



February 13, 2015

By E-Mail

Mr. Kurt Berchtold, Executive Officer.
California Regional Water Quality Control Board, Santa Ana Region
3737 Main Street, Suite 500
Riverside, CA 92501-3348

Subject: Comment - Draft Order No. R8-2015-0001, NPDES Permit No. CAS618030

Dear Mr. Berchtold:

The County of Orange, as Principal Permittee of the Orange County Stormwater Program, appreciates the opportunity to provide comments on *Draft Order No. R8-2015-0001, NPDES Permit No. CAS618030 National Pollutant Discharge Elimination System (NPDES) Permit and Waste Discharge Requirements*. The north Orange County Permittees (Permittees) were involved in the development of these comments and the Cities of Brea, Fullerton, Garden Grove, Huntington Beach, Irvine, La Habra, La Palma, Lake Forest, Orange, Santa Ana, Seal Beach, Tustin, and Westminster, have directed that they be recognized as concurring entities on this letter.

The Permittees acknowledge the positive changes in *Draft Order No. R8-2015-0001* compared to *Draft Order No. R8-2014-0002*. Nonetheless, the Permittees continue to share two key policy concerns with respect to this Order. First, there is no mention of the State of the Environment analysis provided in our Report of Waste Discharge. Second, while it is your intention to provide a compliance pathway, the Receiving Water Limitations provisions of the Draft Order as written will still likely result in non-compliance for an exceedance of a water quality standard.

In our State of the Environment analysis we identify north Orange County's water quality priorities of concern which, over the next permit term, will be fecal indicator bacteria from urban and nonurban sources, nutrients from shallow groundwater and toxicity, principally from pesticides. This information needs to be explicitly considered in the Order's Technical Report because it provides the justification for modifying Program priorities, such as the number of industrial facility inspections, which are not directly linked to these constituents of concern. Moreover, the current Technical Report in a number of places observes that feedback is integral to the iterative planning process and should be informing both the development of the Orange County Stormwater Program and future reauthorizations of NPDES Permit No. CAS618030, but then fails to consider information that it says is needed.

The Permittees, as noted in our prior comments, appreciate the re-affirmation of an adaptive management approach as the fundamental basis of permit compliance and that is consistent with a plain read of Board Order 99-05. However, in light of the Ninth Circuit decision (National Resources Defense Council Inc. v. County of Los Angeles, 725 F.3d 1194 (2013)), this intent needs to be more robustly expressed. The case for this request is detailed in our State of the Environment analysis. In this analysis, we highlight our success with controlling fecal indicator bacteria in dry weather and are candid about the water quality standard attainment challenge posed by this constituent in wet weather. This knowledge is the principal justification for our request to include a regulatory compliance pathway in the Receiving Water Limitations provision that properly accommodates the uncertainties of the water quality management and protection challenge presented by such constituents as fecal indicator bacteria.

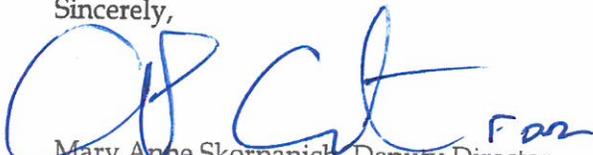
If the Draft Order is modified in response to comments, we request that an additional written comment period be provided prior to scheduling a hearing for adoption. We also reserve the right to respond to other commenters at a hearing and present evidence for the record.

Our comments on the Draft Order are organized and submitted as follows:

- Attachment A presents our general observations and detailed comments on the entire permit.
- Attachment B presents a redline/strikeout version of recommended changes to the Tentative Order.

Thank you for your attention to our comments. Please contact each of the undersigned directly if you have any questions. For technical questions, please also contact Chris Crompton at (714) 955-0630 or Richard Boon at (714) 955-0670 as appropriate.

Sincerely,


Mary Anne Skorpanich, Deputy Director
OC Environmental Resources


Ryan Baron, Senior Deputy County Counsel
Office of the County Counsel

Attachments: A – Detailed Comments
B – Redline Version of the Tentative Order

Mr. Kurt Berchtold
February 13, 2015
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Cc: (Electronic copies only)

North Orange County Permittees
Orange County Technical Advisory Committee
Jason Uhley, Riverside County Flood Control and Water Conservation District
Marc Rodabaugh, San Bernardino County Flood Control District

ATTACHMENT A
COUNTY OF ORANGE REVISED COMMENTS ON
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SANTA ANA REGION
DRAFT ORDER NO. R8-2015-0001 (SECOND DRAFT)
NPDES NO. CAS618030

This document, **Attachment A**, contains the detailed technical and legal comments (“Comments”) of the County of Orange and the Orange County Flood Control District (collectively, “County”) on the Second Draft of Draft Order No. R8-2015-0001 dated December 22, 2014 (“Draft Order”) and the Fact Sheet/Technical Report (“Fact Sheet”). These comments are intended to supplement the County’s prior comments to Draft Order R8-2014-0002 submitted on June 20, 2014, and do not replace or supersede those prior comments. The County further incorporates its June 20, 2014 comments into these comments to the extent not inconsistent with the comments herein.

These comments are divided into three sections (*General Comments, Findings, and Permit Sections*) and address issues relating to specific parts of the Draft Order. At times, the issues and concerns raised will pertain to more than one section of the Draft Order. **Attachment B** identifies the recommended changes to the Draft Order to address the comments raised in Attachment A, as well as, some general edits in order to provide additional clarification where necessary.

The County of Orange, as the Principal Permittee, the Orange County Flood Control District, and the cities of Anaheim, Brea, Buena Park, Costa Mesa, Cypress, Fountain Valley, Fullerton, Garden Grove, Huntington Beach, Irvine, Laguna Hills, Laguna Woods, La Habra, La Palma, Lake Forest, Los Alamitos, Newport Beach, Orange, Placentia, Santa Ana, Seal Beach, Stanton, Tustin, Villa Park, Westminster, and Yorba Linda collectively refer to themselves as “Santa Ana Region Permittees” or “Permittees.” The Draft Order refers to the County, Orange County Flood Control District, and incorporated cities of north Orange County as the “Co-Permittees.” However, the comments below use the term “Permittees” to be consistent with the terminology used by cities and the County.

GENERAL COMMENTS

- 1. THE DRAFT ORDER DOES NOT RECOGNIZE THE 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.**

The Permittees submitted a Report of Waste Discharge (ROWD) to the Santa Ana Regional Water Quality Control Board (“Regional Board”) on October 3, 2013. Pursuant to federal law, the Permittees’ ROWD is an application to discharge pollutants from a point source to waters of the United States and be covered by a fifth term municipal separate storm sewer system (MS4) National Pollutant Discharge Elimination System (NPDES) Permit.¹ The

¹ 40 C.F.R. § 122.21.

ROWD evaluates the fourth term MS4 Permit activities and discusses the accomplishments of the Orange County Stormwater Program. Based on the ROWD’s assessment and findings, the application identifies the activities that are proposed for the fifth term MS4 Permit, including additional pollutant control initiatives. The ROWD is also the technical basis or substantial evidence for what regulations and activities will be required in the fifth term MS4 permit.

The Permittees’ application for a fifth term MS4 permit is predicated on the assessment of the “State of the Environment” (ROWD Section 2). 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 point to bacteria, nutrients, and toxicity as the water quality priorities for the County, and present recommendations for the fifth term MS4 permit intended to ensure further improvements in surface water quality.

Formulation of the fifth term Permit needs to follow the iterative process, that is: assess what measures have been implemented and how the environment has responded. Despite the detailed activities and accomplishments described in the ROWD, there is no discussion in the Draft Order regarding the “State of the Environment.” In fact, the Draft Order Findings and Fact Sheet do not reference the Permittees’ application or cite specific areas in the ROWD to provide a basis for or justify particular fifth term stormwater program modifications. Section B of the Findings (Discharge Characteristics and Runoff Management) only contains generic statements about water quality and does not incorporate the key findings presented in the ROWD. Although the Findings within Section B may have been the general factual basis for the Permittees’ first and second term permits, they are not appropriate for an advanced fifth term stormwater program, especially if they do not acknowledge the activities and accomplishments to date.

Omission of the significant water quality outcomes that have been achieved in Orange County (e.g., coastal water quality) creates a false case for increasing regulatory requirements. Without support from specific findings and other evidence, a number of requirements may be perceived as arbitrary and capricious and adopted without substantial evidence in the administrative record.²

Action: The Draft Order needs to incorporate the key findings from the Report of Waste Discharge (including the State of the Environment) and use this information as the basis for the Draft Order’s requirements.

2.

² *City of Rancho Cucamonga v. Regional Water Quality Control Bd.*, 135 Cal.App.4th 1377, 1384–1385 (2006); Code Civ. Proc., § 1094.5(b).

THE DRAFT ORDER SEEKS TO MAKE A NUMBER OF CHANGES TO THE MODEL WQMP. HOWEVER, AFTER JUST OVER THREE YEARS OF IMPLEMENTATION, IT IS SIMPLY TOO EARLY TO REQUIRE CHANGES TO THE MODEL WQMP AND TGD, AND THERE IS NO SUBSTANTIAL EVIDENCE TO DO SO.

The Draft Fact Sheet indicates that Section XII has been expanded to incorporate synthesized elements of the 2011 Model Water Quality Management Plan ("Model WQMP" or "WQMP") and its' accompanying Technical Guidance Document (TGD). A number of the changes continue to present a concern to the Permittees:

- XII. Changes to BMP lexicon
- XII.B.1 50 Days for implementation
- XII.M.5 Requirements for Non-priority Projects

The effect of these changes is that, not only will the Model WQMP and TGD need to be updated, but protocols at the County and each of the Cities will need to be updated and training will need to be developed and provided to County and City Staff, as well as, the development community so they understand these changes.

Any proposed changes to the Model WQMP are problematic for multiple reasons.

- First, there is no evidence provided to suggest that all or parts of the current program are ineffective or that the program requires modification. The Model WQMP and TGD have only been in existence for just over three years. This is not enough time to understand if the program is resulting in an improvement to water quality. Orange County was one of the first Phase I programs to modify the Land Development Program consistent with the Low Impact Development (LID) approach. The effects of the program need to be understood before significant changes are made. There has only been limited land development under the new Land Development Program so the effects of the program have not been fully realized due to the relatively small sample size. Land development is a long term process with multiple year life-cycles that takes place over multiple permit-terms. Introducing changes prematurely will prevent an accurate assessment on the effects of the program on a long term basis.

Without technical justification that further changes will have a measurable improvement to water quality, the time, effort, and cost to update the OC Land Development Program is not warranted. Given the limited time the new OC Land Development Program has been in place, changes at this time are not justified. Therefore, the proposed changes to the Model WQMP and TGD are unsupportable as a matter of law.

- Second, significant collaborative effort went into the development of the documents and they are successfully being implemented. The Model WQMP and TGD were developed during the last permit term through a collaborative process inclusive of Regional Board staff, Permittees, environmental nongovernmental organizations (NGOs), the land development community, technical consultants, and other interested parties. The Model WQMP Technical Advisory Group (TAG) met for a total of six meetings over 24 months and the Planning Advisory Group (PAG) met

ten times over 18 months to develop this comprehensive program. A Planning Advisory Committee (PAC) was also formed.³ The total cost of developing the revised Land Development Program was in excess of \$1.5 million. Additionally, the Orange County Stormwater Program has conducted numerous training events and maintains a help desk to provide technical support for implementation of the new land development requirements, which has addressed over 100 inquires since August of 2011.

Action: Revise the Draft Order as indicated in Attachment B.

3. THE DRAFT ORDER NEEDS TO PROVIDE A COMPLIANCE PATHWAY.

The Draft Order should recognize that, in addition to the traditional approach for regulating stormwater Permittees, there is also the option of developing and implementing a watershed-based approach as a compliance pathway for the stormwater permit. This approach was recently supported by the State Water Resources Control Board (SWRCB) draft order in its review of the petitions challenging the 2012 Los Angeles Municipal Separate Storm Sewer System permit (Order No. R4-2012-0175). As a part of that draft order it concluded:⁴

- “2. ...it is appropriate for municipal storm water permits to incorporate a well-defined, transparent, and finite alternative pathway 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.”
- “3....the WMP/EWMP Sections of the Los Angeles MS4 Order....are an appropriate alternative to immediate compliance with receiving water limitations.”
- “12. ...we lay out several principles to be followed in drafting receiving water limitations compliance alternatives...(4) encourage watershed-based approaches, address multiple contaminants, and incorporate TMDL requirements....”

In addition, a watershed-based approach would help promote watershed-wide solutions to address high priority water quality issues, which in many cases, are the most efficient and cost-effective means to address urban runoff.

³ The Planning Advisory Committee (PAC) was created in February 2009 at the request of the City Engineers' Technical Advisory Committee (TAC) and the City Managers' Water Quality Committee to serve as a focus for increasingly complex land development and redevelopment requirements in the municipal NPDES stormwater permits. The PAC has delegated authority for private projects The City Engineers' TAC will continue to have delegated authority for public projects. The PAC, when convened, meets with the TAC.

⁴ Pages 72-76,

http://www.waterboards.ca.gov/public_notices/petitions/water_quality/docs/a2236/a2236_draft_order.pdf.

There is broad support for and many benefits related to a watershed-based approach:

- Nationally, there is a permitting approach shift from the traditional stormwater program (six to eight core program elements) to a more watershed/pollutant-based approach (developing the program to address high priority water quality issues).
 - EPA developed Watershed-based NPDES Permitting Implementation Guidance (2003).⁵
 - The shift is occurring at both the regulatory agency and local levels, as many communities are beginning to develop comprehensive water resources strategic plans to address multiple water-related programs and/or various Total Maximum Daily Loads (TMDLs).
- TMDLs are being incorporated into permits and are being addressed more and more by watershed-based plans.
 - This type of approach is supported within the current stormwater permit for compliance with the selenium and nutrient TMDLs (XVIII. B.8).⁶
- Watershed-based approaches may encourage collaboration among Permittees to implement regional integrated water resources approaches such as stormwater capture and re-use to achieve multiple benefits.

Consistent with the County's June 20, 2014 comments, the Regional Board should provide a compliance pathway that would allow the Permittees the ability to implement a watershed-based approach to address water quality protection in the Santa Ana region. This would provide a framework for the Permittees to implement the requirements of this Order, including the total maximum daily loads (TMDLs), in an integrated and collaborative fashion to address water quality priorities on a watershed scale.

The Response to Comments (16.6) states that "the Draft Permit is purposefully silent on the spatial scale of the Co-permittees planning documents necessary to carry out the requirements of the Permit..." The County would submit that a watershed-based approach is not just about the scale of the Permittees planning documents, rather it is a paradigm shift in how stormwater programs are developed and managed so that they are more effective at achieving water quality outcomes. Due to the importance of such an approach as an alternative compliance pathway for the stormwater permit, the Permittees request that the Santa Ana Water Board incorporate a watershed-based approach into this Order.

Action: Revise the Draft Order to create a clear compliance pathway. The Permittees offer to meet with Regional Board staff to assist in identifying what modifications would be necessary.

4.

⁵ <http://cfpub.epa.gov/npdes/wqbasedpermitting/wspermitting.cfm>.

⁶ Order No. R8-2009-0030.

THE DRAFT ORDER INCORPORATES HIGHLY PRESCRIPTIVE SECTIONS AND, THEREBY, LIMITS THE ABILITY OF THE PERMITTEES TO ADAPTIVELY MANAGE THEIR PROGRAMS.

Although the Draft Order provides some flexibility to the Permittees, in a number of cases, certain sections are overly prescriptive and dictate the method and manner of compliance in conflict with Water Code § 13360, instead of the goals and objectives of the program elements that the Permittees should achieve through the implementation of their programs. Examples include:

- Section XIV. C Municipal Facilities/Activities – this Section now requires that the cleaning frequency be based on the accumulation of “unusually large quantities” of pollutants. Each Permittee is also required to establish objective thresholds for “unusually large quantities” of pollutants. In addition, it is unclear how inspectors would know if there are “accumulated pollutants” in the system and if this term is just meant to reference trash and/or debris or a broad range of pollutants.

The Response to Comments (16.66) indicates that the purpose of the new term “unusually large quantities” was to allow the Permittees the ability to prioritize the cleaning frequencies and that the term “accumulated pollutants” should not include mobile pollutants such as pathogens and dissolved wastes. However, the language in the Draft Order does not necessarily convey these concepts. The new terminology could seemingly require the Permittees to address a wide range of materials as a part of the Municipal Facilities/Activities. These new terms add unnecessary complexity to this process. This section also includes new requirements to develop a series of Standard Operating Procedures with prescriptive requirements on when and how they should be reviewed.

- Section XVI. Training Programs – this Section requires each Permittee to maintain a roster of all personnel whose duties directly or indirectly affect the stormwater program, as well as a County-wide database of training records, and the EO must now approve the mechanism used to maintain the training records.

Pursuant to the current Permit (Section XVI.), the Permittees conducted an evaluation of the training program and developed a detailed Training Program Framework in June 2008. This framework identifies a training schedule, curriculum content, and defined expertise and competencies for stormwater program managers, authorized inspectors, planners and plan checkers, construction inspectors, commercial inspectors, industrial inspectors, municipal inspectors, and those involved in landscape maintenance and integrated pest management. Since that time, the Permittees have been providing and refining their training modules based on feedback from these programs. Modifying the current training program based on the prescriptive requirements in the Draft Order would negatively impact the current training program and limit the ability of the Permittees to make changes in the future.

Action: Revise the Draft Order as indicated in Attachment B.

- *Section XIV.C, XIV.E, XIV. F, Municipal Facilities/Activities (pages 66-69)*
- *Section XVI, Training Programs (pages 69-71)*

5. THERE ARE NEW TERMS WITHIN THE DRAFT ORDER THAT NEED TO BE DELETED OR MODIFIED.

The Draft Order includes a number of new terms that are defined in the Glossary that are inconsistent with the current stormwater permit and which may create unnecessary obfuscation in an already complex program. The new terms include:

- “Storm water control measures” or “SMCs”

Finding 10 (In-Stream Structural Treatment Control BMPs) introduces a new term “storm water control measure”, which appears to be used interchangeably with BMP. Since BMP is a widely accepted term, it is recommended that the term storm water control measure be deleted from the Order.

- “Unusually large quantities” of pollutants & “Accumulated Pollutants”

These two terms are used within the Municipal Facilities/ Activities section of the Draft Order (Section XIV.C) in reference to the inspection and cleaning of the stormwater conveyance systems.

- “Interventions”

This term is used within the Program Effectiveness Assessment (PEA) section of the Draft Order (Section XIX.C) and seems to be interchangeable with the term “best management practices” (BMP).⁷ This term is not defined and does not appear to support a new concept within the Draft Order. In fact, within the Fact Sheet (XII.P), the supporting justification for the PEA overwhelmingly uses the term BMP.⁸

Action: Revise the Draft Order as indicated in Attachment B.

- Finding 10, In-Stream Structural Treatment Control BMPs (page 11)
- Section XIV.C, Municipal Facilities/Activities (pages 66-67)
- Section XIX, Program Effectiveness Assessments (pages 79-80)

6. PERMITTING CONSISTENCY IS CRITICAL SINCE SEVERAL PERMITTEES ARE REGULATED UNDER MULTIPLE REGIONAL BOARDS.

The Orange County Stormwater Program operates a unified countywide program with the County of Orange and the Orange County Flood Control District split between the Santa Ana and San Diego Regional Boards. In addition, in order to have an effective program it is critical that the general public, contractors, land developers, etc. receive consistent messaging and be held to the same standards so that there is less confusion about the stormwater program and what is required. As such, the County’s comments seek to create greater uniformity (where possible) between the two sets of regulatory requirements, leading to more effective implementation.

Action: Revise the Draft Order as indicated in Attachment B.

⁷ XIX.C.2 states “A list of each of the best management practices (interventions) in the pollution process and where in the process they are intended to be applied.”

⁸ Fact Sheet, Section XII.P, pages 67 – 69.

7. THE ORDER SHOULD CLARIFY THAT THE SANTA ANA WATER BOARD HAS BEEN DESIGNATED AS THE REGIONAL WATER BOARD FOR REGULATION OF THE ENTIRE JURISDICTIONAL AREA OF THE CITY OF LAKE FOREST AND THE SAN DIEGO WATER BOARD HAS BEEN DESIGNATED AS THE REGIONAL WATER BOARD FOR REGULATION OF THE ENTIRE JURISDICTIONAL AREAS OF THE CITIES OF LAGUNA WOODS AND LAGUNA HILLS.

The Cities of Laguna Woods, Laguna Hills, and Lake Forest (Cities) are located partially within the jurisdictions of the California Regional Water Quality Control Board, Santa Ana Region (Santa Ana Water Board) and the California Regional Water Quality Control Board, San Diego Region (San Diego Water Board). As a result, these cities have experienced significant administrative and financial burden having to comply with two different MS4 permits that is not contributing to greater overall water quality improvements in either region. Written requests for designation of a single Regional Water Board to regulate matters pertaining to permitting of Phase I MS4 discharges were submitted by the cities to the Santa Ana Water Board. In an effort to address these concerns, the Santa Ana Water Board and the San Diego Water Board are entering into an agreement whereby the San Diego Water Board would be designated to regulate the entire jurisdictional area of the Cities of Laguna Woods and Laguna Hills, including those areas of each City located within the Santa Ana Water Board’s jurisdiction, and the Santa Ana Water Board would be designated to regulate the entire jurisdictional area of the City of Lake Forest, including those areas located within the San Diego Water Board’s jurisdiction. These designations should be reflected within the language of the Draft Order.

Action: Revise the Draft Order as indicated in Attachment B.

- *Fact Sheet Section V, Designation of a Regional Water Board (pages 5-6)*
- *Table 1 footnote, List of Entities Subject to the Requirements of this Order (page 1)*
- *Finding 2, Regional Water Board Designation (pages 6-7)*
- *Appendix A footnote, Applicability of TMDL Requirements to Co-Permittees (page A-1)*

FINDINGS

8. FINDING 4 (CWA NPDES PERMIT CONDITIONS): FINDING 4 IS NOT CONSISTENT WITH THE LANGUAGE FROM THE CLEAN WATER ACT.

The language in Finding 4 deviates from CWA Section 402(p)(3)(B) in that it separates the MEP clause from the “other measures” clause as two separate statements, implying that “other measures” are not subject to the MEP standard. Finding 4 states:

“This Order requires controls to reduce the discharge of pollutants in urban runoff from the MS4s to the MEP. This Order also includes such other provisions that the Regional Board has determined are appropriate to control pollutants.”

However, the actual language from CWA Section 402(p)(3)(B) states the following:

- (B) Municipal discharge permits for discharges from municipal storm sewers -
- (i) may be issued on a system- or jurisdiction-wide basis;
 - (ii) shall include a requirement to effectively prohibit non-stormwater discharges into the storm sewers; and

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

The Response to Comments (16.12) states that Finding 4 is not inconsistent with the Clean Water Act section 402(p)(3)(B), noting that this section articulates two separate permit requirements:

- 1) require controls to reduce the discharge of pollutants to the maximum extent practicable; and
- 2) include such other provisions as the Administrator or the State determines appropriate for the control of such pollutants.

The above language is found at section 402(p)(3)(B)(iii), and does not provide for two separate permit provisions regarding the discharge of pollutants from MS4s.

If Finding 4 is attempting to distinguish between non-stormwater and stormwater discharges, it should be noted that although federal law regulates “non-stormwater discharges” into the MS4, Section 402(p)(3)(B)(iii) expressly states that the “discharge of pollutants” shall be reduced to MEP. In drafting this section of the CWA, Congress expressly intended all discharges from MS4s to be subject to MEP as it used the term “pollutant” and did not differentiate between stormwater and non-stormwater, as Finding 4 and Response to Comments 16.12 can be interpreted to do so. Therefore, the duty of the Permittees to reduce the discharge of pollutants from the MS4 to MEP applies to both stormwater and non-stormwater pollutants.

Furthermore, the focus of the CWA and federal regulations is on a management program that includes a comprehensive planning process to reduce the discharge of pollutants to MEP.⁹ One of the elements of the management program is the illicit discharge prevention program.¹⁰ The control and limitation of illicit discharges into the MS4 is intended to achieve the overall MEP standard for discharges from the MS4. This is confirmed by the preamble to EPA regulations that discuss the required elements of the management program. According to EPA:

[Co-permittees are required] to develop management programs for four types of pollutant sources which discharge to large and medium municipal storm sewer systems. Discharges from large and medium municipal storm sewer systems are usually expected to be composed primarily of: (1) Runoff from commercial and residential areas; (2) storm water runoff from industrial areas; (3) runoff from construction sites; and (4) *non-storm water discharges*. Part 2 of the permit application has been designed to allow [Co-permittees] the opportunity to propose *MEP control measures for each of these components of the discharge*. 55 Fed Reg at 48052 (emphasis added). See also 55 Fed Reg at 48045 (stating “Part 2 of the proposed permit application [which includes the illicit discharge prevention requirement] is designed

⁹ 40 C.F.R. § 122.26(d)(2)(iv).

¹⁰ 40 C.F.R. § 122.26(d)(2)(iv)(B)(1).

to . . . provide municipalities with the opportunity of proposing a comprehensive program of structural and non-structural control measures that will *control the discharge of pollutants, to the maximum extent practicable, from municipal storm sewers.*”) (Emphasis added).

EPA’s position is consistent with existing State Water Resources Control Board policy which states that discharges into the MS4 are to be controlled through an iterative, BMP based approach that is *less* stringent than the MEP standard.¹¹ The State Board held:

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

We find that the permit language is overly broad because it applies the MEP standard not only to discharges “from” MS4s, but also to discharges “into” MS4s. . . [T]he specific language in this prohibition too broadly restricts all discharges “into” an MS4, and does not allow flexibility to use regional solutions, where they could be applied in a manner that fully protects receiving waters. It is important to emphasize that dischargers into MS4s continue to be required to implement a full range of BMPs, including source control. In particular, dischargers subject to industrial and construction permits must comply with all conditions in those permits prior to discharging storm water into MS4s.¹²

The State Board’s decision in the *BIA Order* makes clear that the CWA does not include a blanket prohibition on discharges of non-stormwater into the MS4. To the extent the Tentative Order would hold the dischargers liable in the event that any discharge into the MS4 occurs, the Tentative Order exceeds the requirements of the CWA and violates existing State Board policy.

It is also technically infeasible in some cases to differentiate between non-stormwater or stormwater pollutants discharged from the MS4. Thus, just as the discharge of non-stormwater into the MS4 is subject to the effective prohibition standard, the discharge of pollutants in non-stormwater from the MS4 is subject to the MEP standard.

Action: Revise the Draft Order as indicated in Attachment B.

- *Finding 4, CWA NPDES Permit Conditions (pages 7-8)*
- *Finding 32, Economic Considerations (page 19)*

9.

¹¹ See State Water Resources Control Board, Order No. WQ-2001-15, *In the Matter of the Petitions of Building Industry Assoc. of San Diego County and Western States Petroleum Assoc.* (2001) (“BIA Order”).

¹² *Id.*, at 9-10.

FINDING 8 (NON-STORMWATER AND STORMWATER DISCHARGES): THE PERMITTEES SHOULD NOT BE REQUIRED TO OBTAIN SEPARATE COVERAGE FOR DE MINIMUS DISCHARGES OUTSIDE OF THE NEWPORT BAY WATERSHED.

