mobile businesses.
 - (c) Regularly updating mobile business inventories.
 - (d) Implementation of an outreach and education strategy to mobile businesses operating within the Permittee's jurisdiction.
 - (e) Inspection of mobile businesses, as needed.
 - (2) Permittees may cooperate county-wide and/or region-wide with the implementation of their programs for mobile businesses, including sharing

of mobile business inventories, BMP requirements, enforcement action information, and education.

iii. Reporting

- (1) In the 2017 Annual Report, each Permittee shall provide the following: (a) minimum standards and BMPs for each of the various types of mobile businesses; (b) its enforcement strategy; (c) a list and summary of the specific outreach events and education conducted to the different types of mobile businesses operating within the Permittee's jurisdiction; (d) the number of inspections conducted at mobile businesses and/or job sites in 2016-2017; (e) discuss enforcement actions taken against mobile businesses in 2016-2017; (f) Permittee's inventory of mobile businesses operating within the Permittee's jurisdiction; and (g) a list and summary of the county-wide or regional activities conducted, including sharing of mobile business inventories, BMP requirements, enforcement action information, and education (Permittees' annual reports may refer to the county-wide or regional reports for this information.).
- (2) In the 2019 Annual Report, each Permittee shall include at least the following: (a) changes to minimum standards and BMPs for each of the various types of mobile businesses since the 2017 Annual Report; (b) changes to the Permittee's enforcement strategy; (c) minimum standards and BMPs developed for additional types of mobile businesses; (d) a list and summary of specific outreach events and education conducted to each type of mobile businesses operating within the Permittee's jurisdiction during the Permit term; (e) a discussion of the inspections conducted at mobile businesses and/or job sites; (f) Permittee's inventory of mobile businesses operating within the Permittee's jurisdiction; and (g) a discussion of the enforcement actions taken against mobile businesses during the permit term.

C.5.f. Municipal Separate Storm Sewer System (MS4) Map

- i. **Task Description** – Each Permittee shall make the map(s) of its MS4 available.
- ii. **Implementation Level** – Permittees shall make maps of the MS4 publicly available, either electronically or in hard copy. Public availability shall be made through a single point of contact that is convenient for the public, such as a staffed counter or web accessible maps. The MS4 map availability shall be publicized through Permittee directories and web pages.
- iii. **Reporting** – In the 2016 and 2019 Annual Reports, Permittees shall discuss how they make MS4 maps available to the public and how they publicize the availability of the MS4 maps.

C.6. Construction Site Control

Each Permittee shall implement a construction site inspection and control program at all construction sites, with followup and enforcement consistent with each Permittee's respective ERP, to prevent construction site discharges of pollutants into the storm drains. Inspections shall confirm implementation of appropriate and effective erosion and other construction pollutant controls by construction site operators/developers. Each Permittee shall in its reporting demonstrate the effectiveness of its inspections and enforcement activities to prevent polluted construction site discharges into storm drains.

C.6.a. Legal Authority for Effective Site Management

- i. **Task Description** – Permittees shall have the ability to require effective stormwater pollutant controls to prevent discharge of pollutants into the storm drains, and implement progressively stricter enforcement to achieve expedient compliance and cleanup at all public and private construction sites.
- ii. **Implementation Level**
 - (1) Permittees shall have the legal authority to require at all construction sites year-round effective erosion control, run-on and runoff control, sediment control, active treatment systems (as appropriate), good site management, and non-storm water management through all phases of construction (including, but not limited to, site grading, building, and finishing of lots) until the site is fully stabilized by landscaping or the installation of permanent erosion control measures.
 - (2) Permittees shall have the legal authority to oversee, inspect, and require expedient compliance and cleanup at all construction sites year-round.

C.6.b. Enforcement Response Plan (ERP)

- i. **Task Description** – Each Permittee shall implement and update, as needed, its ERP – a reference document for inspection staff to take consistent actions to achieve timely and effective compliance at all public and private construction sites.
- ii. **Implementation Level** – The ERP shall contain the following:
 - (1) **Enforcement Procedures** – A description of the Permittee's procedures from the discovery of the problems through the confirmation of implementation of corrective actions. This shall include guidance for appropriate enforcement actions, followup inspections, referrals to another agency, appropriate time periods for implementation of corrective actions, and the roles and responsibilities of staff responsible for implementing the ERP.
 - (2) **Enforcement Tools and Field Scenarios** – A discussion of the various, escalating enforcement tools for different field scenarios, including, but not limited to, potential discharges (e.g., housekeeping issues, evidence of actual discharges, lack of ERP, inadequate BMPs, and inappropriate

BMPs), actual discharges, non-compliance with previous enforcement actions, and sites with a history of potential and/or actual discharges.

- (3) **Timely Correction of Potential and Actual Discharges** – A description of the Permittee’s procedures for assigning due dates for corrective actions. Permittees shall require timely correction of all potential and actual discharges. Permittees shall require actual non-stormwater discharges to cease immediately. Corrective actions shall be implemented before the next rain event, but no longer than 10 business days after the potential and/or actual discharges are discovered. Corrective actions can be temporary and more time can be allowed for permanent corrective actions. If more than 10 business days are required for compliance, a rationale shall be recorded in the electronic database or equivalent tabular system.

C.6.c. Best Management Practices Categories

- i. **Task Description** – Permittees shall require all construction sites to have site-specific, and seasonally and phase-appropriate, effective BMPS) in the following six categories:

- Erosion Control
- Run-on and Run-off Control
- Sediment Control
- Active Treatment Systems, as necessary
- Good Site Management
- Non-Stormwater Management.

- ii. **Implementation Level**

The BMPs targeting specific construction site pollutants within the six categories listed in C.6.c.i. shall be site-specific. Site-specific BMPs targeting specific pollutants from the six categories listed in C.6.c.i. may be a combination of BMPs from:

- CASQA, BMP Handbook, Construction, January 2009.
- Caltrans Stormwater Quality Handbooks, Construction Site Best Management Practices Manual, March 2003, and addenda.
- New BMPs available since the release of these handbooks.
- Other BMPs shown to provide equivalent protection.

C.6.d. Plan Approval Process

- i. **Task Description** – Permittees shall review erosion control plans for consistency with local requirements and the appropriateness and adequacy of proposed BMPs for each site before issuance of grading permits for projects. Permittees shall also verify that sites disturbing one acre or more of land have filed a Notice of Intent for permit coverage under the Construction General Permit.

- ii. **Implementation Level** – Before approval and issuance of local grading permits, each Permittee shall perform the following:
 - (1) Review the site operator's/developer's erosion/pollution control plan or Stormwater Pollution Prevention Plan (SWPPP) to verify compliance with the Permittee's grading ordinance and other local requirements. Also review the site operator's/developer's erosion/pollution control plan or SWPPP to verify that seasonally appropriate and effective BMPs for the six categories listed in C.6.c.i. are planned;
 - (2) For sites disturbing one acre or more of soil, verify that the site operators/developers have filed a Notice of Intent for permit coverage under the Construction General Permit; and
 - (3) Provide construction stormwater management educational materials to site operators/developers, as appropriate.

C.6.e. Inspections

- i. **Task Description** – Permittees shall conduct inspections to determine compliance with local ordinances (grading and stormwater) and determine the effectiveness of the BMPs in the six categories listed in C.6.c.i. in preventing the discharge of construction pollutants into the storm drain; and Permittees shall require timely corrections of all actual and potential discharges observed.
- ii. **Implementation Level**
 - (1) **Wet Season Notification**

By September 1 of each year, each Permittee shall remind all site developers and/or owners disturbing one acre or more of soil, hillside projects, and high priority sites to prepare for the upcoming wet season.
 - (2) **Frequency of Inspections**

Inspections shall be conducted monthly during the wet season¹² at the following sites:

 - (a) All construction sites disturbing one or more acre of land;
 - (b) All hillside projects¹³ (based on the Permittee's map of hillside development areas or criteria, or if the Permittee does not have a map of hillside development areas or criteria, those projects on sites with $\geq 15\%$ slope) disturbing greater than or equal to 5,000 square feet; and
 - (c) High Priority Sites – Other sites determined by the Permittee or the Water Board as significant threats to water quality. In evaluating threat to water quality, the following factors shall be considered:
 - (i) Soil erosion potential or soil type;
 - (ii) Site slope;

¹² For the purpose of inspections, the wet season is defined as October through April, but sites need to implement seasonally appropriate BMPs in the six categories listed in C.6.c.i throughout the year.

¹³ Effective July 1, 2016.

- (iii) Project size and type;
- (iv) Sensitivity or receiving waterbodies;
- (v) Proximity to receiving waterbodies;
- (vi) Non-stormwater discharges; and
- (vii) Any other relevant factors as determined by the local agency or the Water Board.

(3) Contents of Inspections

Inspections shall focus on the adequacy and effectiveness of the site-specific BMPs implemented for the six categories listed in C.6.c.i. Permittees shall require timely corrections of all actual and potential problems observed. Inspections of construction sites shall include, but are not limited to, the following:

- (a) Assessment of compliance with Permittee's ordinances and permits related to urban runoff, including the implementation and maintenance of the verified erosion/pollution control plan or SWPPP (from C.6.d.ii.(1));
- (b) Assessment of the adequacy and effectiveness of the site-specific BMPs implemented for the six categories listed in C.6.c.i.;
- (c) Visual observations for:
 - actual discharges of sediment and/or construction related materials into storm drains and/or waterbodies.
 - evidence of sediment and/or construction related materials discharges into storm drains and/or waterbodies.
 - illicit connections, and
 - potential illicit connections.
- (d) Education on stormwater pollution prevention, as needed.

(4) Tracking

All inspections shall be recorded on a written or electronic inspection form. Inspectors shall follow the ERP for all actual and potential discharges discovered during the inspection.

Permittees shall track in an electronic database or tabular format all inspections. This electronic database or tabular format shall be made readily available during inspections and audits by the Water Board staff or its representatives. This electronic database or tabular format shall record the following information for each site inspection:

- (a) Site name;
- (b) Inspection date;
- (c) Weather during inspection;
- (d) Enforcement Response Level (Use ERP);
- (e) Problem(s) observed using Illicit Discharge and the six BMP categories listed in C.6.c.i.;

- (f) Resolution of Problems noted using the following three standardized categories: Problems Fixed, Need More Time, and Escalate Enforcement; and
- (g) Comments, which shall include all Rationales for Longer Compliance Time, all escalation in enforcement discussions, and any other information that may be relevant to that site inspection.

iii. Reporting

- (1) In the 2016 Annual Report, each Permittee shall certify the criteria it uses to determine hillside developments. If the Permittee is using maps of hillside developments areas or other written criteria, include a copy in the Annual Report.
- (2) In the 2015-2016 Annual Report, each Permittee shall summarize the following information:
 - (a) Total number of active sites disturbing less than one acre of soil requiring inspection;
 - (b) Total number of active sites disturbing one acre or more of soil;
 - (c) Total number of inspections conducted;
 - (d) Number and percentage¹⁴ of violations in each of the six categories listed in C.6.c.i.;
 - (e) Number and percentage¹⁵ of each type of enforcement action taken as listed in each Permittee's ERP;
 - (f) Number of discharges, actual and those inferred through evidence, of sediment or other construction related materials;
 - (g) Number of sites with discharges, actual and those inferred through evidence, of sediment or other construction related materials;
 - (h) Number and percentage¹⁶ of violations fully corrected prior to the next rain event but no longer than 10 business days after the violations are discovered or otherwise considered in a timely, though longer period; and
 - (i) Number and percentage¹⁷ of violations not fully corrected 30 days after the violations are discovered.
- (3) Beginning with the 2016-2017 Annual Report, each Permittee shall summarize the following information:

¹⁴ Percentage shall be calculated as number of violations in each category divided by total number of violations in all six categories.

¹⁵ Percentage shall be calculated as number of each type of enforcement action divided by the total number of enforcement actions.

¹⁶ Percentage shall be calculated as follows: number of violations fully corrected prior to the goal of the next rain event but no later than 10 business days after the violations are discovered divided by the total number of violations for the reporting year.

¹⁷ Percentage shall be calculated as follows: number of violations not fully corrected 30 days after the violations are discovered divided by the total number of violations for the reporting year.

- (a) Total number of active hillside sites disturbing less than one acre of soil requiring inspection;
 - (b) Total number of active sites disturbing 1 acre or more of soil;
 - (c) Total number of active sites disturbing less than one acre of soil identified as High Priority sites in C.6.e.ii.(2)(c) requiring inspections;
 - (d) Total number of inspections conducted;
 - (e) Number of each type of enforcement action taken as listed in each Permittee's ERP;
 - (f) Number of illicit discharges, actual and those inferred through evidence, of sediment or other construction-related materials;
 - (g) Number of enforcement actions or discrete number of potential and actual discharges fully corrected prior to the next rain event, but no longer than 10 business days after the potential and actual discharges¹⁸ are discovered or otherwise considered corrected in a timely, though longer period.
- (4) In each Annual Report, each Permittee shall evaluate its respective electronic database or tabular format and the summaries produced in C.6.e.ii.(4) above. This evaluation shall include findings on the program's strength, comparison to previous years' results, as well as areas that need more focused education for site owners, operators, and developers the following year.
- (5) The Executive Officer may require that the information recorded and tracked by C.6.e.ii.(4) be submitted electronically or in a tabular format. Permittees shall submit the information within 10 working days of the Executive Officer's requirement. Submittal of the information in tabular form for the reporting year is not required in each Annual Report, but it is encouraged.

C.6.f. Staff Training

- i. **Task Description** – Permittees shall provide training or access to training for staff conducting construction stormwater inspections.
- ii. **Implementation Level** – Permittees shall provide training at least every other year to municipal staff responsible for conducting construction site stormwater inspections. Training topics shall include information on correct uses of specific BMPs, proper installation and maintenance of BMPs, Permit requirements, local requirements, and the ERP.
- iii. **Reporting** – Permittees shall include in each Annual Report the following information: training topics covered, dates of training, and the number of the Permittees' inspectors attending each training. If there was no training in that year, so state.

¹⁸ Permittees who track by discrete potential and actual discharges shall report by discrete discharges. Permittees who track by enforcement actions shall report by enforcement actions.

C.7. Public Information and Outreach

Each Permittee shall increase the awareness of a broad spectrum of the community, including a diversity of socioeconomic groups and ethnic communities, regarding the impacts of stormwater pollution on receiving waters and potential solutions to mitigate the problems caused; positively influence the waste disposal and runoff pollution generation behavior of target audiences by encouraging implementation of appropriate solutions; and involve various citizens in mitigating the impacts of stormwater pollution. Outreach required in other provisions may be conducted under Provision C.7.

C.7.a. Storm Drain Inlet Marking

- i. **Task Description** – Permittees shall mark and maintain municipally-maintained storm drain inlets with an appropriate stormwater pollution prevention message, such as “No dumping, drains to Bay” or equivalent. For newly-approved, privately maintained streets, Permittees shall require storm drain inlet markings with an appropriate stormwater pollution prevention message by the project developer upon construction and maintenance of markings through the development maintenance entity. Markings on the storm drain inlets shall be verified prior to acceptance of the project.
- ii. **Implementation Level**
 - (1) Inspect and maintain storm drain inlet markings of at least 80 percent of municipality-maintained inlets to ensure they are legibly labeled with a no dumping message or equivalent once per permit term.
 - (2) Storm drain inlet markings of newly developed privately-maintained streets shall be verified prior to acceptance of the project. Permittees shall require maintenance of the storm drain inlet markings through the development maintenance entity.
- iii. **Reporting** – In the 2020 Annual Report, each Permittee shall (1) state how many municipally-maintained storm drain inlets it has, (2) certify that at least 80 percent of municipality-maintained storm drain inlet markings are legibly labeled with an appropriate stormwater pollution prevention message during the permit term; (3) include a picture of a labeled municipality-maintained inlet; and (4) certify that all privately-maintained streets had storm drain inlet markings verified prior to acceptance of the project and were required to maintain the storm drain inlet markings through the development maintenance entity.

C.7.b. Outreach Campaigns

- i. **Task Description** – Permittees shall continue to participate in or contribute to outreach campaigns, with the goal of significantly increasing overall awareness of stormwater runoff pollution prevention messages and behavior changes in target audiences.
- ii. **Implementation Level**
 - (1) Target a broad audience with a minimum of one outreach campaign with specific stormwater runoff pollution prevention messages. The outreach

campaign(s) should utilize various electronic and print media, and paid and free media to best reach the different target audiences. The outreach campaign(s) may be coordinated regionally or county-wide.

- (2) Permittees shall conduct a post-campaign effectiveness assessment/evaluation to identify and quantify the audiences' knowledge, trends, and attitudes and/or practices; and to measure the overall population's awareness of the messages and behavior changes achieved by the outreach campaigns. Effectiveness assessment/evaluation may be done regionally or county-wide.

iii. Reporting – In the Annual Report following the post-campaign effectiveness assessment/evaluation, each Permittee (or the Countywide Program, if the effectiveness assessment/evaluation was done county-wide or the regional program, if the effectiveness assessment/evaluation was done regionally) shall provide a report of the effectiveness assessment/evaluation completed, which, at minimum, shall include the following:

- (1) A description of the outreach campaign.
- (2) A summary of how the effectiveness assessment/evaluation was implemented.
- (3) An analysis of the effectiveness assessment/evaluation results.
- (4) A discussion of the measurable changes in awareness and behavior achieved.
- (5) A discussion of the planned or future outreach campaigns to influence awareness and behavior changes regarding stormwater runoff pollution prevention messages.

C.7.c. Stormwater Pollution Prevention Education

i. Task Description – Permittees shall continue to maintain a point of contact to provide the public with stormwater pollution prevention information.

ii. Implementation Level

- (1) Each Permittee shall maintain and publicize one point of contact for information on stormwater issues, watershed characteristics, and stormwater pollution prevention alternatives. This point of contact can be maintained individually or collectively and Permittees may combine this function with the spill and dumping complaint central contact point required in C.5.
- (2) Each Permittee shall place and maintain information on stormwater issues, watershed characteristics, and stormwater pollution prevention alternatives on its website. In lieu of posting the detailed informational pages directly on their individual websites, Permittees may choose to provide links from their websites to the countywide program's and/or BASMAA's websites. Each Permittee shall publicize its website.

- iii. **Reporting** – In the 2016 Annual Report, each Permittee shall list the point of contact, discuss how this point of contact and stormwater pollution website are publicized and maintained, and certify that it has a website dedicated to providing and maintaining information on stormwater issues, watershed characteristics, and stormwater pollution prevention alternatives.

C.7.d. Public Outreach and Citizen Involvement Events

- i. **Task Description** – Public outreach shall include a variety of pollution prevention message such as car washing; proper use, storage and disposal of vehicle waste fluids; household waste materials disposal; pesticide use; and trash. Public outreach events may include venues such as fairs, shows, and workshops. Citizen involvement events may include venues such as creek/shore clean-ups, adopt-an-inlet/creek/beach programs, volunteer monitoring, storm drain inlet marking, riparian restoration activities, community grants.
- ii. **Implementation Level** – Each Permittee shall annually participate and/or host a mix of public outreach and citizen involvement events according to its population, as shown in the table below:

Table 7.1 Public Outreach and Citizen Involvement Events¹⁹

Permittee Population	Number of Events
< 10,000	2
10,001– 40,000	4
40,001 – 100,000	5
100,001 – 175,000	7
175,001 – 250,000	8
> 250,000	10
Non-population-based Permittees ²⁰	6

- iii. **Reporting** – In each Annual Report, each Permittee shall list the events (name of event, event location, and event date) participated in; identity whether the event is public outreach or citizen involvement; and assess the effectiveness of efforts with appropriate measures (e.g., success at reaching a broad spectrum of the community, number of participants compared to previous years, post-event effectiveness assessment/evaluation results, quantity/volume of materials cleaned up and comparisons to previous efforts).

C.7.e. Watershed Stewardship Collaborative Efforts

- i. **Task Description** – Permittees shall individually or collectively encourage and support watershed stewardship collaborative efforts of community groups such as the Contra Costa Watershed Forum, the Santa Clara Basin Watershed

¹⁹ Permittees may claim individual credits for all events in which their Countywide Program or BASMAA participates, supports, and/or hosts, which are publicized to reach the Permittee’s jurisdiction.

²⁰ Alameda County Flood Control and Water Conservation District, Contra Costa Flood Control and Water Conservation District, Santa Clara Valley Water District, Vallejo Sanitation and Flood Control District, and Zone 7 of the Alameda County Flood Control and Water Conservation District

Management Initiative, “friends of creek” groups, and other organizations that benefit the health of the watershed, such as the Bay-Friendly Landscaping and Gardening Coalition. If no such organizations exist, encourage and support development of grassroots watershed groups or engagement of an existing group, such as a neighborhood association, in watershed stewardship activities. Coordinate with existing groups to further stewardship efforts.

- ii. **Implementation Level** – Annually demonstrate effort.
- iii. **Reporting** – In each Annual Report, each Permittee shall state the level of effort, describe the support given, state what efforts were undertaken and the results of these efforts, and provide an evaluation of the effectiveness of these efforts.

C.7.f. School-Age Children Outreach

- i. **Task Description** – Permittees shall individually or collectively implement outreach activities designed to increase awareness of stormwater and/or watershed message(s) in school-age children (K through 12).
- ii. **Implementation Level** – Implement annually and demonstrate effectiveness of efforts through assessment.
- iii. **Reporting** – In each Annual Report, each Permittee shall state the level of effort, spectrum of children reached, and methods used, and provide an evaluation of the effectiveness of these efforts.

C.7.g. Outreach to Municipal Officials

- i. **Task Description** – Permittees shall conduct outreach to municipal officials. One alternative means of accomplishing this is through the use of the Nonpoint Education for Municipal Officials program (NEMO) to significantly increase overall awareness of stormwater and/or watershed message(s) among regional municipal officials.
- ii. **Implementation Level** – At least once per permit cycle, or more often.
- iii. **Reporting** – Permittees shall summarize efforts in the 2020 Annual Report.

C.8. Water Quality Monitoring

C.8.a. Compliance Options

All Permittees shall comply with all the monitoring requirements in this Provision. Permittees may choose any of the following mechanisms, or a combination of these mechanisms, to meet the monitoring requirements:

- i. **Regional Collaboration.** Permittees are encouraged to continue contributing to the Regional Monitoring Collaborative (RMC), which coordinates water quality monitoring conducted by all the Permittees. Permittees are encouraged to consider and assign additional duties to the RMC for purposes of increased efficiencies, particularly, but not limited to, reporting duties.
- ii. **Area-wide Stormwater Program.** Permittees may contribute to their countywide or area-wide Stormwater Program, so that the Stormwater Program conducts monitoring on behalf of its members.
- iii. **Third-party Monitoring.** Permittees may use data collected by a third-party organization, such as the Water Board or Department of Pesticide Regulation, to fulfill a monitoring requirement, provided the data are demonstrated to meet the data quality objectives described in Provision C.8.b.