The first sentence of this Finding is unclear: “The discharge of pollutants from the MS4 is subject to the MEP standard and must include other provisions as necessary to reduce pollutants whether the pollutants are transported by storm water or non-storm water.” It is unclear what “must include other provisions as necessary to reduce pollutants...” means.

See Comment 19.

Action: Revise the Draft Order as indicated in Attachment B.

- *Finding 8, Non-Storm Water and Storm Water Discharges (pages 9-10)*

10. FINDING 9 (LIMITS OF PERMITTEES’ JURISDICTION OVER URBAN RUNOFF): THE DRAFT ORDER SHOULD CONTINUE TO RECOGNIZE THE LIMITS OF THE PERMITTEES’ ABILITY TO CONTROL DISCHARGES OF POLLUTANTS.

The current stormwater permit includes a Finding (Finding 10) that recognizes the limits of the Permittees’ ability to control the discharge of pollutants. This Finding should be included in the Order.

The Response to Comments (16.14) does not address the requested language from the Permittees. To clarify, the Permittees are requesting that the following language be added to Finding 9 so that it is recognized that the Permittees do not have control over the generation of many types of pollutants.

Similarly, certain activities that generate pollutants present in urban runoff may be beyond the ability of the Co-permittees to eliminate. Examples of these include operation of internal combustion engines, atmospheric deposition, brake pad wear, tire wear, and leaching of naturally occurring minerals from local geography.

This Finding is currently in the fourth-term permit and should be included in the Draft Order.

Action: Revise the Draft Order as indicated in Attachment B.

- *Finding 9, Limits of Co-permittees’ Jurisdiction over Urban Runoff (page 11)*

11. FINDING 13 RUNOFF DISCHARGES TO RECEIVING NATURAL WATERS CANNOT LEGALLY BE CLASSIFIED AS PART OF THE MS4, AND CANNOT BE CLASSIFIED AS BOTH A MS4 AND RECEIVING WATER.

Finding 13 states, “Development generally makes use of natural drainage patterns and features to convey runoff. Rivers, streams, and creeks in developed areas used in this manner and under the ownership and control of the Permittees are part of 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 Permittees’ jurisdiction are both an MS4 and receiving water.” This finding is legally incorrect.

First, rivers, streams, creeks and other natural water bodies cannot be legally classified as a MS4. The definition of a *municipal separate storm sewer* means “a conveyance or system of conveyances including roads with drainage systems, municipal streets, catch basins, curbs,

gutters, ditches, man-made channels, or storm drains” “owned and operated” by a municipality.¹³

In California, natural water bodies are not “owned” by the municipality through which they flow. Such water bodies are generally administered by the State of California in the public trust for the right of the people to use such waters for certain purposes.¹⁴ The Legislature, acting within the confines of the common law public trust doctrine, is the ultimate administrator of the trust and may often be the final arbiter of permissible uses of trust lands.

Second, a “receiving water” cannot also be an MS4, as is plain from the CWA regulations. An MS4 is itself defined as discharging to waters of the United States.¹⁵ An MS4 cannot, in essence, discharge to itself. Moreover, an “outfall” from an MS4 (the point at which the discharge enters a receiving water) does not, pursuant to 40 C.F.R §122.26 (b)(9), include conveyances connecting “segments of the same stream or other waters of the United States and are used to convey waters of the United States.”

In EPA’s Preamble to the initial version of the MS4 regulations, the agency expressly determined that “streams, wetlands and other water bodies that are waters of the United States are not storm sewers for the purposes of this rule” and that “stream channelization, and stream bed stabilization, which occur in waters of the United States” were not subject to National Pollutant Discharge Elimination System (“NPDES”) permits under Section 402 of the CWA.¹⁶ In further support of the point that a MS4 is an artificial, not natural, watercourse, the types of “conveyances” identified in the regulation (“roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains”) all refer to anthropogenic structures, not natural streams.¹⁷

Lastly in *South Florida Water Management District v. Miccosukee Tribe of Indians*, the U.S. Supreme Court opined on the issue of whether a NPDES permit was needed when water from a channelized canal was pumped across a levee into a reservoir. The Court held that if the two water bodies were meaningfully distinct, no permit was needed.¹⁸ Likewise, the Court held in *L.A. County Flood Control District v. NRDC* that the flow of water from an improved portion of a navigable flood control channel into an unimproved portion of the same waterway is not a “discharge of a pollutant” under the CWA.¹⁹ Based on these two

¹³ 40 C.F.R. § 122.26(b)(8).

¹⁴ *Marks v. Whitney* (1971) 6 Cal. 3d 251, 259, 260.

¹⁵ 40 C.F.R. § 122.26(b)(8).

¹⁶ 53 Fed. Reg. 49416, 49442 (Dec. 7, 1988).

¹⁷ 40 CFR § 122.26(b)(8).

¹⁸ 541 U.S. 95, 109-112 (2004) (remanding the case to the Florida District Court to determine the hydrological connection between the two waterbodies). After the case was remanded to the Florida District Court, the EPA created an exemption for water transfers based on the Supreme Court’s ruling in *Miccosukee Tribe* (i.e., unitary waters theory), which was subsequently upheld by the 11th Circuit Court of Appeals. 40 C.F.R. § 122.3(i). *Friends of the Everglades v. South Fla. Water Management Dist.*, 570 F.3d 1210 (11th Cir. 2009), cert. denied, 131 S. Ct. 643 (2010).

¹⁹ *L.A. County Flood Control District v. National Resources Defense Council*, 133 S.Ct. 710 (Jan. 8, 2013).

holdings, there is no discharge of pollutants under the CWA if a water body like a flood control channel is both classified as a MS4 and receiving water.

This issue is currently being considered by U.S. EPA in Proposed Rules on defining “waters of the United States” under the Clean Water Act.²⁰ EPA has indicated in meetings and other comments that it did not seek comment and did not intend that MS4s be characterized as waters of the U.S. Therefore, the Regional Board should refrain from issuing this finding until the rules are final and EPA has lawfully established this classification. Otherwise, such a finding is made purely under state law.

Action: Revise the Draft Order as indicated in Attachment B.

- *Fact Sheet VI, Permitted Discharges (pages 6- 7)*
- *Finding 13, Runoff Discharges to Receiving Waters (page 12)*

12. FINDINGS 18, 19, AND 20: THE DRAFT ORDER NEEDS ADDITIONAL FINDINGS REGARDING NEW DEVELOPMENT.

The Draft Order is in need of additional Findings regarding new development. As such, several Findings have been proposed in Attachment B:

- Finding 18 recognizes the significant progress that has been made through development and implementation of the Model WQMP and TGD.
- Finding 19 identifies the importance of the key technical feasibility considerations identified in the TGD developed through comprehensive analysis, extensive BMP and LID implementation experience, and review and comment by the Model WQMP and TGD TAG. Finding 19 also identifies the importance of having technical feasibility alternatives that result in long term effective BMPs, as well as that the intent of Sections in Section XII is to build off of the established technical feasibility criteria within the Model WQMP and TGD.
- Finding 20 identifies the value of regional BMPs and the benefit of integrating redevelopment goals with water quality improvement of existing areas with use of regional BMPs.

Action: Revise the Draft Order as indicated in Attachment B.

- *Findings 18 Orange County Model WQMP..., 19 OC Model WQMP and TGD..., and 20 Regional BMPs (page14)*

13. FINDING 31(ECONOMIC CONSIDERATIONS): THE DRAFT ORDER CONTAINS SECTIONS THAT ARE MORE STRINGENT THAN FEDERAL LAW REQUIRING AN ECONOMIC ANALYSIS. IN ADDITION, THE ECONOMIC ANALYSIS IN THE FACT SHEET IS INADEQUATE.

Finding 31 states “the requirements in this Order are not more stringent than the minimum federal requirements . . . notwithstanding the above; the Regional Board has taken into account economic considerations pertaining to the requirements in this Order, consistent with requirements in section 13241.”²¹ It was also stated by Regional Board staff at the

²⁰ Definition of “Waters of the United States” Under the Clean Water Act, 79 Fed. Reg. 22188-01 (proposed Apr. 21, 2014).

See also *City of Burbank v. State Water Resources Control Bd.* (2005) 35 Cal. 4th 613, 618, 626-627.)

January 30, 2015 workshop that section 13241 did not apply to this permit. Despite these assertions, sections of the Draft Order are indeed more stringent than federal law justifying a section 13241 analysis, and the economic analysis in the Fact Sheet is inadequate.

There has not been a full consideration of the section 13241 factors, which would include an analysis of the economic impacts that would result from compliance with the existing stormwater permit compared to the costs of complying with the proposed Draft Order (*i.e.*, the costs of complying with the new requirements). Instead, the Draft Order's analysis begins by stating that a formal economic analysis is not practical at this time due to the limited amount of economic information and/or the large variability in reported costs.²²

The Fact Sheet also fails to cite any recent cost benefit numbers but relies on inapplicable cost data such as a 1999 EPA study on household costs and a 2005 study on a SWRCB study.

The analysis of costs contained in the Fact Sheet is deficient in two additional ways.

- First, the approach to compliance costs is fundamentally deficient because it tells the public nothing at all about the relationship between the cost of any particular control and the pollution control benefits to be achieved by implementing that control. Under this "generalized" approach, extremely costly requirements that bear little or even no relationship (or even a negative relationship) to the pollution control benefits could be "justified" as long as the "overall" program costs are within what the Regional Board deems to be an acceptable range. This is not a proper way to determine whether a control reduces the discharge of pollutants from the MS4 to the MEP. A more individualized assessment of cost is required. Otherwise, dischargers may be required to implement very costly controls that have no relationship to pollution control benefits, a result inconsistent with MEP.

This analytical flaw in the Fact Sheet is compounded by the approach taken to assess the benefits of the Draft Order. Here again, the assessment approach misses the mark because it tells the public nothing about the pollution control benefits to be achieved by implementation of the controls in the Draft Order. All the Fact Sheet says, in essence, is that people like clean water and in theory may be willing to pay for it, that urban stormwater may contribute to beach closures and that such beach closures have an economic impact. This analysis sheds no light on the relationship between a BMP's costs and the pollution control benefits to be achieved by implementing that BMP.

- Second, the Fact Sheet contains faulty assumptions and relies upon outdated or inapplicable data. The California State University, Sacramento (CSUS) Cost Survey assessed program costs for Phase I cities. Nothing in the Fact Sheet links any of the actual conditions of the Phase I permits of the Phase I cities studied by CSUS with any of the requirements of the Draft Order. Therefore, the study tells the public nothing about the costs to implement the Draft Order. The data included in the Fact Sheet is a decade old. The Fact Sheet uses old data from Phase I programs that have

²² Fact Sheet, pg. 41.

no linkage to any conditions of the Draft Order. The full costs of implementing the entire program required by the Draft Order in 2015 dollars must be assessed.

- Lastly, stormwater agencies cannot readily establish or raise fees to help pay for the BMPs necessary to comply with either the California Toxics Rule (CTR) criteria or proposed Site Specific Objectives (SSOs) due to the requirements of Proposition 218, Proposition 26 and the Mitigation Fee Act. For instance, Proposition 218 requires that property-related fees be put to a vote, so cities cannot assess fees without the consent of a super-majority (two-thirds) of property owners. Therefore, the costs associated with the implementation and maintenance of the BMPs is more likely to be covered through a municipality's General Funds.

Action: Complete an economic analysis that considers the 13241 factors.

14. FINDING 33 (UNFUNDED MANDATES): THE REGIONAL BOARD HAS NO LEGAL ABILITY TO DETERMINE WHETHER A PARTICULAR MANDATE IS UNFUNDED.

Finding 33 and the supporting arguments in the Fact Sheet are an attempt to address whether the requirements of the Draft Order constitute an unfunded state mandate. That attempt, however, is beyond the scope of the Regional Board's powers, as the *only* agency charged by the Legislature with determining the presence of a state mandate, and whether that mandate is unfunded, is the Commission on State Mandates.

Article XIII B, Section 6(a) of the California Constitution ("Section 6") provides that whenever "any state agency mandates a new program or higher level of service on any local government, the state shall provide a subvention of funds to reimburse that local government for the costs of the program or increased level of service . . ." Section 6 applies to storm water permits issued by the State Board and the Regional Boards.²³ Thus, Section 6 applies to the Tentative Order.

Section 6 was added to the California Constitution by voter approval in 1979, as part of a larger effort that had as its goal both limiting state and local spending and restricting the ability of local entities to raise revenue. Section 6 must be viewed as a "safety valve" designed to protect local governments from being placed in the untenable position of being required by the state, on the one hand, to implement certain state mandated programs while also, on the other hand, being prohibited from raising the money needed to pay for those state mandated programs.²⁴ Recognizing that such a situation was neither a fair nor a wise approach to governing, the voters enacted Section 6 to prevent state government from shifting financial responsibility for carrying out governmental functions to local agencies without the state paying for them.

To implement Section 6, the Legislature created the Commission on State Mandates ("Commission"). The Commission has sole and exclusive jurisdiction to determine whether a state law or order of a state agency is an unfunded state mandate.²⁵ In accordance with

²³ *County of Los Angeles v. Commission on State Mandates* (2007) 150 Cal.App.4th 898, 920.

²⁴ *Department of Finance v. Commission on State Mandates* (2003) 30 Cal.4th 727, 735; *County of San Diego v. State of California* (1997) 15 Cal.4th 68, 81.

²⁵ Gov't Code §§ 17551 and 17552; *Kinlaw v. State of California* (1991) 54 Cal.3d 326, 331-334.

Section 6, Government Code section 17500 et seq., and case law, the Commission on State Mandates has determined that an unfunded state mandate exists when: (a) the state imposes a new program or higher level of service that is; (b) mandated by state law, not federal law; and (c) when the local government lacks adequate fee authority to pay for the new program or higher level of service.

Whether and how individual storm water permit conditions constitute unfunded state mandates is currently the subject of pending litigation. In 2009 and 2010, the Commission on State Mandates determined that parts of the Los Angeles Phase I Permit and major components of the San Diego Phase I Permit constituted unfunded state mandates. The State challenged these two decisions in court, and, in the San Diego matter, the court confirmed that only the Commission on State Mandates could make the ultimate determination of whether a permit condition constituted an unfunded state mandate. Specifically, the court in the San Diego case held that the "Commission has exclusive authority to determine whether the Regional Board has imposed a state mandate." The court in the San Diego case further concluded that the Commission on State Mandates should reconsider its decision to assess whether each of the individual permit conditions were required to achieve the MEP standard. Specifically, the court held that "the Commission must determine whether any of the permit conditions exceed the 'maximum extent practicable' standard." (Emphasis added) Therefore, contrary to the discussion in the Fact Sheet, each permit condition (control) must be assessed to determine whether it is consistent with MEP.

This issue is currently being addressed by the California Supreme Court in *Department of Finance v. Commission on State Mandates*.²⁶

Action: Revise the Draft Order as indicated in Attachment B.

- *Finding 33, Unfunded Mandates (page 20)*
- *Fact Sheet Section VII. E., Unfunded Mandates (page 17)*

²⁶ (2013) 220 Cal.App.3th 740.

PERMIT SECTIONS

III. DISCHARGE PROHIBITIONS AND LIMITATIONS & IV. RECEIVING WATER LIMITATIONS

15. THE DRAFT ORDER DOES NOT PROVIDE ADEQUATE TECHNICAL JUSTIFICATION AND FINDINGS OF FACT FOR THE EXCLUSION OF SEVERAL CATEGORIES OF NON-STORMWATER DISCHARGES FROM THE DISCHARGE PROHIBITIONS

Section III.A, Table 2, identifies several categories of non-storm water discharges that are presumed to not be a significant source of pollutants and, thus, do not need to be addressed as an illicit discharge.

In comparison, the Code of Federal Regulations states that, as a part of an illicit discharge program, that the Co-permittees shall incorporate a series of items including the following:²⁷

A description of a program, including inspections, to implement and enforce an ordinance, orders or similar means to prevent illicit discharges to the municipal separate storm sewer system; this program description shall address all types of illicit discharges, however the following category of non-storm water discharges or flows shall be addressed where such discharges are identified by the municipality as sources of pollutants to waters of the United States [Emphasis added]:

- *water line flushing [excluded from the Draft Order]*
- *landscape irrigation [excluded from the Draft Order]*
- diverted stream flows
- rising ground waters
- uncontaminated ground water infiltration (as defined at 40 CFR 35.2005(20)) to separate storm sewers
- uncontaminated pumped groundwater
- *discharges from potable water sources [excluded from the Draft Order]*
- foundation drains
- air conditioning condensation
- *irrigation water [excluded from the Draft Order]*
- springs
- water from crawl space pumps
- footing drains
- *lawn watering [excluded from the Draft Order]*
- individual residential car washing
- flows from riparian habitats and wetlands
- dechlorinated swimming pool discharges
- *street wash water [excluded from the Draft Order]*

(program descriptions shall address discharges or flows from firefighting only where such discharges or flows are identified as significant sources of pollutants to waters of the United States).

²⁷ 40 C.F.R. § 122.26(d)(2)(iv)(B)(1).

Although the discharges listed within federal regulations are generally considered to be “conditionally exempt” from the illicit discharge program (unless they are found to be sources of pollutants), the Regional Water Board has determined that several of the categories of these discharges will no longer be allowed without providing adequate findings of fact and technical justification.

The Draft Order excludes *water line flushing, discharges from potable water sources, and street wash water*; however, there is no information contained within the Fact Sheet to identify the technical basis for the finding that they are a significant source of pollutants. Without these findings of fact, it is unclear to the Permittees what the basis is for excluding them.

The Draft Order excludes *landscape irrigation, irrigation water, and lawn watering*; however the fact sheet only describes the rationale for the exclusion of irrigation water. While the Permittees do not dispute that practices to reduce irrigation runoff may reduce the concentrations of some constituents in dry weather runoff and would be consistent with the most recent drought-related regulations and Orders, it is not appropriate to regulate irrigation water as an illicit discharge through the stormwater program when it is not an original source of pollutants. Instead, the Permittees support working cooperatively with water suppliers/purveyors/districts to assist with the implementation of water conservation and education programs so that less potable water is used and is confined to the application site. In fact, water bills that employ a tiered rate structure based on water use have been shown to be very effective at encouraging water conservation.

The categories irrigation water, lawn watering, and/or landscape irrigation should remain in Table 2.

Action: Revise the Draft Order as indicated in Attachment B.

- *Section III.A, Prohibitions (page 24)*
- *Section III.A, Table 2 Types of Non-stormwater Discharges Presumed to not be a Significant Source of Pollutants (page 25)*
- *Section III.B.2, Limitations (page 26)*
- *Fact Sheet XIII.B, Explanation of Specific Permit Requirements (pages 49-51)*

16. THE PERMITTEES SHOULD NOT BE REQUIRED TO OBTAIN SEPARATE COVERAGE FOR DE MINIMUS DISCHARGES OUTSIDE OF THE NEWPORT BAY WATERSHED.

Section III.B.3 requires that non-stormwater discharges occurring outside of the Newport Bay Watershed from Permittee owned or operated facilities or Permittee activities be in compliance with the conditions and Sections of the General “*De Minimus*” Permit for Discharges to Surface Waters (Order No. R8-2009-0003).

However, it is unclear and unexplained within the Fact Sheet why the regulatory approach for these types of discharges changed from the fourth term Permit to the Draft Order and why it appears to be inconsistent with the Findings in Order No R8-2009-0003. Pursuant to the fourth term Permit, these types of discharges must be in compliance with the *De Minimus* Permit. Separate permit coverage is not required.

In fact, Order No. R8-2009-0003 states “However, as discussed in the Fact Sheet (Attachment F), certain types of municipal separate storm sewer system (MS4) Permittee discharge activities will no longer be regulated under this Order but will be regulated under the area-

wide MS4 permits when these permits are updated appropriately and renewed during the early part of 2009.”²⁸ The types of Permittee discharges that would no longer require coverage include (this is just a sub-set of the types of discharges):

- Construction dewatering wastes; (except stormwater dewatering at construction sites);
- Dewatering wastes from subterranean seepage, except for discharges from utility vaults;
- Discharges from fire hydrant testing or flushing;
- Air conditioning condensate;
- Swimming pool discharge; and
- Discharges resulting from diverted stream flows.

Given that these discharges are in fact *de minimus*, the Permittees are already regulated under an MS4 Phase I Permit, and the *De Minimus* Permit recognizes that the Permittees should be regulated pursuant to the area-wide permit, this Section should continue the current regulatory approach (see Finding 68, Order No R8-2009-0003).

Action: Revise the Draft Order as indicated in Attachment B.

- *Finding 8, Non-storm Water and Storm Water Discharges (pages 9-10)*
- *Section B.III.3, Discharge Prohibitions and Limitations (page 26)*
- *Fact Sheet VI, Permitted Discharges (page 7) and XIII.B, Discharge Limitations/Prohibitions (page 49-51)*

VII. ILLICIT DISCHARGES, ILLICIT CONNECTIONS, AND ILLEGAL DUMPING; LITTER DEBRIS AND TRASH CONTROL

17. THE ILLICIT DISCHARGES AND ILLICIT CONNECTIONS PROGRAM DOES NOT RECOGNIZE THE EXISTING SANITARY SEWER OVERFLOW RESPONSE PROGRAM.

Section VII.F requires the Permittees to either comply with the Statewide General Waste Discharge Requirements for Wastewater Collection Agencies or implement an effective program to detect and mitigate SSOs. However, unlike the current permit, the Draft Order does not recognize the fact that the Permittees have been developing and implementing the Countywide Area Spill Control (CASC) Program in collaboration with the Orange County Sanitation District for over 10 years. This permit Section should be modified to recognize the establishment of and be consistent with the CASC program.

Action: Revise the Draft Order as indicated in Attachment B.

- *Section VII.F, Illicit Discharges, Illicit Connections, and Illegal Dumping; Litter Debris and Trash Control (pages 31-32)*

²⁸ Section I.B.1 (page 3 of 21) and Fact Sheet page F-6 of F-22.

VIII. MUNICIPAL INSPECTIONS OF CONSTRUCTION SITES

18. THE DRAFT ORDER SHOULD NOT REQUIRE INVENTORY OF CONSTRUCTION PROJECTS OF LESS THAN 2 WEEKS IN DURATION.

Section VIII.A requires each Permittee to maintain an inventory of all construction sites within its jurisdiction; however, this section does not exclude from the inventory construction sites with an expected or actual duration of less than two weeks.

Action: Revise the Draft Order as indicated in Attachment B.

- *Section VIII.A, Municipal Inspections of Construction Sites (page 32)*

19. INVENTORY OF CONSTRUCTION SITES SHOULD BE UPDATED ON A BIENNIAL BASIS.

Section VIII.A.3 requires a Permittee to update the inventory of all construction sites within its jurisdiction once per month. The frequency of once per month is unreasonably burdensome to the Permittees and does not provide a benefit to water quality. The time allocated to update the inventory monthly would better be served by performing construction site inspections that do have an impact on water quality. An update to the inventory is necessary only on a biennial basis, once in September prior to the wet season and once in May of each year.

Action: Revise the Draft Order as indicated in Attachment B.

- *Section VIII.A.3, Municipal Inspections of Construction Sites (page 32)*

IX. MUNICIPAL INSPECTIONS OF INDUSTRIAL SITES

20. THE RECOMMENDED INSPECTION APPROACH DESCRIBED IN THE ROWD WAS NOT INCLUDED IN THE DRAFT ORDER.

The ROWD contained an analysis of the industrial inspection program and concluded that the prescriptive nature of the prioritization criteria limited the ability to adaptively manage the program and did not correlate well with changes in behavior (*i.e.*, facilities that are in compliance versus those that are not). The fundamental point raised by the Permittees within the ROWD is that, due to the low rate of non-compliance that has been seen by the inspectors, it is reasonable that the inspection frequency could be modified to reduce the burden of the program. In addition, this would allow the Permittees to better focus their resources on those facilities that posed the greatest risk to water quality and activities related to the broader constituents of concern identified in the State of Environment report. In order to reduce the inspection burden and simultaneously allow for an inspection program that would be focused on the high threat facilities (based on past performance), a revised approach was recommended. The Permittees would like consideration of several options included in the Draft Order:

- Option 1 – A targeted approach with inspection frequencies based on high priority pollutants of concern and past performance of the facility;
- Option 2 – a synoptic approach with no fluctuation in the inspection frequency from year to year;
- Option 3 – a prioritized approach with inspection frequencies based on a prioritization scheme; or

- Option 4 - an alternative approach, which would be approved by the EO.

By allowing optional approaches, the Permittees could tailor the inspections to best fit their individual stormwater programs while still implementing an effective industrial inspection program. Given the fact that industrial facilities are already regulated pursuant to the Industrial General Permit, the Permittees' have identified a low rate of non-compliance for these facilities, and it would be a better expenditure of the Permittees' resources to focus on those facilities that pose the greatest risk to water quality, the Permittees' believe that a revised approach should be considered.

Action: Revise the Draft Order as indicated in Attachment B.

- *Section IX, Municipal Inspections of Industrial Sites (pages 35-39)*

X. MUNICIPAL INSPECTIONS OF COMMERCIAL SITES

21. THE RECOMMENDED APPROACH OUTLINED IN THE ROWD WAS NOT INCLUDED IN THE DRAFT ORDER.

The ROWD contained an analysis of the commercial inspection program and concluded that the prescriptive nature of the prioritization criteria limited the ability of the Permittees' to adaptively manage the program and did not correlate well with high priority pollutants of concern and/or issues within a watershed. The fundamental point raised by the Permittees within the ROWD is that the resources expended on the commercial inspection program should be focused on those facilities that pose the greatest risk to water quality and those that are not in compliance. In order to reduce the inspection burden and simultaneously allow for an inspection program that would be focused on the high threat facilities (based on the high priority pollutants of concern and/or past performance), a revised approach was recommended. The Permittees would like consideration of several options included in the Draft Order:

- Option 1 - A targeted approach with inspection frequencies based on high priority pollutants of concern and past performance of the facility
- Option 2 - a synoptic approach with no fluctuation in the inspection frequency from year to year
- Option 3 - a prioritized approach with inspection frequencies based on a prioritization scheme; or
- Option 4 - an alternative approach, which would be approved by the EO

By allowing options, the Permittees could tailor the inspections to best fit their individual stormwater programs while still implementing an effective commercial inspection program.

Although the ROWD proposed options for the inspection program, the Draft Order incorporated a commercial inspection program that was very similar to the fourth term permit. The Response to Comments (16.28) indicated that it was not clear how the reduction in inspections related to a focus on facilities that pose the greatest risk to water quality or how it would reflect improvement in water quality. If the Permittees are allowed to modify their inspection programs so that they can focus on the highest priority facilities (those that present the greatest threat to water quality), then the resources expended on the inspections would have the greatest chance of improving water quality. Conversely,

inspections of facilities that post little or no threat to water quality will be of much lower value than inspecting and correcting deficiencies at those that pose a high threat to water quality.

Given the fact that there are limited resources within the stormwater program and that they should be focused on the highest water quality issues, it would be a better expenditure of the Permittees' resources to focus on those facilities that pose the greatest risk to water quality. As such, the Permittees' believe that a revised approach for the commercial program be considered.

Action: Revise the Draft Order as indicated in Attachment B.