C.8.b. Monitoring Protocols and Data Quality

Where applicable, monitoring data must be Surface Water Ambient Monitoring Program (SWAMP) comparable. Minimum data quality shall be consistent with the latest version of the SWAMP Quality Assurance Project Plan (QAPrP) for applicable parameters, including data quality objectives, field and laboratory blanks, field duplicates, laboratory spikes, and clean techniques, using the most recent SWAMP Standard Operating Procedures.

C.8.c. San Francisco Estuary Receiving Water Monitoring

With limited exceptions, urban runoff from the Permittees' jurisdictions ultimately discharges to the San Francisco Estuary. Monitoring of the Estuary is intended to answer questions²¹ such as:

- Are chemical concentrations in the Estuary potentially at levels of potential concern and are associated impacts likely?
- What are the concentrations and masses of contaminants in the Estuary and its segments?
- What are the sources, pathways, loadings, and processes leading to contaminant related impacts in the Estuary?
- Have the concentrations, masses, and associated impacts of contaminants in the Estuary increased or decreased?

²¹ <http://www.sfei.org/rmp/objectives> (9/15/2014). While the stated objectives may change over time, the intent of this provision is for Permittees to continue contributing financially and as stakeholders in such a program as the RMP, which monitors the quality of San Francisco Bay.

- What are the projected concentrations, masses, and associated impacts of contaminants in the Estuary?

The Permittees shall participate in implementing an Estuary receiving water monitoring program, at a minimum equivalent to the San Francisco Estuary Regional Monitoring Program by contributing their fair-share financially on an annual basis.

C.8.d. Creek Status Monitoring

Creek status monitoring is intended to assess the chemical, physical, and biological impacts of urban runoff on receiving waters. In particular, the monitoring required by this provision is intended to answer the following questions:

- Are water quality objectives, both numeric and narrative, being met in local receiving waters, including creeks, rivers and tributaries?
- Are conditions in local receiving waters supportive of or likely to be supportive of beneficial uses?

i. Biological Assessment including Nutrients and General Water Quality Parameters

- (1) Field and Laboratory Method – The Permittees shall conduct biological assessments (also referred to herein as bioassessments) in accordance with SWAMP Standard Operating Procedures^{22,23,24} and shall include collection and reporting of in-stream biological and physical habitat data according to the *SWAMP Standard Operating Procedures for Bioassessment*,³ including benthic algae, benthic macroinvertebrates, water chemistry, and full characterization of physical habitat. The bioassessment sampling method shall be multihabitat reach-wide. For algae, the assessment shall include all analytes in the protocol, including diatom and soft algae taxonomy, biomass (ash-free dry weight), chlorophyll a, pebble count algae information, and reach-wide algal percent cover. Physical Habitat (PHab) Assessment shall include the SWAMP full physical habitat characterization method.

²² Ode, P.R. 2007. *Standard Operating Procedures for Collecting Benthic Macroinvertebrate Samples and Associated Physical and Chemical Data for Ambient Bioassessments in California*, State Water Board Surface Water Ambient Monitoring Program (SWAMP), as subsequently revised [http://www.waterboards.ca.gov/water_issues/programs/swamp/docs/swamp_sop_bio.pdf].

²³ Current methods are documented in (1) *SWAMP Standard Operating Procedure (SOP) and Interim Guidance on Quality Assurance for SWAMP Bioassessments*, Memorandum to SWAMP Roundtable from Beverly H. van Buuren and Peter R. Ode, May 21, 2007, and (2) *Amendment to SWAMP Interim Guidance on Quality Assurance for SWAMP Bioassessments*, Memorandum to SWAMP Roundtable from Beverly H. van Buuren and Peter R. Ode, September 17, 2008 both available at http://www.waterboards.ca.gov/water_issues/programs/swamp/tools.shtml#methods.

²⁴ The Standard Operating Procedure for algae sampling and evaluation is available in the following: Fetscher, A. and K. McLaughlin, May 16, 2008. *Incorporating Bioassessment Using Freshwater Algae into California's Surface Water Ambient Monitoring Program (SWAMP)*. Technical Report 563 and current SWAMP-approved updates to Standard Operating Procedures therein. Available at http://www.waterboards.ca.gov/water_issues/programs/swamp/docs/reports/563_periphyton_bioassessment.pdf.

- (2) The sampling crew shall be trained by a SWAMP-approved trainer and possess a Scientific Collection Permit from the California Department of Fish and Wildlife and participate in a SWAMP-approved inter-calibration exercise at least once in the Permit term. The Permittee may, but is not required to, modify its sampling procedures if these referenced procedures change during the Permit term. In such case, the Permittee shall notify the Water Board and follow the updated SWAMP procedures.
- (3) Macroinvertebrates shall be identified and classified according to the *Standard Taxonomic Effort (STE) Level I of the Southwestern Association of Freshwater Invertebrate Taxonomists (SAFIT)*²⁵ (except Chironomids should be identified to subfamily) using a fixed count of 600 organisms per sample. The laboratory shall follow the *SWAMP Standard Operating Procedures for Laboratory Processing and Identification of Benthic Macroinvertebrates in California*.²⁶ Soft-bodied algae and diatom algae shall be identified to the species level. Algae identifications must be harmonized with the SWAMP master taxa list. All quality assurance and quality control steps specified in the *SWAMP Quality Assurance Program Plan*¹ shall be performed.
- (4) The Permittees shall measure general water quality parameters using a sonde and collect nutrient samples at a site when biological samples are collected. The general water quality parameters shall include temperature, dissolved oxygen, pH, and specific conductance. Nutrients samples shall be analyzed for total ammonia, nitrate, nitrite, total Kjeldahl nitrogen, total nitrogen (calculated), dissolved orthophosphate and total phosphorous, silica, and chloride.
- (5) In conducting the required bioassessment monitoring, the Permittees shall take precautions to prevent the introduction or spread of aquatic invasive species.
- (6) Sample Design/Locations – The Permittees shall continue to use the probabilistic sample design developed in the previous Permit term to select sample locations. Also, Permittees shall continue to use the sampling site order and the rationale to exclude potential sites as previously defined by the sample design and reconnaissance standard operating procedures. After a statistically representative data set (i.e., approximately 30 samples) has been collected to address management questions related to condition of aquatic life, Permittees may select up to 20% of sample locations on a targeted basis to evaluate temporal trends in or other impacts to aquatic life condition.

²⁵ The current SAFIT STEs (November 28, 2006) list requirements for both the Level I and Level II taxonomic effort, and are located at http://www.waterboards.ca.gov/water_issues/programs/swamp/safit.shtml. When new editions are published by SAFIT, they will supersede all previous editions. All editions will be posted at the State Water Board's SWAMP website.

²⁶ http://www.waterboards.ca.gov/water_issues/programs/swamp/docs/bmi_lab_sop_final.pdf.

- (7) Frequency, Timeframe and Number of Sites – Sampling shall occur once per year during the appropriate index period (April 15-June 30) with consideration of antecedent rainfall. Sampling is a one-time grab sample for biological communities, nutrients, and general water quality collected on the same day. The Permittees shall collect at least the minimum number of samples as shown below:

Sampling Agency	Minimum Number of Samples
Alameda Permittees	20 per year
Santa Clara Permittees	20 per year
Contra Costa Permittees	10 per year
San Mateo Permittees	10 per year
Fairfield-Suisun Permittees	8 per 5-year period
Vallejo Permittees	4 per 5-year period

- (8) Followup – Sites scoring less than 0.795 according to the California Stream Condition Index²⁷ (CSCI) are appropriate for a Stressor Source Identification (SSID) project as defined in C.8.e. Such a score indicates a substantially degraded biological community relative to reference conditions. Sites where there is a substantial difference in CSCI score observed at a location relative to upstream or downstream sites are also appropriate for a SSID project. If many samples show a degraded biological condition, sites where water quality is most likely to cause and contribute to this degradation may be prioritized by the Permittee for a SSID project.

ii. Chlorine

- (1) Field and Laboratory Method – Permittees shall collect a grab sample and analyze for free and total chlorine using methods specified in the BASMAA Regional Monitoring Coalition Creek Status Monitoring Program Standard Operating Procedures.
- (2) Sample Design/Locations – Sample locations may be selected by the Permittees to monitor locations near known or suspected potable water line breaks; to coincide with bioassessment sites; to coincide with creek restoration sites; or to resample a location where chlorine has been found in the past.
- (3) Frequency, Timeframe, and Number of Samples – Samples shall be collected in spring or summer. Vallejo and Fairfield-Suisun Permittees each shall collect their samples by the end of the second year of the permit term. The Permittees shall collect at least the minimum number of samples as shown below:

²⁷ Documentation for the CSCI and information on calculating scores can be found at http://www.swrcb.ca.gov/plans_policies/biological_objective.shtml.

Sampling Agency	Minimum Number of Locations Sampled
Alameda Permittees	20 per year
Santa Clara Permittees	20 per year
Contra Costa Permittees	10 per year
San Mateo Permittees	10 per year
Fairfield-Suisun Permittees	8 per 5-year period
Vallejo Permittees	4 per 5-year period

- (4) Followup – The Permittees shall immediately resample if the chlorine concentration is greater than 0.1 mg/L. If the resample is still greater than 0.1 mg/L, then Permittees shall report the observation to the appropriate Permittee central contact point for illicit discharges so that the illicit discharge staff can investigate and abate the associated discharge in accordance with its Provision C.5.e - Spill and Dumping Complaint Response Program.

iii. Temperature

- (1) Field Method – The Permittees shall monitor temperature of their streams using a digital temperature logger or equivalent.
- (2) Sample Design/Locations – The Permittees shall monitor stream reaches that are documented to support cold water fisheries and where either past data or best professional judgment indicates that temperatures may negatively affect that beneficial use.
- (3) Frequency, Timeframe and Number of Sites – Loggers shall be installed so that water temperatures are recorded at 60-minute intervals from April through September at the number of sites specified below. Vallejo and Fairfield-Suisun Permittees each shall collect their samples by the end of the second year of the permit term. The Permittees shall collect at least the minimum number of samples as shown below:

Sampling Agency	Minimum Number of Stream Reaches Sampled
Alameda Permittees	8 per year
Santa Clara Permittees	8 per year
Contra Costa Permittees	4 per year
San Mateo Permittees	4 per year
Fairfield-Suisun Permittees	2 per 5-year period
Vallejo Permittees	2 per 5-year period

- (4) Followup – The Permittees shall identify a site for which results at one sampling station exceed the applicable temperature trigger or demonstrate a spike in temperature with no obvious natural explanation as a candidate SSID project. The temperature trigger is defined as when two or more weekly average temperatures exceed the Maximum Weekly Average Temperature of 17.0°C for a Steelhead stream, or when 20% of the results

at one sampling station exceed the instantaneous maximum of 24°C.²⁸ Permittees shall calculate the weekly average temperature by breaking the measurements into non-overlapping, 7-day periods.

iv. Continuous Monitoring of Dissolved Oxygen, Temperature, and pH

- (1) **Field and Laboratory Method** – The Permittees shall monitor general water quality parameters of streams using a water quality sonde or equivalent. Parameters shall include dissolved oxygen (mg/L and % saturation), pH, specific conductance (µS), and temperature (°C).
- (2) **Sample Design/Locations** – The Permittees shall monitor stream reaches that are documented to support cold water fisheries or where either past data or best professional judgment indicates that temperature may negatively affect the cold water beneficial use.
- (3) **Frequency, Timeframe, and Number of Sites** – The Permittees shall install sondes so that parameters are recorded at 15-minute intervals over 1-2 weeks in the spring concurrent with bioassessment sampling and 1-2 weeks in summer at the same sites. The Permittees shall monitor at least the minimum number of sites as shown below:

Sampling Agency	Minimum Number of Sample Sites in Spring	Minimum # of Sample Sites in Summer
Alameda Permittees	3 per year	3 per year
Santa Clara Permittees	3 per year	3 per year
Contra Costa Permittees	2 per year	2 per year
San Mateo Permittees	2 per year	2 per year
Fairfield-Suisun Permittees	2 per permit term	2 per 5-year period
Vallejo Permittees	2 per permit term	2 per 5-year period

- (4) **Followup** – When results at one sampling station exceed the applicable temperature or dissolved oxygen trigger or demonstrate a spike in temperature or drop in dissolved oxygen with no obvious natural explanation, the Permittees shall identify that sample site as a candidate SSID project. The Permittees shall calculate the weekly average temperature and dissolved oxygen by separating the measurements into non-overlapping, 7-day periods. The temperature trigger is defined as any of the following:
 - a. Maximum Weekly Average Temperature exceeds 17.0°C for a Steelhead stream, or 20 percent of the instantaneous results exceed 24°C⁸;

²⁸ This maximum weekly average temperature trigger corresponds to a 10% reduction in growth as listed in Table 7.3 in Sullivan K., Martin, D.J., Cardwell, R.D., Toll, J.E., Duke, S. 2000. *An Analysis of the Effects of Temperature on Salmonids of the Pacific Northwest with Implications for Selecting Temperature Criteria*, Sustainable Ecosystem Institute). The 24° C acute lethal threshold is the more protective threshold cited on page 4-1 in Sullivan et al. (2000).

- b. 20 percent of instantaneous pH results are < 6.5 or > 8.5;
- c. 20 percent of the instantaneous specific conductance results are > 2000µS, or there is a spike in readings with no obvious natural explanation; or
- d. 20 percent of instantaneous dissolved oxygen results are < 7 mg/L in a cold water fishery stream.

v. Pathogen Indicators

- (1) Field and Laboratory Method – The Permittees shall collect and analyze samples for Enterococci and *E. coli* in accordance with the most recent U.S. EPA protocols.²⁹
- (2) Sample Design/Locations – The Permittees shall collect one or more samples in a creek and at an area where water-contact recreation is likely or at an opportunistic location where there is potential to detect leaking sewerage infrastructure.
- (3) Frequency, Timeframe and Number of Sites – The Permittees shall collect samples in the dry season. Permittees shall collect at least the minimum number of samples as shown below:

Sampling Agency	Minimum Number of Sample Sites
Alameda Permittees	5 per year
Santa Clara Permittees	5 per year
Contra Costa Permittees	5 per year
San Mateo Permittees	5 per year
Fairfield-Suisun Permittees	3 per 5-year period
Vallejo Permittees	3 per 5-year period

- (4) Followup – If U.S. EPA’s statistical threshold value³⁰ for 36 per 1000 primary contact recreators is exceeded, the water body reach shall be identified as a candidate SSID project.

C.8.e. Stressor/Source Identification (SSID) Projects

When any monitoring result triggers a candidate for a SSID project followup as indicated within the provisions of C.8.d and C.8.g, the Permittees shall take the following actions, as also required by Provision C.1. If the trigger stressor or source is already known, the Permittee(s) shall take appropriate followup action to reduce the water quality stressor or source and count this action as a completed SSID Project.

SSID projects are intended to be oriented toward taking action(s) to alleviate stressors and reduce sources of pollutants; thus the Permittees shall attempt to

²⁹ U.S. EPA protocols available at http://water.epa.gov/scitech/methods/cwa/methods_index.cfm. Analytical methods listed here are also acceptable: http://water.epa.gov/grants_funding/beachgrants/chapter4.cfm

³⁰ U.S. EPA. 2012. *Recreational Water Quality Criteria*. Office of Water 820-F-12-058. Table 4.

complete all steps for half their required SSID projects, at a minimum, during the permit term.

- i. Review monitoring (C.8.d and C.8.g) results annually and maintain a list of all results exceeding thresholds described therein. Pollutant of Concern Monitoring (C.8.f) results may be included on the list as appropriate.
- ii. Select followup SSID projects from the list developed in C.8.e.i. based on criteria such as magnitude of threshold exceedance; parameter (for a variety of parameters); likelihood stormwater management action(s) could address the exceedance; and similar priorities.
 - (1) Permittees who conduct SSID projects through a regional collaborative shall collectively initiate a minimum of eight new SSID projects (minimum of one for toxicity) during the Permit term. Because these SSID projects are being conducted through a regional collaborative, all SSID project reports shall be presented in a unified, regional-level report when submitted to the Water Board. In the case that no sample exhibits toxicity, as defined within the method required in this section, during the permit term, a SSID project for toxicity is not required.
 - (2) If conducted through a countywide Stormwater Program, the Santa Clara and Alameda Permittees each shall be required to initiate five (minimum of one for toxicity) SSID projects; the Contra Costa and San Mateo Permittees each shall be required to initiate three SSID (one for toxicity) projects; and the Fairfield-Suisun and Vallejo Permittees each shall be required to initiate one SSID project(s) during the Permit term. In the case that no sample exhibits toxicity, as defined within the method required in this section, within a countywide program area during the permit term, a SSID project for toxicity is not required.
- iii. The Permittees shall conduct site specific SSID project(s) (or non-site specific if the problem is wide-spread) in the stepwise process described below:
 - (1) Step 1: The Permittees shall develop a work plan for each SSID project and submit the work plans with the Urban Creeks Monitoring Report (UCMR) such that a minimum of half the required number of SSID projects are started (at a minimum, have a workplan) by the third year of the permit term, with the goal of completing Step 2, at a minimum, for half the required SSID projects within the permit term. The work plan shall:
 - (a) Define the problem (e.g., magnitude and temporal and geographic extent) to the extent known;
 - (b) Describe the SSID project objectives, including the management context within which the results of the investigation will be used;
 - (c) Consider the problem within a watershed context and look at multiple types of related indicators, where possible (e.g., basic water quality data and biological assessment results);

- (d) List candidate causes of the problem (e.g., biological stressors, pollutant sources, and physical stressors);
 - (e) Establish a schedule for investigating the cause(s) of the trigger stressor/source to begin upon completion of the workplan. Investigations may include evaluation of existing data, desktop analyses of land uses and management actions, and/or collection of new data.
 - (f) Conduct a site specific study (or non-site specific if the problem is wide-spread) in a stepwise process to identify and isolate the cause(s) of the trigger stressor/source. This study should follow guidance for Toxicity Reduction Evaluations (TRE) or Toxicity Identification Evaluations (TIE)¹⁸. A TRE, as adapted for urban stormwater, allows Permittees to use other sources of information (such as industrial facility stormwater monitoring reports) in attempting to determine the trigger cause, potentially eliminating the need for a TIE. If a TRE does not result in identification of the stressor/source, Permittees shall conduct a TIE. For toxicity studies where there is no chemical pollutant associated with the creek status monitoring sample exhibiting toxicity, a TIE should be conducted. Where chemical data indicate a pollutant, such as fipronil or a pyrethroid, is present at adverse effects levels in the sample location, it is not necessary to conduct a TIE, and the SSID project would be considered complete;
 - (g) For physical habitat, physiochemical pollutants (dissolved oxygen, pH, conductivity, temperature), nutrients, metals, and other stressors, the investigation shall generally follow Step 5 (Identify Probably Causes) of the Causal Analysis/Diagnosis Decision Information System (CADDIS);³¹
 - (h) For pathogen indicators, the study shall generally follow the California Microbial Source Identification Manual: A Tiered Approach to Identifying Fecal Pollution Sources to Beaches (2013) or equivalent process or method;³² and
 - (i) The Permittees may modify the SSID Work Plan in subsequent years of the Permit term in order to address new Creek Status (or POC) results that exceed applicable thresholds and are of a higher priority based on the criteria in C.8.e.ii.
- (2) Step 2: The Permittees shall conduct SSID investigations according to the schedule in each SSID project work plan and shall report on the status of SSID investigations annually in the UCMR. Local stormwater Permittees shall be advised of the SSID project and consulted regarding

³¹ http://www.epa.gov/caddis/si_step5_overview.html

³² http://www.swrcb.ca.gov/water_issues/programs/beaches/cbi_projects/docs/sipp_manual.pdf

possible local sources and potential management actions during the work plan phase and periodically throughout the SSID project.

(3) Step 3: Follow-up actions.

(a) When a Permittee(s) determines that discharges to its stormwater collection system(s) contribute to an exceedance of a water quality standard or an exceedance of a trigger threshold such that the water body's beneficial uses are not supported, the Permittee(s) shall submit a report in the UCMR that describes BMPs that are currently being implemented, and the current level of implementation, and additional BMPs that will be implemented, and/or an increased level of implementation, to prevent or reduce the discharge of pollutants that are causing or contributing to the exceedance of WQS. The report shall include an implementation schedule.

(b) If a Permittee(s) determines that discharges from its (their) stormwater collection system(s) are not contributing to an exceedance of a water quality standard, the Permittee(s) may end the SSID project. The Executive Officer must concur in writing before an SSID project is determined to be completed.

In cases where SSID investigations prove inconclusive (e.g., the trigger threshold exceedance is episodic or reasonable methods do not reveal a stressor/source), the Permittee(s) may request that the Executive Officer consider the SSID project complete.

(c) Reporting: The Permittees shall submit an SSID status report in each UCMR which summarizes the actions taken in C.8.e.i-iii above. The SSID status report shall include a running summary of all SSID projects (C.8.e.ii), including start date, brief problem definition, and schedule for each project. As projects progress, the SSID report shall describe findings and monitoring results and outline steps for the upcoming year for each ongoing project. The Permittees shall submit the SSID status report with each UCMR.

iv. As long as Permittees have complied with the procedures set forth above, they do not have to repeat the same procedure for continuing or recurring exceedances of the same receiving water limitations unless directed to do so by the Water Board.

C.8.f. Pollutants of Concern Monitoring

Pollutants of Concern (POC) monitoring is intended to assess inputs of POCs to the Bay from local tributaries and urban runoff, provide information to support implementation of TMDLs and other pollutant control strategies, assess progress toward achieving wasteload allocations for TMDLs and help resolve uncertainties associated with loading estimates and impairments associated with these pollutants.

In particular, monitoring required by this provision must be directed toward addressing the following five priority POC management information needs:

1. **Source Identification** - identifying which sources or watershed source areas provide the greatest opportunities for reductions of POCs in urban stormwater runoff;
2. **Contributions to Bay Impairment** - identifying which watershed source areas contribute most to the impairment of San Francisco Bay beneficial uses (due to source intensity and sensitivity of discharge location);
3. **Management Action Effectiveness** - providing support for planning future management actions or evaluating the effectiveness or impacts of existing management actions;
4. **Loads and Status** - providing information on POC loads, concentrations, and presence in local tributaries or urban stormwater discharges; and
5. **Trends** - evaluating trends in POC loading to the Bay and POC concentrations in urban stormwater discharges or local tributaries over time.