- *Section X, Municipal Inspections of Commercial Sites (pages 41-43)*

XII. NEW DEVELOPMENT

Section XII of the Draft Order has been revised and restructured in comparison to the 2009 MS4 Permit (Order No R8-2009-0030). The Permittees recognize that the intent of these revisions was to improve clarity and to reinforce the existing land development program that is currently being implemented by the Permittees. Furthermore, the current Draft Order addresses many of the concerns expressed in our June 12, 2014 comment letter and we appreciate this effort. However, the Draft Order would still trigger revisions to the Model WQMP, TGD, and associated program documents, computer systems, and training programs. These revisions would not necessarily improve the effectiveness of the technical documentation; however, they could potentially result in a significant disruption to ongoing program implementation and jeopardize the significant investment made by the Permittees to date for program development and training. Therefore, the Permittees request that the Draft Order be further revised to be consistent with and reinforce the existing program.

In response to the 2009 MS4 Permit, the Permittees made an extensive investment in the development of the Model WQMP and TGD, as well as templates, checklists, training modules, and Local Implementation Plans to facilitate consistent implementation. This suite of program documents represents a strong technical foundation for an effective program. However, this program has been in effect for just over three years and, due to the economy, a limited number of projects with approved Project WQMPs have been constructed to date. Therefore, there remains relatively limited practical experience upon which to base an opinion about necessary improvements to the program and the technical guidance. The changes proposed in the Draft Order, and their resulting "ripple effect" through the existing program documents and training materials will result in an overall setback for program implementation at this time rather than an improvement.

The Permittees recommend that the Draft Order be revised in a manner that reinforces the adequacy of the existing program and allows the effectiveness of the program to be evaluated through a longer period of time before revisions are made. Alternatively and in lieu of changing the entire Draft Order, the glossary should be modified to ensure that the Draft Order is not in conflict with the Model WQMP and TGD. The Permittees firmly believe in a process for ongoing improvement in Project WQMP development, implementation, and enforcement. However, this process should be based on actual project experience from a representative period of program implementation and should be expressed in terms of regular technical updates to program documents that are led by the results of the effectiveness evaluation, not

driven by unnecessarily increasing the prescriptiveness in the MS4 Permit. The Draft Fact Sheet that accompanies the Draft Order does not present a clear basis for why these technical revisions are necessary; therefore the Permittees recommend that the Draft Order be revised to reinforce the adequacy of the current program documents and the Permittees' current approach for continual improvement. To help achieve these goals, the Permittees suggest have the following comments regarding Section XII.

22. THE BMP LEXICON IN THE DRAFT ORDER SHOULD BE CONSISTENT WITH THE ORANGE COUNTY MODEL WQMP AND TGD.

Throughout Section XII, the BMP lexicon is inconsistent with the Orange County Model WQMP and TGD. If left unaddressed, the new BMP lexicon will require updates throughout the Model WQMP and TGD, as well as to the associated Model WQMP Template and DAMP sections. Furthermore, the changes in terminology in the Draft Order appear to have no substantive change on the actual permit requirements and would introduce unnecessary confusion. The Draft Fact Sheet identifies that "Section XII has been expanded to incorporate synthesized elements of the 2011 Model Water Quality Management Plan and its accompanying Technical Guidance Document," however, the BMP lexicon in the Draft Order conflicts with the lexicon in the Orange County Model WQMP and TGD.

Action: Revise the Draft Order as indicated in Attachment B.

23. THE EFFECTIVE DATE FOR SECTION XII.B SHOULD BE 12 MONTHS FOLLOWING ADOPTION OF THE DRAFT ORDER.

With the new elements and change in lexicon identified in Section XII.B, the Permittees will need time to update the Model WQMP and TGD and implement the changes in municipal protocols. The timeframe of 50 days to complete this is unrealistic. As previously stated, updates to the OC Land Development Program are not necessary as the program has been in place for just over 3 years. The current program was developed over a period of 24 months with periodic meetings of the Technical Advisory Group (TAG). Updating the Model WQMP and TGD in order to be consistent with the new requirements of the Draft Order, will require several meetings of the TAG and time to implement the changes in municipal protocols. Thus, at least 12 months is necessary. Since the requirements of the Draft Order are relatively similar to the 2009 permit and Model WQMP and TGD, there would be little impact to water quality if the implementation of the new permit is deferred to allow the appropriate time to ensure effective implementation of the updated program.

Action: Revise the Draft Order as indicated in Attachment B.

- *Section, XII. B.1, Classifying and Processing Priority and Non-priority Projects (page 45)*

24. MAINTAINING A RECORD OF THE PROJECT CLASSIFICATION CHECKLIST IS DUPLICATIVE OF INFORMATION CONTAINED IN A PROJECT WQMP OR NON-PRIORITY PROJECT PLAN, AND IS NOT NECESSARY. IF A PROJECT DOES NOT REQUIRE A WQMP OR NON-PRIORITY PROJECT PLAN, A RECORD OF SUCH A PROJECT IS NOT NECESSARY.

Section XII B.3.b requires the Permittees to maintain records for the basis of the classification of projects as Priority or Non-priority for a minimum of five years following the completion of a project. Although the Permittees agree with this approach for those projects that are deemed a Priority, this requirement seems excessive for the majority of projects (likely in the

thousands) that may be deemed Non-priority. As such, it is recommended that this requirement solely be focused on Priority projects.

Action: Revise the Draft Order as indicated in Attachment B.

- Section, XII. B.3.b, *Classifying and Processing Priority and Non-priority Projects (page 45)*

25. FOR PROJECTS THAT DO NOT REQUIRE A WQMP OR NON-PRIORITY PROJECT PLAN, IT IS UNNECESSARY FOR THE PROJECT APPLICANT TO SUBMIT THESE DOCUMENTS AS PART OF THE APPLICATION PROCESS.

As currently drafted, the Draft Order requires all projects to submit a WQMP or Non-Priority Project Plan before a project application is deemed complete. However the Draft Order also allows the Co-permittees to distinguish between non-priority projects that pose a potential water quality concern and those that do not. For non-priority projects that do not pose a water quality concern (and thereby are not required to prepare a Non-Priority Project Plan) it is unnecessary for those projects to submit a Non-Priority Project Plan before being deemed complete.

Action: Revise the Draft Order as indicated in Attachment B.

- Section, XII. B.6, *Classifying and Processing Priority and Non-priority Projects (page 47)*

26. THIRD PARTY VERIFICATION IS A VALID APPROACH TO ADDRESS LONG-TERM MAINTENANCE AND PERFORMANCE OF STRUCTURAL BMPs.

Section XII.B.16 requires the Permittees to develop guidelines for inspecting structural BMPs to ensure proper design and maintenance. In the current San Diego issued permit for south Orange County (R9-2015-001) the Permittees are allowed to use other verification processes than a Permittee-based inspection to ensure proper design and maintenance. The County requests that such an option be also available for the Santa Ana Region.

Action: Revise the Draft Order as indicated in Attachment B.

- Section, XII. B.16, *Classifying and Processing Priority and Non-priority Projects (page 48)*

27. REQUIRING APPLICANTS TO DEMONSTRATE A SOURCE OF FUNDING FOR LONG-TERM PERFORMANCE, OPERATION AND MAINTENANCE OF SOURCE CONTROL, SITE DESIGN AND ON-SITE STRUCTURAL TREATMENT CONTROL BMPs OVER THE LIFE OF THE PROJECT IS INFEASIBLE.

In Section XII.C.7, the Draft Order requires project proponents to demonstrate that funding for operation and maintenance is available for the life of the project. Although it is necessary to address the need for adequate funding for proper operation and maintenance, the financial documentation is not required for any aspect of public maintenance (e.g. building or decorative landscaping maintenance per local standards, payment of utilities, etc.). In addition, Co-permittee staff are not qualified to evaluate the veracity of such information.

Action: Revise the Draft Order as indicated in Attachment B.

- Section, XII. C.7, *General Requirements for Priority Projects, (page 49)*

28.

THE REQUIRED ATTRIBUTES FOR THE WQMP DATABASE IN SECTION XII.C.10 ARE INCONSISTENT WITH THE CURRENT DATABASE AND INCLUDES REDUNDANT REQUIREMENTS THAT DO NOT ADD VALUE TO THE EFFORT.

In Section XII.C.10, the Draft Order specifies certain attributes that must be in the Co-Permittees' electronic database. Some of this information is already being compiled in the WQMP or inspection reports. Requiring double accounting of such attributes seems unnecessary and inefficient.

Action: Revise the Draft Order as indicated in Attachment B.

- Section, XII. C.10, General Requirements for Priority Projects, (page 50)

29. THE REQUIREMENT TO INCORPORATE A MECHANISM TO VERIFY THE LOSS RATE OF THE DESIGN CAPTURE VOLUME OF INFILTRATION LID BMPs IS TECHNICALLY IMPRACTICABLE AND SHOULD BE REMOVED.

Section XII.D.7 requires the Permittees to incorporate a mechanism to indicate the need for maintenance of structural treatment control BMPs. This requirement is technically impracticable and unnecessary given the ongoing inspections of the BMPs.

Action: Revise the Draft Order as indicated in Attachment B.

- Section, XII. D.7, General Requirements for Structural Treatment Control BMPs (page 52)

30. SECTION D.10 IS CONFUSING AND IN CONFLICT WITH THE INTENT OF THE SECTION.

Section XII.D.10 provides flexibility in allowing structural control BMPs that are undersized. However, as currently written the regulatory intent here is unclear. The County offers language that may provide additional clarity regarding the intent of the section.

Action: Revise the Draft Order as indicated in Attachment B.

- Section, XII. D.10, General Requirements for Structural Treatment Control BMPs (page 52)

31. ALLOWANCE FOR NONCONFORMING STRUCTURAL TREATMENT CONTROL BMPs TO BE ACCEPTED BY THE PERMITTEES WOULD BE PROBLEMATIC.

Section XII.D (note that the numbering sequence is off within the Draft Order) allows the Permittees to approve/allow a nonconforming structural treatment control BMP if a number of requirements are met. However, the Permittees do not have the resources to conduct rigorous treatment control BMP testing, which would be necessary in order to meet the requirements listed in the Draft Order. Thus, this Section is impracticable.

Action: Revise the Draft Order as indicated in Attachment B.

- Section, XII. D, Nonconforming Structural Treatment Control BMPs: Demonstration Facilities (page 53)

32. THE REQUIREMENT TO OBTAIN WAIVER FOR TREATING OFFSITE IS EXCESSIVE. THERE ARE MANY PROJECTS WHERE RETENTION ONSITE IS NOT FEASIBLE DUE TO THE NATURE OF THE PROJECT OR PHYSICAL CONSTRAINTS. IF SAME OR GREATER BENEFIT CAN BE ACHIEVED BY TREATING OFFSITE WITHIN THE SAME OWNERSHIP, THIS OPTION SHOULD BE AVAILABLE WITHOUT GOING THROUGH THE WAIVER PROCESS.

In Section XII.H, the Draft Order addresses the option of retrofitting off site. However, it is unclear why a project must receive a waiver when the project capture volume is being treated/retained at another site within the watershed and under the same permit

requirements (i.e. Section XII), thereby providing the same net environmental benefit. The waiver requirement appears to place a significant disincentive for exploring off site retrofitting opportunities. Also, as currently drafted, the waiver is only available if one can demonstrate that no retrofit opportunity exists, but then in the retrofit section one must obtain a waiver to be allowed to retrofit. This is confusing and seems contradictory.

Action: Revise the Draft Order as indicated in Attachment B.

- *Section, XII. H.3, Fourth Priority Considerations of Offsets through Retrofitting of Existing Development (page 56)*

33. CONSULTATION WITH THE LOCAL GROUNDWATER MANAGEMENT AGENCY SHOULD BE DONE THROUGH A SYSTEMATIC AREA-WIDE PLANNING EFFORT TO DESIGNATE AREAS WHERE INFILTRATION SHOULD NOT OCCUR.

Section XII.I requires the Co-permittee to confer with local groundwater management agencies when any infiltration BMP is being proposed for a project. Such an approach is labor intensive and can be better addressed through area-wide planning and by requiring the MS4 to confer with local groundwater agencies to identify areas where infiltration should not occur. Such an approach would streamline the review process and provide consistency in project review.

Action: Revise the Draft Order as indicated in Attachment B.

- *Section, XII.I.2, Specific Requirements for Infiltration LID BMPs (page 58)*

34. INDOOR USE OF HARVESTED STORMWATER SHOULD ONLY BE CONSIDERED AS THE APPLICABLE PLUMBING CODE ALLOWS.

Section XII.J should be modified to allow indoor use of harvested stormwater where the plumbing code allows.

Action: Revise the Draft Order as indicated in Attachment B.

- *Section XII.J.2, Specific Requirements for Harvest and Use LID BMPs (page 60)*

35. OFFSITE STRUCTURAL BMPs SHOULD BE ON THE SAME LEVEL IN THE BMP HIERARCHY AS ONSITE BMPs.

Section XII.L.1.d.i requires maximized retention of the Design Capture Volume (DCV) onsite. The use of offsite structural BMPs should not be constrained by requirements onsite because as long as the retention of the DCV is met offsite, the retention of the volume of stormwater and associated pollutants are achieved. Offsite structural BMPs should be in the same level in the BMP Hierarchy as Onsite BMPs. This would allow the Permittees the most flexibility in meeting the retention standard and provide opportunities to achieve an integrated water resource approach. This is the approach taken by the recent Los Angeles MS4 permit. If a project has the ability to convey its DCV to an offsite BMP for harvest and use, but is required to infiltrate on site, the full benefits of using stormwater as a resource through the off-site BMP cannot be realized.

Action: Revise the Draft Order as indicated in Attachment B.

- *Section XII.L.1.d, Off-site Structural Treatment Control BMPs... (page 61)*

36. THE REQUIREMENTS FOR NON-PRIORITY PROJECTS SHOULD BE CLEAR AND CONSISTENT WITH THE MODEL WQMP, AND SHOULD NOT BE DEVELOPED BY EACH INDIVIDUAL CO-PERMITTEE.

Section XII.M.5 requires a plan to be approved under the supervision of a registered civil engineer, which is appropriate for Project WQMPs, but not for Non-Priority Project Water Quality Plan. Non-Priority Project Plans need to be prepared by appropriate qualified individuals based on the complexity of the plan. Non-Priority Project Plans that include structural treatment BMPs will likely require knowledge of hydrological processes or other technical information and should be designed by a civil engineer but plans that do not include such BMPs should not be required to be prepared/approved by a civil engineer. Furthermore such a requirement will add thousands of dollars to a project's costs that are unnecessary. For example, hiring a licensed professional for a simple Non-Priority Project Water Quality Plan that must be approved by a city, such as a small restaurant outdoor patio dining expansion where only a canopy may be used, makes no sense when someone other than a licensed professional can prepare a simple plan. Furthermore, policies and procedures to identify non-priority projects that include modifications or improvements that are, or affect areas that are exposed to stormwater and which may be sources of pollution in urban runoff, should be developed by the Principal Permittee to ensure consistency across the permit area.

Action: Revise the Draft Order as indicated in Attachment B.

- *Section XII.M, General Requirements for Non-priority Projects (page 62)*

XIII. PUBLIC EDUCATION AND OUTREACH

37. REQUIREMENT TO DEVELOP EDUCATIONAL CONTENT WITH THE "MOST" POTENTIAL TO APPEAL TO AUDIENCES SHOULD BE MET THROUGH THE DEVELOPMENT OF THE WRITTEN PLAN.

Section XIII.B.5 requires the Permittees to develop educational content for media with the "most" potential to appeal to audiences. This would be difficult, if not impossible, to demonstrate, and is, therefore, without merit. Prioritizing messages for materials and content using a rationale in the written plan though the process specified in Section XIII.B.5 should be deemed to meeting this requirement.

Action: Revise the Draft Order as indicated in Attachment B.

- *Sections XII.B.5, Public Education and Outreach (pages 64-65)*

XIV. MUNICIPAL FACILITIES/ACTIVITIES

38. THE APPROACH FOR THE DRAINAGE FACILITY MAINTENANCE WAS MODIFIED FROM THE FOURTH PERMIT TERM WITHOUT TECHNICAL JUSTIFICATION.

See Comment 4.

Action: Revise the Draft Order as indicated in Attachment B.

- *Section XIV.C, Municipal Facilities/Activities (pages 66-69)*

XIX. PROGRAM EFFECTIVENESS ASSESSMENT

39. THE PROGRAM EFFECTIVENESS ASSESSMENT REQUIREMENT DOES NOT REFERENCE ESTABLISHED PEA GUIDANCE MATERIALS.

This Section requires the Permittees to develop a program effectiveness assessment approach and implement it in order to assess the effectiveness of their stormwater programs. However, there is very little guidance that has been developed by the State or EPA to identify how municipal program managers can assess their programs. Further, the Draft Order does not reference the documents that have been developed by the California Stormwater Quality Association (CASQA) that provide clear guidance to stormwater managers.

Action: Revise the Draft Order as indicated in Attachment B.

- *Section XIX, Program Effectiveness Assessment (page 79)*

40. THE PROGRAM EFFECTIVENESS ASSESSMENT REQUIREMENT IS NOT CONSISTENT WITH ESTABLISHED PEA GUIDANCE MATERIALS.

This Section requires the Permittees to develop a program effectiveness assessment approach and implement it in order to assess the effectiveness of their stormwater programs. However, the approach that is established within the Order is not consistent with the approach that has generally been utilized within California. For example:

- The Order requires an assessment of BMPs for each of the program elements. Instead, it is recommended that the Order require an assessment of prioritized BMPs (similar to the public education program) so that it is a focused assessment. It is not a good expenditure of resources to track and assess the effectiveness of all the BMPs employed by the stormwater program or even to assess each of the program elements.
- The Order requires the development of a conceptual generalized model of how each pollutant is released into the environment. The purpose of this is unclear and appears to be overly burdensome. Instead, it is recommended that the effectiveness assessment focus on the prioritized areas of the stormwater program, such as the TMDLs so that this information is already understood to the extent that it has been developed.
- The Order requires a description of each of the BMPs in the pollution process and where they are intended to be applied. The purpose of this requirement is unclear and appears to be overly burdensome. Instead, the stormwater program managers should identify a set of prioritized BMPs that are meant to address the highest water quality concerns and develop the effectiveness assessment to focus on them.

Action: Revise the Draft Order as indicated in Attachment B.

- *Section XIX, Program Effectiveness Assessment (page 79)*

XVIII. TOTAL MAXIMUM DAILY LOAD IMPLEMENTATION

41. WLA TABLES ARE UNNECESSARILY CONVERTED, INTRODUCING POTENTIAL CONFUSION AND/OR INCONSISTENCIES WITH THE APPLICABLE BASIN PLAN AMENDMENTS.

The individual TMDL BPAs include WLAs in table format. These tables, which the Permittees are very familiar with, typically include key information, such as important footnotes, that are part of the WLAs. Although the Permittees greatly appreciate the modifications that have been made in this section, the original tables from the TMDL BPAs are still in a modified form, which introduces potential confusion and inconsistencies with the applicable BPAs. Such an approach is unnecessary and introduces language that is potentially confusing and inconsistent with the Basin Plan Amendments.

Therefore, to ensure consistency with the Basin Plan Amendments and to ensure the WLAs are clearly interpreted, the Permittees have revised each TMDL appendix to remove the modified tables to restore the WLAs tables.

Action: Revise the Draft Order as indicated in Attachment B.

- *Appendices B-H*

42. MONITORING AND REPORTING REQUIREMENTS FOR EACH TMDL ARE UNCLEAR. GIVEN THAT EACH TMDL HAS SPECIFIC REQUIREMENTS, BOTH MONITORING AND REPORTING REQUIREMENTS SHOULD BE SPECIFIED.

The Basin Plan Amendments for each TMDL specify monitoring and reporting requirements. The Permit must be consistent with each TMDL and the current language in the Draft Order is unclear. Therefore, Permittees are requesting that specific requirements are included. The first preference, as reflected in Attachment B, includes specific Sections in each of the attachments. Alternatively, a Section could be added to Section XVIII that clearly states monitoring and reporting requirements shall be consistent with the applicable BPA.

Action: Revise the Draft Order as indicated in Attachment B.

- *Appendices B-H*

43. THE MS4 PERMIT IS NOT THE APPROPRIATE REGULATORY MECHANISM TO IMPLEMENT THE LOAD ALLOCATIONS OF THE SEDIMENT TMDL.

While many of the Newport Bay Watershed Permittees have implemented significant sediment control measures over the years, the Sediment TMDL does not establish WLAs for MS4 Permittees. The TMDL is based upon load allocations and control measures to be implemented through the Newport Bay Executive Committee. These actions have been very effective and have resulted in attainment of the load allocations and associated TMDL targets. However, absent wasteload allocations assigned to the MS4 Permittees, the MS4 Permit is not the appropriate regulatory mechanism for this TMDL.

40 C.F.R. § 122.44(d)(1)(vii)(B) states:

When developing water quality based effluent limits under this paragraph the permitting authority shall ensure that: (B) Effluent limits developed to protect a narrative water quality criterion, a numeric water quality criterion, or both, are consistent with the assumptions and requirements *of any available wasteload*

allocation for the discharge prepared by the State and approved by EPA pursuant to 40 CFR 130.7.²⁹

Permittees support continued management actions to ensure sediment does not impair Newport Bay and propose that continued monitoring efforts are instead included as part of Attachment A, Monitoring and Reporting Program.

Action: Revise the Draft Order as indicated in Attachment B.

- *Appendix D*

44. THE TMDL SECTIONS IN THE APPENDICES (APPENDIX A THROUGH H) HAVE INCONSISTENCIES WITH THE RELEVANT BASIN PLAN AMENDMENTS.

- Appendix A includes the City of Stanton as a responsible party for the San Gabriel River TMDL – Coyote Creek Metals TMDL. However, this is inconsistent with the adopted Basin Plan Amendment and Table 7-1 within the TMDL. Although the Technical Report recognizes the inconsistency, it is not appropriate to add a new responsible party to this TMDL without going through the public process.
- Load allocations (for the Sediment TMDL in the Newport Bay Watershed) have been inappropriately incorporated into the Permit. Federal regulations specify that waste load allocations, not load allocations, are to be incorporated into the Permit (40 CFR 122.44(d)(1)(vii)(B)).
- The Toxics TMDL for the Newport Bay Watershed does not mention that certain aspects of the TMDL have been superseded by Basin Plan Amendments adopted by the Regional Board.
- The Los Angeles Regional Board adopted an implementation schedule for the Metals TMDL for Coyote Creek. The implementation schedule and actions are not included in Appendix H.

Action: Revise the Draft Order as indicated in Attachment B.

- *Appendices A - H*

MONITORING AND REPORTING PROGRAM (MRP)

45. WET WEATHER SAMPLING REQUIREMENTS SHOULD BE CLARIFIED

Section II.C.5 states: “wet-weather sampling events may not be consecutive and must be separated by a minimum of two (2) days of dry weather (no precipitation).” As written, the Permittees would not be able to sample a wet weather event if a dry weather sampling event does not occur between the desired wet weather event and a previous wet weather event. The Permittees would like the flexibility to sample any wet weather event as it arises. Removing “*may not be consecutive and*” from the Section would allow flexibility while ensuring a period of dry weather occurs between two wet weather sampling events. Although similar modifications were made in other sections of the MRP, this particular modification may have been missed.

²⁹ (Emphasis added).

Action: The MRP should be revised as indicated in Attachment B.

- *Section II.C.5, General Water Quality Monitoring Requirements (page 6)*

46. THE PERMITTEES SHOULD BE PROVIDED FLEXIBILITY TO REMOVE ANALYTES FROM THE MONITORING PROGRAM IF THEY HAVEN'T BEEN DETECTED.

Section II.D.7 and Section II.E.5 of the MRP identify the Outfall Monitoring constituents that must be monitored and the manner in which they are supposed to be collected. Language should be included that allows the Permittees to remove an analyte that is not detected upon completion of the annual monitoring. Removal of an analyte should be on a site-by-site basis and on a storm sampling/dry weather sampling basis or both based on the supporting technical justification.

An example of this would be related to sampling certain classifications of pesticides. As documented in the State of the Environment report and 2013-14 PEA, the frequency of detections of organophosphate pesticides is decreasing due to lack of use in the environment. The organophosphate pesticides are being replaced by other pesticide compounds such as synthetic pyrethroids, neonicotinoids, and fipronil based compounds. The permit should allow the Permittees the ability to shift sampling parameters in the sampling programs based on these types of conditions. In addition, the Permittees have begun consulting with the California Department of Pesticide Regulations on their special study of pesticide compounds in urban runoff in South Orange County. Results of this study, along with the Permittees own monitoring, can be presented in the annual work plan to justify changes in pesticide analytes to the various monitoring programs as part of the iterative process.

Although the Response to Comments (16.80) indicates that the modifications requested to this section were made, the Permittees request that these additional clarifying modifications be made consistent with the previous comment letter.

Action: The MRP should be revised as indicated in Attachment B.

- *Section II.D.7, Outfall Monitoring Requirements (pages 7-9)*
- *Section II.E.5, Receiving Waters Monitoring Requirements (pages 11-12)*
- *MRP Table 3, Parameters for Illicit Discharge and Illicit Connection Discharge Monitoring (page 17) - since Organophosphate pesticides are presently banned for commercial usage, the Permittees recommend that this analysis suite be removed from the required analytical list as there is a low likelihood of detection. As indicated in the Dry Weather Reconnaissance Monitoring section of the 2013-14 PEA, detections of Organophosphates only occurred in 14 of 257 samples collected in 2014 (< 4%). This detection frequency is expected to continue to decrease over time.*

47. THE TOXICITY TESTING REQUIREMENTS SHOULD BE ALIGNED WITH THE CURRENT MONITORING PROGRAM.

The proposed toxicity testing requirements in Section II.F include an overarching statement: "The water quality monitoring program must include toxicity testing, analyzed using

USEPA's Test of Significant Toxicity Approach." The Test of Significant Toxicity³⁰ (TST) approach is a new statistical approach to assess the whole effluent toxicity (WET) measurement of wastewater effects. However, Regional Board staff removed the requirement to conduct WET testing on receiving waters as WET testing was developed to assess effluent from publically-owned treatment works, not ambient waters. As WET testing is not required, and will likely not be performed, the TST approach does not seem to necessarily be applicable to receiving water testing. As such, the TST requirement should be removed and current toxicity testing requirements allowed.

In addition, the TST approach differs from what is required for toxicity testing in the current permit. Review and analysis of the TST approach has yielded some issues with the reliability of the approach.

TST tests have been shown to have 5-40% false failures (failing the TST when there is no actual toxicity), placing their regulatory usefulness in question and raising legal issues for permit violations. The USEPA has determined that "the accuracy of toxicity tests cannot be determined."³¹ Even if there is only a 5% false failure level (as is set for the TST), this guarantees at least one numeric effluent limit "violation" in the five year permit term, even though there is no actual toxicity for those incidents. But this would still be a violation, while not subject to Mandatory Minimum Penalties (MMPs, Water Code section 13385(i)(1)(D)) if there are other toxic pollutant limits in the permit that is subject to citizen suit enforcement. No reason exists to put permittees in such compliance jeopardy unnecessarily.