Not all information needs apply to all POCs (see Table 8.2 below for details).

- i. **Sampling Methods** – The Permittees shall implement or cause to be implemented the monitoring components shown in Table 8.1 in order to address each of the five POC management information needs.

Table 8.1 POC Monitoring Methods

Monitoring Type	Information Need	Monitoring Methods
1	Identify Source Areas	Monitoring methods to identify watershed sources of POCs should include: <ul style="list-style-type: none"> • Collection and analysis of POCs on sediments in urban stormwater runoff that are transported through MS4s or receiving waters during stormwater runoff events; or • Collection and analysis of POCs on bedded sediments deposited in MS4s or receiving waters; or • Collection and analysis of POCs in stormwater runoff or bedded sediments on source area properties (e.g. private property); or, • Other monitoring methods designed to identify specific sources or uses of POCs (e.g., caulk in roadways or building materials) or watershed source areas.
2	Identify watershed areas contributing most to Bay impairment	Monitoring methods to identify watershed areas contributing most to Bay impairment should include: <ul style="list-style-type: none"> • Methods described for Monitoring Type #1; or • Collection of small fish tissue (or equivalent indicator) near tributary confluences with the Bay and analysis for POCs; or • Collection of bedded sediments near tributary confluences with the Bay and analysis for POCs.
3	Provide support for future or existing management actions	Monitoring methods to support future or existing management actions should include: <ul style="list-style-type: none"> • Methods described for Monitoring Type #1, with a focus on monitoring the effectiveness of specific management actions in reducing or avoiding POCs in MS4 discharges.
4	Provide information on POC loads, concentrations, or presence / absence	Monitoring methods to provide information on POC loads, concentrations or presence/absence should include: <ul style="list-style-type: none"> • Methods described for Monitoring Type #1, in combination with quantitative modeling associated with quantifying POC loads from MS4s or small tributaries to the Bay.
5	Evaluate POC trends	Monitoring methods to provide information on trends in POC loads and concentrations overtime may include: <ul style="list-style-type: none"> • Methods described for Monitoring Type #1 or #2.

ii. **Parameters and Monitoring Frequency** – The Permittees shall conduct POC monitoring consistent with the monitoring intensity and frequency specified in Table 8.2. Monitoring frequencies are described as the total and minimum number of samples that Permittees within a countywide Stormwater Program shall collectively collect and analyze in a Water Year (October 1 – September 30). Minimum number of samples that Permittees within a countywide Stormwater Program shall collect by the end of the Permit term to address each monitoring type are also specified.

Table 8.2 POC Monitoring Parameters, Effort and Type

Pollutant of Concern	Total Samples ^a Collected /Analyzed (yearly minimum) for each Countywide Program: Alameda, Contra Costa, Santa Clara, and San Mateo	Minimum Number of Samples for each Monitoring Type ^b
Polychlorinated Biphenyls (PCBs)	80 (8)	8 samples minimum for monitoring types 1-5
Total Mercury	80 (8)	8 samples minimum for monitoring types 1-5
Copper	20 (2)	4 samples minimum for monitoring types 4-5
Emerging Contaminants^c: Must include but not limited to: Perfluorooctane Sulfonates (PFOS, in sediment) Perfluoroalkyl sulfonates (PFAS, in sediment) Alternative flame retardants	See footnote c	See footnote c
Ancillary Parameters^d: Total organic carbon Suspended sediments (SSC) Hardness	as necessary to address management questions for other POCs – see footnote d	
Nutrients: Ammonium, Nitrate, Nitrite, Total Kjeldahl Nitrogen, Orthophosphate, Total Phosphorus (all nutrients collected together for each sample)	20 (2) for each nutrient species	20 samples for monitoring type 4 for each nutrient species.

^a This column indicates the total number of samples, across all applicable monitoring types (i.e., monitoring types 1-5 from Table 8.1), that must be collected during the permit term. The number in parentheses indicates the minimum number of samples that must be collected, across all applicable monitoring types, during each of the five years of the permit. For example, 80 total samples must be collected for both total PCBs and mercury by each set of Santa Clara County, San Mateo County, Alameda County, and Contra Costa County Permittees during the term of the permit. Permittees must collect a minimum of 8 PCBs samples every year of the permit term, including the final year.

^b This column indicates the monitoring types from Table 8.1 that are applicable to this POC along with the minimum number of samples that shall be collected by each set of Permittees (i.e., Santa Clara County, San Mateo County, Alameda County, and Contra Costa County) by the end of year four of the permit. The applicable monitoring type(s) is also stated to illustrate the management information need(s) motivating the collected data. For example, each set of Permittees (i.e., the Countywide Programs for Santa Clara, San Mateo, Alameda, and Contra Costa counties) must collect and analyze at least 8 samples to address monitoring types 1-5 in Table 8.1 for both total PCBs and total mercury. Some collected samples may address multiple management questions.

^c The Permittees shall conduct or cause to be conducted a special study that addresses relevant management information needs for emerging contaminants. The special study must account for relevant CECs in stormwater and would address at least PFOS, PFAS, and alternative flame retardants being used to replace PBDEs.

^dTotal Organic Carbon (TOC) data are not used independently. Rather, TOC can be useful for normalizing PCBs data collected in water and sediment. TOC shall be collected concurrently with PCBs data that should be normalized to TOC. Similarly, suspended sediment concentrations (SSC) samples should be collected and analyzed when water samples are collected that will be used to assess loads, loading trends, or BMP effectiveness for PCBs and Mercury. Hardness data are used in conjunction with copper concentrations collected in fresh water.

iii. **POC Parameters and Analytical Methods** – Samples collected consistent with Table 8.2 shall be analyzed for parameters listed in Table 8.3. Where no laboratory method is listed in Table 8.3, Permittees shall use U.S. EPA or SWAMP-approved methods.

Table 8.3 POC Analytes and Analytical Methods

Pollutant of Concern	Matrix	Analyte(s) or Test Species	Laboratory Analytical Methods
Polychlorinated Biphenyls (PCBs)	Water	Total PCBs	U.S. EPA 1668 (RMP 40)
		Total Organic Carbon	
		Suspended sediments (SSC)	
	Bedded Sediment	Total PCBs	As appropriate to address the management information need: U.S. EPA 1668 (RMP 40), 8082A, or 8270D modified by Method 1625
		Total organic carbon	
Mercury	Water	Total Mercury	
	Bedded Sediment	Total Mercury	
Copper	Water	Total Copper	
		Dissolved Copper	
		Hardness	
Nutrients	Water	Ammonium	
		Nitrate	
		Nitrite	
		Total Kjeldahl Nitrogen	
		Orthophosphate	
		Total Phosphorus	

C.8.g. Pesticides and Toxicity Monitoring

The Permittees shall conduct wet weather and dry weather monitoring of pesticides and toxicity in urban creeks. If a statewide coordinated pesticides and pesticides-related toxicity monitoring program begins collecting data on an ongoing basis during the Permit term, Permittees may request the Executive Officer modify, reduce or eliminate this monitoring requirement, provided the resultant change, viewed in context of the statewide program, would result in overall improvement of pesticide monitoring data collection.

i. Toxicity in Water Column - Dry Weather

(1) Field and Laboratory Method – The Permittees shall collect grab samples of receiving water using applicable SWAMP comparable methodology. These samples shall be analyzed for the test organisms listed, and by the methods described, on Table 8.4.

Toxicity shall be evaluated using the Test of Significant Toxicity (TST) statistical approach.³³ Each sample shall be subject to determination of “Pass” or “Fail” and shall indicate “Percent Effect” from toxicity using nondiluted samples. The TST null hypothesis shall be “mean sample response $\leq 0.75 \times$ mean control response.” A test result that rejects this null hypothesis shall be reported as “Pass.” A test result that does not reject this null hypothesis shall be reported as “Fail.” The relative “Percent Effect” of the sample is defined and reported as: $((\text{Mean control response} - \text{Mean sample response}) \div \text{Mean control response}) \times 100$.

Table 8.4 Water Column Aquatic Toxicity Analytical Procedures

Test Species	Test Endpoint(s)	Units	U.S. EPA Method
<i>Pimephales promelas</i> (Fathead Minnow)	Larval Survival and Growth	Pass or Fail using TST, % Effect	EPA-821-R-02-013 ³⁴ EPA 833-R-10-003 ³⁵
<i>Ceriodaphnia dubia</i> (Freshwater Crustacean)	Survival ^a	Pass or Fail, % Effect <25% Passes, >25% Fails	EPA-821-R-02-013 EPA 833-R-10-003
<i>Ceriodaphnia dubia</i> (Freshwater Crustacean)	Reproduction	Pass or Fail using TST, % Effect	EPA-821-R-02-013 EPA 833-R-10-003
<i>Selenastrum capricornutum</i> (Green Algae)	Growth	Pass or Fail using TST, % Effect	EPA-821-R-02-013 EPA 833-R-10-003
<i>Hyalella azteca</i> (Freshwater Amphipod)	Survival	Pass or Fail using TST, % Effect ^b	EPA-821-R-02-012 ³⁶ EPA 833-R-10-003
<i>Chironomus dilutus</i> (midge)	Survival	Pass or Fail using TST, % Effect ^b	EPA-821-R-02-012 EPA 833-R-10-003

³³ National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document (EPA 833-R-10-003, 2010), Appendix A, Figure A-1, and Table A-1.

³⁴ *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms*. EPA/821/R-02/013, 2002; Table IA, 40 CFR Part 136.

³⁵ *National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document* (EPA 833-R-10-003) 2010.

³⁶ *Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms* (EPA/821/R-02/012, 2002; Table IA, 40 CFR Part 136). See Appendix B, page 238, for *H.azteca* and *C.dilutus* methods.

^a The *Ceriodaphnia dubia* chronic toxicity test design for the survival endpoint is not amenable to the TST, Welch's t-test so the survival endpoint will be determined as a percent effect using the TST approach. A percent effect less than 25 percent will be considered a "pass," and a percent effect equal to or greater than 25 percent will be considered a "fail."

^b For *Hyaella* and *Chironomus* acute toxicity test methods, the test result will be considered a "pass," regardless of a TST determination of "fail" if the percent survival in the receiving water is equal to or greater than 90 percent.

- (2) Sample Design/Locations – Sample locations may be selected by the Permittees to monitor locations where toxicity could be likely; to coincide with bioassessment sites; to coincide with creek restoration sites; or to resample a location where toxicity has been found in the past.
- (3) Frequency, Timeframe and Number of Sites – The Permittees shall collect samples annually in the dry season. Vallejo and Fairfield-Suisun Permittees each shall collect their sample by the end of the second water year of the permit term. The Permittees shall collect at least the minimum number of samples as shown below:

Sampling Agency	Minimum Number of Sample Sites
Alameda Permittees	2 per year
Santa Clara Permittees	2 per year
Contra Costa Permittees	1 per year
San Mateo Permittees	1 per year
Fairfield-Suisun & Vallejo Permittees collectively	1 per 5-year period

ii. Toxicity, Pesticides and Other Pollutants in Sediment - Dry Weather

- (1) Field and Laboratory Method – The Permittees shall collect grab samples of creek sediment using applicable SWAMP comparable methodology. These samples shall be analyzed for the pollutants and organisms listed and by the methods described on Table 8.5. Where no laboratory method is listed in Table 8.5, Permittees shall use U.S. EPA or SWAMP-approved methods.

Table 8.5 Sediment Toxicity & Pollutants Analytical Procedures

Test Species or Pollutant	Units	Laboratory Method
<i>Hyaella azteca</i> and <i>Chironomus dilutus</i> survival ^a	Pass/Fail using TST, % Effect ^a	EPA-600/R-99-064 ³⁷
Pyrethroids: bifenthrin, cyfluthrin, cypermethrin, deltamethrin, esfenvalerate, lambda-cyhalothrin, permethrin		EPA 3540C followed by EPA 8270D by NCI-GCMS
Carbaryl		
Fipronil		
Total PAHs		
Arsenic, Cadmium, Chromium, Copper, Lead, Nickel, Zinc		
Total organic carbon		
Grain size		

³⁷ *Methods for Measuring the Toxicity and Bioaccumulation of Sediment-associated Contaminants with Freshwater Invertebrates* (EPA 600/R-99-064) Second Edition. March 2000.

* For *Hyaella* and *Chironomus* acute toxicity test methods, the test result will be considered a "pass," regardless of a TST determination of "fail" if the percent survival in the receiving water is equal to or greater than 90 percent. The false positive rate (beta error) is 0.05 and the negative rate (alpha error) is 0.25 for these test methods.

- (2) **Sample Design/Locations** – Samples shall be collected at fine-grained depositional locations. Such sample locations may be selected by the Permittees to monitor locations where toxicity could be likely, to coincide with bioassessment sites, or to resample a location where toxicity has been found in the past, for example.
- (3) **Frequency, Timeframe, and Number of Sites** – The Permittees shall collect samples annually during the dry season. Vallejo and Fairfield-Suisun Permittees each shall collect their sample by the end of the second year of the permit term. Permittees shall collect at least the minimum number of samples as shown below:

Sampling Agency	Minimum Number of Sample Sites
Alameda Permittees	2 per year
Santa Clara Permittees	2 per year
Contra Costa Permittees	1 per year
San Mateo Permittees	1 per year
Fairfield-Suisun & Vallejo Permittees collectively	1 per 5-year period

iii. Wet Weather Pesticides and Toxicity Monitoring

- (1) **Field and Laboratory Method** – The Permittees shall collect water column samples and analyze them for the following parameters using the methods specified in Tables 8.4 and 8.5. For imidacloprid, Permittees shall specify an analytical method that achieves a reporting level as close to 0.05 ppb as possible, but in no case exceeds 0.1 ppb).
 - Pyrethroids: bifenthrin, cyfluthrin, cypermethrin, deltamethrin, esfenvalerate, lambda-cyhalothrin, permethrin
 - Imidacloprid
 - Indoxacarb³⁸
 - Fipronil
 - Toxicity
- (2) **Sample Design/Locations** – The Permittees shall collect samples annually during storm events. Sample locations shall be representative of urban watersheds (i.e., bottom of watershed locations).
- (3) **Frequency, Timeframe, and Number of Sites** – If this (C.8.g.iii) sampling is conducted by the RMC on behalf of all Permittees, a total of ten (10) samples shall be collected over the Permit term, with a minimum of six (6) samples collected by the end of the third water year of the permit term. If this (C.8.g.iii)

³⁸ Indoxacarb shall be a required analyte in the water year following notification by the Executive Officer that an analytical method with appropriate quality assurance and sensitivity is available. At the time of Permit issuance, an analytical method has not been developed.

sampling is conducted by Countywide Stormwater Programs, Permittees shall collect at least the minimum number of samples as shown below:

Sampling Agency	Minimum Number of Sample Sites
Alameda Permittees	1 per year
Santa Clara Permittees	1 per year
Contra Costa Permittees	1 per year
San Mateo Permittees	1 per year
Fairfield-Suisun & Vallejo Permittees collectively	1 per 5-year period

- iv. **Followup** – The Permittees shall identify a site as a candidate SSID project when analytical results indicate any of the following:
- (1) A toxicity test of growth, reproduction, or survival of any test organism is reported as “fail” in both the initial sampling and a second, followup sampling, and both have $\geq 50\%$ Percent Effect;
 - (2) A pollutant is present at a concentration exceeding its water quality objective in the Basin Plan;
 - (3) For pollutants without WQOs, results exceed Probable Effects Concentrations or Threshold Effects Concentrations.³⁹

C.8.h. Reporting

- i. **Water Quality Standard Exceedence** – When data collected pursuant to C.8.a.- C.8.g. indicate that discharges are causing or contributing to an exceedence of an applicable water quality standard, the Permittees shall notify the Water Board within no more than 30 days of such a determination and submit a followup report in accordance with Provision C.1 requirements. This reporting requirement shall not apply to continuing or recurring exceedences of water quality standards previously reported to the Water Board or to exceedences of pollutants that are to be addressed pursuant to Provisions C.9 through C.14 of this Order, consistent with Provision C.1.
- ii. **Electronic Reporting** – The Permittees shall submit to the California Environmental Data Exchange Network (CEDEN) all results from monitoring conducted pursuant to Provisions C.8.d. Creek Status, C.8.e. SSID Projects (as applicable), C.8.f. Pollutants of Concern and C.8.g. Pesticides and Toxicity. Data that CEDEN cannot accept are exempt from this requirement.
 - (1) Data shall be submitted in SWAMP formats and with the quality controls required by CEDEN.

³⁹ TEC and PEC are found in MacDonald, D.D., G.G. Ingersoll, and T.A. Berger. 2000. Development and Evaluation of Consensus-based Sediment Quality Guidelines for Freshwater Ecosystems. *Archives of Environ. Contamination and Toxicology* 39(1):20–31. More recent TECs and PECs may be used if lower than stated in MacDonald 2000.

- (2) Data collected during the previous October 1–September 30 period shall be submitted by March 31 of each year.

iii. Urban Creeks Monitoring Report – The Permittees shall submit a comprehensive Urban Creeks Monitoring Report no later than March 31 of each year, reporting on all data collected during the foregoing October 1–September 30 period. Each Urban Creeks Monitoring Report shall contain summaries of Creek Status, SSID Projects, and Pollutants of Concern Monitoring including, as appropriate, the following:

- (1) Immediately following the Table of Contents, a completed Water Year Summary Table that lists each Program’s monitoring sites, with a row for each site. The table columns contain: Site ID; creek name; land use; latitude; longitude; bioassessment, nutrient; chlorine; water column toxicity; sediment toxicity and chemistry; pathogens; temperature loggers; and general water quality (sonde data). For each site, list the site information and check the parameters sampled at that site. This will provide a summary of all Creek Status Monitoring conducted that water year.
- (2) An SSID status report pursuant to Provision C.8.e.iv.
- (3) For all data, a statement of the data quality.
- (4) An analysis of the data, which shall include the following:
 - (a) Identification and analysis of any trends in stormwater or receiving water quality which shall include:
 - Calculations of CSCI scores and physical habitat endpoints;
 - Comparison of CSCI scores to:
 - Each other;
 - Any applicable, available reference site(s); and
 - Physical habitat endpoints.
 - (b) A discussion of the data for each monitoring program component, which shall:
 - Discuss monitoring data relative to prior conditions, beneficial uses and applicable water quality standards as described in the Basin Plan, the Ocean Plan, or the California Toxics Rule or other applicable water quality control plans;
 - Where appropriate, develop hypotheses to investigate regarding pollutant sources, trends, and BMP effectiveness;
 - Identify and prioritize water quality problems;
 - Identify potential sources of water quality problems;
 - Describe followup actions;
 - Evaluate the effectiveness of existing control measures; and
 - Identify management actions needed to address water quality problems.

- iv. **Pollutants of Concern Monitoring Reports** – By October 15 of each year of the permit (beginning in 2016), the Permittees shall submit a report describing the allocation of sampling effort for POC monitoring for the forthcoming year (i.e., the water year that began October 1 of that year) and what was accomplished for POC monitoring during the preceding water year. The report shall include (for preceding year and projected for forthcoming year): monitoring locations, number and types of samples collected, purpose of sampling (management question addressed), and analytes measured. Any data not reportable to CEDEN should be included in the following Urban Creeks Monitoring Report due annually on March 31.
- v. **Integrated Monitoring Report** – No later than March 31 of the fifth year of the Permit term, Permittees shall submit an Integrated Monitoring Report in lieu of the annual Urban Creeks Monitoring Report. This report will be part of the next Report of Waste Discharge for the reissuance of this Permit. The Integrated Monitoring Report shall report on all the data collected since the previous Integrated Monitoring Report and shall contain the following:
 - (1) The Water Year Summary Table, as described in Provision C.8.h.iii, containing information pertaining to the fourth year monitoring data;
 - (2) A comprehensive analysis of all data collected pursuant to Provision C.8. since the previous Integrated Monitoring Report, and may include other pertinent studies;
 - (3) For POCs, the report shall include methods, data, calculations, load estimates, and source estimates for each POC parameter, as applicable; and
 - (4) The Integrated Monitoring Report shall include a budget summary for each monitoring requirement and recommendations for future monitoring.
- vi. **Standard Report Content** – All monitoring reports shall include the following:
 - (1) The purpose of the monitoring and briefly describe the study design rationale;
 - (2) Quality Assurance/Quality Control summaries for sample collection and analytical methods, including a discussion of any limitations of the data;
 - (3) Brief descriptions of sampling protocols and analytical methods;
 - (4) Sample location description, including water body name and segment and latitude and longitude coordinates;
 - (5) Sample ID, collection date (and time if relevant), media (e.g., water, filtered water, bed sediment, tissue);
 - (6) Concentrations detected, measurement units, and detection limits;
 - (7) Assessment, analysis, and interpretation of the data for each monitoring program component;
 - (8) A listing of volunteer and other non-Permittee entities whose data are included in the report; and
 - (9) Assessment of compliance with applicable water quality standards.

C.9. Pesticides Toxicity Control

To prevent the impairment of urban streams by pesticide-related toxicity, the Permittees shall implement a pesticide toxicity control program that addresses, within their jurisdictions, their own and others' use of pesticides that pose a threat to water quality and that have the potential to enter the municipal conveyance system.

This provision implements requirements of the TMDL for Diazinon and Pesticide-Related Toxicity for Urban Creeks in the region. The TMDL includes urban runoff allocations for Diazinon of 100 ng/l and for pesticide-related toxicity of 1.0 Acute Toxicity Units (TUa) and 1.0 Chronic Toxicity Units (TUc) to be met in urban creek waters. U.S. EPA phased out urban uses of diazinon in the mid-2000s, and diazinon is no longer detected in urban creeks in the region. Pesticide-related toxicity continues to occur, because State and federal pesticide regulatory programs, as currently implemented, allow pesticides to be used in ways that cause or contribute to aquatic toxicity. In adopting the TMDL implementation plan, the Water Board recognized that (1) Permittees must control their own use of pesticides, but Permittees are not solely responsible for attaining the allocations, because their authority to regulate others' pesticide use is constrained by federal and State law; and (2) because a realistic date for achieving allocations cannot be discerned given the current framework for pesticide regulation, reviewing the implementation strategy every five years, at permit reissuance, is the appropriate timeline. Accordingly, the Permittees' requirements for addressing the allocations are set forth in the TMDL implementation plan and are included in this provision.