Reanalysis of actual Whole Effluent Toxicity (WET) test data, from a wide variety of real-world samples, demonstrates that the TST technique consistently "detects" the existence of toxicity more frequently than the No Observable Effect Concentration (NOEC) method, especially for tests with relatively small effect levels.³²

One should not assume that greater statistical sensitivity equates with improved accuracy in WET testing. Reanalysis of data from EPA's inter-laboratory WET variability study indicates that the TST technique also "detects" toxicity in blank samples at a rate up to three times higher than the NOEC.³³ Blank samples are comprised solely of laboratory dilution water than is known to be non-toxic before the test begins. Such inaccuracies demonstrate that the TST does not provide performance equivalent to that of the standard methods that were promulgated in 2002.

In addition, the TST document is only considered to be a guidance document as it has not been approved under 40 C.F.R. Part 136. Although EPA often tries to regulate by guidance,

³⁰ US Environmental Protection Agency, Office of Wastewater Management, *National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document*. EPA 833-R-10-003., (June 2010).

³¹ US Environmental Protection Agency, Office of Water, *Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms*; EPA/600/4-91/002,pp. 139, 193, and 225 (Oct. 2002).

³² State Water Resources Control Board, *Effluent, Stormwater and Ambient Toxicity Test Drive Analysis f the Test of Significant Toxicity (TST)* (Dec. 2011).

³³ U.S. Environmental Protection Agency, *Final Report: Interlaboratory Variability Study of EPA Short-term Chronic and Acute Whole Effluent Toxicity Test Methods, Vol. 1*; EPA-821-B-01-004 (Sept. 2001).

courts have frowned upon this practice as aptly described in *Appalachian Power Co. v. EPA*³⁴. The district court in the *Appalachian Power* case found fault in EPA’s regulating by setting aside the guidance in its entirety.³⁵ “If an agency acts as if a document issued at headquarters is controlling in the field, if it treats the document in the same manner as it treats a legislative rule, if it bases enforcement actions on the policies or interpretations formulated in the document, if it leads private parties or State permitting authorities to believe that it will declare permits invalid unless they comply with the terms of the document, then the agency’s document is for all practical purposes ‘binding.’”³⁶

More recent cases have reached the same conclusion in other instances when EPA tried to regulate through interpretive rules, such as the 2010 TST guidance. One case related to invalidating EPA guidance setting forth air quality attainment alternatives.³⁷ (Another related to “requirements” contained in letters related to water quality permitting prohibitions related to blending and mixing zones. In this case, the court found that EPA not only lacked the statutory authority to impose the guidance regulations on blending, but also violated the Administrative Procedures Act by implementing the guidance on both issues without first proceeding through the notice and comment procedures for agency rulemaking.³⁸ The case law is clear that EPA must regulate through rules and not through informal guidance.³⁹ Similar rules apply to the Water Boards, which also cannot regulate by guidance, particularly where that guidance is contrary to established regulations (e.g., the CCW Toxicity TMDL) and statewide precedential orders.

Furthermore, the Fact Sheet for the Draft Order does not provide the background information necessary to determine why the use of the TST approach is necessary. Inclusion of the TST approach is inconsistent with existing policies and regulations. As such, toxicity testing requirements should remain the same as the previous permit since no change in law or regulations have occurred to authorize these modifications.

Action: The MRP should be revised as indicated in Attachment B.

- *Section II.F, Toxicity Testing (page 14)*

48. THE MRP SHOULD NOT PREMATURELY REQUIRE CAUSAL ASSESSMENTS.

The County recognizes and appreciates Regional Board staff revising Section II.J to require only one Causal Assessment (CA) during the term of Order No. R8-2015-0001. However, the County still believes this requirement is premature for the same reasons as provided in the previous comments:

³⁴ 208 F.3d. 1015, 1020 (D.C. Cir. 2000).

³⁵ *Id.* at p. 1028.

³⁶ *Id.* at p. 1021 [*citations omitted*].

³⁷ *NRDC v. U.S. EPA*, 643 F.3d 311 (D.C.Cir. 2011).

³⁸ *Iowa League of Cities v. U.S. EPA*, 711 F.3d 844, 878 (8th Cir. 2013).

³⁹ *See also United States v. Mead Corp.*, 533 U.S. 218 (2001) (defining a two-part test for when agency guidance documents have the force and effect of law).

- The State Water Resources Control Board is in the process of developing a Biological Integrity Policy (Policy) that will be incorporated into the Inland Surface Waters Plan. Although CAs are a part of the overall Policy, the specific process for triggering the need for, conducting, and interpreting the CA is still being evaluated. The Policy will likely include guidance to the Regional Boards on a number of issues including when a CA should be conducted, how a CA should be conducted, how to interpret the results, and what the follow up actions should be. Until these decisions have been made, it would be difficult to implement this requirement on a consistent basis.
- There is still significant debate about if and how the Policy should apply to “modified” channels. In addition, if the Policy does apply to “modified” channels, there may be a CA “lite” that is conducted to determine if a significant driver for the biological integrity of a site is habitat modification. If this is the case, then a full CA may not be necessary. Given that much of northern Orange County is fully developed and the waterways significantly modified, the outcome of these discussions will be critically important.

The Regional Board staff indicated, in their Response to Comments, that: “By performing a Causal Assessment the Permittees will be advancing approaches and techniques for regional assessments and advancing our collective knowledge of stressors to receiving waters.” This seems to put the onus on the Permittees to provide the resources to develop the approach to use for CAs instead of the State Water Board’s process. It is important to note that the limitations of causal assessments and the use of CADDIS for these assessments has been the subject of much conversation with State Water Board staff as a part of the development of the biological integrity plan. In fact, it has been noted that CAs have not been well-vetted in California and that stressor identification designs must be optimized for use in California where there are cumulative stressors, which are difficult to diagnose.

An alternative would be to allow the conductance of a CA to be an optional special study, rather than a required monitoring element. This special study could be conducted in conjunction with Stormwater Monitoring Coalition monitoring if applicable.

It should be noted that the Permittees have already begun participating in a CA with the Santa Ana Water Board and other participants for a portion of San Diego Creek in the Newport Bay watershed. This CA is considered a new special study under the Fourth Term Permit that is anticipated to be completed following adoption of the Fifth Term Permit. Due to the limitations noted above and the work that is being conducted by the State Water Board, it is recommended that the current CA project be incorporated into the Fifth Term Permit as a special study in lieu of a requirement of the Bioassessment Monitoring program.

In addition, since the toxicity testing requirements were removed from Section II.J, Section II.J.6, which requires Toxicity Identification Evaluations (TIEs) based upon the determination of first-hour toxicity, should be also removed.

Action: The MRP should be revised as indicated in Attachment B.

- *Sections II.J, Bioassessment Monitoring (pages 18-19)*

49.

THE MRP NEEDS CLARIFICATION AND CONSOLIDATION REGARDING THE FREQUENCY OF MONITORING BETWEEN THE OUTFALL MONITORING, RECEIVING WATER MONITORING, AND TOXICITY TESTING PROGRAMS.

The County recognizes and appreciates Regional Board staff allowing greater flexibility in the frequency of monitoring of sites on an applicable even- and odd-year basis. The County has provided additional redline comments in the Outfall Monitoring Requirements, Receiving Waters Monitoring Requirements, and Toxicity Testing sections to better clarify and consolidate the frequency of monitoring at stations in Newport Bay and North Orange County regional watersheds during the applicable even- and odd-year sampling events. These redline comments are based on current monitoring frequencies for the Mass Emissions and Estuary/Wetlands monitoring programs, with some stations sampled semi-annually and others sampled quarterly.

The County also included clarifications on sampling protocols for storm event compositing in the Outfall Monitoring Requirements section to coincide more closely with current protocols.

Action: The MRP should be revised as indicated in Attachment B.

- *Sections II.D.4 and II.D.5, Outfall Monitoring Requirements (pages 7-9)*
- *Sections II.E.1 and II.E.2, Receiving Waters Monitoring Requirements (pages 11-12)*
- *Section II.F.4, Toxicity Testing (page 14)*

50. FIRST SUBMITTAL DATE FOR ANNUAL PROGRESS REPORT

The approval of the Draft Order No. R8-2015-001 is expected in March 2015. Consequently consideration should be given to making the first annual progress under the new permit on November 15, 2016 rather than 2015 since this would be reflective of just over a year of implementation. Submittal of policies and procedures for non-priority projects could be accomplished as a stand-alone submittal rather than as part of the annual report.

Action: The MRP should be revised as indicated in Attachment B.

- *Table 5 revised date (page 23)*

STATE OF CALIFORNIA
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD SANTA ANA REGION

3737 Main Street, Suite 500, Riverside, CA 92501-3348
(951) 782-4130 • Fax (951) 781-6288
<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 ¹	City of Westminster
City of Laguna Woods ¹	City of Yorba Linda

¹ [The entire jurisdictional area of the City of Lake Forest, including those areas located in the San Diego Region, will be regulated by the Santa Ana Regional Water Quality Control Board \(Santa Ana Regional Board\). The entire jurisdictional areas of the City of Laguna Hills and the City of Laguna Woods, including those areas located in the Santa Ana Region, will be regulated by the San Diego Regional Water Quality Control Board \(San Diego Regional Board\). These designations are subject to the terms of the agreement between San Diego Regional Board and Santa Ana Regional Board and become effective on the later effectiveness date of this Order or the effective date of San Diego Water Board Tentative Order No. R9-2013-0001, as amended by Order No. R9-2015-0001.](#)

Comment [KA1]: The Permittees recognize that the Draft Order is still undergoing revision. Once finalized, the Permittees recommend the following modifications for consistency throughout the Order:

- Use of the term "Co-permittee" instead of "Co-Permittee"
- Only define acronyms the first time used
- Use of "de minimis" as a general term and use of "De Minimis" for permits

Field Code Changed

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ADMINISTRATIVE INFORMATION

This Order was adopted by the Santa Ana Regional Water Quality Control Board ("Regional Board") on:	Month day, 2015
This Order shall become effective on:	Month day, 2015
This Order shall expire on:	Month day, 2020
The U.S. Environmental Protection Agency ("USEPA") and the Regional Board have classified the discharges from the Co-permittees' municipal separate storm sewer systems ("MS4s") as a "large municipal separate storm sewer system"- pursuant to 40 CFR 122.26(b)(4).	

IT IS HEREBY ORDERED that the Co-permittees² subject to this Permit, in order to meet the provisions contained in division 7 of the California Water Code (commencing with section 13000) and the provisions of the federal Clean Water Act ("CWA") and regulations and guidelines adopted thereunder, shall comply with the requirements of this Permit.

I, Kurt V. Berchtold, Executive Officer, do hereby certify that this Order with all attachments is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Santa Ana Region, on MONTH DAY, 2015.

Kurt V. Berchtold
Executive Officer

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² This Order refers to all of the Co-permittees collectively as "Co-Permittees", including the Principal Permittee.
Attach B.1 - Redline of MS4 Permit.docx

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Appendix A: Applicability of TMDL requirements to Co-permittees

Appendix B: Water Quality-Based Effluent Limits for Nutrients in Newport Bay

Appendix C: Water Quality-Based Effluent Limits for Fecal Coliform in Newport Bay

Appendix D: Water Quality-Based Effluent Limits for Sediment in Upper Newport Bay

Appendix E: Water Quality-Based Effluent Limits for Organo-Chlorine~~eg~~ Compounds in Newport Bay and San Diego Creek

Appendix F: Water Quality-Based Effluent Limits for the Diazinon and Chlorpyrifos TMDL for Upper Newport Bay and San Diego Creek

Appendix G: Water Quality-Based Effluent Limits for Toxic Pollutants (Metals and Selenium) into San Diego Creek and Newport Bay

Appendix H: Water Quality-Based Effluent Limits for Coyote Creek

FINDINGS

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

A. JURISDICTION

1. **MS4 Ownership or Operation.** Each of the Co-permittees owns or operates a municipal separate storm sewer system ("MS4), through which it discharges storm water and non-storm water (collectively "urban runoff") into waters of the U.S. within the Santa Ana 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. **Regional Water Board Designation.** The Cities of Laguna Hills, Laguna Woods, and Lake Forest are located partially within the jurisdictions of the California Regional Water Quality Control Board, Santa Ana Region (Santa Ana Water Board) and the California Regional Water Quality Control Board, San Diego Region (San Diego Water Board) and are subject to regulation by both Regional Water Boards. 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 each of the Cities. The Santa Ana Water Board and the San Diego Water Board entered into an agreement, whereby the San Diego Water Board is designated to regulate the entire jurisdictional areas of the Cities of Laguna Woods and Laguna Hills, including those areas of each City located within the Santa Ana Water Board's jurisdiction, and the Santa Ana Water Board is designated to regulate the entire jurisdictional area of the City of Lake Forest, including those areas located within the San Diego Water Board's jurisdiction on the effective date of this Order or San Diego Water Board Order No. R9-2013-0001, as amended by Order No. R9-2015-0001, whichever is later. The agreement provides that the City of Lake Forest is required to retain, and continue implementation of, its over-irrigation discharge prohibition in Section 15.14.030 of the City Municipal Code for regulating storm water quality throughout its jurisdiction. The City of Lake Forest will also be required to actively participate during development and implementation of the Aliso Creek Watershed Management Area Water Quality Improvement Plan required pursuant to San Diego Water Board Order No. R9-2013-0001, as amended by Order No. R9-2015-0001. 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)). 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 Santa Ana Water Board will periodically review the effectiveness of the agreement during each MS4 permit reissuance. Based on this periodic review the Santa Ana Water Board may terminate the agreement with San Diego Water Board or otherwise modify the agreement subject to the approval of the San Diego Water Board.

~~2.3.~~ **Regulated Sources and Activities.** This Order regulates the discharge of pollutants from anthropogenic sources in urban runoff from MS4s or activities within the jurisdiction and control of the Co-permittees. Except as noted in Finding 8 below, this Order authorizes discharges of urban runoff from MS4s subject to the conditions and provisions herein. This Order is not intended to obligate the Co-permittees to address non-anthropogenic pollutants ~~or flows in receiving waters.~~

~~3.4.~~ **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 a National Pollutant Discharge Elimination System ("NPDES") permit for discharges of urban runoff from MS4s to waters of the U.S. 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 Regional Board has the legal authority to issue a system-wide MS4 permit pursuant to its authority under CWA section 402(p)(3)(B) and 40 CFR 122.26(a)(1)(v). The USEPA has established that the permitting authority, in this case the Regional Board, has the flexibility to establish system- or region-wide permits affecting multiple Co-permittees (40 CFR 122.26(a)(3)(ii)). The system-wide nature of this Order will ensure consistency of regulation within watersheds and is expected to result in overall cost savings for the Co-permittees and the Regional Board. The federal regulations make it clear that the Co-permittees 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 Co-permittees to manage storm water that originated outside of their jurisdictional boundaries, but rather to work collectively to improve storm water management within the Permit area.

CWA NPDES Permit Conditions. Pursuant to CWA section 402(p)(3)(B),

NPDES permits for ~~storm water~~ discharges from MS4s must include: (1) requirements to effectively prohibit non-storm water discharges into MS4s; (2) controls to reduce the discharge of pollutants to the maximum extent practicable ("MEP"), including management practices, control techniques, and system, design and engineering methods and ~~other such; and (3)~~ such other provisions as the Regional Board determines ~~are~~ appropriate for the control of such pollutants. This Order prescribes conditions to comply with the CWA requirements for owners and operators of MS4s ~~to effectively prohibit non-storm water discharges into the MS4s. This Order requires controls to reduce the discharge of pollutants in urban runoff from the MS4s to the MEP. This Order also includes such other provisions that the Regional Board has determined are appropriate to control pollutants.~~

~~4.5.~~ **CWA and CWC Monitoring Requirements.** CWA section 308(a) and 40 CFR 122.41(h),(j)-(l) and 122.48 require that NPDES permits 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 Regional Board to establish monitoring, inspection, data entry, reporting and recordkeeping requirements. This Order establishes monitoring and reporting requirements to implement federal and State requirements.

~~5.6.~~ **Total Maximum Daily Loads.** CWA section 303(d)(1)(A) requires that each state "shall identify those waters within its boundaries for which the effluent limitations...are not stringent enough to implement any water quality standard 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 22.44(d)(1)(vii)(B)) require that, when NPDES permits incorporate water quality based effluent limitations ("WQBELs") developed to protect a narrative water quality criterion, a numeric water quality criterion, or both, the WQBELs must be consistent with the assumptions and requirements of ~~any available~~ the WLA for the discharge. Consistent with this requirement, this Order includes a process for developing a BMP-based approach (development of a WQBEL compliance plan), which, when adopted by the Regional Board, shall become the final water quality-based effluent limitation(s).

A Permittee or group of Co-permittees may submit a WQBEL compliance plan describing the proposed BMPs and the documentation demonstrating that the BMPs are expected to attain the WLAs when implemented. Once the Regional Board approves this plan the plan becomes the final water quality-based effluent limit that is consistent with the WLAs. The plan will be updated, as necessary, to reflect evaluations of the effectiveness of the BMPs, including evaluations presented in the annual reports.–

This Order implements TMDLs that have been adopted by the Regional Board and approved by USEPA as of the time this Order is issued. This Order also implements TMDLs that have been promulgated by the USEPA. This Order establishes WQBELs consistent with the assumptions and requirements of TMDL implementation requirements and WLAs assigned to discharges from the Permittees' MS4s. The WQBELs are expected to be sufficient to cause the responsible Co-permittees to meet the WLAs by the compliance dates specified in their respective TMDLs and shown in Appendices B through H.

- ~~6.7.~~ **Permit Modification.** In accordance with 40 CFR 122.41(f), this Order may be modified, revoked or reissued prior to its expiration date for cause. This includes the following reasons:
- a. To address significant changes in conditions identified in the technical reports required by the Regional Board which were unknown at the time of the issuance of this Order;
 - b. To incorporate applicable requirements of state-wide water quality control plans adopted by the State Water Resources Control Board or any amendments to the Basin Plan approved by the Regional Board, the State Board, and, if necessary, by the Office of Administrative Law;
 - ~~c. To incorporate changes needed for consistency with standard provisions and precedential Orders adopted by the State Water Resources Control Board.~~
 - ~~d.c.~~ To incorporate changes needed for consistency with standard provisions and precedential Orders adopted by the State Water Resourced Control Board;
 - ~~e.d.~~ To comply with any applicable requirements, guidelines, or regulations issued or approved under the Clean Water Act, if the requirements, guidelines, or regulations contain different conditions or additional requirements than those included in this Order;
 - ~~f.e.~~ Or to incorporate any requirements imposed upon the Co-permittees through the TMDL process.

- 8. Non-Storm Water and Storm Water Discharges.** The discharge of pollutants from the MS4 is subject to the MEP standard and ~~must include~~ other provisions necessary to reduce pollutants whether the pollutants are transported by storm water or non-storm water.

This Order requires each Co- Permittee to effectively prohibit discharges of non-

storm water into its MS4 unless such discharges are authorized by an NPDES permit. The MS4s generally contain non-storm water flows such as [irrigation runoff](#), [runoff wastewater](#) from non-commercial car washing, [wastewater runoff](#) from miscellaneous washing and cleaning operations, and other nuisance flows generally referred to as *de minimis* discharges. Federal regulations, 40 CFR 122.26(d)(2)(i)(B), prohibit the discharge of non-storm water containing pollutants into the MS4s and to waters of the U.S. unless they are regulated under a separate NPDES permit, or are exempt, as indicated in Section III, Discharge Prohibitions, of this Order.

Certain non-storm water discharges may be permitted under various NPDES permits adopted by the Regional Board and the State Water Resources Control Board. These permits include NPDES Permit No. CAG998001 (commonly known as the *De Minimis* Permit); NPDES Permit No. CAG990002, Discharges from Utility Vaults and Underground Structures to Surface Waters; and NPDES Permit No. CAG918002, for discharges to surface waters of certain groundwater at sites within the San Diego Creek/Newport Bay watersheds. Non-storm water discharges permitted under these and other NPDES permits do not need to be prohibited by the Co-Permittees.

This Order authorizes the discharge of urban runoff from the Co-permittees' MS4s. This includes authorization for certain non-storm water discharges. [The Regional Board adopted a number of NPDES permits to address de-minimus types of pollutant discharges. However, the Co-permittees need not get coverage under the de-minimus permits for the types of discharges listed under Section III \(Table 2\), except for discharges to the Newport bay watershed \(where coverage under the Newport Bay watershed-specific de-minimus permit is required\), as long as they are in compliance with the conditions specified under Section III of this Order.](#)

~~Authorized non-storm water discharges are subject to both the requirements herein and the requirements of the *De Minimis* Permit.~~ This Order does not authorize the Co-permittees' non-storm water discharges that are subject to NPDES Permit No. CAG918002. Authorization for such discharges must be obtained through the process described in NPDES Permit No. CAG918002.

Monitoring conducted by the Permittees, 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 Santa Ana Region. The federal regulations (40 CFR 122.26(d)(2)(iv)(B)(1)) require Co-permittees to have a program to prevent illicit discharges to the MS4. The federal regulations, however, allow specific categories of unpermitted non-storm water discharges or flows to be regarded as illicit discharges only where such discharges are identified as sources of pollutants to waters of the U.S. Such unpermitted non-storm water discharges are listed in this Order in Section III. However, this list of discharges is subject to modification during the term of this Order.

9. Limits of Co-permittees' Jurisdiction over Urban Runoff. The Co-permittees may lack or have limited legal jurisdiction over urban runoff into their MS4s from some state and federal facilities, Native American tribal lands, utilities, special districts, and other entities. The Regional Board recognizes that the Co-permittees can only be held responsible for discharges of pollutants from such entities to the extent that the Co-permittees have the authority to eliminate or control the pollutants. Recognizing these limitations, the Co-permittees are expected to control pollutants in discharges into their MS4s from such entities according to CWA Section 402(p)(3)(B).

Similarly, certain activities that generate pollutants present in urban runoff may be beyond the ability of the Co-permittees to eliminate. Examples of these include operation of internal combustion engines, atmospheric deposition, brake pad wear, tire wear, and leaching of naturally occurring minerals from local geography.

10. In-Stream Structural Treatment Control BMPs. 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 structural treatment control BMP within a water of the U.S., or using the water body itself as a structural treatment control BMP or for conveyance to such a facility, would be tantamount to accepting waste assimilation as an appropriate use for that water body. Waters of the U.S. should not be converted into structural treatment control best management practices ("BMPs", ~~a.k.a. storm water control measures or "SMCs"~~).

However, this exclusion does not preclude stream restoration or rehabilitation projects, constructed wetlands, or regional BMPs that have been properly permitted and ~~whose water quality impacts have been fully mitigated~~ maintained. Construction, operation, and maintenance of a structural treatment control facility in a water body can otherwise negatively impact the physical, chemical, and biological integrity, as well as the beneficial uses, of the water body.

B. DISCHARGE CHARACTERISTICS AND RUNOFF MANAGEMENT

~~7.11.~~ **Potential Beneficial Use Impairment.** The discharge of pollutants from MS4s may cause ~~or threaten to cause~~ the concentration of pollutants in receiving waters to exceed applicable water quality standards. Discharges from MS4s may result in alterations to the hydrology of receiving waters that negatively impact their physical integrity. These conditions may impair or threaten to impair designated beneficial uses resulting in a condition of pollution, contamination, or nuisance.

~~8.12.~~ **Pollutants Generated by Land Development.** Land development has created, and ~~continues threatens~~ 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 automobile emissions, automobile maintenance wastes, municipal sewage, pesticides, household hazardous wastes, pet wastes, and trash. Development typically converts natural ground cover to impervious surfaces such as paved highways, streets, rooftops, and parking lots. Pollutants deposited on these surfaces are dumped or washed off ~~the~~ by non-storm water or storm water flows into and from the MS4s. As a result of the increased imperviousness in urban areas, less rain water can infiltrate through and flow over vegetated soil where physical, chemical, and biological processes can remove pollutants. Therefore, runoff leaving a developed area can contain greater pollutant loads and have significantly greater runoff volume, velocity, and peak flow rate than pre-development runoff conditions from the same area. Certain best management practices can minimize these impacts to water quality.

~~9.13.~~ **Runoff Discharges to Receiving Waters.** The MS4s discharge runoff into lakes, reservoirs, rivers, streams, creeks, bays, estuaries, coastal lagoons, the Pacific Ocean, and tributaries thereto within the Santa Ana Region. ~~Development generally makes use of natural drainage patterns and features to convey runoff. Rivers, streams and creeks in developed areas used in this manner and under the ownership and control of the Permittees are part of 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 Permittees' jurisdictions are both an MS4 and receiving water.~~ Discharges of runoff from MS4s must occur through outfalls (point sources) into waters of the U.S. Outfalls do not include open conveyances connecting two municipal separate storm sewers. Outfalls also do not include pipes, tunnels, or other conveyances which connect segments of the same stream or other waters of the U.S. and are used to convey waters of the U.S. (40 CFR 122.26(b)(9)).

~~10.14.~~ **Pollutants in Urban Runoff.** The most common pollutants in urban runoff 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. Pollutants in urban runoff are typically generated by persons or activities over which the Co-permittees may have the authority to enact measures to control those pollutants. The Regional Board recognizes that the Co-permittees' authority is not equal for all persons or activities in their jurisdictions. The limits of the Co-permittees' authority over some persons, such as school districts, are not clear. Nonetheless, the Co-permittees are required to exercise their authority consistent with the requirements of the Clean Water Act and this Order.

~~11.15.~~ **Human Health and Aquatic Life Impairment.** Pollutants in runoff discharged from the MS4s risk may adversely affecting human health and/or aquatic organisms. Adverse human health effects include gastrointestinal diseases and infections. Adverse physiological responses to pollutants in runoff include

impaired reproduction, growth anomalies and mortality in aquatic organisms. These responses may be the result of different mechanisms, including bioaccumulation of toxicants. During bioaccumulation, toxicants carry up the food chain and may affect both aquatic and non-aquatic organisms, including human health. 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.

~~12-16.~~ **Best Management Practices.** Wastes 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 BMPs are practices that prevent or reduce the generation of potential pollutants, typically at their source. Pollution prevention is the "first line of defense". Source control BMPs (both structural and non-structural) eliminate or minimize the contact between potential pollutants and urban runoff, therefore preventing the transport of pollutants to receiving waters. Treatment control BMPs remove pollutants that have entered into urban runoff.

Certain structural treatment control BMPs, such as constructed wetlands, are or will be waters of the state, and may support beneficial uses. The operation and maintenance of these BMPs may impact the beneficial uses of those waters. Section III of this Order contains provisions to minimize impacts to those beneficial uses as the result of operating and maintaining structural treatment control BMPs. However, it is not the intent of the Regional Board to regulate discharges *within* structural treatment control BMPs in a way that interferes with efforts to comply with the requirements of this Order.

17. **BMP Implementation.** To reduce the discharge of storm water pollutants, to effectively prohibit non-storm water discharges, and to protect receiving waters, the water quality impacts of development need to be addressed during the three major phases of planning, construction, and use. 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 may result in sediment or runoff rates which greatly exceed natural erosion rates of undisturbed lands, causing siltation and potentially impairing the beneficial uses of the receiving waters. In addition, 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 hydro-modification management BMPs is necessary to address discharges of urban runoff that may cause or contribute to a condition of pollution or a violation of water quality standards.

18. Orange County Model WQMP and Technical Guidance Document (TGD).

The Orange County Model WQMP (Model WQMP) and TGD were developed during the last permit term through a collaborative process inclusive of Regional Board staff, Copermittees, environmental nongovernmental organizations (NGOs), the land development community, technical consultants, and other interested people. The result of this process is the Model WQMP and TGD that is a comprehensive and innovative stormwater quality approach to new and redevelopment that integrates the principles of Low Impact Development (LID). Through the development and implementation of the Model WQMP and TGD with comprehensive technical guidance, a training program, and development plan check procedures, the land development program in Orange County has made significant progress toward improving the quality of runoff from new and redevelopment projects. The intent of the new development and significant redevelopment provisions in Section XII is to build off of Model WQMP and TGD.

19. OC Model WQMP and TGD Technical Feasibility Criteria. The Model WQMP and TGD has developed critical technical feasibility criteria developed through comprehensive analysis, extensive BMP and LID implementation experience, and review and comment by the Model WQMP and TGD Technical Advisory Group. To maintain the technical feasibility criteria identified in the Model WQMP and TGD will ensure that long-term effective BMPs can be maintained and do not contribute to risks to people, property, or the environment. The intent of provisions in Section XII is to build off of the established technical feasibility criteria with in the Model WQMP and TGD.

~~13-20.~~ **Regional BMPs.** Regional BMPs consist of a critical tool to help achieve improvement in stormwater quality and ultimately receiving waters. Regional BMPs can provide similar retention and treatment to onsite BMPs for development. One of the benefits of regional BMPs is that maintenance can be better monitored and most regional BMPs are maintained by a Copermittee or an HOA ensuring that maintenance is actually performed. Regional BMPs also provide a better opportunity for implementation of harvest and use of stormwater as more water demands and storage is available usually than onsite harvest and use systems. Additionally regional BMPs can be placed in areas where groundwater recharge is desired, where this resource can be used as a future water supply, as opposed to distributed infiltration, where this may not be able to be realized. Regional BMPs can also be increased in size to meet the redevelopment criteria to improve water quality from existing developed areas by treatment or retention. An example of this is the San Diego Creek Natural Treatment System Master Plan that has integrated these principles and serve as a complex system of constructed wetlands that provide invaluable treatment implemented to provide treatment for new development and redevelopment. Regional BMPs have been included in Section XII as a method to achieve compliance with the new and redevelopment provisions based in this understanding.

44-21. **Water Quality Improvements.** Since 1990, the Permittees have been developing and implementing programs and BMPs intended to effectively prohibit non-storm water discharges ~~in~~ to the MS4s and control pollutants in ~~storm water~~ discharges from the MS4s ~~to the MEP~~. As a result, beach closures have been significantly reduced, public awareness of water quality issues has increased, and several water body / pollutant combinations are being considered for removal from the CWA Section 303(d) List. The Permittees 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.

45-22. **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 Regional Board recognizes that water quality degradation and impacts to beneficial uses in the Santa Ana Region occurred over several decades and will not be undone easily. [The Regional Board subsequently recognizes that multiple permit terms may be necessary before water quality objectives are consistently achieved in the Santa Ana Region.](#)

46-23. **“Iterative Process”.** This Order is based on an iterative approach that, in summary, is comprised of planning, implementing, evaluating, and improving BMPs carried out as part of the Co-p-Permittees’ storm water programs. Multiple iterations will occur during this permit term, and are likely to occur over multiple permit terms, to achieve water quality standards. To fully effectuate the “iterative process”, this Order includes ~~prescriptive~~ requirements for conducting program effectiveness assessments (“PEAs”). PEAs are a necessary component of the “iterative process”. As part of the ~~performance of~~ PEAs, Co-permittees must compare the outcomes of program activities to the requirements of this Order and ~~to objective~~ performance standards developed by the Co-p-Permittees. The purposes of conducting PEAs include:

- a. assessing compliance with the requirements of this Order;
- b. tracking progress towards meeting [performance standards and/or](#) water quality standards;
- c. justifying the Permittees’ commitment of resources, including the cessation of ineffective management practices;
- d. providing feedback to Permittees’ program managers, in part, to identify the “best” or most effective management practices undertaken; and
- e. assessing reductions in pollutant loads to receiving waters and any relationship to management practices.

It is not the intent of the Regional Board that ~~objective~~ performance standards that are developed exclusively by the Permittees as part of PEAs, be used as the basis for enforcement action against any of the Permittees for failure to satisfy those standards. The intent of the Regional Board is that the Permittees constructively use those [performance](#) standards, and the related monitoring, to iteratively improve the performance of their storm water programs in a timely way to remove

pollutants in urban runoff to the maximum extent practicable. Permittees are also required to periodically evaluate the validity of their performance standards and methods of measurement and make modifications accordingly.

C. WATER QUALITY STANDARDS

22. **Basin Plan.** The Regional Board adopted the *Water Quality Control Plan for the Santa Ana River Basin* (Basin Plan) on January 24, 1995. The Basin Plan designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for receiving waters addressed through the plan. Subsequent revisions to the Basin Plan have also been adopted by the Regional Board and approved by the State Water Board, the Office of Administrative Law, and where appropriate, the USEPA. The requirements of this Order implement the Basin Plan.

The Basin Plan identifies the following existing and potential beneficial uses for surface waters in the Santa Ana Region: Municipal and Domestic Supply (MUN); Agricultural Supply (AGR); Industrial Process Supply (PROC); Industrial Service Supply (IND); Ground Water Recharge (GWR); Navigation (NAV); Hydropower Generation (POW); Water Contact Recreation (REC1); Non-contact Recreation (REC2); Commercial and Sport Fishing (COMM); Warm Freshwater Habitat (WARM); Limited Warm Freshwater Habitats (LWRM); Cold Freshwater Habitat (COLD); Preservation of Biological Habitats of Special Significance (BIOL); Wildlife Habitat (WILD); Rare, Threatened, or Endangered Species (RARE); Spawning, Reproduction, and Development (SPWN); Marine Habitat (MAR); Shellfish Harvesting (SHELL); and Estuarine Habitat (EST).

23. **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, 2005, and 2009. The State Water Board adopted the latest amendment on October 16, 2012 and it became effective on August 19, 2013. The Ocean Plan is applicable, in its entirety, to point source discharges to the ocean. The 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.

24. **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.

25. **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. The CTR and NTR contain water quality criteria for priority pollutants in discharges to surface water. However, the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* states that the Policy does not apply to regulation of storm water discharges. The Regional Board believes that compliance with Water Quality Standards through implementation of BMPs is appropriate for regulating urban runoff. The USEPA articulated this position on the use of BMPs in storm water permits in the policy memorandum entitled, "Interim Permitting Approach for Water Quality-Based Effluent Limitations in Storm Water Permits" (61 FR 43761, August 9, 1996). The USEPA also has articulated this position with respect to implementing TMDLs in their policy memorandum entitled "Establishing Total Maximum Daily Load (TMDL) Wasteload Allocations (WLAs) for Storm Water Sources and NPDES Permit Requirements Based on those WLAs", November 22, 2002.
26. **Anti-degradation Policy.** Federal anti-degradation policy is applicable to all NPDES permits. 40 CFR 131.12 requires that State water quality standards include an anti-degradation policy consistent with the federal policy. The State Water Resources Control Board established California's anti-degradation policy in State Board Resolution No. 68-16. Resolution No. 68-16 incorporates the federal anti-degradation policy where the federal policy applies under federal law. Resolution No. 68-16 requires that existing quality of waters be maintained unless degradation is justified based on specific findings. The Santa Ana Water Board's Basin Plan implements, and incorporates by reference, both the State and federal anti-degradation policies. This Order requires the Co-permittees to implement programs and policies necessary to improve water quality; the Order does not allow any degradation of existing water quality. Therefore, this Order is consistent with the anti-degradation provisions of 40 CFR 131.12 and State Board Resolution No. 68-16 as discussed further in the Technical Report.
27. **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. Further discussion regarding anti-backsliding is in the Technical Report to this Order.

D. CONSIDERATIONS UNDER FEDERAL AND STATE LAW

28. **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 hydro-modification. This Order addresses the management measures required by CZARA for the urban category, with the exception of septic systems. The programs developed pursuant to this Order fulfill the need for coastal cities to develop a runoff non-point source plan identified in the Non-Point Source Program Strategy and Implementation Plan. The Regional Board addresses septic systems through the administration of other programs.
29. **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 Permittees are responsible for meeting all requirements of the applicable Endangered Species Act.
30. **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 Orange County Permittees prior to the expiration of Order No. R8-2009-0030 (NPDES No. CAS618030). The federal regulations (40 CFR 122.21(d)(2)) and CWC section 13376 impose a duty on the Permittees to reapply for continued coverage through submittal of a Report of Waste Discharge no later than 180 days prior to expiration of a currently effective permit. This requirement is set forth in Provision XXIII.1. of Order No. R8-2009-0030. Order No. R8-2009-0030 (NPDES No. CAS618030) expired on May 22, 2014 but was administratively extended pursuant to 40 CFR 122.6(d). Once adopted and in effect, this Order supersedes Order No. R8-2009-0030, except for purposes of enforcement, and is subject to any necessary revisions to its requirements made after the Regional Board considers the Report of Waste Discharge through the public process provided in 40 CFR Part 124.
31. **Integrated Report and Clean Water Act Section 303(d) List.** The Santa Ana Regional Water Quality Control Board and the State Water Resources Control 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 Santa Ana 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. The most recent 303(d) List was issued in 2010.

Surface water bodies may be included in Category 4 of the Integrated Report if a TMDL has been adopted and approved by the USEPA for all identified pollutants or impairments (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). According to the 2010 Integrated Report, no water bodies in the Santa Ana Region are identified in Category 4.

Information acquired as part of implementing this Order may be used by the Regional Board to include surface waters impaired by discharges from the Permittees' MS4s in Category 4 and Category 5 in the Integrated Report. The inclusion of those waters will allow for their consideration during the next 303(d) List submittal by the State to USEPA.

32. **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 Regional Board finds that the requirements in this Order are not more stringent than the minimum federal requirements. The minimum federal requirements include: (1) the effective prohibition ~~of on-the-discharge of~~ non-storm water discharges into the MS4; and (2) controls to reduce the discharge of pollutants ~~in storm water from the MS4~~ to the MEP, including management practices, control techniques and system, design and engineering methods; and ~~(3) such other provisions as that~~ the Regional Board ~~has~~ determines appropriate for the control of such pollutants. The minimum federal requirements also include requirements for limitations consistent with any applicable waste load allocation. Therefore, considerations pursuant to CWC section 13241 are not required. Notwithstanding the above, the Regional Board has taken into account economic considerations pertaining to the requirements in this Order, consistent with requirements in section 13241. The economic consideration is described in the accompanying Technical Report.

33. ~~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 reasons detailed in the accompanying Technical Report.~~
34. **California Environmental Quality Act.** The issuance of this 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.

E. STATE WATER RESOURCES CONTROL BOARD DECISIONS

35. **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 (amending WQ 98-01), 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.
36. **Special Conditions for Areas of Special Biological Significance.** On March 20, 2012, the State Water Board approved Resolution No. 2012-0012 approving an exception to the Ocean Plan prohibition against discharges to Areas of Special Biological Significance ("ASBS") for certain nonpoint source discharges and NPDES permitted municipal storm water discharges. State Water Board Resolution No. 2012-0012 requires monitoring and testing of marine aquatic life and water quality in several ASBS to protect California's coastline during storms when rain water overflows into coastal waters. Specific terms, prohibitions, and special conditions were adopted to provide special protections for marine aquatic life and natural water quality in ASBS. The Special Protections contained in Attachment B to Resolution No. 2012-0012, applicable to discharges to ASBS', are hereby incorporated into this Order as if fully set forth herein (See Provision IV.E.).

F. ADMINISTRATIVE FINDINGS

38. **Executive Officer Delegation of Authority.** The Regional 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 Regional Board's behalf on any matter within this Order unless such delegation is unlawful under CWC section 13223 or this Order explicitly states otherwise.
39. **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 this Order.

40. **Fact Sheet/Technical Report.** The Technical Report 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 Technical Report serves as a fact sheet described in Parts 124.8 and 124.56 of the Code of Federal Regulations. The Technical Report is hereby incorporated into this Order and constitutes part of the Findings of this Order.
41. **Public Notice.** In accordance with State and federal laws and regulations, the Regional Board notified the Co-permittees, 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 Technical Report.
42. **Public Hearing.** The Regional Board held a public hearing on **MONTH(S), DATE(S)** 2014, and heard and considered all comments pertaining to the terms and conditions of this Order. Details of the public hearing are provided in the Technical Report.
43. **Effective Date.** This Order serves as an NPDES permit pursuant to CWA section 402 or amendments thereto, and becomes effective fifty (50) days after the date of its adoption, provided that the Regional Administrator, USEPA, Region IX, does not object to this Order.
44. **Review by the State Water Board.** Any person aggrieved by this action of the Regional Board may petition the State Water Board to review the action in accordance with CWC section 13320 and California Code of Regulations, title 23, sections 2050, *et seq.* The State Water Board must receive the petition by 5:00 p.m., 30 days after the Regional Board action, except that if the thirtieth day following the action falls on a Saturday, Sunday or State holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions will be provided upon request or may be found on the Internet at:

http://www.waterboards.ca.gov/public_notices/petitions/water_quality

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PERMIT REQUIREMENTS

IT IS HEREBY ORDERED that the Co-permittees³, in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder, and the provisions of the Clean Water Act, as amended, and regulations and guidelines adopted thereunder, must comply with the following:

I. GENERAL RESPONSIBILITIES OF THE CO-PERMITTEES

- A. The Co-permittees (inclusive of the Principal Permittee), shall be responsible for the management of storm drain systems within their jurisdictions. To carry out the requirements of this Order, the Co-permittees must:
1. Accurately document and effectively implement best management practices, including programs, policies, and procedures, within each of their respective jurisdictions.
 2. Develop and apply ~~valid objective~~ performance measures to track and assess the effectiveness of individual best management practices or systems of best management practices and execute timely program improvements necessary to improve the effectiveness of those practices.
 3. ~~Annually e~~Evaluate the validity of performance measures and the methods used to measure achievement of performance measures.
 4. Participate with one another in the development of necessary programs, plans, procedures, strategies, and reports that are of mutual interest.
 5. Coordinate the relevant plans, policies, procedures, and standards of their internal agencies, departments, and divisions.
 6. Develop and execute necessary interagency agreements.
 7. Establish and maintain adequate legal authority, as required by the Federal Storm Water Regulations.
 8. Maintain records and submit reports that are adequate to determine compliance with the requirements of this Order.
 9. Monitor and report the progress of any plans, projects, and programs implemented to control the discharge of pollutants in urban runoff to their MS4s. Reports must include comparisons of outcomes to objectives, performance measures, or milestones prescribed by this Order or developed pursuant to Provision I.A.2. by the Co-permittees.

II. GENERAL RESPONSIBILITIES OF THE PRINCIPAL PERMITTEE

- A. In addition to the General Responsibilities in Section I above, the Principal Permittee (County of Orange) is responsible for the overall management of the storm water program. To carry out the requirements of this Order, the Principal

³ As described in the Glossary of this Order, the term "Co-permittees" includes the Principal Permittee.
Attach B.1 - Redline of MS4 Permit.docx

Permittee must:

1. Coordinate the planning and execution of necessary common programs, plans, policies, procedures, and strategies among the Co-permittees.
2. Monitor and report the progress of any plans, projects, and programs of mutual interest to the Co-permittees.
3. Conduct chemical and biological water quality monitoring and conduct any additional monitoring as directed by the Executive Officer and authorized by this Order.
4. Coordinate the preparation of written reports, programs, plans, and procedures, including the Annual Progress Report, and their submittal to the Executive Officer.

III. DISCHARGE PROHIBITIONS AND LIMITATIONS

A. Prohibitions

1. In accordance with the requirements of 40 CFR § 122.26(d)(2)(i)(B) and (F), the Co-permittees must effectively prohibit illicit/illegal discharges from entering into the municipal separate storm sewer system ("MS4") unless such discharges are authorized by an NPDES permit or are not prohibited according to Provision III.A.2., below.
2. The non-storm water discharges in Table 2 ~~below~~ do not need to be prohibited by the Co-permittees unless such discharges are identified by the Co-permittee(s) or the Executive Officer as a significant source of pollutants⁴.
3. Except for those discharges described in Table 2 ~~below~~, non-storm water discharges from Co-permittees' activities into waters of the U.S. are prohibited unless the discharge is authorized under an NPDES Permit.
4. With the recommendation of the Co-permittees or based on Substantial Evidence, the Executive Officer is authorized to add other types of discharges to Table 2 ~~below~~, by way of written notice to the Co-permittees and after providing a minimum of 30 days for public comment.
5. Discharges of urban runoff from MS4s owned or operated by the Co-Permittees must be in compliance with the applicable discharge prohibitions contained in Chapter 5 of the Basin Plan.
6. Discharges of urban runoff into waters of the U.S. from MS4s owned or operated by the Co-permittees which cause or contribute, ~~or which threaten to cause or contribute~~ to a condition of pollution, contamination, or nuisance (see CWC Section 13050) are prohibited.
7. The discharge to waters of the U.S. of any substance(s) in concentrations that are toxic to animal or plant life is prohibited.
8. The discharge to waters of the U.S. of any radiological, chemical, or biological warfare agent, or high-level radiological waste, is prohibited.

⁴ ~~Note that this Order now requires the effective prohibition of irrigation runoff into the MS4.~~
Attach B.1 - Redline of MS4 Permit.docx

Table 2: Types of non-storm water discharges presumed to not be a significant source of pollutants

Water line flushing
Landscape irrigation
Air conditioning condensate
Discharges from potable water sources
Irrigation water
Passive foundation or footing drains
Lawn watering
Water from crawl space pumps
Individual residential car washing and charity car washing events conducted by non-profit 501(c) organizations
De-chlorinated water from swimming pools (except cleaning wastewater and filter backwash)
Diverted stream flows
Rising ground water and natural springs
Ground water infiltration (as defined in 40 CFR § 35.2005(20))
Uncontaminated pumped groundwater
Flow from riparian habitats and wetlands
Street wash water
Temporary non-storm water discharges authorized by USEPA pursuant to Sections 104(a) or 104(b) of the Comprehensive Environmental Response, Compensation, and Liability Act ("CERCLA") ⁵
Emergency firefighting flows necessary for the protection of life and property
Water not otherwise containing "waste", as defined in CWC Section 13050(d)

B. Limitations

1. The Co-permittees must implement an effective public education and

⁵ These discharges must comply with water quality standards as applicable or relevant and appropriate requirements ("ARARs") under Section 121(d)(2) of CERCLA; or must be subject to either a written waiver of ARARs by USEPA pursuant to Section 121(d)(4) of CERCLA, or a written determination by USEPA that compliance with ARARs is not practicable considering the exigencies of the situation pursuant to 40CFR300.415(j).
 Attach B.1 - Redline of MS4 Permit.docx

outreach program for the purpose of reducing the volume of the anthropogenic non-storm water discharges included in Table 2 to the MS4s.

- ~~1-2.~~ Each Co-permittee must implement an effective water conservation program to minimize irrigation runoff from facilities that they own or control.
- ~~2-3.~~ For discharges outside the Newport Bay watershed the de minimus types of discharges listed in the Regional Board's General De Minimus Permit for Discharges to Surface Waters, Order No. R8-2009-0003, NPDES No. CAG 998001 (General De Minimus Permit), shall be in compliance with the terms and conditions of the ~~General De Minimus Permit~~ MS4 Permit. Separate coverage under the General De Minimus Permit is not required. For discharges within the Newport Bay watershed, separate permit authorization for these de minimus discharges will be required when the discharges contain selenium, nitrogen or other pollutants at levels of concern. ~~Non-storm water discharges occurring outside of the Newport Bay watershed from Co-permittee-owned or operated facilities or Co-permittee activities must be in compliance with the conditions and provisions of the General De Minimis Permit for Discharges to Surface Waters, Order No. R8-2009-0003, NPDES Permit No. CAG998001 (General De Minimis Permit) or subsequent reauthorizations or amendments.~~
- ~~3-4.~~ Discharges to waters of the U.S. from swimming pools that are owned or operated by the Co-permittees must not be composed of pool cleaning wastewater or filter backwash.
- ~~4-5.~~ The volume and velocity of non-storm water discharges must be controlled to prevent causing hydrologic conditions of concern.
- ~~5-6.~~ Discharges from facilities owned or controlled by Co-permittees that extract, treat, and discharge water diverted from waters of the U.S. must meet the following requirements:
 - a. The discharge to waters of the U.S. must not contain any pollutants added by the treatment process or contain pollutants in greater concentration(s) than the influent.
 - b. The discharge must not cause or contribute to a condition of erosion or cause the suspension and discharge of pollutants already in the conveyance.
 - c. The extraction and treatment must be in compliance with Section 404 of the Clean Water Act or with the conditions or provisions of any applicable permit, license, or CWA Section 401 Water Quality Standards Certification.
- ~~6-7.~~ For discharges associated with water body pollutant combinations addressed in a TMDL, the Permittees shall achieve compliance as outlined in Section XVIII and Appendices A-H.

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IV. RECEIVING WATER LIMITATIONS

- A. Except as provided for in Provision IV.B, d Discharges of urban runoff from the Co-permittees' MS4s must not cause or contribute to a condition of nuisance or exceedances of water quality standards for surface waters and groundwaters.
- B. Discharges of urban runoff from the Co-permittees' MS4s must comply with Provision IV.A. through timely implementation of ~~storm water control measures~~ best management practices and other actions to reduce pollutants in discharges according to the conditions and provisions of this Order. If exceedances of receiving waters limitations persist, notwithstanding implementation of ~~storm water control measures~~ best management practices and other actions, the responsible Co-permittees must achieve compliance with prohibitions and receiving waters limitations according to Subsection IV.D. below.
- C. Determinations that discharges are causing or contributing to exceedances of water quality standards will be based, in part, on assessments of water quality data which are performed according to scheduled cycles of monitoring, analysis, and reporting required in attached Monitoring and Reporting Program No. R8-2015-0001 (Attachment A).
- D. Upon a determination by a Co-permittee or the Executive Officer that a discharge is causing or contributing to the exceedance of an applicable water quality standard, the responsible Co-permittee(s) must submit a draft plan to the Executive Officer describing actions that will be taken to achieve compliance. A plan to achieve compliance with TMDL-related water quality-based effluent limits related to the exceeded water quality standard, and prepared according to Section XVIII of this Order, also satisfies this Provision.
 - 1. The draft plan must be submitted to the Executive Officer within 6 months of the Co-permittees becoming aware that a discharge is causing or contributing to the exceedance.
 - 2. Where a draft plan is requested in writing by the Executive Officer, the plan must be submitted by a date specified in the request.
 - 3. The plan must:
 - a. describe the pollutant(s) that are known or suspected of causing or contributing to the exceedance(s);
 - b. describe the persons or activities believed to cause or contribute to the pollutant(s);
 - c. describe the BMPs that are being employed to control the pollutant(s);
 - d. describe any proposed new BMPs, or modification of currently-employed BMPs, along with a time schedule for their implementation to prevent or reduce the pollutant(s);
 - e. include an objective analysis which provides a reasonable assurance that the new or modified BMPs can be expected to cause discharges to comply with the applicable water quality standard(s) as soon as possible⁶. The analysis must be supported, in part, by

⁶ Taking into account the technological, operational, and economic factors that affect the design, development, and implementation of the BMPs necessary to comply with the water quality standard.

- peer-reviewed models that are in the public domain where such models are available and appropriate. Alternatively, the analysis can include trend analyses that demonstrate that no additional actions are necessary.; AND
- f. include a monitoring program and periodic review to characterize the exceedance(s) and to objectively assess the effectiveness of BMPs employed to address them; OR
 - g. provide objective evidence, acceptable to the Executive Officer, that there is a trend indicating that relevant pollutant loads or concentrations are decreasing and that the applicable water quality standard(s) are expected to be satisfied without further intervention; OR
 - h. provide evidence, acceptable to the Executive Officer, that the cause of pollution is not within the jurisdiction or control of the Co-permittees.
4. The draft plan is subject to review by the Executive Officer. The Co-Permittees must make any such modifications to the plan within 60-days of written notification by the Executive Officer.
 5. The draft plan becomes a final plan and must be fully implemented by the responsible Co-permittees upon approval by the Executive Officer. In the event that the Executive Officer determines that the Co-permittees have failed to fully implement the final plan, the Executive Officer may provide written Notice to the responsible Co-permittees and provide 60-days from the date of the Notice to correct the deficiencies.
 6. The Executive Officer will provide a 30-day public review period prior to approving and finalizing the draft plan.
 7. If, despite the implementation of the approved final plan described above in this Section, cycles of monitoring, analysis, and reporting continue to result in determinations that there are continuing or recurring exceedances of water quality standards caused or contributed to by discharges from the Co-permittees' MS4s, the Co-permittees must reinstate the procedure in this Section⁷. Successive iterations must include in the new draft plan: (1) an updated objective analysis, which provides a reasonable assurance ~~analysis~~; (2) modifications to BMPs, (3) additional BMPs, and (4) if appropriate, changes to the monitoring program.
 8. The Co-permittees must make the final plan accessible to the public by posting the plan to the responsible Co-permittees' web sites, the Principal Permittee's web site, or another method acceptable to the Executive Officer.
 9. Except for inconsequential grammatical or technical corrections, the final plan may be amended by the Co-permittees only with the approval of the Executive Officer.
 10. Where the Co-permittee(s) believe that additional time is necessary to

⁷ Pursuant to Provision II.B.3.a. of MRP No. R8-2015-0001, the cycle of adaptive planning must occur not less than once every 5 years.

comply with a deadline in the implementation schedule of the final plan, and the Co-permittee(s) fail to timely request, or is not granted an extension, Co-permittees may request a time schedule order pursuant to California Water Code Section 13300.

- E. The Special Protections contained in Attachment B to Resolution No. 2012-0012, as amended or reauthorized by the State Water Resources Control Board, are hereby incorporated into this Order as if fully set forth herein. The Special Protections are specifically applicable to discharges of urban runoff from the City of Newport Beach's MS4 to Newport Coast and Crystal Cove (ASBS 32 and ASBS 33, respectively) which are authorized by this Order. Where there are conflicts between this Order and the Special Protections, the most protective requirements, as determined by the Executive Officer, shall prevail. The Special Protections are accessible at:

http://www.waterboards.ca.gov/board_decisions/adopted_orders/resolutions/2012/rs2012_0012.pdf

V. **IMPLEMENTATION AGREEMENT**

The Co-permittees must execute inter-agency and inter-Co-permittee agreements necessary to satisfy the requirements of this Order.

VI. **LEGAL AUTHORITY/ENFORCEMENT**

- A. Each Co-permittee must secure and maintain legal authority adequate to control the discharge of pollutants in urban runoff to their MS4s pursuant to the requirements of this Order.
- B. Each Co-permittee must track and evaluate challenges to their authority to control the discharge of pollutants in urban runoff to their MS4s.
1. Where a formal or informal challenge indicates a weakness in the Co-Permittees' authority, the Co-permittee must act in good faith and in a timely manner to make their authority adequate.
 2. The Co-permittees must report any discovered weaknesses in their legal authority in their Program Effectiveness Assessment. The report must include a plan, with a schedule of action(s), to make their authority adequate.
- C. Each Co-permittee must secure and maintain legal authority, to the extent allowed by State and Federal Law, and subject to limitations on municipal action under the constitutions of the state of California and the United States, that is adequate to enter, inspect, and gather evidence (including pictures, video, samples, statements, and documents) from industrial, construction, and commercial establishments to determine compliance with ordinances, permits, conditions, and other requirements of the Co-permittees related to the control of discharges of pollutants to their MS4s.
- D. Each Co-permittee must maintain adequate legal authority to impose a series of

effective, progressive sanctions to compel compliance with their regulatory requirements related to the control of discharges of pollutants to their MS4s.