Urban-use pesticides of concern to water quality include: diamides (chlorantraniliprole and cyantraniliprole); diuron, fipronil and its degradates; indoxacarb; organophosphorous insecticides (chlorpyrifos, diazinon, and malathion); pyrethroids (metofluthrin, bifenthrin, cyfluthrin, beta-cyfluthrin, cypermethrin, deltamethrin, esfenvalerate, lambda-cyhalothrin, and permethrin); and carbamates (e.g., carbaryl and aldicarb).

C.9.a. Maintain and Implement an Integrated Pest Management (IPM) Policy or Ordinance and Standard Operating Procedures

All Permittees have developed a pesticide toxicity control program for use of pesticides in municipal operations and on municipal property based on the concepts of IPM⁴⁰ and have adopted an IPM policy or ordinance and standard operating procedures to implement the policy or ordinance.

⁴⁰ IPM is an ecosystem-based strategy that focuses on long-term prevention of pests or their damage through a combination of techniques such as biological control, habitat manipulation, modification of cultural practices, and use of resistant varieties. Pesticides are used only after monitoring indicates they are needed according to established guidelines, and treatments are made with the goal of removing only the target organism. Pest control materials are selected and applied in a manner that minimizes risks to human health, beneficial and non-target organisms, and the environment. IPM techniques could include biological controls (e.g., ladybugs and other natural enemies or predators); physical or mechanical controls (e.g., hand labor or mowing, caulking entry points to buildings); cultural controls (e.g., mulching, alternative plant type selection, and enhanced cleaning and containment of food sources in buildings); and reduced risk chemical controls (e.g., soaps or oils).

- i. **Task Description** – The Permittees shall implement their IPM policies or ordinances and standard operating procedures and update their IPM policies or ordinances and standard operating procedures as needed to ensure their use of pesticides do not cause or contribute to pesticide-caused toxicity in receiving waters.
- ii. **Implementation** - Each Permittee shall require municipal employees and contractors to adhere to its IPM policy or ordinance and standard operating procedures in all the Permittee’s municipal operations and on all municipal property.
- iii. **Reporting**
 - (1) In their Annual Reports, the Permittees shall certify they are implementing their IPM policy or ordinance and standard operating procedures, report trends in quantities and types of pesticide active ingredients used, and explain any increases in use of pesticides of concern to water quality as listed in the introduction section of this Provision. Trends and quantities of pesticide active ingredient usage shall be reported beginning with the September 2017 Annual Report.
 - (2) In their Annual Reports, the Permittees shall provide a brief description (e.g., one or two sentences) of two IPM tactics or strategies implemented in the reporting year. Examples could include non-chemical strategies such as monitoring, mowing weeds, mulching, and redesign of problematic landscapes; preventive actions such as sealing holes and gaps in structures, improving sanitation, and outreach to employees about how their actions contribute to pest presence; and examples of integration of several strategies into a cohesive whole, such as tackling a rat problem by educating building occupants, improving sanitation, trimming trees away from buildings, sealing holes in the structure, and trapping rodents. To the extent possible, different IPM actions should be described each year, so that a range of IPM actions is described over the permit term.
 - (3) IPM policies or ordinances and IPM standard operating procedures shall be submitted to the Water Board upon request.

C.9.b. Train Municipal Employees

- i. **Task Description**– The Permittees shall ensure that all municipal employees who, within the scope of their duties, apply or use pesticides are trained in IPM practices and the Permittee’s IPM policy or ordinance and standard operating procedures. This training may also include other training opportunities such as Bay-Friendly Landscape Maintenance Training & Qualification Program, provided both structural and landscape pest control training are provided.
- ii. **Reporting**
 - (1) In their Annual Reports, the Permittees shall report the percentage of municipal employees who apply pesticides who have received training in their IPM policy or ordinance and IPM standard operating procedures

within the last year. This report shall briefly describe the nature of the training, such as tailgate training provided by a Permittee's IPM coordinator, IPM training through the Pesticide Applicators Professional Association, etc.

- (2) The Permittees shall submit training materials (e.g., course outline, date, and list of attendees) upon request.

C.9.c. Require Contractors to Implement IPM

- i. **Task Description** – The Permittees shall hire IPM-certified contractors or include contract specifications requiring contractors to implement IPM, so that all contractors practice IPM on municipal properties. The Permittees shall observe contractor pesticide applications to verify that contractors implement their contract specifications in accordance with the Permittee's IPM policies or ordinance and standard operating procedures. Permittees shall note that contractor certification as a pest control advisor (PCA) alone is not evidence of IPM implementation. Similarly, IPM certifications awarded to a pest control company may not guarantee an individual employee will always use IPM strategies. Thus, periodic Permittee observation of contractor performance is necessary.
- ii. **Implementation** – Permittees shall periodically monitor their contractors' activities to verify full implementation of IPM techniques. This shall include, at a minimum, evaluation of lists of pesticides and amounts of active ingredient used.
- iii. **Reporting** – In their Annual Reports, the Permittees shall state how they verified contractor compliance with IPM policies and any actions taken or needed to correct contractor performance.

C.9.d. Interface with County Agricultural Commissioners

- i. **Task Description** – The Permittees shall maintain communications with county agricultural commissioners to (a) get input and assistance on urban pest management practices and use of pesticides, (b) inform them of water quality issues related to pesticides, and (c) report any observed or citizen-reported violations of pesticide regulations (e.g., illegal handling and applications of pesticides) associated with stormwater management, particularly the California Department of Pesticide Regulation (DPR) surface water protection regulations for outdoor, nonagricultural use of pyrethroid pesticides by any person performing pest control for hire (http://www.cdpr.ca.gov/docs/legbills/rulepkgs/11-004/text_final.pdf).
- ii. **Reporting** – In their Annual Reports, the Permittees shall briefly describe the communications they have had with county agricultural commissioners and report followup actions to correct violations of pesticide regulations.

C.9.e. Public Outreach

- i. Task Description** – Permittees shall undertake outreach programs to (a) encourage communities within the Permittee’s jurisdiction to reduce their reliance on pesticides that threaten water quality; (b) encourage public and private landscape irrigation management that minimizes pesticide runoff; and (c) promote appropriate disposal of unused pesticides.
- ii. Implementation** – The Permittees shall conduct each of the following:
 - (1) Point of Purchase Outreach:** The Permittees shall:
 - Conduct outreach to consumers at the point of purchase;
 - Provide targeted information on proper pesticide use and disposal, potential adverse impacts on water quality, and less toxic methods of pest prevention and control; and
 - Participate in and provide resources for the “Our Water, Our World” program or a functionally-equivalent pesticide use reduction outreach program.
 - (2) Pest Control Contracting Outreach:** The Permittees shall conduct outreach to residents who use or contract for structural pest control and landscape professionals by (a) explaining the links between pesticide usage and water quality; and (b) providing information about IPM in structural pest management certification programs and landscape professional trainings; and (c) disseminating tips for hiring structural pest control operators and landscape professionals, such as the tips prepared by the University of California Extension IPM Program (UC-IPM).
 - (3) Outreach to Pest Control Professionals:** The Permittees shall conduct outreach to pest control operators, urging them to promote IPM services to customers and to become IPM-certified by Ecowise Certified or a functionally-equivalent certification program. Permittees are encouraged to work with the Pesticide Applicators Professional Association; the California Association of Pest Control Advisors; DPR; county agricultural commissioners; UC-IPM; BASMAA; EcoWise Certified Program (or functionally equivalent certification program); Bio-integral Resource Center and others to promote IPM to pest control operators.
- iii. Reporting** – In each Annual Report, Permittees shall describe their actions taken in the three outreach categories above. Outreach conducted at the county or regional level shall be described in Annual Reports prepared at that respective level; reiteration in individual Permittee reports is discouraged. Reports shall include a brief description of outreach conducted in each of the three categories, including level of effort, messages and target audience. (The effectiveness of outreach efforts shall be evaluated only once in the Permit term, as required in Provision C.9.f.).

C.9.f. Track and Participate in Relevant Regulatory Processes

- i. Task Description** – The Permittees shall conduct the following activities, which may be done at a county, regional, or state wide level:
 - (1) The Permittees shall track U.S. EPA pesticide evaluation and registration activities as they relate to surface water quality and, when necessary, encourage U.S. EPA to coordinate implementation of the Federal Insecticide, Fungicide, and Rodenticide Act and the CWA and to accommodate water quality concerns within its pesticide registration process;
 - (2) The Permittees shall track DPR pesticide evaluation activities as they relate to surface water quality and, when necessary, encourage DPR to coordinate implementation of the California Food and Agriculture Code with the California Water Code and to accommodate water quality concerns within its pesticide evaluation process;
 - (3) The Permittees shall assemble and submit information (such as monitoring data) as needed to assist DPR and county agricultural commissioners in ensuring that pesticide applications comply with WQS; and
 - (4) As appropriate, the Permittees shall submit comment letters on U.S. EPA and DPR re-registration, re-evaluation, and other actions relating to pesticides of concern for water quality.
- ii. Reporting** – In their Annual Reports, the Permittees shall summarize participation efforts, information submitted, and how regulatory actions were affected. Permittees who contribute to a county, regional, or state wide effort shall submit one report at the county or regional level. Duplicate reporting is discouraged.

C.9.g. Evaluate Implementation of Pesticide Source Control Actions

- i. Task Description** – This task is necessary to gauge how effective the implementation actions taken by Permittees are in (a) achieving TMDL targets and (b) avoiding future pesticide-related toxicity in urban creeks. Once during the permit term, Permittees shall conduct a thoughtful evaluation of their IPM efforts, how effective these efforts appear to be, and how they could be improved.
- ii. Implementation** – The Permittees shall evaluate the effectiveness of the pesticide control measures implemented by their staff and contractors, evaluate attainment of pesticide concentration and toxicity targets for water and sediment from monitoring data (collected by Permittees, research agencies, and/or State agencies), and identify additions and/or improvements to existing control measures needed to attain targets, with an implementation time schedule.
- iii. Reporting** – In their 2019 Annual Reports, the Permittees shall submit this evaluation, which shall include an assessment of the effectiveness of their IPM efforts required in Provisions C.9.a-e and g; a discussion of any improvements

made in these efforts in the preceding five years; and any changes in water quality regarding pesticide toxicity in urban creeks. This evaluation shall also include a brief description of one or more pesticide-related area(s) the Permittee will focus on enhancing during the subsequent permit term. Work conducted at the county or regional level shall be evaluated at that respective level; reiteration in individual Permittee evaluation reports is discouraged.

C.10. Trash Load Reduction

The Permittees shall demonstrate compliance with Discharge Prohibition A.1, for trash discharges, Discharge Prohibition A.2, and trash-related Receiving Water Limitations through the timely implementation of control measures and other actions to reduce trash loads from municipal separate storm sewer systems in accordance with the requirements of this provision. Flood management agencies are not subject to these trash reduction requirements except for continued implementation of requirements for trash full capture systems and Trash Hot Spot cleanups, as specified in subsections C.10.b.i and C.10.c.

C.10.a. Trash Reduction Requirements

Permittees shall implement trash load reduction control actions in accordance with the following schedule and trash generation area management requirements, including mandatory minimum full trash capture systems, to meet the goal of 100 percent trash load reduction or no adverse impact to receiving waters from trash by July 1, 2022.

- i. **Schedule** – Permittees shall reduce trash discharges from 2009 levels, described below, to receiving waters in accordance with the following schedule:
 - a. 70 percent by July 1, 2017; and
 - b. 80 percent by July 1, 2019.

In addition, Permittees should achieve 60 percent reduction by July 1, 2016. This is not a mandatory deadline; rather, it shall be used as a performance guideline to meet the mandatory July 1, 2017 deadline. Permittees that do not attain the 60 percent performance guideline shall submit documentation of a plan and schedule of implementation of additional trash load reduction control actions that will attain the July 1, 2017 deadline.

- ii. **Trash Generation Area Management** – Permittees shall demonstrate attainment of the C.10.a.i trash discharges percentage-reduction requirements by management of mapped trash generation areas within their jurisdictions delineated on Trash Generation Area Maps included with their Long Term Trash Reduction Plans, submitted in February 2014, in accordance with the requirements and accounting set forth in this provision. The February 2014 maps provide the 2009 trash levels and delineate trash generation areas within Permittees' jurisdictions into the following trash generation rate categories

Low = less than 5 gal/acre/yr;
Moderate = 5-10 gal/acre/yr;
High = 10-50 gal/acre/yr; and
Very High = greater than 50 gal/acre/yr.

Permittees also designated trash management areas on their February 2014 maps encompassing one or more trash generation areas, within which they will implement trash control actions. Permittees shall have an opportunity to correct and/or revise, based on improved information, the 2009 trash levels and trash generation areas in their February 2014 maps by submitting the correction and/or revision no later than the 2016 Annual Report deadline.

- a. Permittees shall implement trash prevention and control actions, including full trash capture systems or other trash management actions, or combinations of actions, with trash discharge control equivalent to or better than full trash capture systems, to reduce trash generation to a Low trash generation rate or better. Actions equivalent to full trash capture means actions that send no more trash down the storm drain system than a full trash capture device would allow, which is essentially no trash discharge except in very large storm flows. The C.10.a.i percent reductions shall be demonstrated by percent of 2009 Very High, High, and Moderate trash generation areas reduced to lower trash generation categories or Low trash generation by the C.10.a.i mandatory deadlines.
- b. Permittees shall ensure that lands that they do not own or operate, but that are plumbed directly to their storm drain systems in Very High, High, and Moderate trash generation areas are equipped with full trash capture systems or are managed with trash discharge control actions equivalent to or better than full trash capture systems. The efficacy of the latter shall be assessed with visual assessments in accordance with C.10.b.ii. If there is a full trash capture device downstream of these lands, no other trash control is required. Permittees shall map the location, or otherwise record the location, of all such lands greater than 10,000 ft² that are plumbed directly to their storm drain systems by July 1, 2018, including the trash control status of these areas. This information shall be retained by the Permittees for inspection upon request.
- iii. **Mandatory Minimum Full Trash Capture Systems** - Permittees shall install and maintain a mandatory minimum number of full trash capture devices, to treat runoff from an area equivalent to 30 percent of retail/wholesale land area, as documented by the Association of Bay Area Governments, which drains to the storm drain system within their jurisdictions. A city Permittee with a population less than 12,000 and retail/wholesale land less than 40 acres, or a population less than 2,000, is exempt from this full trash capture requirement. Table 2 in Attachment E contains the minimum amount of drainage areas that must be treated with full trash capture devices by each city or county Permittee, and the minimum number of trash capture devices required to be installed and maintained by flood management agency Permittees.

A full capture system is any single device or series of devices that traps all particles retained by a 5 mm mesh screen and has a design treatment capacity of not less than the peak flow rate resulting from a one-year, one-hour, storm in the sub-drainage area or designed to carry at least the same flow as the storm drain connected to the inlet. The device(s) must also have a trash reservoir large enough to contain a reasonable amount of trash safely without overflowing trash into the overflow outlet between maintenance events. Types of systems certified by the State Water Resources Control Board are deemed full capture systems. A stormwater treatment facility implemented in accordance with Provision C.3 is also deemed a full capture system if the facility, including its maintenance prevents the discharge of trash to the downstream MS4 and receiving waters

and discharge points from the facility, including overflows, are appropriately screened or otherwise configured to meet the full trash capture screening specification for storm flows up to the full trash capture one year, one hour storm hydraulic specification (C.10.a.iii.).

C.10.b. Demonstration of Trash Reduction Outcomes

- i. Full Trash Capture Systems** – Permittees shall maintain, and provide for inspection and review upon request, documentation of the design, operation, and maintenance of each of their full trash capture systems, including the mapped location and drainage area served by each system.
 - a. Maintenance** – The maintenance of each full capture device shall be adequate to prevent plugging, including plugging of the 5 mm screen leading to trash overflow and bypass, flooding, or a full condition of the device’s trash reservoir causing bypassing of trash. All full trash capture devices shall be inspected and maintained at least once per year. All such devices in high or very high trash generation areas shall be inspected at least two times per year, with the inspections spaced at least three months or more apart. If this frequency of inspection is found excessive after two inspections, the inspection frequency can be reduced to once per year.

If any such device is found to have a plugged or blinded screen or is greater than 50 percent full of trash during a maintenance event, the maintenance frequency shall be increased so that the device is neither plugged nor more than half full of trash at the next maintenance event.
 - b. Maintenance Records** – Permittees shall retain device specific maintenance records, including, at a minimum: the date(s) of maintenance, the capacity condition of the device at the time of maintenance (full and overflowing or with storage capacity remaining), any special problems such as flooding, screen blinding or plugging from leaves, plastic bags, or other debris causing overflow, damage reducing function, or other negative conditions. A summary of this information shall be reported in each Annual Report which may be limited to the number of full capture devices maintained that exhibited a plugged, full or overflowing condition upon maintenance.
 - c. Certification** – Permittees shall certify annually that each of their full trash capture systems is operated and maintained to meet full trash capture system requirements. Drainage areas served by an adequately maintained full trash capture system will be considered equivalent to or better than a Low trash generation area.
- ii. Other Trash Management Actions** – Permittees shall maintain, and provide for inspection and review upon request, documentation of non-full trash capture system trash control actions that verifies implementation of each action. Permittees shall also conduct assessment of the action that verifies effectiveness of the action or combination of actions and maintain, and provide for inspection and review upon request, documentation of assessments.

- a. **Implementation Documentation** – Permittees shall maintain documentation of trash control actions that describes each action or combination of actions, the level of implementation, the timing and frequency of implementation, standard operating procedures if applicable, location(s) of implementation actions including mapped location(s) and drainage area(s) affected or description of areal extent, tracking and enforcement procedures if applicable, and other information relevant to effective implementation of the action or combination of actions.
- b. **Visual Assessment of Outcomes of Other Trash Management Actions** – Permittees shall conduct visual on-land assessment, including photo documentation, or other acceptable assessment method (see C.10.b.ii.b.(iv.)), of each trash generation area within which it is implementing other trash management actions or combination of actions other than full trash capture, to determine or verify the effectiveness of the action or combination of actions. Permittees may assess and account for one or more trash generation areas in a single trash management area within which a control action or combination of control actions is implemented. The visual on-land assessment method used shall meet or exceed the following criteria:
 - (i) Conduct observations within a trash management area of the sidewalk, curb and gutter, or locations associated with trash generation sources.
 - (ii) Conduct observations at randomly selected locations covering at least ten percent of a trash management area’s street miles; or conduct observations at strategic locations with justification they are representative of trash generation in the management area and they will represent the effectiveness of the control action(s) implemented or planned in the management area.
 - (iii) Conduct observations at a frequency consistent with known or estimated trash generation rate(s) within a trash management area and the time frequency of implementation of the control action(s) implemented or planned in the management area. Conduct observations for effectiveness approximately at the halfway point of the interval between instances of recurring trash control actions such as street sweeping and on-land cleanup.
 - (iv) Permittees may put forth substantive and credible evidence that certain management actions or sets of management actions when performed to a specified performance standard yield a certain trash reduction outcome reliably. Such a proposal shall be made to the Executive Officer as a submittal separate from any other submittals or reports. If this evidence is accepted by the Executive Officer, the Permittees may claim a similar trash reduction outcome by demonstrating that they have performed these trash reduction actions within certain trash management areas to the same performance standard accepted by the Executive Officer.
- iii. **Percentage Discharge Reduction** – Percentage discharge reduction from 2009 from Very High generation areas reduced to High, Moderate, and Low, High

generation areas reduced to Moderate and Low, and Moderate trash generation areas reduced to Low trash generation category to meet the required total percent reduction (%_{Reduction}) shall be calculated based on the following formula:

$$\% \text{ Reduction} = 100 [(12A_{\text{VH}(2009)} + 4A_{\text{H}(2009)} + A_{\text{M}(2009)}) - (12A_{\text{VH}} + 4A_{\text{H}} + A_{\text{M}})] / (12A_{\text{VH}2009} + 4A_{\text{H}2009} + A_{\text{M}2009})$$

where:

- $A_{\text{VH}(2009)}$ = total amount of the 2009 very high trash generation category jurisdictional area
 $A_{\text{H}(2009)}$ = total amount of the 2009 high trash generation category jurisdictional area
 $A_{\text{M}(2009)}$ = total amount of the 2009 moderate trash generation category jurisdictional area
 A_{VH} = total amount of very high trash generation category jurisdictional area in the reporting year
 A_{H} = total amount of high trash generation category jurisdictional area in the reporting year
 A_{M} = total amount of moderate trash generation category jurisdictional area in the reporting year
12 = Very High to Moderate weighing ratio
4 = High to Moderate weighing ratio
100 = fraction to percentage conversion factor

- iv. **Source Control** – Permittee jurisdiction-wide actions to reduce trash at the source, particularly persistent trash items, may be valued toward trash load reduction compliance by up to ten percent load reduction total for all such actions. To claim a load percentage reduction value, Permittees must provide substantive and credible evidence that these actions reduce trash by the claimed value. A Permittee may reference studies in other jurisdictions if it provides evidence that the implementation of source control in its jurisdiction is similarly implemented as the source control assessed in the reference studies.
- v. **Receiving Water Monitoring** – Permittees shall conduct receiving water monitoring and develop receiving water monitoring tools and protocols and a monitoring program designed, to the extent possible, to answer the following questions:
- Have a Permittee's trash control actions effectively prevented trash within a Permittee's jurisdiction from discharging into receiving water(s)?
 - Is trash present in receiving water(s), including transport from one receiving water to another, e.g., from a creek to a San Francisco Bay segment, at levels that may cause adverse water quality impacts?
 - Are trash discharges from a Permittee's jurisdiction causing or contributing to adverse trash impacts in receiving water(s)?
 - Are there sources outside of a Permittee's jurisdiction that are causing or contributing to adverse trash impacts in receiving water(s)?

The monitoring tools and protocols shall include direct measurements and/or observations of trash in receiving water(s), or in scenarios where direct measurements or observations are not feasible, surrogates for trash in receiving waters, such as measurement or observations of trash on stream banks or shorelines.