- E. Within 90-days of the effective date of this Order, each Co-permittee must develop a formal, written program, which describes supporting policies and procedures that effectively promote the consistent and decisive use of their sanctions, and describes performance measures to track and objectively evaluate the sanctions' effectiveness.

VII. ILLICIT DISCHARGES, ILLICIT CONNECTIONS, AND ILLEGAL DUMPING; LITTER DEBRIS AND TRASH CONTROL

- A. Each Co-permittee must effectively prohibit illicit discharges and illicit connections to their respective MS4s through their ordinances and other appropriate mechanisms.
- B. Each Co-permittee must employ an effective mechanism for the public to report known or suspected illicit discharges, illicit connections, and illegal dumping. The reporting mechanism must be continuously advertised to the public by each Co-Permittee using a minimum of two media outlets (i.e. newsprint, internet, telephone directory, etc.).
- C. Each Co-permittee must advertise the availability of mechanisms for residents to dispose of wastes that have the potential to be discharged to their MS4s.
- D. The Co-permittees must implement an effective program to detect illicit discharges and illicit connections; to abate illegal dumping that has the potential to result in a discharge of pollutants to their MS4s; to trace the source of illicit discharges and connections; and to eliminate or permit such discharges and connections. The Co-permittees' program must be fully described in written processes and procedures. Sanitary Sewer Overflows shall be treated as a subclass of illicit discharges subject to additional requirements of Subsection VII.F.
 - 1. Co-permittees must provide mutual assistance to one another in detecting known or suspected illicit discharges, illicit connections, and illegal dumping.
 - 2. Each Co-permittee must maintain an electronic database that tracks instances of known or suspected illicit discharges, illicit connections, and illegal dumping within their respective jurisdictions.
 - a. The database must be designed and used to track compliance with the requirements of this Section (Subsection VII.D.).
 - b. The database must be designed and used to guide the Co-Permittees' most effective use of resources towards satisfying the requirements of this Section.
 - 3. Each Co-permittee must identify the personnel or staff positions that are responsible for satisfying the requirements of Subsection VII.D. of this Order in their written program.
 - 4. The Co-permittees must maintain maps of their respective MS4s that contain information of sufficient detail and quality to trace the source of suspected illicit discharges in a timely manner.
 - a. The maps must be distributed in a format that is readily available to personnel responsible for satisfying the requirements of Subsection

VII.D. of this Order.

- b. The maps must be reviewed and updated annually.
5. The Co-permittee that is the local jurisdiction must initiate (or cause to be initiated) a source investigation where bacterial monitoring (see Monitoring and Reporting Program No. R8-2015-0001) indicates AB411 receiving water standards are exceeded in ocean outfalls/tributaries and in the nearby surf zone.
6. A source investigation must occur in substantial conformance with a common set of written techniques and procedures developed by the Permittees as part of the written program described in Provision VII.D.
 - a. When the source of an illicit discharge or illicit connection is discovered, the Co-permittee(s) must take immediate action to eliminate the discharge or connection or require that it be subject to appropriate NPDES permit(s) within 120 calendar days of discovery.
- E. Each Co-permittees must implement an effective program to reduce and/or eliminate the discharge of trash and debris to waters of the U.S.
 1. Measures employed for the control of trash and debris must be reported and reviewed annually by the Co-permittees to objectively evaluate the measures' effectiveness and/or the effectiveness of the overall trash and debris program. The results of the reviews must be provided annually in the Annual Progress Reports.
 2. The principle Co-permittee must demonstrate that the Co-permittees have formally evaluated new technologies for the control of trash and debris, as they become aware of them, and report the findings in the Annual Progress Reports.
 3. Co-permittees may discontinue control measures for trash and debris that they deem to pose an unmitigatable health and/or safety hazard or to be ineffective provided that the measure is replaced by an equal or more-effective measure.
 - a. The permanent substitution of control measures must be reported in the Annual Progress Report and approved by the Executive Officer. The proposed substitution must be supported by substantial objective evidence. This applies to program-level changes and not to the day-to-day operation of control measures.
 - b. Co-permittees must satisfy any conditions imposed by the Executive Officer as part of the approval of any substitution.
- F. For those Co-permittees that own or operate sanitary sewer systems over one mile in length, the State Board has established minimum requirements to prevent and mitigate sanitary sewer overflows ("SSOs") in Order No. 2006-0003-DWQ, "Statewide General Waste Discharge Requirements for Wastewater Collection Agencies". The Co-permittees that are not subject to the requirements of Order No. 2006-0003-DWQ, or subsequent renewals, must implement an effective program to detect and mitigate SSOs, such as the Countywide Area Spill Control Program ("CASC") and collaborate with the Orange County Sanitation District and Irvine Ranch Water District. The SSO program should include the-as

followings:

1. The Co-permittees' SSO program(s) must be comprised of the following elements:
 - a. Procedures for responding to SSOs.
 - b. A hands-on field training program for Co-permittees' staff responsible for responding to SSOs.
 - c. An awareness-level training program for Co-permittees' field staff most likely to initially detect SSOs.
 - d. If necessary, executed Memorandum/Memoranda of Understanding ("MOU") for delineating jurisdictional and financial responsibilities for the program.
 - e. ~~Objective program performance measures comprised, at a minimum, of SSO response time targets, training targets, and spill recovery targets.~~
2. Co-permittees must respond to SSOs according to the formal written response procedures unless there is cause to believe that such a response would not be most effective under the circumstances.
3. Co-permittees must maintain records adequate to demonstrate that they implemented the SSO program and its elements; records must be maintained for a minimum of five (5) years.
4. The Principal Permittee is responsible for developing a model SSO program and its elements; and for documenting and reporting the program(s) outcomes in the Annual Progress Report.

VIII. MUNICIPAL INSPECTIONS OF CONSTRUCTION SITES

- A. Each Co-permittee must maintain an inventory of all construction sites. ~~except for construction projects that are less than two weeks in duration,~~ within its jurisdiction.
 1. The construction sites inventory must include sites where building or grading permits are applicable and where activities at the site include the following:
 - a. Soil movement;
 - b. Uncovered storage of materials or wastes, such as dirt, sand, fertilizer, or landscaping materials; OR
 - c. Exterior mixing of cementitious products (i.e. concrete, mortar, or stucco).
 2. All construction sites shall be included in the Co-permittees' inventory regardless of whether the site is subject to the Statewide General Construction Permit or an individual NPDES permit.
 3. The inventory of construction sites must be updated ~~once per month,~~ at a minimum on a biannual basis (September and May).
 4. Each Co-permittees' inventory of construction sites must be maintained in an electronic-format database. The database records must include information on site/project ownership, project area, General Construction Permits WDID (if any), and location (latitude/longitude in decimal-degrees

or NAD83/WGS84 format).

- B. Each Co-permittee must inspect construction sites in their inventory, subject to the limitations on municipal action under the constitutions of the State of California and the United States. Each Co-permittee must have written policies and procedures that describe how inspections and related enforcement actions are carried out. Inspections and related enforcement actions must be carried out in a manner that enforces compliance with applicable ordinance(s), plans, permits, or other requirements related to the control of discharges of pollutants to their MS4s.
1. Co-permittees must categorize all construction sites in their inventory as either "high-priority", "medium-priority", or "low-priority". Construction sites with an expected or actual duration of more than two weeks must be inspected according to the following schedule:
 - a. May 1st through September 30th of each year (dry season): all construction sites must be inspected at a frequency where sediment and other pollutants are properly controlled and that unauthorized, non-storm water discharges are prevented.
 - b. October 1st through April 30th of each year (wet season):
 - i. High-priority sites must be inspected once every two (2) months in their entirety.
 - ii. Medium-priority sites must be inspected twice during the wet season.
 - iii. Low-priority sites must be inspected once during the wet season.
 - c. Where a Co-permittee determines that BMPs or their maintenance are inadequate or out of compliance, the site must be inspected once per month until the deficiency is corrected.
 2. A construction site must be considered "high priority" if it meets any of the following minimum criteria:
 - a. The site is 20-acres or larger;
 - b. The site is over one acre and tributary to a water body listed according to Clean Water Act Section 303(d), as being impaired by sediment or turbidity; OR
 - c. The site is tributary to, and within 500-feet of, an area defined by the Ocean Plan as an Area of Special Biological Significance ("ASBS").
 3. A construction site must be considered "medium-priority" if it consists of between 5 and 20 acres of disturbed soil and is not otherwise a high-priority site. All other sites may be considered "low-priority".
 4. Co-permittees must consider other factors or circumstances that could cause a construction site to fall into a higher priority. These factors include, but are not limited to, soil erosion potential, site slope, proximity to a receiving water, and the sensitivity of the receiving water to potential pollutants from the site.
 5. Co-permittees must inspect construction sites according to a checklist. The checklist must document, at a minimum, that the inspector:
 - a. Verified that the site has been covered by the General Construction Permit, if applicable, during the initial inspection;

- b. Reviewed an Erosion and Sediment Control Plan, to verify that the BMPs on the site are appropriate for the phase of construction;
 - c. Identified, through visual observation, any non-storm water discharges and potential pollutant sources;
 - d. Assessed the effectiveness of BMPs implemented at the site; and
 - e. Identified and communicated to the site representative non-compliance with requirements related to the control of discharges of pollutants to the Permittee's MS4s.
6. Co-permittees must address non-compliance with applicable ordinance(s), plans, permits, or other requirements related to the control of discharges of pollutants to their MS4s with a series of effective, progressive actions in order to compel compliance.
7. Completed inspections must be recorded in an electronic-format database. The database must be organized in a manner that is adequate to determine compliance with the requirements of this Order. Inspection records must be maintained a minimum of three (3) years from the date of the project's completion.
8. Construction site inspectors must be trained according to Section XVI of this Order; inspectors must undergo training once per year.
9. The Executive Officer must be notified of any known, suspected, or threatened violation of applicable waste discharge requirements (i.e. State-wide General Construction Permit, etc.), discovered during inspections of construction sites according to Section XVII.C. of this Order. Such violations include, but are not limited to:
 - a. Failure to obtain coverage under the applicable waste discharge requirements.
 - b. Unauthorized discharges.
10. Except as provided for in Section XVII of this Order, Co-permittees must investigate complaints regarding construction sites, received by internal departments or divisions, external agencies, or the public, within three (3) business days of the complaint being brought to their attention.

IX. and X. INSPECTIONS OF INDUSTRIAL AND COMMERCIAL SITES

The industrial and commercial site inspection program is outlined in the table below. Additional detail is provided in Sections IX. and X.

Task	Option 1		Option 2	Option 3
	Industrial	Commercial	Industrial/Commercial	Industrial/Commercial
Inventory (Section IX. A and X.A)	See Section IX.A.	See Section X.A	See Section IX.A and X.A	See Section IX.A and X.A
Prioritization (Section IX.B and X.B)	Based on past performance	Based on pollutants of concern and past performance	None	Low, medium and high based on criteria and risk factors
Inspections (Section IX.B and X.B)	- On site - individual - Drive by + Outreach - Outreach only	- On site – individual - On site – property based - Drive by + Outreach - Outreach only	- On site - individual	- On site - individual
Frequency (Section IX.B and X.B)	- High priority – Annual - Medium/Low priority – As needed	- High priority – Annual on site - Medium – Annual drive by + outreach - Low priority – 2x per permit term outreach	- 20% of inventory per year - 100% of inventory over permit term	- High priority – Annual - Medium – every 2 years - Low priority every 5 years
Follow Up (Section IX.B and X.B)	As needed	As needed	As needed	As needed
Minimum (Section IX.B and X.B)	20% of high priority per year	None	20% per year 100% over permit term	None

IX. MUNICIPAL INSPECTIONS OF INDUSTRIAL SITES

- A. **Inventory:** Each Co-permittee must continue to maintain an inventory of **all** industrial sites with the potential to discharge pollutants to the MS4 within its jurisdiction.
 1. Industrial sites shall be included in the Co-permittees' inventory regardless of whether the site is subject to the Statewide Industrial General Permit or other NPDES permit.
 2. The inventory of industrial sites must be updated ~~once every three months~~annually, or more frequently, as needed.
 3. Each Co-permittees' inventory of industrial sites must be maintained in an electronic-format database. The database records must include information on site/project ownership, project area, Industrial General Permits WDID (if any), and location (latitude/longitude in decimal-degrees or NAD83/WGS84 format).

B. Prioritization and Inspections: There are four options for the prioritizations and inspections of the industrial sites:

- Option 1 – A targeted approach with inspection frequencies based on high priority pollutants of concern and past performance of the facility;
- Option 2 - A synoptic approach with no fluctuation in the inspection frequency from year to year;
- Option 3 - A prioritized approach with inspection frequencies based on a prioritization scheme; or
- Option 4 – Alternative approach, which would be approved by the EO.

Each option is outlined below.

No matter which option is utilized, each Co-permittee must inspect industrial sites in their inventory, subject to limitations on municipal action under the constitutions of the State of California and the United States. Each Co-permittee must have written policies and procedures that describe how inspections and related enforcement actions are carried out. Inspections and related enforcement actions must be carried out in a manner that consistently enforces compliance with applicable ordinance(s), plans, permits, or other requirements related to the control of discharges of pollutants to their MS4s. The requirements listed in Sections B.4-B.9 apply to all options.

The options listed below may be used by the Permittees for the facilities listed within their industrial inventory.

1. Option 1 – Targeted approach for industrial site inspections.

- a. The Permittees shall develop a targeted approach for the facilities that is based on the past performance of that facility and high priority pollutants of concern. The Permittees will identify the high, medium, and low priority facilities based on this approach.
- b. At a minimum, 20% of the high priority facilities would be inspected each year.
The Permittees will conduct one of the following types of inspections:
 - (a) On-site individual inspections; or
 - (b) Drive by inspections.Where a business does not receive a formal inspection, outreach should be provided periodically.
- c. The medium and low priority facilities shall be inspected on an as needed basis. Each site that is not inspected should receive outreach information, including BMP Fact Sheets twice per permit term.
- a-d. An inspection of an industrial site that is covered by the General Industrial Permit or other NPDES storm water permit and performed by Regional Board staff may be substituted for any one of the above-required inspections for the same site.
- e. Where a Co-permittee determines that a site is out of compliance with requirements, the industrial site must be inspected, at a minimum, once per month until the site is in compliance.

2. Option 2 – Synoptic approach for industrial site prioritizations and inspections.

- a. The Permittees shall annually inspect 20% of the facility inventory, with 100% of the inventory inspected over the permit term.
- b. The Permittees will conduct on site-individual inspections.
- c. An inspection of an industrial site that is covered by the General Industrial Permit or other NPDES storm water permit and performed by Regional Board staff may be substituted for any one of the above-required inspections for the same site.
- e. Where a Co-permittee determines that a site is out of compliance with requirements, the industrial site must be inspected, at a minimum, once per month until the site is in compliance.

3. Option 3 – Prioritized approach for industrial site inspections.

Co-permittees must categorize all industrial sites in their inventory as either “high-priority”, “medium-priority”, or “low-priority”. Industrial sites must be inspected according to the following schedule:

- a. High-priority sites must be inspected once per year in their entirety.
- b. Medium-priority sites must be inspected once every two years.
- c. Low-priority sites must be inspected once every five years.
- d. An inspection of an industrial site that is covered by the General Industrial Permit or other NPDES storm water permit and performed by Regional Board staff may be substituted for any one of the above-required inspections for the same site.
- e. Where a Co-permittee determines that a site is out of compliance with requirements, the industrial site must be inspected, at a minimum, once per month until the site is in compliance.

An industrial site must be prioritized as high priority if the site meets any of the following criteria:

- a. The site is subject to Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (“SARA”);
- b. The site requires coverage under the General Industrial Permit or other NPDES storm water permit;
- c. The site has a history of unauthorized non-storm water discharges;
- d. The site is tributary to, and within 500-feet of, an area defined by the Ocean Plan as an Area of Special Biological Significance (“ASBS”).

Co-permittees must consider additional site- specific risk factors that could cause an industrial site to be categorized into a higher priority. These risk factors include, but are not limited to:

- a. quantity of materials or wastes used or stored outside;
- b. the potential for pollutants to be mobilized by storm water;
- c. facility size;
- d. proximity to a receiving water;
- e. the presence of an infiltration LID BMP that accepts “storm water associated with industrial activity”⁸;

⁸ See the Industrial General Permit for a detailed definition of “storm water associated with industrial activity”.
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- f. the sensitivity of the receiving water to potential pollutants from the site (e.g. water bodies listed on the 303(d) List); AND
- g. any other relevant factors.
- h. An inspection of an industrial site that is covered by the General Industrial Permit or other NPDES storm water permit and performed by Regional Board staff may be substituted for any one of the above-required inspections for the same site.
- i. Where a Co-permittee determines that a site is out of compliance with requirements, the industrial site must be inspected, at a minimum, once per month until the site is in compliance.

3.Option 4 – Alternative approach for industrial site inspections.

Any Co-permittee may propose an alternative priority category distribution of their industrial sites and implement the related inspection schedule within their jurisdiction subject to the written approval of the Executive Officer.

- a. The approved alternative distribution and schedule must be implemented in lieu of the distribution and inspection schedule prescribed in this Section subject to any conditions of approval established by the Executive Officer.
 - b. The Executive Officer may rescind that approval for cause with written notification to the Co-permittee(s).
4. Co-permittees must conduct inspections of industrial sites according to a checklist. The checklist must document the following items as they apply, at a minimum, that:
- a. During the initial inspection, the inspector verified that the site has been covered by the General Industrial Permit, if applicable;
 - b. The inspector identified, through visual observation, any non-storm water discharges and potential pollutant sources;
 - c. The inspector assessed the effectiveness of BMPs implemented at the site;
 - d. The inspector documents evidence of non-compliance or threatened non-compliance with requirements related to the control of discharges of pollutants to the Co-permittee's MS4s.
5. Industrial site inspections must be recorded in an electronic-format database in a manner that is adequate to determine compliance with the requirements of this Order. Inspection records for a facility operator must be maintained for a minimum of five (5) years while in business and three (3) years following termination of business at the site.
6. Co-permittees must address instances of non-compliance with a series of effective, progressive actions to ultimately compel compliance.
7. Industrial site inspectors must be trained according to Provision XVI of this Order; inspectors must undergo training once per year.
8. The Executive Officer must be notified of any known, suspected, or

threatened violation of applicable waste discharge requirements (i.e. State-wide General Industrial or Construction Permits, etc.), discovered during inspections of industrial sites according to Provision XVII.C. of this Order. Such violations include, but are not limited to:

- a. Failure to obtain coverage under the applicable waste discharge requirements.
 - b. Unauthorized discharges.
9. Except as provided for in Provision XVII of this Order, Co-permittees must investigate complaints regarding industrial sites, received by internal staff, external public agency staff, or the public, within three (3) business days of the complaint being brought to their attention.

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X. MUNICIPAL INSPECTIONS OF COMMERCIAL SITES

A. Inventory: Each Co-permittee must maintain an inventory of commercial sites listed in Subsection X.A.3 below within its jurisdiction.

1. The inventory of commercial sites must be updated annually or more frequently as needed once every three months, at a minimum.
2. Each Co-permittees' inventory of commercial sites must be maintained in an electronic-format database. The database records must include information on the following attributes:
 - a. site/business ownership;
 - b. site area;
 - c. any related approved Water Quality Management Plans and associated structural treatment control BMPs; AND
 - d. location (latitude/longitude in decimal-degrees or NAD83/WGS84 format).
3. Commercial sites include, but are not limited to those engaged in the following:
 - a. Aircraft maintenance, fueling, or cleaning;
 - b. Animal care facilities such as petting zoos and boarding and training facilities;
 - c. Automobile and other motor vehicle body repair or painting;
 - d. Automobile impound and storage facilities;
 - e. Automobile mechanical repair, maintenance, fueling, or cleaning;
 - f. Botanical or zoological gardens;
 - g. Building material retail and storage facilities;
 - h. Cemeteries;
 - i. Eating or drinking establishments, including food markets and restaurants;
 - j. Golf courses, parks, and other recreational areas or facilities;
 - k. Landscape and hardscape installation;
 - l. Machinery and equipment repair, maintenance, fueling, or cleaning;
 - m. Marina operations;
 - n. Nurseries and greenhouses;
 - o. Painting and coating;
 - p. Pest control service facilities;
 - q. Pool, lake and fountain cleaning;
 - r. Portable sanitary service facilities;
 - s. Transportation services for passengers, parcels or freight;
 - t. Watercraft maintenance, fueling, or cleaning;
 - u. Any commercial sites that is tributary to, and within 500-feet of, an area defined by the Ocean Plan as an Area of Special Biological Significance; AND
 - v. Other commercial sites that the Co-permittee determines may be a significant contributor of pollutants to the MS4.

B. Prioritizations and Inspections: There are four options for the prioritizations and inspections of the commercial sites:

- Option 1 – A targeted approach with inspection frequencies based on high priority pollutants of concern and past performance;
- Option 2 - a synoptic approach with no fluctuation in the inspection frequency from year to year;
- o Option 3 - A prioritized approach with inspection frequencies based on a prioritization scheme; or
- o Option 4 – Alternative approach, which would be approved by the EO.

Each option is outlined below.

No matter which option is utilized, eEach Co-permittee must inspect commercial sites in their inventory. Inspections must occur according to written processes and procedures, and in a manner to enforce compliance with ordinance(s), plans, permits, WQMPs, or other requirements related to the control of discharges of pollutants to their MS4s. The requirements listed in Sections B.6-B.11 apply to all options.

The options listed below may be used by the Co-permittees for the facilities listed within their commercial inventory, with the exception of the food facilities, which is addressed within Section X.X below.

1. Option 1 – Targeted approach for commercial site inspections.
 - a. The Permittees shall develop a prioritization process for the commercial facilities that is based on the watershed pollutants of concern and the past performance of that facility. The Permittees will identify the high, medium, and low priority facilities based on this approach.
 - b. At a minimum, 20% of the high and medium priority facilities would be inspected each year.

The Permittees will conduct one of the following types of inspections:

 - i. On-site individual inspections;
 - ii. On-site property-based inspections; or
 - iii. Drive by inspections.

Where a business does not receive a formal inspection, outreach should be provided periodically.
 - c. The commercial inspection program under this option would be structured as illustrated in the Orange County ROWD Table 3.6.2.
 - d. Where a Co-permittee determines that BMPs or their maintenance is inadequate or out of compliance, the commercial site must be re- inspected monthly until BMPs and their maintenance is adequate and in compliance.
 - ee. If Regional Board staff inspects a commercial site, the Co-permittee may substitute Regional Board staff's inspection for an inspection required under this Order for the same site.

2. Option 2 – Synoptic approach for commercial site inspections.

- a. The Permittees shall annually inspect 20% of the commercial facility inventory, with 100% of the inventory inspected over the permit term.
- b. Where a Co-permittee determines that BMPs or their maintenance is inadequate or out of compliance, the commercial site must be re-inspected monthly until BMPs and their maintenance is adequate and in compliance.
- c. If Regional Board staff inspects a commercial site, the Co-permittee may substitute Regional Board staff's inspection for an inspection required under this Order for the same site.

2. Option 3 – Prioritized approach for commercial site inspections.

1. Co-permittees must prioritize all commercial sites (except for eating or drinking establishments, see Subsection X.C. below) in their inventory as either “high-priority”, “medium-priority” or “low-priority”.
- 4-2. Co-permittees must exercise their discretion and consider site-specific factors that could cause a commercial site to be categorized into a higher priority. These factors include, but are not limited to, soil erosion potential, site slope, proximity to a receiving water, and the sensitivity of the receiving water to potential pollutants from the site.
- 2-3. Each Co-permittee must categorize a minimum of 5% of their inventoried commercial sites as “high-priority”; a minimum of 15% of their inventoried commercial sites as “medium-priority”; and the remainder as “low-priority”.
- 3-4. Prioritized commercial sites must be inspected according to the following schedule:
 - a. High-priority sites must be inspected once per year in their entirety.
 - b. Medium-priority sites must be inspected once every two years.
 - c. Low-priority sites must be inspected once every five (5) years.
 - d. Where a Co-permittee determines that BMPs or their maintenance is inadequate or out of compliance, the commercial site must be re-inspected monthly until BMPs and their maintenance is adequate and in compliance.
 - e. If Regional Board staff inspects a commercial site, the Co-permittee may substitute Regional Board staff's inspection for an inspection required under this Order for the same site.

3. Option 4 – Alternative approach for commercial site inspections.

Any Co-permittee may propose an alternative priority category distribution of their commercial sites and implement the related inspection schedule within their jurisdiction subject to the written approval of the Executive Officer.

- ~~a-c.~~ The approved alternative distribution and schedule must be implemented in lieu of the distribution

and inspection schedule prescribed in this Section subject to any conditions of approval established by the Executive Officer.

d. The Executive Officer may rescind that approval for cause with written notification to the Co-permittee(s).

- ~~4. Where a Co-permittee determines that BMPs or their maintenance is inadequate or out of compliance, the commercial site must be re-inspected within two weeks until BMPs and their maintenance is adequate or in compliance.~~
- ~~5. If Regional Board staff inspects a commercial site, the Co-permittee may substitute Regional Board staff's inspection for an inspection required under this Order for the same site.~~
- ~~5. Co-permittees must exercise their discretion and consider site-specific factors that could cause a commercial site to be categorized into a higher priority. Those factors include, but are not limited to, soil erosion potential, site slope, proximity to a receiving water, and the sensitivity of the receiving water to potential pollutants from the site.~~
6. Co-permittees must conduct inspections of commercial sites according to a checklist. The Co-permittees must use the checklist to document, at a minimum, that the following items as they apply:
 - a. The inspector identified, through visual observation, any non-storm water discharges, evidence of non-storm water discharges, and potential pollutant sources;
 - b. The inspector assessed the effectiveness of BMPs implemented at the site;
 - c. The inspector documented evidence of non-compliance or threatened non-compliance;
 - d. If the inspector identifies non-compliance or a threat of non-compliance with relevant requirements, or determines that BMPs are ineffective; the inspector notified the site operator and provided the applicable BMP Fact Sheet(s) and any other relevant published educational materials.
7. Commercial site inspections must be recorded in an electronic-format database in a manner that is adequate to determine compliance with the requirements of this Order. Inspection records for a site operator must be maintained for a minimum of five (5) years while in business and three (3) years following the termination of business at the site.
8. Co-permittees must address non-compliance with a series of effective, progressive actions to ultimately compel compliance.
9. Commercial site inspectors must be trained according to Provision XVI of this Order; inspectors must undergo training once per year.
10. The Executive Officer must be notified of any known, suspected, or threatened violation of applicable waste discharge requirements (i.e. State-wide Construction Permit, etc.), discovered during inspections of commercial sites according to Provision XVII of this Order.

11. Except as provided for in Provision XVII of this Order, Co-permittees must investigate complaints regarding commercial sites, received by internal departments or divisions, external agencies, or the public, within three (3) business days of the complaint being brought to their attention.
- B. The Co-permittees must inspect eating or drinking establishments annually or cause such inspections to occur on their behalf by another party. These third-party inspections are anticipated to occur as part of the Orange County Health Care Agency ("HCA") restaurant inspection program.
1. The inspections must occur, in part, to enforce the local Co-permittee's 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.
 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.
- C. **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.

XI. RESIDENTIAL PROGRAM (INCORPORATED INTO PUBLIC EDUCATION)

XII. NEW DEVELOPMENT (INCLUDING SIGNIFICANT REDEVELOPMENT)

A. Planning Requirements

1. Each Co-permittee must adopt policies and procedures that are effective at integrating source control, site design and structural treatment control BMPs as early in the land-use planning and development process as practicable.
2. The Executive Officer or his designee, must be given the appropriate notices where a Co-permittee initiates an amendment or update of their General Plan which may directly, indirectly, or cumulatively impact beneficial uses, consistent with the requirements of Government Code Section 65350 *et seq.* This requirement does not diminish any other obligations of the Co-permittees' to provide notice to the Regional Board as a Responsible Agency pursuant to CEQA.
3. Within 12-months of the effective date of this Order, the Principal

Permittee must review, update and submit to the Executive Officer any studies performed to examine feasible opportunities to retrofit existing storm water conveyance systems, parks, and other recreational areas with regional or sub-regional structural treatment control BMPs. The update shall expand the scope of the examination to include areas owned or controlled by the Co-permittees. If necessary, work necessary to complete only the expanded scope may be phased, but all phases must be completed no later than 36-months from the effective date of this Order.

4. Within 12 months of the effective date of this Order, the Principal Permittee must, in coordination with the groundwater management agencies, develop a water quality monitoring project to assess the potential impacts of storm water infiltration on groundwater quality. The project shall consider other similar studies that have been conducted to ensure that this project will complement those studies and add new data and/or information. The monitoring project may be conducted by: (1) analyzing the quality of the runoff prior to infiltration; (2) by monitoring the quality of the infiltrate through the vadose zone; and/or (3) by monitoring groundwater quality upstream and downstream of the infiltration systems. The project shall be implemented over the permit term and reported on within the Annual Progress Report.

B. Classifying and Processing Priority and Non-priority Projects

1. The requirements of Section XII.B., and subsequent sub-sections of Section XII., apply to initial project applications received by the Co-Permittees beginning ~~12 months 90-days~~ after the effective date of this Order ~~(50-days following adoption)~~ and thereafter. For projects initiated by the Co-permittees, the requirements apply to projects ~~and project phases~~ that are ~~deemed complete for processing approved~~ 12 months 90-days after the effective date of this Order and thereafter. In the interim, the relevant requirements of Order No. R8-2009-0030 shall apply.
2. Each Co-permittee must classify development and redevelopment projects over which they have approval authority as "priority projects" (see Subsection XII.B.5. below) or "non-priority projects". Non-priority projects may be further subdivided by the Co-permittees into those requiring Non-priority Project Plans and those that do not, as described in Subsection XII.M.
3. Each Co-permittee must employ a standardized form, checklist, or similar mechanism to document the basis for classifying a project as a priority project ~~or a non-priority project~~.
 - a. Each Co-permittee is responsible for ensuring the accuracy of information relied on in support of the Co-permittee's classification.
 - b. ~~The Co-permittees must maintain records of the basis for classification for a minimum of five years following the completion of the project.~~
4. Co-permittees must consider the whole of the project in classifying a project; the Co-permittees must not piecemeal a project.

5. Each Co-permittee must regard projects that fit any of the following categories of projects as priority projects; all other projects may be regarded as non-priority projects:
- a. Significant redevelopment projects that include the addition or replacement of 5,000 square feet or more of impervious surfaces on a developed site.
 - i. Redevelopment projects do not include those areas where impervious surfaces are replaced as part of routine maintenance activities, or as part of activities that are conducted to maintain the original line and grade, hydraulic capacity, or original purpose of a facility.
 - ii. Redevelopment projects do not include those areas where impervious surfaces are replaced as part of the replacement, upgrade, or installation of dry utilities (e.g. gas, electric, and telecommunications), sanitary sewer, petroleum pipelines, or water distribution lines in existing rights of way.
 - iii. Where a redevelopment project results in the addition or replacement of 50% or less of the impervious surfaces of an existing developed site, and the existing development was not subjected to a properly-implemented and properly-approved WQMP, the numeric sizing requirements for structural treatment control BMPs apply only to runoff from the impervious areas added or replaced and not from the entire developed site.
 - iv. Where a redevelopment project results in the addition or replacement of more than 50% of the impervious surfaces of an existing developed site, the numeric sizing requirements must be applied to runoff from the entire development.
 - b. New developments that create a total of 10,000 square feet or more of impervious surfaces, including commercial, industrial, and mixed-use developments; public and private capital improvement projects; and subdivisions for single and multi-family dwelling units. This category includes public or private land development projects subject to the planning and building authorities of the Co-permittees.
 - c. New automotive repair shops that engage in activities described by Standard Industrial Classification ("SIC") codes 5013, 5014, 5541, 7532 through 7534, and 7536 through 7539.
 - d. Restaurants where the area of land development is 5,000 square feet or more.
 - e. Hillside developments affecting 5,000 square feet or more, in areas with known erosive soil conditions or where the natural slope is 25% or more.
 - f. Development that includes the construction of 2,500 square feet or more of impervious surface that is located within 200 feet of, or which discharges the site's runoff into, an environmentally sensitive area where the discharge is not commingled with discharges from other sites.

the final project WQMP and non-priority project plan is internally consistent and free of material contradictions.

14. As part of the project approval process, each Co-permittee must apply standard conditions of approval, or some other effective measure(s), that requires the proper operation and maintenance of all source control, site design, and structural treatment control BMPs by the project applicant, their successors and assigns over the life of the project.
15. Each Co-permittee must have an effective inspection program to identify and correct missing, damaged, or deficient source control, site design, and structural treatment control BMPs during the construction or development of priority and non-priority projects.
16. In addition to using published and generally-accepted engineering design criteria (see Subsection D below), each Co-permittee must develop, publish, and apply guidelines developed for the purpose of providing that site design and structural treatment controls to be readily inspected and maintainable and generally of a quality that is satisfactory to the Co-permittee. [For verifications performed through a means other than direct Co-permittee inspection, adequate documentation must be required by the Co-permittee to provide assurance that the required maintenance of structural BMPs is provided.](#)
17. Co-permittees are prohibited from permitting final occupancy or otherwise effectively issuing final approval of a priority or non-priority project site [requiring a project WQMP or Non-Priority Project Plan respectively](#) until all source control, site design, and, where applicable, structural treatment control BMPs are constructed, serviceable, and satisfactory to the Co-permittee or otherwise certified as such by a licensed professional engineer on behalf of the project applicant.
 - a. Serviceable facilities must operate as intended; where the Co-Permittee is unable to conclusively determine that a facility is serviceable, the Co-permittee must require that the project applicant conduct a satisfactory field demonstration.
 - b. Where deficiencies exist, the Co-permittee may permit final occupancy or issue final approval only if written enforcement action is taken and a time schedule to bring the site into compliance with its WQMP or non-priority project plan has been approved by the Co-permittee.
 - c. Co-permittees must require that certifications by the licensed professional engineer be affixed with said engineer's stamp and maintained as part of the WQMP or non-priority project plan.
18. Each Co-permittee must have effective standard processes that provide the following:
 - a. Approved final project WQMPs and non-priority project plans are retained using a system that allows for their ready retrieval for the life of the project.
 - b. The Co-permittee is able to validate the authenticity of approved final project WQMPs and non-priority project plans.
 - c. Approved final WQMPs and non-priority project plans are protected

by the Co-permittee's standard record protection practices in the event of fire, information system failure or attack, or other loss or damage.

C. General Requirements for Priority Projects

1. The Co-permittees must require priority projects to use source control, site design, and structural treatment control BMPs to remove pollutants in urban runoff¹⁰. These BMPs and other information necessary to demonstrate compliance with this Order must be documented in a project WQMP.
2. Project WQMPs must be prepared in substantial conformance with uniform written technical guidance¹¹. The technical guidance must implement the requirements of this Order for the benefit of persons responsible for preparing, reviewing and approving, enforcing, and implementing WQMPs.
3. Project WQMPd must be prepared by or under the supervision of a registered civil engineer or licensed landscape architect (See Provision XII.D.8. below).
4. Final project WQMPs must be approved by or under the supervision of a registered civil engineer acting on behalf, and with the expressed permission, of the Co-permittee.
5. Each Co-permittee must employ effective, uniform mechanisms to provide efficiency and consistency in their WQMP-approval process. The mechanisms must be subject to a bi-annual review by the Co-Permittees for the purpose of promoting the mechanisms' continual improvement. Such mechanisms may include the following:
 - a. Use of written standard instructions, processes, procedures, and methods.
 - b. Use of standardized paper forms, checklists, and worksheets.
 - c. Use of model language for project WQMPs or categories of project WQMPs.
 - d. Use of standardized models, electronic spreadsheets, web-based tools, and other software.
 - e. Prepared maps, tables and other sources of information necessary for preparers and reviewers to evaluate the feasibility of structural treatment control BMPs.
6. The Co-permittees must provide and promote a mechanism for stakeholder input in the continual improvement process for the preparation, review, enforcement, and implementation of WQMPs.
7. The Co-permittees must require project proponents to ~~demonstrate~~ state in each approved project WQMP that there is a source of funding available and a party responsible for the long-term performance, operation, and maintenance of source control, site

¹⁰ See Glossary for the meaning of "structural treatment control BMP".

¹¹ This guidance is anticipated to consist of the 2011 Model Water Quality Management Plan and its accompanying Technical Guidance Document as amended or revised by the Co-permittees to satisfy the requirements of this Order. Attach B.1 - Redline of MS4 Permit.docx

- design, and on-site or off-site structural treatment control BMPs over the life of the project.
8. The Co-permittees must provide that approved WQMPs are maintained in public records in a manner that allows for their discovery by interested parties and facilitates the transfer of responsibility in the event of the sale, lease, or other transfer of ownership or control of the affected site (e.g. a lease).
 9. The Co-permittees must provide that any covenants, conditions, and restrictions, easements or other similar mechanisms necessary for the implementation of an approved WQMP are properly maintained in public records with the County and/or the relevant city.
 10. The Co-permittees must maintain an electronic database adequate to identify sites affected by an approved WQMP.
 - a. The database must be established within 6-months of the effective date of this Order. The database must include records identifying all structural treatment control BMPs installed after May 22, 2009 and their following attributes:
 - i. Type of structural treatment control. If a 'type' does not comply with Provision XII.C.5., the facility must be identified as "undetermined".
 - ~~ii. For infiltration LID BMPs: depth of invert and screen interval, if applicable.~~
 - ~~iii. Standards applied to the design of the facility.~~
 - ~~iv-ii.~~ Location by watershed and by a scale sufficient for location in the field.
 - ~~v-iii.~~ Date of construction or date first placed in service.
 - ~~vi-iv.~~ Party responsible for maintenance and their contact information, including emergency contact information.
 - ~~vii. Source of funding for operation and maintenance.~~
 - ~~viii. Actual or alleged performance, maintenance, or nuisance problems identified during any site inspections by the Co-Permittees or brought to their attention.~~
 - b. Information regarding WQMPs that were approved prior to May 22, 2009 must populate the database on an opportunistic basis.
 - c. Sites that are part of the Co-permittees' industrial and commercial inspection program inventories and which are subject to any approved WQMPs must have their information populated in the database no later than 60 months from the effective date of this Order.
 11. The Co-permittees must refer nuisance problems associated with structural treatment control BMPs to the Orange County Vector Control District within 5 business days of the problem becoming known. The Co-Permittees must cooperate in good faith with the Orange County Vector Control District to remedy any confirmed nuisance problems.

D. General Requirements for Structural Treatment Control BMPs

1. Structural treatment control BMPs must be sized to infiltrate, filter, or remove pollutants from the design capture volume or design capture flow from their respective tributary project areas as required by this Subsection (Subsection XII.D.). This requirement can be met through BMPs located either on-site, or off-site as described in Subsection XII.L.
2. The Co-permittees must have effective processes and policies in their written technical guidance that provide that the selection of structural treatment control BMPs conforms to the requirements of Subsections XII.E. through M. of this Order (See also Provision XII.C.2.).
3. A singular or set of structural treatment control BMPs that are volume-based must be sized to infiltrate, filter, or remove pollutants from any of the following design capture volumes from their tributary project area:
 - a. The volume of runoff produced by a 24-hour, 85th percentile storm event. The volume must be calculated using the County of Orange's 85th Percentile Precipitation Isopluvial map.
 - b. The volume of annual runoff produced by the 85th percentile, 24-hour rainfall event, determined as the maximized capture storm water volume for the area, from the formula recommended in Urban Runoff Quality Management, WEF Manual of Practice No. 23/American Society of Civil Engineers Manual of Practice No. 87 (1998).
 - b. 80% or more of the annual runoff volume, based on published and generally accepted methods (e.g. California Stormwater Best Management Practices Handbook – Industrial/Commercial).
 - c. The volume of runoff, as determined from the local historical rainfall record, that achieves approximately the same reduction in pollutant loads and flows as would be achieved by treatment of the volume of runoff produced by an 85th percentile, 24-hour rain event.
4. A singular or set of structural treatment control BMPs that are flow-based must be sized to infiltrate, filter, or remove pollutants from any of the following design flows from their tributary project area:
 - a. The maximum flow rate of runoff produced from a rainfall intensity of 0.2 inch of rainfall per hour, for each hour of a storm event.
 - b. The maximum flow rate of runoff produced by the 85th percentile hourly rainfall intensity, as determined from the local historical rainfall record, multiplied by a factor of two.
 - c. The maximum flow rate of runoff, as determined from the local historical rainfall record, which achieves approximately the same reduction in pollutant loads and flows as would be achieved by treatment of the flow produced by the 85th percentile hourly rainfall intensity multiplied by a factor of two.
5. Structural treatment control BMPs intended to retain the design capture volume must be designed to infiltrate, evaporate, evapotranspire, or use

the volume over a period not to exceed 48-hours; this drawdown period may be extended or shortened provided that the combination of design capture volume and drawdown time achieve retention of 80% or more of the average annual storm water runoff. Any remaining volume must be passed on to another structural treatment control BMP selected according to the requirements of this Order.

6. The design capture volume or flow may be treated by routing the runoff through multiple structural treatment control BMPs organized in series or parallel. Co-permittees must require that the design capture volume or flow be calculated for each ~~project~~ area ~~tributary~~ to a structural treatment control or group of structural treatment control BMPs.
7. ~~Co-permittees must require practical and durable mechanisms designed to indicate the need for maintenance of structural treatment control BMPs for the benefit of the party responsible for long-term maintenance. The mechanism(s) must be readily identifiable and located on, within, or in close proximity to structural treatment control BMPs; such mechanisms must be documented in the related approved project WQMP.~~
8. Structural treatment control BMPs must be sized and designed by, or under the direction of, a registered civil engineer.
9. Structural treatment control BMPs must incorporate design features to minimize the entrainment and bypass of captured pollutants in the course of routine maintenance, normal operation, or overflow.
10. Where a structural treatment control BMP satisfies ~~all the~~ requirements of this Order ~~except that it but~~ is undersized relative to the volume or flow that it accepts from its ~~tributary~~ ~~project~~ area, Co-permittees must require that the WQMP disclose any unconventional operation and maintenance requirements for the facility that are necessary to maintain the performance of the facility or to address unusual hazards .
11. The Co-permittees must conduct inspections of all approved structural treatment control BMPs according to the following schedule:
 - a. All privately-owned or operated structural treatment control BMPs, must be inspected a minimum of once every 5 years¹².
 - b. All Co-permittee-owned or operated structural treatment control BMPs must be inspected annually prior to the wet season (October 1st).
12. Structural treatment control BMPs must not cause a condition of nuisance or pollution, as defined in CWC Section 13050.
13. Structural treatment control BMPs must not cause or contribute to an exceedance of groundwater quality objectives.
14. Structural treatment control BMPs must not be approved in a final WQMP if they are located within waters of the U.S. unless the related discharges have been authorized pursuant to a Clean Water Act Section 401 Water Quality Standards Certification or waste discharge requirements.

¹²Structural treatment controls that are part of sites in the Co-permittees' industrial and commercial inventories are required to be inspected as part of the requirements of Sections IX and X of this Order. This requirement does not supersede the inspection schedules in those Sections.

15. Except as permitted by Subsection E, below, structural treatment control BMPs must:
 - a. Be identified using standard nomenclature; AND
 - b. Must be sized and designed in substantial conformance with standards and methods found in published and generally-accepted engineering design manuals; unnecessary deviations from those standards and methods are prohibited. Where those manuals conflict with the requirements of this Order, this Order shall prevail;
Or
 - c. Have had their expected performance substantiated in field tests using published and recognized protocols.
16. All requirements in this Order for the design of structural treatment control BMPs apply to both on-site or off-site facilities.

~~D. Nonconforming Structural Treatment Control BMPs: Demonstration Facilities~~

- ~~1. The Co-permittees are prohibited from approving or allowing to be placed into service structural treatment control BMPs which do not substantially conform to published and generally-accepted engineering design criteria or whose expected performance has not been substantiated in field tests using published and recognized protocols (nonconforming structural treatment control) unless the following requirements are satisfied:
 - ~~a. The design of the nonconforming structural treatment control BMP is based on sound principles of operation and pollutant removal mechanisms exhibited by similar conforming structural treatment control BMPs.~~
 - ~~b. The tributary area of any single nonconforming structural treatment control BMP is three (3) acres or less.~~
 - ~~c. The Co-permittees approve no more than three (3) such similar nonconforming structural treatment control BMPs in total until and unless the results of a performance monitoring plan substantiates the expected performance of the facility, using published and recognized protocols, such that the facility performs in a similar or better manner as compared to the most similar conforming structural treatment control.~~
 - ~~d. The nonconforming structural treatment control BMP is subject to all other requirements of this Order.~~~~
- ~~2. Co-permittees must report both the application for approval and approval or denial of any nonconforming structural treatment control BMPs within their jurisdiction to the Principal Permittee.~~
- ~~3.1. The Principal Permittee is responsible for coordinating the Co-permittees in complying with the requirements of this Subsection.~~

~~E.D. First Priority Consideration of Retention LID BMPs in WQMPs~~

- ~~1. The Co-permittees must require that low impact development ("LID")~~

controls that employ harvest and use, evaporation/transpiration, infiltration (collectively "retention LID BMPs") , or any combination thereof, of the entire design capture volume be given preference and first consideration in all WQMPs. That consideration must be demonstrated in the approved final WQMP in substantial conformance with uniform written technical guidance (see Provision XII.C.2.).

2. The Co-permittees must require retention LID BMPs for the design capture volume, or the maximum portion thereof, unless such controls are:
 - a. Technically infeasible;
 - b. Economically infeasible; OR
 - c. where environmental and public health hazards cannot be mitigated to an acceptable level.
3. Co-permittees must document the specific basis for their rejection of retention LID BMPs in the approved final WQMP. The rejection of retention LID BMPs must be supported with Substantial Evidence¹³.
4. The Co-permittees must require project applicants to mitigate the environmental and public health hazards of retention LID BMPs to an acceptable level where the absence of such mitigation would, by itself, make the use of retention LID BMPs infeasible. Mitigation is limited to activities that may be reasonably undertaken as part of the development project and are within the authority of the Co-permittees to mandate. Mitigation is not necessary if the costs disproportionately outweigh the pollution control benefits; any such finding must be documented in the final WQMP and be supported with Substantial Evidence.

F.E. Second Priority Consideration of Biotreatment Control BMPs in WQMPs

1. The Co-permittees must require that structural treatment control BMPs that employ biological uptake, transformation, or degradation of pollutants and incidental infiltration and evapotranspiration ("biotreatment control BMPs") be given secondary consideration in the project final WQMP, when, based on Substantial Evidence, any of the following conditions exist:
 - a. Retention LID BMPs have been demonstrated to be technically or economically infeasible;
 - b. The hazards of using retention LID BMPs cannot be mitigated to an acceptable level; OR
 - c. A retention LID BMP is proposed but cannot be sized to treat the tributary project area's entire design capture volume and a complementing biotreatment control BMP can be designed to treat the remainder of the design capture volume or a portion thereof.
- 2.1. The Co-permittees must ensure that the final approved project WQMP demonstrates preferential consideration of biotreatment control BMPs over non-LID BMPs.

¹³ See Glossary.

3.2. When retention LID BMPs are demonstrated to be infeasible according to Section XII.G.1. above, the Co-permittees must require biotreatment control BMPs unless such controls are:

- a. Technically infeasible;
- b. economically infeasible; OR
- c. where the environmental and public health hazards cannot be mitigated to an acceptable level.

4.3. Where biotreatment control BMPs cannot meet the above criteria, the Co-Permittees must document the specific basis for their rejection in the approved final WQMP. The rejection of biotreatment control BMPs must be based on Substantial Evidence.

5.4. The Co-permittees must mitigate the environmental and public health hazards of biotreatment control BMPs to an acceptable level where the absence of such mitigation would, by itself, make the use of biotreatment control BMPs infeasible. Mitigation is not necessary if the costs disproportionately outweigh the pollution control benefits; any such finding must be documented in the final WQMP and be supported with Substantial Evidence.

6.5. Biotreatment control BMPs must be designed to maximize the infiltration of the design capture volume or flow.

7.6. Biotreatment control BMPs must be sized and designed to treat 1.5 times the design capture volume not retained or using an alternative sizing factor acceptable to the Executive Officer.

G.F. Third Priority Consideration of All Other Structural Treatment Control BMPs:
Non-LID BMPs

1. The Co-permittees must maintain and employ a common schedule which rates the expected performance of specific structural treatment control BMPs, or categories of structural treatment control BMPs.
 - a. Any category of structural treatment control BMPs must include only those controls that employ the same principal of operation; use similar treatment mechanisms, and which can reasonably be expected to exhibit generally similar performance in the removal of pollutants.
 - b. The performance of structural treatment control BMPs must be rated based on the reasonably-expected level of removal of categories of pollutants. The performance ratings must be classified as "high", "medium", and "low" level of removal. These ratings must be distinguished by fixed numeric thresholds.
 - c. The Co-permittees' assignment of the expected level of performance for the structural treatment control BMPs must be based on the best available objective evidence (e.g. International BMP Database). The evidence must include field performance test data specific to the BMP and the data must have been collected according to published and recognized protocols.

- d. The categorizations of structural treatment control BMPs and their performance ratings must be reviewed and updated within 12-months of the effective date of this Order so that they are supported by the best available information.
2. Structural treatment control BMPs, which are not LID BMPs (“non-LID BMPs”) may be necessary to complement LID BMPs. Non-LID BMPs must not be accepted in an approved project WQMP in lieu of LID BMPs unless LID BMPs cannot be employed pursuant to Sections XII.F. and XII.G. above.
3. The Co-permittees must maintain and employ a common schedule of project types and a corresponding common list of pollutants which can reasonably be expected to be found in urban runoff from those project types.
4. If non-LID BMPs are the only type of structural treatment control BMP employed to treat the design capture volume from a ~~tributary project~~ area of a project, the Co-Permittees must only accept the use of non-LID BMPs that provide either a “medium” or “high” level of treatment for the expected pollutants.
 - a. The Co-permittees must use the performance rating schedule in Provision XII.H.1. above and the project category schedule in Provision XII.H.3. above to identify acceptable non-LID BMPs for a project.
 - b. Approved WQMPs must reflect the use of this prescribed methodology.
5. If a project does not propose to use any LID BMPs on-site and a regional or sub-regional off-site LID BMP, that meets the requirements in Section XII.K. below, is planned to serve the project, the Co-permittees may require the use of the regional or sub-regional facility. The Co-permittees must require any BMPs that are needed to satisfy pre-treatment requirements for that facility where applicable.

~~H.G.~~ Fourth Priority Consideration of Offsets through Retrofit of Existing Development

1. Co-permittees must require that project proponents give fourth priority consideration to offsetting all or any portion of the untreated design capture volume with treatment of the same or greater design capture volume using structural treatment controls (according to Subsections XII.F. XII.G., and XII.H. above) through retrofits of existing development at an off-site location.
2. The retrofit site must be located within the same watershed of the nearest receiving waters of the U.S.
- ~~3. If the entire design capture volume cannot be treated on-site, the project must be eligible for and receive a Waiver (see Subsection XII.L).~~
- 4.3. The off-site location must not have a pending or submitted

development application which would produce similar structural treatment controls on its own.

~~5.4.~~ The structural treatment control(s) selection process at the off-site location must be subject to the requirements of Section XII as applicable.

~~6.5.~~ The operator of the structural treatment control(s) at the retrofit site must be subject to requirements in the project WQMP or another equally-effective mechanism that provides for its proper operation and maintenance.

~~7.6.~~ The retro-fit option applies only to the subject project and not to future redevelopment of the same site; future redevelopment projects must consider incorporation of structural treatment controls.

L. Waiver of Structural Treatment Control BMPs and Credit Programs

1. Co-permittees are authorized to waive their requirement to provide structural treatment control BMPs (see Provision XII.C.1 above) to remove pollutants and subsequently approve a WQMP if all of the following conditions are met:
 - a. Employing structural treatment control BMPs has been demonstrated in the project WQMP to be technically and economically infeasible; or there is no structural treatment control BMP available for which the environmental and public health impacts can be mitigated to an acceptable level;
 - b. No feasible opportunities are available to retrofit existing development in the tributary project area of the same receiving water to treat the untreated design capture volume;
 - c. Source and site design BMPs have been incorporated to maximize the infiltration of urban runoff;
 - d. If a schedule has been designed to mitigate the water quality impacts of the untreated design capture volume and has been approved by the Executive Officer, the Co-permittee has collected the related impact fees or services from the project proponent;
 - e. The Executive Officer has been provided written notice of the Co-Permittee's intent to issue the waiver, along with adequate supporting documentation, at least 30-days prior to issuance by the Co-permittee; AND
 - f. The Executive Officer approves the proposed waiver or 30-days has elapsed without action by the Executive Officer on the proposed waiver, whereby it is "deemed approved".
2. Co-permittees are authorized to allow transactions of design capture volume or flow "credits" between projects within the same watershed of the nearest receiving water of the U.S. The "credit" shall be generated when a LID BMP has been designed to treat the design capture volume or flow from an area that is outside of the project boundaries. Credits must be generated and traded subject to the following additional limitations:
 - a. Credits may not be generated by oversizing the LID BMP relative to its tributary project area.

- b. The receiving project must be eligible for a waiver as described above.
- c. The credit may only be used for the receiving project; it may not be re-used for future projects in the same site as the original project receiving the credit. The selection of structural treatment controls for future projects must be based on the merits of the project alone and not on credits allowed for past projects in the same space.
- d. The Co-permittees where the affected projects are located must have and employ an effective system of accounting and tracking for the credit transfers.