- a. **Development and Testing Plan** – Permittees shall submit a plan acceptable to the Executive Officer by July 1, 2017, to develop and test a proposed receiving water monitoring program that includes the following:
- (i) Description of the tools and protocols;
 - (ii) Description of discharge and receiving water scenarios, which will be considered, that accounts for the various receiving waters and watershed, community, and drainage characteristics within Permittees' jurisdictions that affect the discharge of trash and its fate and effect in receiving water(s);
 - (iii) Description of factors, in addition to those in C.10.b.v.a.(ii), that will be considered and evaluated to determine scenarios and spatial and temporal representativeness;
 - (iv) Identification of sites, representative of all the Permittees and discharge and receiving water scenarios, that will be monitored during this permit term;
 - (v) Development of a system to manage and access monitoring results;
 - (vi) Opportunity for input and participation by interested parties;
 - (vii) Scientific peer review of the tools and protocols and testing results; and
 - (viii) Schedule for development and testing; with monitoring at representative sites starting no later than October 2017.

If the Permittees conduct this work through an independent third party, approved by the Executive Officer, the Plan may be submitted by July 2018, with monitoring to begin no later than October 2018.

- b. **Report and Proposed Monitoring Program** – Permittees shall report progress in the 2018 Annual Report, and submit a preliminary report by July 1, 2019 and a final report by July 1, 2020 on the proposed trash receiving water monitoring program. The progress report is not required if the Permittees conduct this work through an independent third party, approved by the Executive Officer, that provides input and participation by interested parties and scientific peer review of the tools and protocols and testing results and proposed receiving monitoring program.

C.10.c. Trash Hot Spot Selection and Cleanup

Trash Hot Spots in receiving waters shall be cleaned annually to achieve the multiple benefits of abatement of impacts and to learn more about the sources and transport routes of trash loading.

- i. **Trash Hot Spot Cleanup and Definition** – The Permittees shall clean selected Trash Hot Spots to a level of “no visual impact” at least one time per year for the

term of the permit. Trash Hot Spots shall be sections of creek or shoreline significantly impacted by trash of at least 100 yards of creek length or 200 yards of shoreline length.

- ii. **Trash Hot Spot Selection** – Permittees shall maintain the same number of trash hot spots identified in the previous permit term, which are included in Attachment E. Permittees may select new trash hot spot locations if past locations are no longer trash hotspots or if other locations may better align with trash management areas.
- iii. **Trash Hot Spot Assessments** – The Permittees shall quantify the volume of material removed from each Trash Hot Spot cleanup and attempt to identify sources to the extent readily feasible. Documentation of the cleanup activity to be retained by the Permittee shall include the trash condition before and after cleanup of the entire hot spot using photo documentation with a minimum of one photo per 100 feet of hot spot length and the total volume of trash and litter removed from the hot spot. Permittees shall report the volume removed for the most recent five years of hot spot cleanup in each Annual Report, or if a new trash hot spot location is selected, Permittees shall report the volume removed for the years of cleanup of that hotspot.

C.10.d. Trash Load Reduction Plans

Each Permittee shall maintain, and provide for inspection and review upon request, a Trash Load Reduction Plan, including an implementation schedule to meet the C.10.a Trash Load Reduction requirements. A summary of any new revisions to the Plan shall be included in the Annual Report. The Plan shall describe trash load reduction control actions being implemented or planned and the trash generation areas or trash management areas where the actions are or will be implemented, including jurisdiction-wide actions, such as source control ordinances

The Plans may include actions to control sources outside of the Permittee's jurisdiction that are causing or contributing to adverse trash impacts in the receiving water(s). Permittees who choose to implement such control actions may account for them towards meeting the C.10.a Trash Load Reduction requirements as long as they can demonstrate the controls will be sustained and they quantify the sustained load reduction benefit relative to control actions in the trash generation areas or trash management areas in their jurisdiction that drained to the affected receiving water.

C.10.e. Optional Trash Load Reduction Offset Opportunities

- i. **Additional Creek and Shoreline Cleanup** – A Permittee may offset part of its provision C.10.a trash load percent reduction requirement by conducting additional cleanup of creek and shoreline areas beyond trash hot spot cleanups required by C.10.c if the additional cleanup efforts are conducted at a frequency of at least twice per year and sufficient to demonstrate sustained improvement of the creek or shoreline area. The maximum offset that may be claimed is ten percent.

A Permittee may claim a load reduction offset of one percent for each total of trash volume removed from additional cleanups that is three and a third percent

for the 2016 performance guideline and 2017 mandatory trash load reduction deadline, and ten percent for the 2019 mandatory trash load reduction deadline, of the Permittee's 2009 trash load volume estimates, based on its trash generation maps and average categorical trash generation rates (see C.10.a.ii), in accordance with the following formula:

$$1\% \text{ Reduction Offset (Volume)} = (12 A_{VH(2009)} + 4 A_{H(2009)} + A_{M(2009)}) OF$$

where:

- $A_{VH(2009)}$ = total amount of 2009 very high trash generation category jurisdictional area
- $A_{H(2009)}$ = total amount of 2009 high trash generation category jurisdictional area
- $A_{M(2009)}$ = total amount of 2009 moderate trash generation category jurisdictional area
- 12 = Very High to Moderate weighing ratio
- 4 = High to Moderate weighing ratio
- OF = offset factor equal to (7.5×0.033) for the 2016 performance guideline and 2017 mandatory trash load reduction deadline, where 7.5 is the conversion from acres to gallons based on trash generation rates and 0.033 is the three to one offset ratio, or (7.5×0.1) for the 2019 mandatory trash load reduction deadline, where 7.5 is the conversion from acres to gallons based on trash generation rates and 0.1 is the ten to one offset ratio.

ii. **Direct Trash Discharge Controls** – A Permittee may offset an additional part of its provision C.10.a trash load percent reduction requirement by implementing a comprehensive plan approved by the Executive Officer for control of direct discharges of trash to receiving waters from non-storm drain system sources. The maximum offset that may be claimed is fifteen percent using the C.10.e.i formula. The plan shall be submitted not later than February 1 of the first year in which the offset will be reported in the following Annual Report and shall include the following:

- a. description of sources of the directly discharged trash;
- b. description of control actions that will be implemented during the permit term to prevent or reduce direct discharge trash loads in a systematic and comprehensive manner;
- c. map of the affected receiving water area and associated watershed; and
- d. description of how effectiveness of controls will be assessed, including documentation of controls, quantification of trash volume controlled, and assessment of resulting improvements to receiving water conditions.

C.10.f. Reporting

Each Permittee shall provide the following in each Annual Report:

- i. A summary of trash control actions within each trash management area, including the types of actions, levels of implementation, areal extent of implementation, and whether the actions are ongoing or new, including initiation date.
- ii. Upon request by the Executive Officer, an updated trash generation area map or maps, which include trash management areas, including the locations and associated drainage areas and of full trash capture systems and other trash control actions, and the location of Trash Hot Spots, with highlight or other indication of any revisions or changes from the previous year map(s). These maps can be used to illustrate progress toward achieving the trash reduction requirements in C.10.a.i.
- iii. Should a Permittee correct and/or revise its 2009 trash generation map submitted in February 2014, the corrected or revised 2009 trash generation map shall be submitted in the 2016 Annual Report, if the Permittee has not already submitted the corrected or revised map. Certification that each of its full trash capture systems is operated and maintained to meet full trash capture system requirements; a description of any systems that did not meet full trash capture system requirements (e.g., due to plugging or overflowing); and any corrective actions taken.
- iv. An accounting of its non-full trash capture system trash control actions assessments by providing a summary description of assessments in each of its trash management areas, including the number and dates of observations.
- v. An accounting of progress toward or attainment of C.10.a.i trash discharge reduction performance guidelines and mandatory deadlines using the C.10.a.ii trash generation area mapping methodology and formula.
 - a. If a Permittee cannot demonstrate attainment of the 2016 performance guideline, it shall submit a detailed plan and schedule of implementation of additional trash load reduction control actions that will attain the 2017 mandatory deadline.
 - b. If a Permittee cannot demonstrate attainment of the 2017 or 2019 mandatory trash load reduction deadline, it shall submit a report of non-compliance with the associated Annual Report, or in advance of the Annual Report, that describes actions to comply with the mandatory reduction deadline in a timely manner. The report shall include a plan and schedule for implementation of full trash capture systems sufficient to attain the required reduction. A Permittee may submit a plan and schedule for implementation of other trash management actions to attain the required reduction in an area where implementation of a full trash capture system is not feasible. In such cases, the report shall include identification of the area and documentation of the basis of the Permittee's determination that implementation of a full trash capture system is not feasible.
- vi. In the 2018 Annual Report, progress on development and testing of the receiving water monitoring program.

- vii.** The volume removed for the most recent five years of hot spot cleanup for each of its trash hot spots, or for the years of cleanup if a new trash hot spot location has been selected.
- viii.** For Permittees claiming a C.10.e.i offset, based on additional cleanup of creek and shoreline areas, a summary description of the additional cleanup actions.
- ix.** For Permittees claiming a C.10.e.ii offset, based on non-storm drain system trash controls, a summary description of control actions receiving water assessment results, quantification of trash volume controlled, and assessment of resulting improvements in receiving water condition, the claimed offset and documentation of information used in the C.10.e.i formula.

C.11. Mercury Controls

The Permittees shall implement the following control program for mercury. The Permittees shall perform the control measures (source control, treatment control, and pollution prevention strategies) and report on those control measures according to the provisions below. The provisions implement the urban runoff requirements of the San Francisco Bay and Guadalupe River Watershed mercury TMDLs and reduce mercury loads to make substantial progress toward achieving the urban runoff mercury load allocations established for the TMDLs. The aggregate, regionwide, urban runoff wasteload allocation from the San Francisco Bay mercury TMDL is 82 kg/yr. The TMDL implementation plan calls for attainment of the allocation by February 2028 and, as a way to measure progress, attainment of an interim loading milestone by February 2018 of 120 kg/yr, halfway between the 2003 estimated load, 160 kg/yr, and the aggregate allocation. The Permittees may comply with any requirement of this provision through a collaborative effort.

C.11.a. Implement Control Measures to Achieve Mercury Load Reductions

- i. **Task Description** – Permittees shall implement mercury source and treatment control measures and pollution prevention strategies to reduce mercury loads throughout the area covered by this Permit (permit-area).
- ii. **Implementation level** – To comply with this provision element, Permittees shall:
 - (1) Identify the watersheds or portions of watersheds (management areas) in which mercury control measures are currently being implemented and those in which new control measures will be implemented during the term of this Permit (many or most may be the same watersheds as those identified for C.12.a.ii(1));
 - (2) Identify the control measures that are currently being implemented and those that will be implemented in each watershed and management area (may be the same as those identified for C.12.a.ii(2));
 - (3) Submit a schedule of control measure implementation; and
 - (4) Implement mercury source and treatment control measures and pollution prevention strategies and quantify mercury load reductions achieved by using the accounting methods established according to provision C.11.b.
- iii. **Reporting**
 - (1) The Permittees shall report by April 1, 2016, progress toward developing a list of the watersheds and management areas where mercury control measures are currently being implemented and those in which control measures will be implemented (C.11.a.ii(1)) during the term of this Permit as well as the monitoring data and other information used to select these watersheds and management areas.

- (2) The Permittees shall report in their 2016 Annual Report the list of watersheds and management areas where control measures are currently being implemented or will be implemented during the term of the Permit (C.11.a.ii(1)) along with the specific control measures (C.11.a.ii(2)) that are currently being implemented and those that will be implemented in these watersheds and management areas and an implementation schedule (C.11.a.ii(3)) for these control measures. In addition to the list of watersheds and management areas, this report shall include:
 - a. The number, type, and locations and/or frequency (if applicable) of control measures;
 - b. The description, scope, and start date of pollution prevention measures;
 - c. For each structural control and non-structural BMP, interim implementation progress milestones (e.g., construction milestones for structural BMPs or other relevant implementation milestones for structural and non-structural BMPs) and a schedule for milestone achievement; and
 - d. Clear statements of the roles and responsibilities of each participating Permittee for implementation of pollution prevention or control measures identified under C.11.a.ii(2).
- (3) Beginning with the 2017 Annual Report and continuing in all Annual Reports, Permittees shall update all the information required under C.11.a.iii(2) as necessary to account for new control measures implemented, but not described, in the 2016 Annual Report.

C.11.b. Assess Mercury Load Reductions from Stormwater

- i. **Task Description** – The Permittees shall develop and implement an assessment methodology and data collection program to quantify in a technically sound manner mercury loads reduced through implementation of pollution prevention, source control, and treatment control measures, including mercury source control, stormwater treatment, green infrastructure, and other measures. The Permittees shall use the assessment methodology to demonstrate progress toward achieving the load reductions required in this Permit term and the program area wasteload allocations.

A reasonable and technically sound load reduction accounting system is described in the Fact Sheet and is based on information submitted by the Permittees in the January 2014 Integrated Monitoring Report. This task consists of documenting the method described in the Fact Sheet or any alternative methodology, updating and refining the accounting system to account for new information, justifying assumptions, analytical methods, sampling schemes and parameters used to quantify the load reduction for each type of control measure, and indicating what information will be collected and submitted to confirm the calculated load reduction for each control measure implemented.

- ii. **Implementation Level** – The Permittees shall adequately quantify the mercury load reductions achieved through implementing pollution prevention, source control, and treatment control efforts.
- iii. **Reporting**
 - (1) In their 2016 Annual Report the Permittees shall submit, for Executive Officer approval, the assessment methodology and data collection program required in C.11.b.i.
 - (2) Beginning with the 2017 Annual Report, Permittees shall report annually the loads reduced using the default (from Fact Sheet) or alternative approved assessment methodology to demonstrate cumulative mercury load reduced from each control measure implemented since the beginning of the Permit term. Permittees shall submit all supporting data and information necessary to substantiate the load reduction estimates, including appropriate reference to the control measures described in the reporting required under C.11.a.
 - (3) In their 2018 and subsequent Annual Reports, the Permittees shall submit, for Executive Officer approval, any refinements, if necessary, to the measurement and estimation methodologies to assess mercury load reductions in the subsequent permit.

C.11.c. Plan and Implement Green Infrastructure to reduce mercury loads

- i. **Task Description** – Permittees shall implement green infrastructure projects during the term of the Permit to achieve the mercury load reductions performance criteria in Table 11.1. Green infrastructure projects on both public and private land can serve to achieve this load reduction requirement. Additionally, Permittees shall prepare a reasonable assurance analysis (see below and Fact Sheet) to demonstrate quantitatively that mercury load reductions of at least 10 kg/yr will be achieved by 2040 through implementation of green infrastructure throughout the permit-area.
- ii. **Implementation Level**
 - (1) The Permittees shall implement sufficient green infrastructure projects so that mercury loads are collectively reduced by 48 g/yr by June 30, 2020, which shall be extended to December 31, 2020, if the Permittees provide documentation that control measures that will attain the load reduction will be implemented by December 31, 2020. Permittees shall demonstrate achievement of these load reductions by using the accounting methods approved under provision C.11.b.iii(1). Load reductions from green infrastructure projects implemented prior to the effective date of this Permit may be counted toward the required green infrastructure reductions of this Permit term if these projects were established and implemented during the Previous Permit term, but load reductions from the activity were not realized or credited during the Previous Permit term.

The Permittees may meet the load reduction as a group. The load reduction requirements summed over all Permittees within each county are set forth in Table 11.1. If neither the permit-area-wide total load reduction nor the county-specific load reduction is achieved, Permittees shall achieve load reductions consistent with their share of the county total. The individual Permittee share of the county load reduction is the proportion of county population in each municipality.

If all the Permittees in a county wish to use an alternative method of distributing the county load reductions, these Permittees shall report through their countywide stormwater programs on their alternative method (if different from default population-based method) for assigning Permittee-specific load fractions in the 2017 Annual Report. This can be determined by the Permittees within the counties and may be different from one county to the next, but all Permittees within a county shall use the same method of distributing the county load reductions. Any acceptable alternative load reduction criteria must be approved through an amendment of this Permit.

Table 11.1 Mercury Load Reduction Performance Criteria via Green Infrastructure Implementation by County

County Permittees	Mercury Load Reduction (g/yr) by June 30, 2020, through green infrastructure
Alameda Permittees	15
Contra Costa Permittees	9
San Mateo Permittees	6
Santa Clara Permittees	16
Solano Permittees: Suisun City, Vallejo, Fairfield	2
Totals	48

- (2) Permittees shall prepare a reasonable assurance analysis of future mercury load reductions by doing the following:
 - a. Quantify the relationship between areal extent of green infrastructure implementation and mercury load reductions. This quantification should take into consideration the scale of contamination of the treated area as well as the pollutant removal effectiveness of likely green infrastructure strategies.
 - b. Estimate the amount and characteristics of land area that will be treated through green infrastructure by 2020, 2030, and 2040.
 - c. Estimate the amount of mercury load reductions that will result from green infrastructure implementation by 2020, 2030, and 2040.

- d. Quantitatively demonstrate that mercury reductions of at least 10 kg/yr will be realized by 2040 through implementation of green infrastructure projects.
- e. Ensure that the calculation methods, models, model inputs, and modeling assumptions used to fulfill C.11.c.ii(2)(a-d) have been validated through a peer review process.

iii. Reporting

- (1) The Permittees shall submit in their 2018 Annual Report, as part of reporting for C.11.b.iii(2), the quantitative relationship between green infrastructure implementation and mercury load reductions. This submittal shall include all data used and a full description of models and model inputs relied on to establish this relationship.
- (2) The Permittees shall submit in their 2020 Annual Report an estimate of the amount and characteristics of land area that will be treated through green infrastructure implementation by 2020, 2030, and 2040. This submittal shall include all data used and a full description of models and model inputs relied on to generate this estimate.
- (3) The Permittees shall submit in their 2020 Annual Report a reasonable assurance analysis to demonstrate quantitatively that mercury reductions of at least 10 kg/yr will be realized by 2040 through implementation of green infrastructure projects. This submittal shall include all data used and a full description of models and model inputs relied on to make the demonstration and documentation of peer review of the reasonable assurance analysis.
- (4) The Permittees shall submit as part of reporting for C.11.b.iii(2), beginning with their 2019 Annual Report, an estimate of the amount of mercury load reductions resulting from green infrastructure implementation during the term of the Permit. This submittal shall include all data used and a full description of models and model inputs relied on to generate this estimate.
- (5) All Permittees in a county may submit, in the 2017 Annual Report, an alternative (different from the population-based default described in C.11.c.ii(1)) and supporting information to derive Permittee-specific proportions of load reduction criteria.

C.11.d. Prepare Implementation Plan and Schedule to Achieve TMDL Allocations

- i. **Task Description** – Permittees shall prepare a plan and schedule for mercury control measure implementation and reasonable assurance analysis demonstrating that sufficient control measures will be implemented to attain the mercury TMDL wasteload allocations by 2028. This plan may share many elements of a similar plan developed for PCBs according to Provision C.12.d.

- ii. **Implementation level** – Permittees shall prepare a mercury control measure implementation plan and corresponding reasonable assurance analysis that demonstrates quantitatively that the plan will result in mercury load reductions sufficient to attain the mercury TMDL wasteload allocations by 2028. The plan must:
 - (1) Identify all technically and economically feasible mercury control measures (including green infrastructure projects) to be implemented;
 - (2) Include a schedule according to which these technically and economically feasible control measures will be fully implemented; and
 - (3) Provide an evaluation and quantification of the mercury load reduction of such measures as well as an evaluation of costs, control measure efficiency and significant environmental impacts resulting from their implementation.
- iii. **Reporting**

Permittees shall submit the plan and schedule in the 2020 Annual Report.

C.11.e. Implement a Risk Reduction Program

- i. **Task Description** – The Permittees shall conduct an ongoing risk reduction program to address public health impacts of mercury in San Francisco Bay/Delta fish. The fish risk reduction program shall take actions to reduce actual and potential health risks in those people and communities most likely to consume San Francisco Bay-caught fish, such as subsistence fishers and their families. The risk reduction framework developed in the Previous Permit term, which funded community-based organizations to develop and deliver appropriate communications to appropriately targeted individuals and communities, is an appropriate approach.
- ii. **Implementation Level**
 - (1) At a minimum, Permittees shall conduct or cause to be conducted an ongoing risk reduction program with the potential to reach 3000 individuals annually who are likely consumers of San Francisco Bay-caught fish. Permittees are encouraged to collaborate with San Francisco Bay industrial and wastewater discharger agencies in meeting this requirement.
 - (2) In year four of the permit term, Permittees shall evaluate the effectiveness of their risk reduction program.
- iii. **Reporting** – The Permittees shall report on the status of the risk reduction program in each of their Annual Reports, including a brief description of actions taken, an estimate of the number of people reached, and why these people are deemed likely to consume Bay fish. The Permittees shall report the findings of the effectiveness evaluation of their risk reduction program in their 2020 Annual Report.

C.12. Polychlorinated Biphenyls (PCBs) Controls

The Permittees shall implement the following control program for PCBs. The Permittees shall implement PCBs control measures (source control, treatment control, and pollution prevention strategies) in areas where benefits are most likely to accrue (focused implementation) and report on those control measures according to the provisions below. The provisions implement the urban runoff requirements of the PCBs TMDL. Permittees shall reduce PCBs loads by a specified amount during the term of the Permit, thereby making substantial progress toward achieving the urban runoff PCBs wasteload allocation in the Basin Plan. The allocation, on an aggregate and regionwide basis, is 2 kg/yr (1.6 kg/yr allocated to Permittees) to be achieved by March 2030. This wasteload allocation represents a load reduction from all urban runoff sources to the Bay of approximately 18 kg/yr (14.4 kg/yr from Permittees) compared to loads estimated using data collected in 2003. The Permittees may comply with any requirement of this Provision through a collaborative effort.

C.12.a. Implement Control Measures to Achieve PCBs Load Reductions.

- i. Task Description** – Permittees shall implement PCBs source and treatment control measures and pollution prevention strategies to achieve PCBs load reductions in Table 12.1 throughout the area covered by this Permit (permit-area).
- ii. Implementation level** –To comply with this provision element, Permittees shall:
 - (1) Identify the watersheds or portions of watersheds (management areas) in which PCBs control measures are currently being implemented and those in which new control measures will be implemented during the term of this permit;
 - (2) Identify the control measures that are currently being implemented and those that will be implemented in each watershed and management area;
 - (3) Submit a schedule of control measure implementation; and
 - (4) Implement sufficient control measures to achieve the permit-area-wide reduction stated below or the county-specific load reduction performance criteria shown in Table 12.1. The Permittees shall demonstrate achievement of these load reductions as required in provision C.12.b. Load reductions from control measures implemented prior to the effective date of this Permit may be counted toward the required reductions of this Permit term if these control measures were established or implemented during the Previous Permit term, but load reductions from the activity were not realized or credited during the Previous Permit term (e.g., they were implemented after the 2014 Integrated Monitoring Report was submitted).

For all Permittees combined, these county-specific average annual PCBs load reduction performance criteria shall total 0.5 kg/yr by June 30, 2018, and 3.0 kg/yr by June 30, 2020. The June 30, 2020, deadline shall be extended to December 31, 2020, if the Permittees provide documentation that control measures that will attain the load reduction will be implemented by December 31, 2020. The Fact Sheet describes the amount of PCBs load reduction benefit associated with implementing a number of control measures.

The Permittees may meet the load reductions as a group. The load reduction requirements summed over all Permittees within each county are set forth in Table 12.1. If neither the permit-area-wide total load reduction criteria nor the county-specific load reduction criterion is achieved, Permittees shall achieve load reductions consistent with their share of the county total. The individual Permittee share of the county load reduction performance criteria is the proportion of county population in each municipality.

If all the Permittees in a county wish to use an alternative method of distributing the county load reductions, these Permittees shall report through their countywide stormwater programs on their alternative method (if different from default population-based method) for assigning Permittee-specific load fractions in the 2017 Annual Report. This can be determined by the Permittees within the counties and may be different from one county to the next, but all Permittees within a county shall use the same method of distributing the county load reductions. Any acceptable alternative load reduction criteria must be approved through an amendment of this Permit.

Table 12.1 PCBs Load Reductions Performance Criteria by County

County	PCBs load reduction (g/yr) by June 30, 2018	PCBs Load Reduction (g/yr) by June 30, 2020
Alameda Permittees	160	940
Contra Costa Permittees	90	560
San Mateo Permittees	60	370
Santa Clara Permittees	160	940
Solano Permittees: Suisun City, Vallejo, Fairfield	30	190
Totals	500	3000

iii. Reporting

- (1) The Permittees shall report by April 1, 2016, progress toward developing a list of the watersheds and management areas where PCBs control measures are currently being implemented and those in which control measures will be implemented (C.12.a.ii(1)) during the term of this Permit as well as the monitoring data and other information used to select these watersheds and management areas. This list should include watersheds containing contaminated sites referred to the Water Board as well.
- (2) The Permittees shall report in their 2016 Annual Report the list of watersheds and management areas where control measures are currently being implemented or will be implemented during the term of the Permit (C.12.a.ii(1)) along with the specific control measures (C.12.a.ii(2)) that are currently being implemented and those that will be implemented in these watersheds and management areas

and an implementation schedule (C.12.a.ii(3)) for these control measures. In addition to the list of watersheds and management areas, this report shall include:

- a. The number, type, and locations and/or frequency (if applicable) of control measures;
 - b. A cumulative listing of all potentially PCB-contaminated sites Permittees have discovered and referred to the Water Board to date, with a brief summary description of each site and where to obtain further information;
 - c. The description, scope, and start date, of PCBs control measures;
 - d. For each structural control and non-structural BMP, interim implementation progress milestones (e.g., construction milestones for structural controls or other relevant implementation milestones for structural controls and non-structural BMPs) and a schedule for milestone achievement; and
 - e. Clear statements of the roles and responsibilities of each participating Permittee for implementation of pollution prevention or control measures identified under C.12.a.ii(2).
- (3) Beginning with the 2017 Annual Report and continuing in all Annual Reports, Permittees shall update all the information required under C.12.a.iii(2) as necessary to account for new control measures implemented but not described in the 2016 Annual Report.
- (4) All Permittees in a county may submit, in the 2017 Annual Report, an alternative (different from the default described in C.12.a.ii(4)) and supporting information to derive Permittee-specific proportions of load reduction criteria.

C.12.b. Assess PCBs Load Reductions from Stormwater

- i. **Task Description** – The Permittees shall develop, document, and implement an assessment methodology and data collection program to quantify in a technically sound manner PCBs loads reduced through implementation of pollution prevention, source control, and treatment control measures, including PCBs source control, stormwater treatment, green infrastructure and other measures. The Permittees shall use the assessment methodology to demonstrate progress toward achieving the load reductions required in this Permit term and the program area wasteload allocations.

A reasonable and technically sound load reduction accounting system is described in the Fact Sheet and is based on information submitted by Permittees in the January 2014 Integrated Monitoring Report. This task consists of documenting the method described in the Fact Sheet or any alternative methodology, updating and refining the accounting system to account for new information, justifying assumptions, analytical methods, sampling schemes and parameters used to quantify the load reduction for each type of control measure, and indicating what information will be collected and submitted to confirm the calculated load reduction for each unit of activity.

- ii. **Implementation Level** – The Permittees shall adequately quantify the PCBs load reductions achieved through all the pollution prevention, source control, and

treatment control measures Permittees will implement in this Permit term, except for measures to manage PCB-containing materials and wastes during building demolitions (C.12.f).

For this Permit term, the Permittees will receive a total of 2000 g/yr (2 kg/yr) PCBs load reduction value if they have developed and implemented effective protocols for managing PCB-containing materials during demolition so that PCBs do not drain into the MS4 as required in provision C.12.f. The 2000 g/yr PCBs load reduction value shall be in furtherance of meeting the June 30, 2020, 3000 g/yr requirement in Table 12.1.

The Permittee-specific portion of the 2000 g/yr PCBs load reduction value shall be based on the proportion of county population in each municipality. If all the Permittees in a county wish to use an alternative method of distributing the county load reductions for managing PCB-containing materials during demolition, these Permittees shall report through their countywide stormwater programs on their alternative method (if different from default population-based method) for assigning Permittee-specific load fractions in the 2019 Annual Report. This can be determined by the Permittees within the counties and may be different from one county to the next, but all Permittees within a county shall use the same method of distributing the county load reductions. Any acceptable alternative load reduction criteria must be approved through an amendment of this Permit.

iii. Reporting

- (1) In their 2016 Annual Report the Permittees shall submit for approval by the Executive Officer the assessment methodology and data collection program required in C.12.b.i. and described in C.12.b.ii.
- (2) Beginning with the 2017 Annual Report, Permittees shall report annually the loads reduced using the default (from the Fact Sheet) or alternative approved assessment methodology to demonstrate cumulative PCBs load reduced from each control measure implemented since the beginning of the Permit term. Permittees shall submit all supporting data and information necessary to substantiate the load reduction estimates, including appropriate reference to the control measures described in the reporting required under C.12.a.
- (3) In their 2018 and subsequent Annual Reports, the Permittees shall submit, for Executive Officer approval, any refinements, if necessary, to the measurement and estimation methodologies to assess PCBs load reductions in the subsequent Permit.
- (4) All Permittees in a county may submit, in the 2019 Annual Report, an alternative (different from the default population-based method) and supporting information to derive Permittee-specific shares of load reduction value associated with implementation of C.12.f.

C.12.c. Plan and Implement Green Infrastructure to reduce PCBs loads

- i. **Task Description** – Permittees shall implement green infrastructure projects during the term of the Permit to achieve PCBs load reduction performance criteria in Table

12.2 in furtherance of meeting the 3000 g/year load reduction criteria required in C.12.a.ii.(4) and Table 12.1. Green infrastructure projects on both public and private land can serve to achieve this load reduction requirement. Additionally, Permittees shall prepare a reasonable assurance analysis (see below and the Fact Sheet) to demonstrate quantitatively that PCBs load reductions of at least 3 kg/yr will be achieved by 2040 through implementation of green infrastructure throughout the permit-area.

**Table 12.2 PCBs Load Reduction Performance Criteria via Green Infrastructure
Implementation by County**

County Permittees	PCBs Load Reduction (g/yr) by June 30, 2020, through green infrastructure
Alameda Permittees	37
Contra Costa Permittees	23
San Mateo Permittees	15
Santa Clara Permittees	37
Solano Permittees: Suisun City, Vallejo, Fairfield	8
Totals	120

ii. Implementation Level

- (1) The Permittees shall implement green infrastructure projects so that PCBs loads are collectively reduced by 120 g/yr by June 30, 2020, which shall be extended to December 31, 2020, if the Permittees provide documentation that control measures that will attain the load reduction will be implemented by December 31, 2020. Permittees shall demonstrate achievement of these load reductions by using the accounting methods approved under provision C.12.b.iii(1). Load reductions from green infrastructure projects implemented prior to the effective date of this Permit may be counted toward the required green infrastructure reductions of this Permit term if these projects were established and implemented during the Previous Permit term, but load reductions from the activity were not realized or credited during the Previous Permit term.

The Permittees may meet the load reduction as a group. The load reduction requirements summed over all Permittees within each county are set forth in Table 12.2. If neither the permit-area-wide total load reduction nor the county-specific load reduction is achieved, Permittees shall achieve load reductions consistent with their share of the county total under provision C.12.a.ii(4).

- (2) Permittees shall prepare a reasonable assurance analysis that demonstrates how green infrastructure will be implemented in order to achieve a PCBs load reduction of 3 kg/yr across the permit-area by 2040. This analysis shall include the following:
 - a. Quantify the relationship between areal extent of green infrastructure implementation and PCBs load reductions, taking into consideration the scale of contamination of the treated area as well as the pollutant removal effectiveness of likely green infrastructure strategies;
 - b. Estimate the amount and characteristics of land area that will be treated through green infrastructure by 2020, 2030, and 2040;
 - c. Estimate the amount of PCBs load reductions that will result from green infrastructure implementation by 2020, 2030, and 2040;
 - d. Quantitatively demonstrate that PCBs reductions of at least 3 kg/yr will be realized by 2040 through implementation of green infrastructure projects; and
 - e. Ensure that the calculation methods, models, model inputs and modeling assumptions used to fulfill C.12.c.ii(2)a-d have been validated through a peer review process.

iii. Reporting

- (1) The Permittees shall submit in their 2018 Annual Report, as part of reporting for C.12.b.iii(3), the quantitative relationship between green infrastructure implementation and PCBs load reductions. This submittal shall include all data used and a full description of models and model inputs relied on to establish this relationship.
- (2) The Permittees shall submit in their 2020 Annual Report an estimate of the amount and characteristics of land area that will be treated through green infrastructure implementation by 2020, 2030, and 2040. This submittal shall include all data used and a full description of models and model inputs relied on to generate this estimate.
- (3) The Permittees shall submit in their 2020 Annual Report a reasonable assurance analysis to demonstrate quantitatively that PCBs reductions of at least 3 kg/yr will be realized by 2040 through implementation of green infrastructure projects. This submittal shall include all data used and a full description of models and model inputs relied on to make the demonstration and documentation of peer review of the reasonable assurance analysis.
- (4) The Permittees shall submit as part of reporting for C.12.b.iii(4), beginning with their 2019 Annual Report an estimate of the amount of PCBs load reductions resulting from green infrastructure implementation during the term of the Permit. This submittal shall include all data used and a full description of models and model inputs relied on to generate this estimate.

C.12.d. Prepare Implementation Plan and Schedule to Achieve TMDL Wasteload Allocations

- i. Task Description** – Permittees shall prepare a plan and schedule for PCBs control measure implementation and reasonable assurance analysis demonstrating that sufficient control measures will be implemented to attain the PCBs TMDL wasteload allocations by 2030.
- ii. Implementation level** – Permittees shall prepare a PCBs control measures implementation plan and corresponding reasonable assurance analysis that demonstrates quantitatively that the plan will result in PCBs load reductions sufficient to attain the PCBs TMDL wasteload allocations by 2030. The plan must:
 - (1) Identify all technically and economically feasible PCBs control measures to be implemented (including green infrastructure projects); and
 - (2) Include a schedule according to which these technically and economically feasible control measures will be fully implemented; and
 - (3) Provide an evaluation and quantification of the PCBs load reduction of such measures as well as an evaluation of costs, control measure efficiency and significant environmental impacts resulting from their implementation.

iii. Reporting

Permittees shall submit the plan and schedule in the 2020 Annual Report.

C.12.e. Evaluate PCBs Presence in Caulks/Sealants Used in Storm Drain or Roadway Infrastructure in Public Rights-of-Way

- i. Task Description** –Permittees shall collect samples of caulk and other sealants used in storm drains and between concrete curbs and street pavement and investigate whether PCBs are present in such material and in what concentrations. PCBs are most likely present in material applied during the 1970s, so the focus of the investigations should be on structures installed during this era.

ii. Implementation Level

Permittees shall collect at least 20 composite samples (throughout the permit-area) of the caulks and sealants used in storm drains or roadway infrastructure in public rights-of-way and analyze this material for PCBs in such a way as to be able to detect a minimum PCBs concentration of 200 parts per billion. This sampling and analysis will count toward partial fulfillment of the monitoring effort aimed at finding PCBs sources (see management information need in C.8.f).

iii. Reporting

Permittees shall report on the results (including all data gathered) of this investigation no later than the 2018 Annual Report.

C.12.f. Manage PCB-Containing Materials and Wastes During Building Demolition Activities So That PCBs Do Not Enter Municipal Storm Drains

- i. **Task Description** – Permittees shall develop and implement or cause to be developed and implemented an effective protocol for managing materials with PCBs concentrations of 50 ppm or greater in applicable structures at the time such structures undergo demolition so that PCBs do not enter MS4s. PCBs from these structures can enter storm drains during and/or after demolition through vehicle track-out, airborne releases, soil erosion, or stormwater runoff.

Applicable structures include, at a minimum, commercial, public, institutional and industrial structures constructed or remodeled between the years 1950 and 1980 with building materials with PCBs concentrations of 50 ppm or greater. Single-family residential and wood frame structures are exempt.

A Permittee is exempt from this requirement if it provides evidence acceptable to the Executive Officer that the only structures that existed pre-1980 within its jurisdiction were single-family residential and/or wood-frame structures.

ii. **Implementation Level**

- (1) The Permittees shall develop a protocol by June 30, 2019, that includes each of the following components, at a minimum:
 - a. The necessary authority to ensure that PCBs do not enter MS4s from PCB-containing materials in applicable structures at the time such structures undergo demolition;
 - b. A method for identifying applicable structures prior to their demolition; and
 - c. Method(s) for ensuring PCBs are not discharged to the storm drain from demolition of applicable structures.
- (2) By July 1, 2019, and thereafter, the Permittees shall implement or cause to be implemented the PCBs management protocol for ensuring PCBs are not discharged to MS4s from demolition of applicable structures via vehicle track-out, airborne releases, soil erosion, or stormwater runoff.
- (3) By July 1, 2019, Permittees shall develop an assessment methodology and data collection program to quantify in a technically sound manner PCBs loads reduced through implementation of the protocol for controlling PCBs during demolition of applicable structures.

iii. **Reporting**

- (1) In their 2016, 2017, and 2018 Annual Reports, the Permittees shall summarize the steps they have taken to begin implementing this requirement, which could include working with State and local agencies on inter-agency coordination regarding building demolitions, developing ordinances or policies, obtaining information materials, updating or supplementing permit application materials, developing a tracking tool for potential PCB-containing structures, and training relevant staff as needed to comply with this sub-provision.

- (2) Each Permittee seeking exemption from C.12.f requirements must submit in its 2017 Annual Report documentation, such as historic maps or other historic records, that clearly demonstrates that the only structures that existed pre-1980 within its jurisdiction were single-family residential and/or wood-frame structures.
- (3) In their 2020 Annual Report, the Permittees shall provide documentation demonstrating implementation with each of the minimum requirements in C.12.f.ii(1)(a)-(c).
- (4) In their 2020 Annual Report and thereafter, the Permittees shall provide documentation of each of the following items:
 - a. The number of applicable structures that applied for a demolition permit during the reporting year; and
 - b. A running list of the applicable structures that applied for a demolition permit (since the date the PCBs control protocol was implemented) that had material(s) with PCBs at 50 ppm or greater, with the address, demolition date, and brief description of PCBs control method(s) used.
- (5) In their 2020 Annual Report, Permittees shall submit an assessment methodology and data collection program to quantify PCBs loads reduced through implementation of the protocol for controlling PCBs during building demolition. This should be reported at the regional level on behalf of all Permittees.

C.12.g. Fate and Transport Study of PCBs: Urban Runoff Impact on San Francisco Bay Margins

- i. **Task Description** – The Permittees shall conduct or cause to be conducted studies concerning the fate, transport, and biological uptake of PCBs discharged from urban runoff to San Francisco Bay margin areas.
- ii. **Implementation Level** – The specific information needs include understanding the in-Bay transport of PCBs discharged in urban runoff, the sediment and food web PCBs concentrations in margin areas receiving urban runoff, the influence of urban runoff on the patterns of food web PCBs accumulation, especially in Bay margins, and the identification of drainages where urban runoff PCBs are particularly important in food web accumulation.
- iii. **Reporting** – The Permittees shall submit in their 2017 Annual Report a workplan describing the specific manner in which these information needs will be accomplished and describing the studies to be performed with a preliminary schedule. The Permittees shall report on status of the studies in their 2018 Annual Report. The Permittees shall report in the March 15, 2020, Integrated Monitoring Report the findings and results of the studies completed, planned, or in progress as well as implications of studies on potential control measures to be investigated, piloted or implemented in future permit cycles.

C.12.h. Implement a Risk Reduction Program

- i. Task Description** – The Permittees shall conduct an ongoing risk reduction program to address public health impacts of PCBs in San Francisco Bay/Delta fish. The fish risk reduction program shall take actions to reduce actual and potential health risks in those people and communities most likely to consume San Francisco Bay-caught fish, such as subsistence fishers and their families. The risk reduction framework developed in the Previous Permit term, which funded community-based organizations to develop and deliver appropriate communications to appropriately targeted individuals and communities, is an appropriate approach. Permittees should work with local health departments, the Bay Area Clean Water Agencies, and the Western States Petroleum Association to leverage resources for this program and to appropriately target at-risk populations.
- ii. Implementation Level**

 - (1) At a minimum, Permittees shall conduct or cause to be conducted an ongoing risk reduction program with the potential to reach 3,000 individuals annually who are likely consumers of San Francisco Bay-caught fish. Permittees are encouraged to collaborate with San Francisco Bay industrial and wastewater discharger agencies in meeting this requirement.
 - (2) In year four of the Permit term, Permittees shall evaluate the effectiveness of their risk reduction program.
- iii. Reporting** – The Permittees shall report on the status of the risk reduction program in each of their Annual Reports, including a brief description of actions taken, an estimate of the number of people reached, and why these people are deemed likely to consume Bay fish. The Permittees shall report the findings of the effectiveness evaluation of their risk reduction program in their 2020 Annual Report.

C.13. Copper Controls

The Permittees shall implement the following control program for copper. The Permittees shall implement the control measures and accomplish the reporting on those control measures according to the provisions below. The purpose of these provisions is to implement the control measures identified in the Basin Plan amendment necessary to support the copper site-specific objectives in San Francisco Bay. The Permittees may comply with any requirement of C.13 Provisions through a collaborative effort.

C.13.a. Manage Waste Generated from Cleaning and Treating of Copper Architectural Features, Including Copper Roofs, during Construction and Post-Construction.

- i. Task Description** – The Permittees shall prohibit the discharge of wastewater to storm drains generated from the installation, cleaning, treating, and washing of the surface of copper architectural features, including copper roofs.
- ii. Implementation Level**
 - (1) The Permittees shall require, when issuing building permits, use of appropriate BMPs for managing waste during and post-construction.
 - (2) The Permittees shall educate installers and operators on appropriate BMPs for managing copper-containing wastes.
 - (3) The Permittees shall enforce against noncompliance.
- iii. Reporting**
 - (1) In the 2016 Annual Report, the Permittees shall certify that legal authority currently exists to prohibit the discharge of wastewater to storm drains generated from the installation, cleaning, treating, and washing of copper architectural features, including copper roofs.
 - (2) In the 2016 Annual Report, the Permittees shall report how copper architectural features are addressed through the issuance of building permits.
 - (3) The Permittees shall report annually permitting and enforcement activities.

C.13.b. Manage Discharges from Pools, Spas, and Fountains that Contain Copper-Based Chemicals

- i. Task Description** – Permittees shall prohibit discharges to storm drains from pools, spas, and fountains that contain copper-based chemicals.
- ii. Implementation Level** – The Permittees shall either: 1) require installation of a sanitary sewer discharge connection for pools, spas, and fountains, including connection for filter backwash, with a proper permit from the POTWs; or 2) require diversion of discharge for use in landscaping or irrigation.

iii. Reporting

- (1) In the 2016 Annual Report, the Permittees shall certify that legal authority currently exists to prohibit the discharges to storm drains of water containing copper-based chemicals from pools, spas, and fountains.
- (2) In the 2016 Annual Report, the Permittees shall report how copper-containing discharges from pools, spas, and fountains are addressed to accomplish the prohibition of the discharge.
- (3) The Permittees shall report annually on any enforcement activities.

C.13.c. Industrial Sources

i. Task Description – The Permittees shall ensure industrial facilities do not discharge elevated levels of copper to storm drains by ensuring, through industrial facility inspections, that proper BMPs are in place.

ii. Implementation Level

- (1) As part of industrial site controls required by Provision C.4, the Permittees shall identify facilities likely to use copper or have sources of copper (e.g., plating facilities, metal finishers, auto dismantlers) and include them in their inspection program plans.
- (2) The Permittees shall educate industrial inspectors on industrial facilities likely to use copper or have sources of copper and proper BMPs for them.
- (3) As part of the industrial inspection, inspectors shall ensure that proper BMPs are in place at such facilities to minimize discharge of copper to storm drains, including consideration of roof runoff that might accumulate copper deposits from ventilation systems on site.

iii. Reporting

The Permittees shall highlight copper reduction results in the industrial inspection component in the C.13 portion of each Annual Report.

C.14. City of Pacifica and San Mateo County Fecal Indicator Bacteria Controls

The City of Pacifica (City) and San Mateo County (County) Permittees shall implement Provision C.14 for fecal indicator bacteria. The City and County shall implement fecal indicator bacteria control measures in areas where benefits are most likely to accrue (focused implementation) and report on those control measures according to this provision. The goal of this provision is to implement the urban runoff (stormwater runoff and dry weather flows) requirements of the San Pedro Creek (Creek) and Pacifica State Beach (Beach) Indicator Bacteria TMDL (TMDL) and reduce exceedances of the bacterial water quality objectives for the water contact recreation beneficial use during the term of the Permit, thereby making substantial progress toward achieving the TMDL wasteload allocations. The wasteload allocations and the dates they must be attained by are listed in Table 14.1 below. The City and County may comply with any requirement of this provision through a collaborative effort.

Table 14.1. Numeric Targets, TMDLs, and Allocations Based on Allowable Exceedances of Single-Sample Bacteria Objectives for San Pedro Creek and Pacifica State Beach					
	San Pedro Creek		Pacifica State Beach		
	Dry Weather	Wet Weather	Summer Dry Weather (Apr. 1 to Oct. 31)	Winter Dry Weather (Nov. 1 to Mar. 31)	Wet Weather⁴
Allowable Exceedances of Single-Sample Objectives (assuming daily sampling is conducted) ^{1,2}	4	26	0	2	30
Allowable Exceedances of Single-Sample Objectives (assuming weekly sampling is conducted) ³	1	4	0	1	5
Attainment Date	August 1, 2028	August 1, 2028	August 1, 2021	August 1, 2021	August 1, 2021

1. Allowable exceedances are calculated by multiplying exceedance rates observed in the Reference System(s) by the Number of Days during each respective period in the reference year (1994).
2. To end up with whole numbers, where the fractional remainder for the calculated allowable exceedance days exceeds 0.1, the number of days is rounded up.
3. To determine the allowable number of exceedance events given a weekly sampling regime, as practiced for monitoring San Pedro Creek and Pacifica State Beach, the number of exceedance days was adjusted by solving for "X" in the following equation: $X = (\text{exceedance days} \times 52 \text{ weeks}) / 365 \text{ days}$.
4. Wet weather is defined as any day with 0.1 inches of rain or more and the following three days.

C.14.a. Implement Control Measures to Achieve Indicator Bacteria Wasteload Allocations.

- i. **Task Description** – The City and County shall implement bacteria control measures and pollution prevention strategies to prevent or reduce discharges of bacteria from their storm drain systems to meet the stormwater TMDL

wasteload allocations in the San Pedro Creek watershed and Pacifica State Beach Indicator Bacteria TMDL (TMDL Project Area).

ii. Implementation Level – In order to comply with this provision element:

- (1) The County shall effectively prohibit potential illicit discharges into its storm sewer system from sanitary sewer overflows or the sanitary sewer lines within its jurisdiction.
- (2) The County shall address bacteria discharges from the existing and future commercial horse and dog kennel facilities (facilities) into its storm sewer system within its jurisdiction as follows:
 - (a) Conduct annual site inspections of each facility for code compliance by June 30 of each year, beginning in 2016.
 - (b) Conduct an annual compliance review of each facility's current manure, stormwater, and drainage management plans by June 30 of each year, beginning in 2016.
 - (c) Enforcement actions for noncompliant facilities will be in line with the County's Confined Animal Ordinance.
- (3) The City shall address bacteria discharges from the existing and future commercial horse facilities (facilities) within its jurisdiction as follows:
 - (a) Review each facility's compliance with the City's Administrative Policy on "Standards for Keeping Animals."
 - (b) Review each facility's compliance with the City's Municipal Code on "Animal Excreta."
 - (c) Conduct annual compliance review and inspection of each facility by June 30 of each year, beginning in 2016.
 - (d) Take progressive enforcement action(s), as needed, to bring noncompliant facilities into compliance with the City's Administrative Policy on "Standards for Keeping Animals" and Municipal Code on "Animal Excreta."
- (4) The City shall install new dog waste clean-up signs, waste bag dispensers, and trash cans at a minimum of 10 (ten) high priority locations within the TMDL Project Area (each site to receive all three elements: sign, bag dispenser, and trash can, unless some of the elements are already in place) by June 30, 2016. The high priority sites for these installations shall be determined via visual inspections of popular dog walking areas and their potential to discharge improperly deposited dog waste to the Creek or Beach.
- (5) The City shall develop and implement a visual inspection and cleanup plan for high dog waste accumulation areas along San Pedro Creek and its tributaries by June 30, 2016. From April 1 through October 31, inspections and cleanups shall, at a minimum, be conducted on a quarterly basis (e.g., once each in April, July, and October). From November 1 through March 31, inspections and cleanups shall be conducted prior to forecast rain

events with a forecast rainfall depth of 0.2 inches or more (as measured at Half Moon Bay Airport (KHAF) Meteorological Station), and at a frequency of no less than once a month.

- (6) The City shall develop and implement an enhanced pet waste public outreach and education campaign by June 30, 2016, that, at a minimum, includes all the following:
 - (a) Explore the possibility of establishing a new public pet waste management stakeholder group (e.g., formal or informal dog owners club).
 - (b) Prepare and implement public service announcements regarding pet waste management and associated impacts to the Creek and Beach to play on the local television station and to include in print ads in the Pacifica Tribune.
 - (c) Distribute a mailer with an informational brochure to residents and businesses describing proper pet waste management, the linkage of the watershed to the Creek and Beach, and the adverse impact on those water bodies and those recreating in them from improper pet waste management.
 - (d) Add a new web page to the City website with information on the TMDL and the water quality monitoring and BMP implementation activities, as well as information about proper pet waste management and the impact of improperly deposited waste on water quality of the Creek and Beach and public health.
 - (e) Create and implement a pre-rain pet waste cleanup email alert to residents, reminding them to cleanup accumulated pet waste in their yards that could otherwise get washed into the Creek and Beach.
 - (f) Participate in local events and festivals to distribute pet waste management materials (educational fliers, dog waste bags, etc.).
- (7) The City and County, based on the results of the source characterization and BMP effectiveness, and wasteload allocation attainment analyses described in sections C.14.b-c, shall modify or refocus control measure implementation efforts as appropriate, at a frequency of no less than every two years.

iii. Reporting

- (1) No later than March 15 of each year, the City and County shall submit a comprehensive TMDL Status and Monitoring Report, reporting on the specific control measures (as listed in section C.14.a.ii above) that have been implemented in the TMDL Project Area during the forgoing October 1 through September 30 period. This report shall include:
 - (a) The number, type, and locations and/or frequency (if applicable) of control measures;
 - (b) The description, scope, and start date of pollution prevention measures; and

- (c) Clear statements of the responsibilities of each participating Permittee for implementation of pollution prevention or control measures.
- (2) Beginning with the 2017 TMDL Status and Monitoring Report and continuing in all TMDL Status and Monitoring Reports, the City and County shall update all the information as necessary to account for new control measures implemented, but not described in the 2016 TMDL Status and Monitoring Report or revisions to control measures.

C.14.b. Conduct Water Quality Monitoring to Assess Attainment of Wasteload Allocations

- i. **Task Description** - The purpose of the attainment monitoring is to determine whether or not the TMDL wasteload allocations are attained.
- ii. **Implementation Level** - In order to comply with this provision element, the City and County shall conduct attainment water quality monitoring activities as follows:
 - (1) **Sample Locations** – Two stations shall be monitored to assess attainment of wasteload allocations for stormwater runoff and dry weather flows: the mouth of San Pedro Creek (Creek Mouth) and Pacifica State Beach (Linda Mar #5).
 - (2) **Sampling Frequency** – The two attainment stations shall be monitored weekly on an ongoing basis for fecal indicator bacteria. The weekly sampling shall occur year-round regardless of weather conditions, provided the conditions are safe for field staff to collect the samples.
 - (3) **Constituents** – Fecal indicator bacteria species measured in freshwater samples collected from the Creek Mouth shall include *E. coli* and total coliform. Fecal indicator bacteria species measured in ocean water samples collected from Linda Mar #5 station shall include enterococci, fecal coliform, and total coliform.
- iii. **Reporting**
 - (1) In their Annual TMDL Status and Monitoring Reports submitted on March 15 each year, the City and County shall analyze, summarize, and report the results of the ongoing attainment monitoring, as follows:
 - (a) The City and County shall complete a data evaluation, which shall focus on determining whether the TMDL wasteload allocations are being attained in San Pedro Creek and at Pacifica State Beach.
 - (b) The indicator bacteria results from the attainment monitoring stations (Creek Mouth and Linda Mar #5 stations) shall be compared to applicable bacterial water quality objectives and the allowable exceedances of those objectives as specified in the TMDL (Table 14.1).
 - (c) The data evaluation shall include tabulation and review of local rainfall data to determine whether the weekly attainment monitoring sampling events occurred during dry weather or wet weather.

- (d) An ongoing quantitative analysis of trends in bacteria densities and exceedances of applicable water quality objectives at the two attainment stations shall be conducted and reported annually.
- (e) A detailed and comprehensive assessment of wasteload allocation attainment by the end of year 4 of the Permit term shall be completed. If wasteload allocations are not achieved by the end of the Permit term, no later than 180 days prior to Permit expiration, the City and County shall submit a plan in their Report Of Waste Discharge, acceptable to the Executive Officer, that describes additional control measures or increased levels of existing control measures that will be implemented to prevent or reduce discharges of bacteria to storm drain systems to attain wasteload allocations. The plan shall include implementation methods, an implementation schedule, and proposed milestones.

C.14.c. Conduct Water Quality Monitoring to Characterize Sources of Bacteria in The Project Area and to Assess BMP Effectiveness

- i. **Task Description** – The purpose of characterization monitoring is to better characterize indicator bacteria contributions from specific sources and to evaluate control measure effectiveness. The characterization monitoring shall provide data to:
 - (1) Characterize indicator bacteria densities in subwatersheds, storm drain outfalls, and pump stations that have not been sampled in the past. Results of the investigation may be used to drive future control measure actions.
 - (2) Establish baseline (or current) conditions against which future monitoring results can be compared following new or ongoing control measure implementation.

Characterization monitoring shall be conducted every other year on a water year basis (i.e., October 1 through September 30) beginning with Water Year 2016 (WY2016) (i.e., October 1, 2015 – September 30, 2016). WY2016 characterization monitoring shall assess *E. coli* densities throughout the San Pedro Creek watershed, with a focus on the culverted branches of the North Fork. The City and County may elect to focus on other areas with potential or suspected bacteria sources during subsequent years. In WY2016, human-, horse-, and dog-specific genetic markers shall be analyzed for a subset of the samples to investigate whether these species contribute fecal contamination to the Creek. The characterization monitoring shall be iterative in nature and allow for flexibility of design and details in future years. Subsequent years of characterization monitoring, at a minimum, shall have the same level of effort as WY2016; however, in future years, based on the results of the WY2016 monitoring, alternative sampling stations may be targeted, sampling intensities may be modified, sampling frequencies may be adjusted, and/or the species-specific genetic marker sampling may be revised.

ii. **Implementation Level** – The City and County shall conduct characterization monitoring activities as follows:

- (1) **Sample Locations** – in WY2016, a minimum of twelve sampling stations shall be monitored. The selected sampling stations for the WY2016 characterization monitoring are divided into three separate categories, as follows:
 - (a) **Subwatersheds** – Four subwatersheds shall be targeted in WY2016: the North Fork (three stations), Middle Fork (one station), Sanchez Fork (one station), and Main Stem (three stations);
 - (b) **Pump stations** – The Linda Mar and Anza pump stations shall be sampled during wet weather discharge events to the Beach (during dry weather, flows entering these stations are pumped to a wastewater treatment facility and do not discharge to the Creek or Beach);
 - (c) **Stormwater outfalls** – The Crespi Canal, which is an engineered and concrete-lined drainage ditch, shall be sampled if it has flowing water.

In addition to the above stations, the Creek mouth shall be also sampled during events when species-specific genetic marker samples are collected (see section C.14.c.ii.3).

In monitoring years subsequent to the WY2016 monitoring year, based on the results of the WY2016 monitoring, the sample locations and quantity may be modified. However, in each subsequent monitoring year, a minimum of one hundred ten (110) fecal indicator bacteria samples shall be collected.

- (2) **Sampling Frequency** – in WY2016, the characterization stations shall be sampled a minimum of ten times over the course of the water year, as follows:
 - (a) **Characterization monitoring** shall begin in WY2016 with the first sample collected in Winter 2016;
 - (b) **Wet season** – Five sampling events shall be conducted during each of the wet season months (November through March). To the extent possible, wet season sampling events shall occur during wet weather, which as defined in the TMDL is any day with 0.1 inch of rain or more and the following three days;
 - (c) **Dry season** – Five sampling events shall be conducted during the dry season on a monthly basis from May through September.

In subsequent monitoring years, based on the results of the WY2016 monitoring, the sampling frequency may be modified. However, in each subsequent monitoring year, a minimum of one hundred ten (110) fecal indicator bacteria samples shall be collected.

- (3) **Constituents** – All samples shall be analyzed for *E. coli*. In addition, during each monitoring year (i.e., WY2016, and every other water year thereafter), at a minimum, samples collected at four stations during four sampling events (two wet season, two dry season) shall be analyzed for

human-, horse-, and dog-specific genetic markers to assess whether the targeted host species contribute fecal contamination to the Creek and Beach.

- (4) **Monitoring Protocols and Data Quality** – Where applicable, monitoring data must be SWAMP comparable. Minimum data quality shall be consistent with the latest version of the SWAMP Quality Assurance Project Plan (QAPP) for applicable parameters, including data quality objectives, field and laboratory blanks, field duplicates, laboratory spikes, and clean techniques, using the most recent SWAMP Standard Operating Procedures.
- (5) **Future Revisions** – Any and all changes to the characterization monitoring plan in subsequent years (e.g., WY2018, WY2020, etc.) shall be submitted to the Executive Officer for review and acceptance no later than 90 days prior to implementation.

iii. Reporting

- (1) In their Annual TMDL Status and Monitoring Reports beginning with the 2016 report submitted on March 15, 2017, and every other year's report thereafter, the City and County shall submit a comprehensive Characterization Monitoring Report reporting on all data collected during the preceding October 1 through September monitoring period.
- (2) Data evaluation shall focus on addressing the following questions:
 - (a) Which land uses and/or sources contribute most to bacteria impairments in San Pedro Creek watershed?
 - (b) Are controllable sources of fecal contamination (e.g., human, horses, and dogs) present in the San Pedro Creek watershed?
 - (c) What are the multi-year indicator bacteria density trends in the Creek and at the Beach (i.e., do control measures appear to be reducing bacteria)?
- (3) As appropriate, the Report shall include the following:
 - (a) Immediately following the Table of Contents, a Data Tables section that includes all the data collected pursuant to Provision C.14.d. and contains the following information pertaining to the foregoing monitoring period:
 - (i) A map showing all monitoring locations;
 - (ii) Immediately following the map, a single completed Locations and Parameters Table containing the following columns or rows for each location sampled: numeric site identifier, a short-hand site name such as "Creek Mouth," latitude, longitude, and parameters assessed;
 - (iii) Immediately following the Locations and Parameters Table, a single completed Results Table containing the following columns or rows for each location sampled: the short-hand site name and

- datum/result for each constituent analyzed. Constituents that exceed applicable water quality objectives shall be highlighted.
- (b) For all data, a statement of the data quality.
 - (c) An analysis of the data, which includes the following:
 - (i) Basic descriptive statistics using indicator bacteria data;
 - (ii) Identification and evaluation of any controllable sources of fecal contamination (e.g., human, horses, and dogs) present in the San Pedro Creek watershed;
 - (iii) Identification and analysis of any trends in stormwater or receiving water quality; and
 - (iv) Consideration of variability in the data sets.
 - (d) A discussion of the data, which shall:
 - (i) Discuss monitoring data relative to prior conditions, beneficial uses and applicable water quality standards as described in the Basin or the Ocean plans;
 - (ii) Where appropriate, develop hypotheses to investigate regarding pollutant sources, trends, and BMP effectiveness;
 - (iii) Identify and prioritize water quality problems;
 - (iv) Identify potential sources of water quality problems;
 - (v) Describe followup actions;
 - (vi) Evaluate the effectiveness of existing control measures; and
 - (vii) Identify management actions needed to address water quality problems.

C.15. Exempted and Conditionally Exempted Discharges

The objective of this provision is to exempt unpolluted non-stormwater discharges from Discharge Prohibition A.1 and to conditionally exempt non-stormwater discharges that are potential sources of pollutants. In order for non-stormwater discharges to be conditionally exempted from Discharge Prohibition A.1, the Permittees must identify appropriate BMPs, monitor the non-stormwater discharges where necessary, and ensure implementation of effective control measures – as listed below – to eliminate adverse impacts to waters of the State consistent with the discharge prohibitions of the Order.

C.15.a. Exempted Non-Stormwater Discharges (Exempted Discharges):

- i. Discharge Type** – In carrying out Discharge Prohibition A.1, the following unpolluted discharges are exempted from prohibition of non-stormwater discharges:
 - (1) Flows from riparian habitats or wetlands;
 - (2) Diverted stream flows;
 - (3) Flows from natural springs;
 - (4) Rising ground waters;
 - (5) Uncontaminated and unpolluted groundwater infiltration;
 - (6) Single family homes' pumped groundwater, foundation drains, and water from crawl space pumps and footing drains;
 - (7) Pumped groundwater from drinking water aquifers (excludes well development); and
 - (8) NPDES permitted discharges (individual or general permits).
- ii. Implementation Level** – The non-stormwater discharges listed in Provision C.15.a.i above are exempted unless they are identified by the Permittees or the Executive Officer as sources of pollutants to receiving waters. If any of the above categories of discharges, or sources of such discharges, are identified as sources of pollutants to receiving waters, such categories or sources shall be addressed as conditionally exempted discharges in accordance with Provision C.15.b below.

C.15.b. Conditionally Exempted Non-Stormwater Discharges:

The following non-stormwater discharges are also exempt from Discharge Prohibition A.1 if they are either identified by the Permittees or the Executive Officer as not being sources of pollutants to receiving waters, or if appropriate control measures to eliminate adverse impacts of such sources are developed and implemented in accordance with the tasks and implementation levels of each category of Provision C.15.b.i-vi below.

- i. **Discharge Type – Pumped Groundwater, Foundation Drains, and Water from Crawl Space Pumps and Footing Drains**
- (1) **Pumped Groundwater from Non-Drinking Water Aquifers**
Groundwater pumped from a monitoring well, used for groundwater basin management, which is owned and/or operated by a Permittee is allowed if the following requirements are met:
- (a) **Implementation Level –** Twice a year (once during the wet season and once during the dry season), representative samples shall be taken from each aquifer that potentially will discharge or has discharged into a storm drain. Samples collected and analyzed for compliance in accordance with self-monitoring requirements of other NPDES permits or sample data collected for drinking water regulatory compliance may be submitted to comply with this requirement as long as they meet the following criteria:
- (i) The water samples shall meet water quality standards consistent with the existing effluent limitations or pollutant triggers in the Water Board's NPDES Groundwater General Permit, NPDES No. CAG912002.
- (ii) The water samples shall be analyzed using approved U.S. EPA methods: (a) U.S. EPA Method 8015 Modified for total petroleum hydrocarbons; (b) U.S. EPA Method 8260B and 8270C or equivalent for volatile and semi-volatile organic compounds; and (c) approved U.S. EPA methods to meet the triggers for the metals listed in the general permit discussed in C.15.(b)i.(1)(a)(i) above.
- (iii) The water samples shall be analyzed for pH and turbidity.
If a Permittee is unable to comply with the above criteria, the Permittee shall notify the Water Board upon becoming aware of the compliance issue.
- (b) **Required BMPs and Monitoring –** When greater than 2,500 gallons per day of uncontaminated (meeting the criteria in C.15.b.i.(1)(a)(i)) groundwater is discharged from these monitoring wells, the following shall be implemented:
- (i) Test the receiving water, upstream and downstream of the discharge point, to determine ambient turbidity and pH prior to discharging. Receiving water monitoring is not required if the discharge infiltrates into a dry creek immediately downstream.
- (ii) Test water samples for turbidity and pH on the first two consecutive days of dewatering.
- (iii) Maintain proper control of the discharge at the discharge point to prevent erosion, scouring of banks, nuisance, contamination, and excess sedimentation in the receiving waters.

- (iv) Maintain proper control of the flowrate and total flow during discharge so that it will not have a negative impact on the receiving waters.
 - (v) Appropriate BMPs shall be implemented to remove total suspended solids and silt to allowable discharge levels. Appropriate BMPs may include filtration, settling, coagulant application with no residual coagulant discharge, minor odor or color removal with activated carbon, small scale peroxide addition, or other minor treatment.
 - (vi) Turbidity of the discharged groundwater shall be maintained below 50 NTU for discharges to dry creeks, 110 percent of the ambient stream turbidity for a flowing stream with turbidities greater than 50 NTU, or 5 NTU above ambient turbidity for flowing streams with turbidities less than or equal to 50 NTU.
 - (vii) The pH of the discharged groundwater shall be maintained within the range of 6.5 to 8.5 and shall not vary from normal ambient pH by more than 0.5 pH units.
- (c) If the Permittee is unable to comply with the criteria in Provision C.15.b.i.(1)(b)(i)-(vii), discharge shall cease immediately and the Permittee shall employ treatment to meet the above criteria, use other means of disposal, or apply for coverage under the Water Board's NPDES Groundwater General Permits.
- (d) **Reporting** – The Permittees shall maintain records of these discharges, BMPs implemented, and any monitoring data collected.
- (2) **Pumped⁴¹ Groundwater, Foundation Drains, and Water from Crawl Space Pumps and Footing Drains**
- (a) Proposed new discharges of uncontaminated groundwater at flows of 10,000 gallons/day or more and all new discharges of potentially contaminated groundwater shall be reported to the Water Board so that they can be subject to NPDES permitting requirements. Proposed new discharges of uncontaminated groundwater at flows of less than 10,000 gallons/day shall be encouraged to discharge to a landscaped area or bioretention unit that is large enough to accommodate the volume.
 - (b) If the groundwater cannot be discharged to a landscaped area or bioretention unit and the discharge is greater than 2,500 gallons per day, it can only be considered for discharge once the following sampling is done to verify that the discharge is uncontaminated:
 - (i) The discharge shall meet WQS consistent with the existing effluent limitations or pollutant triggers in the Water Board's NPDES Groundwater General Permit, NPDES No. CAG912002.

⁴¹ Pumped groundwater not exempted in C.15.a or conditionally exempted in C.15.b.i.(1).

- (ii) The Permittees shall require that water samples from these discharge types be analyzed using the following approved U.S. EPA methods:
- U.S. EPA Method 8015 Modified for total petroleum hydrocarbons, and U.S. EPA Method 8260B and 8270C or equivalent for volatile and semi-volatile organic compounds.
 - The approved U.S. EPA Methods for the metals listed below that meet the corresponding Reporting Limits:

Metal	Reporting Limit
Antimony	6 µg/l
Arsenic	10 µg/l
Beryllium	4 µg/l
Cadmium	1.1 µg/l
Chromium VI	11 µg/l
Copper ⁴²	5.9 µg/l
Copper ⁴³	3.4 µg/l
Copper ⁴⁴	4.7 µg/l
Lead	3.2 µg/l
Mercury	0.025 µg/l
Nickel	19 µg/l
Selenium	5 µg/l
Silver	2.2 µg/l
Thallium	1.7 µg/l
Zinc	86 µg/l
Cyanide	2.9 µg/l

- (c) **Monitoring and Required BMPs** – When the discharge has been verified as uncontaminated per sampling completed in C.15.b.i.(2)(b) above, the Permittees shall require the following:
- (i) Test the receiving water, upstream and downstream of the discharge point, to determine ambient turbidity and pH prior to discharging. Receiving water monitoring is not required if the discharge infiltrates into a dry creek immediately downstream or if accessing the sampling points poses safety to personnel.
 - (ii) Test water samples for turbidity and pH on the first two consecutive days of dewatering.
 - (iii) Maintain proper control of the discharge at the discharge point to prevent erosion, scouring of bank, nuisance, contamination, and excess sedimentation in the receiving waters.

⁴² Applicable to Suisun Bay and San Pablo Bay segments of San Francisco Bay.

⁴³ Applicable to Central Bay and Lower Bay segments of San Francisco Bay.

⁴⁴ Applicable to South San Francisco Bay segments of San Francisco Bay.

- (iv) Maintain proper control of the flow rate and total flow during discharge so that it will not have a negative impact on the receiving waters.
 - (v) Appropriate BMPs to render pumped groundwater free of pollutants and therefore exempted from prohibition may include the following: filtration, settling, coagulant application with no residual coagulant discharge, minor odor or color removal with activated carbon, small scale peroxide addition, or other minor treatment.
 - (vi) Turbidity of discharged groundwater shall be maintained below 50 NTU for discharges to dry creeks, 110 percent of the ambient stream turbidity for a flowing stream with turbidities greater than 50 NTU, or 5 NTU above ambient turbidity for a flowing stream with turbidities less than or equal to 50 NTU.
 - (vii) The pH of discharged water shall be maintained within the range of 6.5 to 8.5 and shall not vary from normal ambient pH by more than 0.5 pH units.
- (d) If a Permittee determines that a discharger or a project proponent is unable to comply with the criteria in C.15.b.i.(2)(c)(i)-(vii), the Permittee shall require the discharge to cease immediately and require that the discharger employ treatment to meet the above criteria, use other means of disposal, or apply for coverage under the Water Board's NPDES Groundwater General Permit.
- (e) **Reporting** – The Permittees shall maintain records of these discharges, BMPs implemented, and any monitoring data collected.

ii. Discharge Type – Air Conditioning Condensate

Required BMPs – Condensate from air conditioning units shall be reused or directed to landscaped areas or the ground. Discharge to a storm drain system may be allowed if discharge to landscaped areas or the ground is not feasible.

iii. Discharge Type – Emergency Discharges of Potable Water

- (1) **Emergency Discharges** – Discharges resulting from firefighting activities.
- (2) **Required BMPs**
 - (a) The Permittees shall implement or require firefighting personnel to implement BMPs for emergency discharges. However, the BMPs should not interfere with immediate emergency response operations or impact public health and safety. BMPs may include, but are not limited to, the plugging of the storm drain collection system for temporary storage, the proper disposal of water according to jurisdictional requirements, and the use of foam where there may be toxic substances on the property the fire is located.
 - (b) During emergency situations, priority of efforts shall be directed toward life, property, and the environment (in descending order). The

Permittees or firefighting personnel shall control the pollution threat from their activities to the extent that time and resources allow.

- (3) **Reporting Requirements** – Reporting requirements will be determined by Water Board staff on a case-by-case basis, such as for fire incidents at chemical plants.

iv. Discharge Type – Individual Residential Car Washing

Required BMPs

- (1) The Permittees shall discourage through outreach efforts individual residential car washing within their jurisdictional areas that discharge directly into their storm drain systems.
- (2) The Permittees shall encourage individuals to direct car wash waters to landscaped areas, use as little detergent as necessary, or wash cars at commercial car wash facilities.

v. Discharge Type – Swimming Pool, Hot Tub, Spa, and Fountain Water Discharges

(1) Required BMPs

- (a) The Permittees shall prohibit discharge of water that contains chlorine residual, copper algacide, filter backwash or other pollutants to storm drains or to waterbodies. Such polluted discharges from pools, hot tubs, spas, and fountains shall be directed to the sanitary sewer (with the local sanitary sewer agency's approval) or to landscaped areas that can accommodate the volume.
- (b) Discharges from swimming pools, hot tubs, spas and fountains shall be allowed into storm drain collection systems only if there are no other feasible disposal alternatives (e.g., disposal to sanitary sewer or landscaped areas) and if the discharge is properly dechlorinated to non-detectable levels of chlorine consistent with water quality standards.
- (c) The Permittees shall require that new or rebuilt swimming pools, hot tubs, spas and fountains within their jurisdictions have a connection⁴⁵ to the sanitary sewer to facilitate draining events. The Permittees shall coordinate with local sanitary sewer agencies to determine the standards and requirements necessary for the installation of a sanitary sewer discharge location to allow draining events for pools, hot tubs, spas, and fountains to occur with the proper permits from the local sanitary sewer agency.
- (d) The Permittees shall improve their public outreach and educational efforts and ensure implementation of the required BMPs and compliance in commercial, municipal, and residential facilities.

⁴⁵ This connection could be a drain in the pool to the sanitary sewer or a sanitary sewer clean out located close enough to the pool so that a hose can readily direct the pool discharge into the sanitary sewer clean out.

- (e) The Permittees shall implement the Illicit Discharge Enforcement Response Plan from C.5.b for polluted (contains chlorine, copper algicide, filter backwash, or other pollutants) swimming pool, hot tub, spa, or fountain waters that get discharged into the storm drain.
 - (2) **Reporting** – The Permittees shall keep records of the authorized major discharges of dechlorinated pool, hot tubs, spa, and fountain water to the storm drain, including BMPs employed; such records shall be available for inspection by the Water Board.
- vi. **Discharge Type – Irrigation Water, Landscape Irrigation, and Lawn or Garden Watering**
- (1) **Required BMPs** – The Permittees shall promote measures that minimize runoff and pollutant loading from excess irrigation via the following:
 - (a) Promoting and/or working with potable water purveyors to promote conservation programs that minimize discharges from lawn watering and landscape irrigation practices;
 - (b) Promoting outreach messages regarding the use of less toxic options for pest control and landscape management;
 - (c) Promoting and/or working with potable water purveyors to promote the use of drought tolerant, native vegetation to minimize landscape irrigation demands;
 - (d) Promoting and/or working with potable water purveyors to promote outreach messages that encourage appropriate applications of water needed for irrigation and other watering practices; and
 - (e) Implementing the Illicit Discharge Enforcement Response Plan from C.5.b, as necessary, for ongoing, large-volume landscape irrigation runoff to their storm drain systems.
 - (2) **Reporting** – The Permittees shall provide implementation summaries in their Annual Report.

**STATE OF CALIFORNIA
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD SANTA ANA REGION**

**3737 Main Street, Suite 500, Riverside, CA 92501-3348
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<http://www.waterboards.ca.gov/santaana>**

**ORDER NO. R8-2015-0001
NPDES PERMIT NO. CAS 618030**

**NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM ("NPDES") PERMIT
AND WASTE DISCHARGE REQUIREMENTS**

**Orange County Flood Control District, the County of Orange
And
The Incorporated Cities therein within the Santa Ana Region

Area-wide Urban Runoff, Santa Ana Region**

The following Co-permittees, listed in Table 1, are subject to waste discharge requirements as set forth in this Order (or Permit):

Table 1: List of Entities Subject to the Requirements of this Order

County of Orange	City of La Habra
Orange County Flood Control District	City of La Palma
City of Anaheim	City of Lake Forest ¹
City of Brea	City of Los Alamitos
City of Buena Park	City of Newport Beach
City of Costa Mesa	City of Orange
City of Cypress	City of Placentia
City of Fountain Valley	City of Santa Ana
City of Fullerton	City of Seal Beach
City of Garden Grove	City of Stanton
City of Huntington Beach	City of Tustin
City of Irvine	City of Villa Park
City of Laguna Hills City of La Habra	City of Westminster
City of Laguna Woods	City of Yorba Linda

¹ [This Order regulates discharges of urban runoff from the entire jurisdiction of the City of Lake Forest, including those discharges into the San Diego Region.](#)

requirements related to the control of discharges of pollutants to their MS4s (See Section III).

2. Where the inspecting agency staff observes known or suspected violations of a local Co-permittee's requirements related to the control of discharges of pollutants to their MS4s, the known or suspected violation must be referred to the Co-permittee within two (2) business days of the inspection date.
3. Co-permittees must respond to referrals from the HCA or other third-party within three (3) business days of the matter being brought to their attention.

D. **Mobile Businesses:** The Co-permittees must implement an enforcement and outreach program for the following mobile businesses operating in the permit area: automobile wash/detail services, carpet cleaners, and pet services. The purpose of the program must be to identify potential dischargers and eliminate illicit non-storm water discharges into the MS4.

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XI. WATERSHED MANAGEMENT PLANS

In response to determinations that a discharge of urban runoff is causing or contributing to an exceedance of water quality standards or to exceedances of a WQBEL, the responsible Co-permittees may develop and fully implement plans to address these exceedances according to the requirements of this Section XI. The development and implementation of these plans will serve as a means to comply with receiving water limitations in Section IV (Receiving Water Limitations) and with WQBELs whose final deadlines have not yet passed in Section XVIII (Total Maximum Daily Load Implementation). Co-permittees may also develop plans without waiting for the results of water quality monitoring, analysis, and reporting to indicate that urban runoff is causing or contributing to exceedances of water quality standards or exceeding WQBELs. Whether a plan is initiated reactively or proactively, the responsible Co-permittees' full compliance with the following requirements will constitute compliance with receiving water limitations in Section IV and with those WQBELs that implement WLAs whose final deadlines have not yet passed in Appendices B through H according to the procedures in Section XVIII.

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A. The responsible Co-permittees must provide written notice to the Executive Officer of their intent to develop a Watershed Management Plan (WMP) to achieve water quality standards and/or WQBELs within a watershed according to the following requirements:

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1. The notice must include a schedule for the development of the draft WMP.
 - a. The schedule must include a work breakdown structure for the completion of discrete tasks and the achievement of specific milestones in the development of the draft plan. The plan development schedule must identify a minimum of three (3) critical milestones. The schedule must be sufficiently detailed to allow early detection of variances that may cause the Co-permittees to miss

- critical milestones or the final deadline. Deadlines may be either fixed dates or floating deadlines (e.g. "thirty days from").
- b. The plan development schedule must be as short as practical, but the date for submitting a final draft WMP must not have a deadline that exceeds 12-months from the date of the notice. The Regional Board and the Executive Officer may approve extensions of time for meeting critical milestones and the final deadline. The Executive Officer may not approve extensions that exceed 6 months in total. For the duration of the extension period, the responsible Co-permittees must demonstrate compliance with receiving water limitations in Section IV and with applicable WQBELs according to Section XVIII.
 - c. All deadlines must be part of a measurable and verifiable schedule.
 - d. The development schedule is subject to the approval of the Executive Officer. The Executive Officer is authorized to approve subject to conditions. Upon approval, the responsible Co-permittees must implement the development schedule according to the critical milestones and final submittal deadline.
2. The notice must also:
- a. Identify the responsible Co-permittees who will be participating in the development of the WMP.
 - b. Include copies of executed or draft agreements that are necessary to fund the development of the WMP.
 - c. Provide the contact information for representatives for each of the responsible Co-permittees.
 - d. Describe the management area (watershed or sub-watershed) over which the plan will apply.
 - e. Describe any models or similar analyses that may be used to prepare the draft WMP according to Provision XI.E.8. below.
- B. The responsible Co-permittees must implement the development schedule for the draft WMP according to the critical milestones and final deadline provided in their notice except as follows:
- a. Any changes to the critical milestones and final deadline must be requested in writing and are subject to the approval of the Executive Officer or the Regional Board. The Executive Officer may approve extensions of time not to exceed 6 months in total. For the duration where the extension period causes them to deviate from the original development schedule, the responsible Co-permittees must demonstrate compliance with receiving water limitations in Section IV and with applicable WQBELs according to Section XVIII.
 - b. Any written request for a change in the development schedule must include a statement of the purpose and need for the change.
 - c. The Executive Officer will provide a minimum of 10 days for public review of a request for a change prior to approving the request. Written requests must be received not less than 10-days prior to the affected scheduled deadline.
- C. WMPs may be developed for more than one pollutant or for similar classes of pollutants.

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D. The responsible Co-permittees must describe programs and projects in their Watershed Management Plan(s) which prioritize pollutants which are most likely to cause or contribute, or are known or suspected of causing or contributing to exceedances of water quality standards and WQBELs. The projects and programs must be designed to be carried out to reduce those pollutants in urban runoff according to a measurable and verifiable schedule. The responsible Co-permittees will prioritize pollutants based on any available information that is relevant to actual or probable exceedances of water quality standards and WQBELs, including, but not limited to the following:

1. Water quality information collected as part of efforts to detect illicit discharges and illicit connections;
2. Information collected as part of inspections of industrial, commercial, and construction sites;
3. Reports regarding pollutant source investigations;
4. The results of watershed modeling studies; and
5. Analyses of outfall monitoring data or receiving water monitoring data.
6. The status of the receiving water on the Clean Water Act Section 303(d) list of impaired waters.

E. The plan's projects and programs must be designed by the responsible Co-permittees to cause discharges of urban runoff from their MS4s to comply with relevant water quality standards and WQBELs. The WMP contents must include the following:

1. A description of the pollutant(s) that are most likely to cause or contribute, or are known or suspected of causing or contributing to exceedance(s) of water quality standards and/or WQBELs and a description of the supporting information and rationale used to identify the pollutant(s).
2. A description of the persons or activities known or suspected of being the source of the pollutant(s); a description of other potential sources which were considered and excluded; and a description of the supporting information and rationale.
3. A description of the BMPs that were being employed to control the pollutant(s). The description must be adequate to fully characterize the baseline conditions under which exceedances have occurred or may occur.
4. A description of any proposed new BMPs or modifications of currently-employed BMPs. BMPs may include:
 - a. Execution of studies or pilot programs that fill information gaps in storm water pollution control science and support the effective employment of BMPs.
 - b. Modification or substitution of procedures or practices at facilities owned or controlled by the responsible Co-permittees.
 - c. Modifications of the messages and target audiences of public education campaigns.
 - d. Adoption and enforcement of ordinances or standards designed to reduce certain pollutants.

- c. The analysis must be in substantial conformance with written guidance developed or referenced by Regional Board staff.
- 9. Proposed revisions to the Monitoring and Reporting Program designed to evaluate the effect of implementing the Watershed Management Plan on receiving water quality.
- F. The draft WMP is subject to review and approval by the Executive Officer. The Executive Officer is authorized to approve the draft plan, subject to conditions. The Executive Officer may also elect to seek consideration by the Regional Board of the draft plan.
- G. The Executive Officer will provide at least a 30-day public review period prior to consideration by the Executive Officer or Regional Board of any draft WMP or any proposed amendments to an already-approved (final) WMP.
- H. The draft WMP becomes a final plan upon approval by the Executive Officer or the Regional Board and must be fully implemented by the responsible Co-permittees according to critical performance measures identified in the plan or by the Executive Officer as part of conditions of approval.
- I. The responsible Co-permittees must provide any information that is missing from their draft WMP, and/or submit changes to the draft plan pursuant to a written request by the Executive Officer by a date specified in the request.
- J. The development, review and approval process of a WMP will occur according to the schedule shown in Table 3 below:

Table 3: Schedule for the Development, Review, and Approval of Watershed Management Plans

<u>Step</u>	<u>Deadline</u>
<u>The responsible Co-permittees submit notice of intent to develop a plan to comply with water quality standards and/or WQBELs.</u>	<u>No deadline.</u>
<u>Initial draft is submitted to the Executive Officer.</u>	<u>Not more than one year from the date the Regional Board receives the written notice of intent to prepare a WMP.</u>
<u>The Executive Officer completes the initial review of the draft plan, determines if the initial draft is complete according to the required contents, and notifies the responsible Co-permittees of any missing information or any instructions for amendments in writing.</u>	<u>Within 60-days of receipt of the initial draft WMP.</u>

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<p><u>The responsible Co-permittees provide any missing information to complete the initial draft plan and/or provide a second draft amended according to the Executive Officer's written instructions.</u></p>	<p><u>Within 60-days of receipt of the Executive Officer's written notice.</u></p>
<p><u>The Executive Officer provides draft conditions of approval for the draft plan, if any, to the responsible Co-permittees.</u></p>	<p><u>Within 60-days of receipt of a complete draft WMP which has been amended according to the Executive Officer's instructions.</u></p>
<p><u>The Executive Officer provides the complete, amended draft plan and any proposed conditions of approval for public notice.</u></p>	<p><u>Not less than 30-days prior to the expected date of approval of the draft plan.</u></p>

- K. The responsible Co-permittees must make the final WMP, as later amended or revised, accessible to the public by posting the plan to their web site(s), the Principal Permittee's web site, or another method acceptable to the Executive Officer.
- L. Except for non-substantive grammatical or technical corrections, the final WMP may be amended by the Co-permittees only with the approval of the Executive Officer.
- M. Plan amendments must be requested in writing and are subject to the approval of the Executive Officer. All proposed amendments must include an explanation of the purpose and need for the amendments. The Executive Officer will respond to requests for amendments within 60-days of receipt of the request. The Executive Officer may either: (1) request additional information, (2) approve the proposed amendments as is, (3) approve, subject to conditions, or (4) reject the proposed amendments.
- N. In carrying out approved WMPs, the responsible Co-permittees are subject to all of the relevant management requirements of this Order. This includes, but is not limited to requirements related to legal authority to carry out the approved WMP; execution of inter-agency and inter-Co-permittee agreements; execution of the "iterative process"; the performance of program effectiveness assessments using valid performance measures; and the collection and use of monitoring data to evaluate and improve the effectiveness of projects and programs described in the WMP.
- O. The effective requirements of the approved WMPs shall supplement and complement the requirements of this Order, unless provisions of this Order allow otherwise.
- P. Performance measures (inclusive of non-critical milestones) developed by the responsible Co-permittees for the BMPs in the WMPs will not be regarded as

enforceable unless specified otherwise in the WMP or as part of the Executive Officer's conditions of approval (critical performance metrics). However, as with any performance measure, the responsible Co-permittees must use them constructively to improve projects and programs in order to achieve or maintain water quality standards or WQBELs according to the requirements of this Order.

Q. Where regional and sub-regional structural treatment control BMPs are proposed in the WMPs and such facilities are not subject to requirements pertaining to project WQMPs, the Executive Officer and the responsible Co-permittees must provide that regional and sub-regional structural treatment control BMPs comply with the requirements of Section XII.D. (General Requirements for Structural Treatment Control BMPs) of this Order and, if applicable, Sections XII.K. (Specific Requirements for Infiltration LID BMPs) and XII.L. (Specific Requirements for Harvest and Use LID BMPs).

R. If, despite the implementation of the final approved WMP, cycles of monitoring, analysis, and reporting continue to result in determinations that there are continuing or recurring exceedances of water quality standards or WQBELs that are caused or contributed to by discharges of urban runoff, the responsible Co-permittees must reinitiate the planning procedures in this Section. Successive iterations must include in the new draft WMP, in summary:

1. Revised compliance schedule;
2. an updated objective analysis which provides reasonable assurance that relevant RWLs or WQBELs will be met ;
3. modifications to BMPs;
4. additional BMPs; and
5. if appropriate, changes to the monitoring program.

S. Compliance Determination

1. A submitted notice to prepare a draft WMP, compliance with the critical milestones and final deadline in a draft WMP development schedule, or implementation of an approved final WMP according to the requirements of this Order will serve as a mechanism to comply with receiving water limitations in Section IV (Receiving Water Limitations) and with WQBELs whose final deadlines have not yet passed in Section XVIII (Total Maximum Daily Load Implementation).
2. In the absence of a submitted notice to prepare a draft WMP, compliance with the critical milestones and final deadline in a development schedule for a draft WMP, or implementation of an approved final WMP according to the requirements of this Order, the responsible Co-permittee must comply directly with the receiving water limitations in Section IV and achieve the WQBELs in Appendices B through H according to the requirements of Section XVIII; compliance will be verified through a process developed for this purpose in the Water Quality Monitoring Plan.
3. In the event that the Executive Officer determines that the Co-permittees have failed comply with any of the provisions in this Section related to developing a draft plan, or to fully implementing a final plan, the Executive Officer may provide written Notice to the responsible Co-permittees and provide not more than 90-days from the date of the Notice to correct the deficiencies.

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- a. If, after issuance of written Notices, a Co-permittee repeatedly fails to come into compliance with the requirements of this Section XI, either through performance of the requirement or by pursuing an acceptable amendment of the WMP, the Executive Officer may conclude that the Co-permittee has constructively abandoned development or implementation of the WMP.
 - b. Upon concluding that the WMP has been constructively abandoned, the Executive officer will provide written notice to the responsible Co-permittee that they have been relieved of responsibility for developing a draft WMP or implementing the approved final WMP and direct the responsible Co-permittee to immediately comply with the receiving water limitations and WQBELs.
 - c. Once the Executive Officer has issued any written Notice to the responsible Co-permittee, any action taken by the responsible Co-permittee(s) as a means to come back into compliance does not preclude any additional enforcement action by the Executive Officer or the Regional Board for violations of the requirement(s) in effect at the time of the Notice. The Executive Officer will make Notices issued according to this Subsection XI.S. available for public review.
4. Where the responsible Co-permittee(s) believe that additional time is necessary to comply with an interim milestone or final deadline identified in a WMP with the exception of those final compliance dates established in a TMDL, the Co-permittee(s) may request an extension by way of amending the WMP, subject to public review. The requested extension must be provided to the Executive Officer and for public review not less than 30 days prior to the milestone or deadline and shall include the purpose and need for the extension. Extensions approved by the Executive Officer may not cause or allow a Co-permittee to exceed a final compliance date established in a TMDL.
5. If, during the development phase for a WMP, the responsible Co-permittees are granted an extension of time to meet critical milestones or the final deadline for the submission of a draft WMP, the responsible Co-permittees must demonstrate compliance with receiving water limitations in Section IV and with those WQBELs that implement WLAs whose final deadlines have not yet passed in Appendices B through H during the period where the extension causes them to deviate from the original development schedule.
6. Where the responsible Co-permittee(s) believe that additional time is necessary to comply with a final deadline for a WQBEL, the Co-permittee(s) may request a time schedule order pursuant to California Water Code Section 13300. The request must be in writing and received by the Regional Board not less than 180-days before the final deadline.

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