H. Specific Requirements for Infiltration LID BMPs

1. The requirements of this Section apply to retention LID BMPs that are intended to infiltrate the entire design capture volume or a portion thereof (infiltration LID BMPs). The requirements of this Section are not intended to apply to bio-treatment control or other structural treatment control BMPs that incidentally infiltrate a portion of the design capture volume or flow.
2. Co-permittees must designate, in conjunction with provide the local groundwater management agency with an opportunity for consultation on the potential impacts of any proposed infiltration LID BMPs prior to the approval of the final WQMP. If the agency requests consultation, the Co-permittee must provide the agency with adequate information to review areas where infiltration BMPs are not allowed due to the potential impacts of the BMP on groundwater quality.
3. The vertical separation from the bottom of the infiltration LID BMPs to the seasonal high groundwater must be a distance of 10-feet or more unless the facility is known to pose a low risk of contaminating groundwater; if the facility is low risk or an embedded pretreatment layer has been provided, the vertical separation may be reduced to 5 feet according to criteria established in the Co-permittees' written technical guidance. Where the groundwater does not support, or does not have the potential to support, beneficial uses, the Co-permittee may approve infiltration LID BMPs with less vertical separation, provided that groundwater quality is maintained and that other potential hazards presented by such facilities can be mitigated to an acceptable level.
4. Infiltration LID BMPs must be located a minimum horizontal distance of 100-feet from any water supply wells.
5. Where an infiltration LID BMP overlies known groundwater or soil contamination, infiltration facilities must not be used for storm water runoff associated with industrial activity, storm water runoff from highways subject to motorized vehicular traffic of 25,000 average annual daily traffic, automotive repair shops, car washes, motorized fleet vehicle storage, nurseries, or other land uses or activities that pose a high-threat to ground water quality.
6. Infiltration LID BMPs must incorporate one or more practical mechanisms to allow verification of the loss rate of the design capture volume. The

mechanisms must be durable and useful over the life of the project and designed for the benefit of the party responsible for the operation of the facility.

7. Infiltration LID BMPs which constitute Class V Injection Wells must comply with all applicable County and municipal well construction or destruction ordinances and standards, and USEPA's Class V Rule, as amended or revised¹⁴.
8. Structural treatment control BMPs must be provided to pre-treat and remove pollutants that could unreasonably diminish the performance of the infiltration LID BMP for the duration of the project unless pre-treatment mechanisms are incorporated into the facility design itself.
9. The Co-permittees must develop, publish, and employ a common factor(s) of safety in their written technical guidance that must be used to size infiltration facilities. The factor(s) of safety must be based on those recommended in published and generally-accepted engineering design manuals.
10. The Co-permittees must develop, publish, and employ a uniform protocol in their written technical guidance for estimating the loss or draw-down rate used for designing LID BMPs that infiltrate.
 - a. The protocol must be consistent with those used in published and generally-accepted engineering design manuals.
 - b. The protocol must employ the best available information for estimating the loss rate.
 - c. The Co-permittees must require that the following categories of projects use relevant site-specific methods to estimate soil infiltration rates:
 - i. Residential projects affecting more than 10-acres or greater than 30 dwelling units.
 - ii. Commercial or institutional projects affecting more than 5-acres or greater than 50,000 square feet of floor space.
 - iii. Industrial projects affecting more than 2-acres or greater than 20,000 square feet of floor space.

J.I. Specific Requirements for Harvest and Use LID BMPs

1. The Co-permittees must not accept insufficient demand for harvested storm water as the sole basis for rejecting harvest and use LID BMPs unless the basis is supported by water demand calculations. Calculated estimates must demonstrate that the expected wet season water demand is insufficient to use the harvested design capture volume within a 48-hour period according to the following:
 - a. The Co-permittees must publish and employ tables of daily average wet-season (October 1st through April 30th) demand rates and objective project characteristics necessary to provide sufficient

¹⁴ USEPA, Office of Water, "Revisions to the Underground Injection Control Regulations for Class V Wells", 64 FR 68545-68573, December 7, 1999 (or as amended or revised)
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demand for harvested storm water. The demand rates must be used for estimating anticipated non-potable uses of harvested storm water.

- i. The rates and thresholds must be based on published and generally accepted rates or methods for calculating average daily demand of harvested storm water for non-potable uses such as toilet and urinal flushing, landscape irrigation, industrial process supply, evaporative cooling, and vehicle washing.
 - ii. The rates and thresholds must account for the off-setting effects of rainfall, reclaimed water, water conservation or the inconsistent nature of demand.
 - iii. Reclaimed water supplies must be based on available supplies, not speculative supplies.
- b. Where demand rates are dependent upon variable site occupancy, average daily occupancy during the wet season must be used.
2. [Indoor use of harvested stormwater shall only be considered as the applicable plumbing code allows.](#)

L. Off-Site Structural Treatment Control BMPs: Regional and Sub-Regional Facilities

1. Co-permittees must require that structural treatment control BMPs be located on the project site except under the following conditions:
 - a. A regional or sub-regional structural treatment control BMP has been planned as part of a WQMP for a Specific Plan, parcel map, master tract map, master plan of drainage, or similar larger plan of development that was approved prior to the effective date of this Order and all of the following requirements will be met:
 - i. The project and the regional or sub-regional structural treatment control BMP are both located within the approved Specific Plan, parcel map, or similar larger plan of development.
 - ii. The WQMP for the larger plan of development has been prepared and approved according to the requirements of this Order, Order No. R8-2009-0030 or Order No. R8-2002-0010, whichever was in force at the time.
 - iii. The WQMP for the project complies with all other requirements of this Order to the extent that those requirements do not conflict with this Subsection (Subsection XII.K.).
 - iv. The regional or sub-regional facility is constructed, serviceable, and satisfactory to the Co-permittee prior to final occupancy or use of the project site(s) in its tributary area.
 - b. A regional or sub-regional retention LID BMP has been planned by the Co-permittees, another public agency, or other legal entity and the following requirements will be met:
 - i. Site design and source control BMPs have been provided in

- ii. the project WQMP.
Any structural treatment control BMPs deemed necessary by the party responsible for the facility's performance ("Operator") to pre-treat and remove pollutants that could unreasonably diminish the performance of the facility or cause or contribute to a condition of nuisance over its service life have been provided in the project WQMP.
- iii. An Operator will maintain ownership or control over the facility over the life of projects located within the facility's tributary area.
- iv. The facility complies with, and/or is subject to, the requirements in Section XII.D. and, if an infiltration facility, Section XII.J. above.
- v. The regional or sub-regional facility is constructed, serviceable, and satisfactory to the Co-permittee prior to final occupancy of the project site(s) in its tributary area.
- vi. The project WQMP is otherwise prepared according to the requirements of this Order.
- c. A regional or sub-regional biotreatment control BMP has been planned by the Co-permittees, another public agency, or other legal entity and the following requirements will be met:
 - i. Retention of the design capture volume has been maximized on the project site using site design and source control BMPs.
 - ii. The requirements in Section XII.L.1.b. (for regional or sub-regional retention LID BMPs above) have been or will be met as appropriate.
- d. There is an infiltration LID BMP located offsite for which the Co-permittees' approval for use would not otherwise cause the Co-permittee to violate any provision of this Order¹⁵. The requirements include, but are not limited to, the requirements to:
 - i. ~~maximize retention of the site's design capture volume on-site;~~
 - ii. demonstrate the capacity of the off-site facility to serve the project;
 - iii. demonstrate adequate funding for the off-site facility's construction, and/or operation and maintenance for the life of the project; AND
 - iv. place the facility in service prior to final occupancy or use of the project site.

¹⁵ In other words, the Co-permittee is faced with the choice of approving a WQMP where either a retention LID control could be located on-site or off-site, or where an eligible biotreatment control could be located on-site or off-site. Except for the facility's location, the approval would not violate the requirements of this Order Attach B.1 - Redline of MS4 Permit.docx

M. General Requirements for Non-Priority Projects

1. Where a non-priority project includes modifications or improvements that are, or affect areas that are exposed to storm water and which may be sources of pollution in urban runoff, Co-permittees must require non-priority projects (see Section XII.B.) to implement source control and site design BMPs to remove pollutants in urban runoff consistent with the maximum extent practicable standard¹⁶.
 - a. ~~Each Co-permittee~~The Lead Permittee must develop policies and procedures to identify non-priority projects that include modifications or improvements that are, or affect areas that are exposed to storm water and which may be sources of pollutants in urban runoff. Such projects will be required to that have the potential to incorporate source control or site design BMPs.
 - b. ~~Each Co-permittee~~The Lead Permittee must report the policies and procedures used to comply with this Subsection in the first Annual Report due not less than 6-months from the date of the adoption of this Order. Updates must be reported in subsequent Annual Reports thereafter.
2. BMPs must be documented in a Non-Priority Project Plan. The Non-Priority Project Plan must include a summary rationale for BMP selection.
4. Source and site design BMPs must generally conform to published and generally-accepted designs or methods.
- 4-5. Non-Priority Project Plans must be developed by a person qualified to complete the plan based on the complexity of the plans. Non-Priority Project Plans must be approved by the applicable Co-permittee.
5. ~~Non-priority project plans must be approved by or under the supervision of a registered civil engineer or licensed landscape architect acting on behalf of, and with the expressed permission of, the applicable Co-permittee.~~
- 6.

N. Hydrologic Conditions of Concern

1. Co-permittees must address the changes in a priority project site's hydrology in the project WQMP according to the requirements of this Section except under any of the following conditions:
 - a. The runoff volume and time of concentration for the two-year frequency, 24-hour storm event are not significantly affected by the project. A significant effect must be deemed to occur only where:
 - i. The calculated runoff volume from the site increases by 5% or more over the pre-project condition and/or

¹⁶ This requirement must not be construed to mean that structural treatment control BMPs are not required for non-priority projects; only that there is no presumption requiring rebuttal that treatment control BMPs are economically or technically feasible.

- ii. The calculated time of concentration for runoff from the site decreases by 5% or more over the pre-project condition.
 - b. All downstream conveyance channels that will receive runoff from the project are engineered and regularly maintained to accommodate the necessary design flow capacity as dictated by the latest version of the Orange County Hydrology Manual, and no sensitive stream habitat areas have the potential to be adversely affected by discrete or cumulative changes in hydrology.
 - c. The project has the demonstrated capacity to infiltrate, harvest and use, evaporate, or evapotranspire the volume of runoff produced by a two-year storm event within a 48-hour period.
 - d. The Executive Officer grants an individual or general variance in writing to the Permittee(s).
 - i. The granting of such variances must be supported by objective and relevant studies.
 - ii. The Co-permittees must comply with any conditions placed on the issuance of the variance by the Executive Officer.
 - iii. The Executive Officer and the requesting Co-permittee(s) must provide the public an opportunity to comment on the proposed variance for a period of not less than 30-days prior to its issuance.
- 2. For those priority projects that do not meet the conditions in Subsection XII.N.1. above, the Co-permittees must apply the following conditions:
 - a. The project WQMP must include a hydrology study that quantifies the pre- and post-project runoff volumes, peak flow rates, and times of concentration for a 2-year, 24-hour storm event.
 - b. Except as provided in Section XII.N.2.c., the project WQMP must provide BMPs that modify runoff volumes and times from the project site for the 2-year, 24-hour storm event such that:
 - a. Post-project runoff volumes for the 2-year, 24-hour storm event do not increase by more than 10% compared to the pre-project runoff volumes for the 2-year, 24-hour storm event; AND
 - b. Post-project times of concentration for the 2-year, 24-hour storm event do not decrease by more than 10% compared to the pre-project times of concentration for the 2-year, 24-hour storm event.
 - c. The provisions of Section XII.N.2.b. above apply unless any of the following have occurred:
 - i. A Clean Water Act Section 401 Water Quality Standards Certification has been issued authorizing discharges of fill associated with channel modifications that would accommodate the project's changes in hydrology while protecting beneficial uses.
 - ii. Site design and/or structural treatment control BMPs proposed for the site to reduce pollutants in urban runoff already effectively modify runoff volumes and times of

- concentration such that they satisfy Provision XII.N.2.b. above.
- iii. The Project WQMP has demonstrated that it is infeasible to satisfy the criteria of Provision XII.N.2.b. above and there are site design, structural treatment control, and/or flow-control BMPs such that the post-project peak runoff flow rates for the 2-year, 24-hour storm event are not increased by more than 10% compared to the pre-project peak runoff flow rates for the 2-year, 24-hour storm event.
2. Co-permittees must prepare a set of watershed maps that identify management areas tributary to drainages that have not been engineered and regularly maintained to accommodate the design flow capacity, as dictated by the latest version of the Orange County Hydrology Manual, and management areas that are tributary to sensitive stream habitat areas have the potential to be adversely affected by discrete or cumulative changes in hydrology (see Provision XII.N.1.b. above).
- a. The Co-permittees must submit the watershed maps in draft form to the Executive Officer for approval no later than 6 months following the effective date of this Order.
- b. The Co-permittees must make changes requested by the Executive Officer within 30-days of receipt of the request. The Executive Officer is authorized to approve the watershed maps conditioned upon completion of the changes.
- c. Upon approval by the Executive Officer, the Co-permittees must consistently use the applicable maps to identify projects that will be subject to the limitations on changes in runoff volumes, peak flow rates, and times of concentration provided in this Section (Section XII.N.).

XIII. PUBLIC EDUCATION AND OUTREACH

- A. The Co-permittees must implement an effective public education program that ~~both~~ raises awareness of pollution-prevention best practices and ~~causes~~ ~~encourages~~ the audience to take action to reduce pollution of urban runoff. The program must include a general audience, consisting of residents of school age and older and commercial and industrial establishments, and a target audience selected from the general audience to address high-priority urban runoff pollution issues identified by the Co-permittees.
- B. ~~The public education program must be described in a written plan.~~ The Co-permittees must:
1. Make a minimum of 10 Million annual impressions on the general audience using educational content in multiple media to raise awareness of pollution in urban runoff;
 2. Identify goals and related measurable objectives that address ~~a minimum of three~~ high-priority urban runoff pollution issues over the term of this

- Order. Issues must be identified for the entire permit area, for each watershed, or for each city. The Permittees shall initiate public education campaigns that address the high-priority urban runoff pollution issues¹⁷;
3. Identify ~~and analyze~~ target behaviors and target audiences for specific behavior-based outreach to address believed to have the greatest influence on the selected high-priority urban runoff pollution issues;
 4. Create specific messages that are appropriate to the target audiences and to ~~identified~~ sub-groups within the general audience, where appropriate;
 5. Develop educational content for media ~~with the most potential to appeal to the audiences as defined by the Co-permittees in a written plan~~;
 6. Determine the methods and processes of distributing the educational content;
 7. Objectively evaluate the effectiveness of the program; AND
 8. Provide opportunities for public input, and demonstrate consideration of that input, in the development of the program outreach campaigns addressing high-priority urban runoff pollution issues identified within written plans.
- C. The Co-permittees must provide a rationale in a written plan to justify the selected high-priority urban runoff issues and related target audiences.
- D. During the term of this Order, the Co-permittees must distribute the educational content, using one or more of the selected methods and procedures determined most appropriate by the Co-permittees. The content must be distributed in a manner that is designed to communicate the program's messages to the general and target audiences annually, beginning with the next full monitoring and reporting period after the effective date of this Order.
- E. The Co-permittees must implement an effective program to measure the achievement of the objectives and requirements in this Section XIII.
1. The program must include an annual assessment of progress towards meeting the goals and objectives of the education program.
 2. The Co-permittees must adapt their educational program in response to any shortcomings found as a result of the annual assessment.
 3. The program must include a statistically valid survey to measure:
 - c. the general audiences' knowledge regarding the sources of urban runoff pollution;
 - d. the general audiences' knowledge of the impacts of the pollutant(s) on the environment; awareness of what the general audience can do to help prevent urban runoff pollution; AND
 - e. specific changes in the general audiences' behavior(s) to prevent urban runoff pollution.
 3. The survey must be completed no later than 60 months from the effective date of this Order.
 4. The survey results must be made available to the public through a press-release, web site, or similar method acceptable to the Executive Officer.

¹⁷ The Permittees are only required to initiate the public education campaigns. The campaigns may extend into another permit term.

XIV. MUNICIPAL FACILITIES/ACTIVITIES

Each Permittee shall continue to implement the Model Maintenance Activities Program developed by the Permittees for fixed facilities, field operations, and drainage facilities to ensure that public agency facilities and activities do not adversely impact water quality.

- A. Each Co-permittee must maintain an inventory of fixed facilities, owned or controlled by the Co-permittee, that have the potential to discharge pollutants in urban runoff.
1. The inventory must include the following:
 - a. Catch basins, storm drain inlets, and open channels;
 - b. Municipal landfills;
 - c. Waste incinerators;
 - d. Solid waste transfer facilities;
 - e. Land application sites;
 - f. Sewage collection and treatment facilities;
 - g. Hazardous waste treatment, disposal, and recovery facilities;
 - h. Corporation, maintenance, and storage yards;
 - i. Airfields;
 - j. Parks, golf courses, and recreation areas;
 - k. Cemeteries;
 - l. Public buildings (police and fire stations and training facilities, libraries, etc.)
 - m. Stadiums and other special event venues;
 - n. Equestrian facilities;
 - o. Animal shelters and kennels;
 - p. Boat yards and marinas;
 - q. Public parking facilities; and
 - r. Areas or facilities that discharge directly to lagoons, the ocean, or environmentally sensitive areas.
 - B. The Principal Permittee may propose a schedule for visual inspection and mechanical or physical cleaning (as needed) of catch basins, storm drain inlets, and open channels (also referred to as "systems") under the Co-Permittees' control. The proposed schedule is subject to the approval of the Executive Officer. If approved, the schedule will serve as an alternative to the schedule prescribed by Subsection XIV.C. below.
 - C. Each Co-permittee must visually inspect a minimum of 80% of catch basins, storm drain inlets, and open channels under their control annually. 100% of the systems must be inspected every two years. Each Co-permittee must prepare a written inspection and maintenance schedule for each the facilities subject to this requirement.
 1. Accumulated pollutants-trash and debris must be physically removed from the systems in a timely manner when found.
 2. Where other agencies' authorization is required to remove pollutants-trash and debris from the systems (i.e. CWA Section 404 permit), the Co-permittee must make a good faith effort to secure the necessary authorizations and remove the accumulated pollutants-trash and debris in

- a timely manner.
3. Co-permittees must exercise their discretion and increase the inspection and cleaning frequency as necessary for those portions of the systems which tend to accumulate trash and debris ~~“unusually large quantities” of pollutants.~~
 - ~~4. Each Co-permittee must establish objective thresholds to define “unusually large quantities” of pollutants in systems that they own or control.~~
 - ~~5.4. Each Co-permittee must have an effective management system approach to identify portions of the systems which tend to accumulate unusually large quantities of pollutant trash and debris.~~
 - ~~6.5. Each Co-permittee must have a program an effective management system in place to detect and eliminate or minimize the seepage of wastewater from sanitary sewers to the storm drain system.~~
- D. Except for catch basins, storm drain inlets, and open channels, each Co-Permittee must categorize fixed facilities that they own or control into “high-priority”, “medium-priority”, and “low-priority” sites.
1. The Co-permittee must inspect each fixed facility according to the following schedule:
 - a. High-priority sites must be inspected once per year.
 - b. Medium-priority sites must be inspected once every two years.
 - c. Low-priority sites must be inspected once every five years.
 2. The following fixed facilities must be categorized as “high-priority” sites:
 - a. Municipal landfills
 - b. Publicly-owned treatment works
 - c. Waste incinerators
 - d. Solid waste transfer facilities
 - e. Land application sites
 - f. Corporation, maintenance, and storage yards
 - g. Hazardous waste treatment, disposal, and recovery facilities
 - h. Land-side areas of airfields
 - i. Facilities that are located adjacent or within an environmentally sensitive area or that discharge directly to an environmentally sensitive area.
 3. Co-permittees must categorize all other fixed facilities according to a uniform objective ranking system developed by the Principal Permittee. The ranking system must be based on the following factors:
 - a. The degree to which potentially polluting activities occur in areas exposed to storm water.
 - b. The quantity of potentially polluting materials used or stored at the facility.
 - c. Whether or not the activities at a site could produce pollutants that cause or contribute to the impairment of a water body listed according to CWA Section 303(d).
 - d. The risk of a release of a pollutant.
 - e. The occurrence of known or suspected non-storm water discharges.
 - f. ~~The size of a facility, the number of employees assigned to the~~

- ~~facility, and the number of visitors.~~
4. Co-permittees must carry out inspections of fixed facilities to: identify and correct observed violations of the municipal code or ordinance related to protecting water quality; identify and correct unnecessary deviations from standard operating procedures (see Section XIV.E. below); internally enforce relevant discharge requirements; and identify and eliminate known or suspected unauthorized non-storm water discharges.
- E. Co-permittees must implement an effective program to prevent the discharge of pollutants from Co-permittees' field activities and fixed facilities.
1. ~~The program must include the imposition of written standard requirements on the person(s) performing field activities on behalf of Co-permittees. The requirements must direct the person(s) to effectively employ BMPs that are specific and relevant to the activity to prevent the discharge of pollutants to storm water.~~
 - a. The program must include written standard operating procedures for Co-Permittees' staff that engage in field activities and activities at fixed facilities that have the potential to discharge pollutants in urban runoff.
 - a. The standard operating procedures must incorporate BMPs to prevent or minimize such discharges of pollutants.
 - ~~b. The standard operating procedures must be subject to an annual review to verify their relevance and effectiveness. Each standard operating procedure must display the date of the last review, the identity of the reviewing personnel, and the due date for the next review.~~
 2. The program must include a training program to provide Co-permittees' staff with an awareness of the responsibilities described in standard operating procedures relevant to their duties (See Section XVI below).
 3. ~~The program must include an inspection program for field activities to: identify and correct observed violations of the municipal code or ordinance related to protecting water quality; identify and correct unnecessary deviations from standard operating procedures; internally enforce compliance with relevant waste discharge requirements; and identify and eliminate or minimize known or suspected non-storm water discharges.~~
- F. Each Co-permittee must implement an effective program: to reduce the use of unwarranted or excessive applications of pesticide and fertilizer at facilities that they own or control; to ensure that pests are controlled using the best available methods while protecting water quality; and to ensure that pesticides are used in accordance with Federal, State, and local laws and regulations¹⁸.
1. Each Co-permittee must develop and implement Integrated Pest Management, Pesticide and Fertilizer Guidelines.
 2. Each Co-permittee must review pesticide applications ~~conduct annual integrated pest management audits for~~ of chemicals known or suspected of impairing water quality to enforce the use Integrated Pest Management Strategies that reduce their potential entry into MS4s.

¹⁸ The term "pesticide" includes herbicides, rodenticides, insecticides, etc., consistent with the common meaning of the term.

3. Each Co-permittee must ~~conduct review~~ annual fertilizer use ~~audits~~ to verify that application rates do not exceed those recommended by University of California Integrated Pest Management Research, or similarly qualified organizations, and to enforce fertilizer application methods that eliminate or minimize fertilizer entry into MS4s.

XV. MUNICIPAL CONSTRUCTION PROJECTS AND ACTIVITIES

- A. This Order authorizes the discharge of storm water runoff from construction projects that are under the ownership or direct responsibility of any of the Co-Permittees and that may result in land disturbance of one acre or more; or less than one acre if the project is part of a larger common plan of development or sale which is one acre or more.
- B. All construction activities must be in compliance with the conditions and provisions of the latest version of the State Board's General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (NPDES Permit No. CAS000002) as amended or revised with the following exceptions:
 1. A Notice of Intent must be submitted in an electronic format acceptable to the Executive Officer.
 2. No additional fees are necessary to authorize discharges associated with construction and land disturbance activities.
 3. The conditions and provisions in this Order pertaining to post-construction BMPs prevail.

XVI. TRAINING PROGRAMS

- A. Each Co-permittee must have an effective training program for their staff, contractors and vendors whose duties or responsibilities directly or indirectly affect the Co-permittee's capacity to satisfy the requirements of this Order (collectively, "personnel").
 1. Those personnel include, but are not limited to, the following:
 - a. Storm water program managers;
 - b. CEQA practitioners;
 - c. Inspectors;
 - d. Maintenance personnel;
 - e. Plan checkers;
 - f. Planners;
 - g. The division heads of all of the above staff;
 - h. Contractors and vendors who perform duties similar to the above staff.
 - ~~2. Each Co-permittee must maintain a roster of personnel or staff positions whose duties or responsibilities directly or indirectly affect the Co-Permittee's capacity to satisfy the requirements of this Order.~~
 - ~~3.2.~~ Except for industrial, commercial, and construction site inspectors, personnel must undergo training a minimum of once every two years.

New hires must receive their initial training within 6 months of their initial hire date.

- 4-3. The training program must be subjected to an annual review, for the purpose of achieving continual improvement of its effectiveness, and must be updated accordingly.
 - 5-4. Training materials must be written in plain, straightforward language, avoiding technical terms as much as possible, and using a coherent and easily readable style.
 - 6-5. The Co-permittees must employ a method that objectively demonstrates that personnel individually have the necessary level of expertise and competence commensurate with their duties and responsibilities.
 - 7-6. The Co-permittees must maintain records demonstrating that personnel have satisfied the requirements of the training program; records must be maintained for a minimum of three (3) years.
 - 8-7. Training records must be maintained for staff, ~~and contractors,~~ and vendor ~~records,~~ as part of a region-wide training registry, or through another mechanism ~~acceptable to the Executive Officer.~~
- B. The Principal Permittee must establish a written training curriculum for use by the Co-permittees. The contents of the curriculum must be commensurate with the duties and responsibilities of the affected personnel.
1. ~~The Co-permittees should consider training. At a minimum, all-~~ affected personnel ~~must be trained~~ in the following subject matter:
 - a. An overview of Federal, state and local water quality laws and regulations pertaining to urban runoff.
 - b. The potential direct and indirect impacts of urban runoff on receiving waters.
 - c. Current water quality impairments.
 - d. The potential sources of pollutants in urban runoff.
 - e. Specific actions that personnel are obligated to take to reduce pollutants in urban runoff.
 2. ~~The Co-permittees should consider training. At a minimum,~~ personnel who are responsible for inspecting construction sites ~~must be trained~~ in the following subject matter:
 - a. Federal, state and local water quality laws and regulations pertaining to construction and grading activities.
 - b. The potential effects of construction and grading activities and urbanization on water quality.
 - c. The proper application and use of erosion and sediment control BMPs.
 - d. The Co-permittee's enforcement tools and procedures.
 3. ~~The Co-permittees should consider training. At a minimum,-~~ personnel responsible for inspecting commercial and industrial sites ~~must be trained~~ in the following subject matter:
 - a. Federal, state and local water quality laws and regulations pertaining to commercial and industrial activities.
 - b. The potential effects of commercial and industrial activities and

- urbanization on water quality.
- c. The proper application and use of non-structural and structural treatment control BMPs.
- d. The Co-permittee's enforcement tools and procedures.
- 4. ~~The Co-permittees should consider training. At a minimum,~~ personnel responsible for inspecting restaurants ~~must be trained~~ in the following subject matter:
 - a. Proper oil and grease disposal.
 - b. Proper housekeeping of trash bins and trash bin enclosures.
 - c. Proper cleaning of floor mats, mops, filters, and garbage containers and proper disposal of related waste water.
 - d. Proper methods of cleaning parking lot areas.
 - b. Proper spill clean-up methods.
 - c. Proper operation and maintenance of devices designed to separate fat, oil, and grease from wastewater.
 - d. The Co-permittee's enforcement tools and procedures.
- 5. ~~The Co-permittees should consider training. At a minimum,~~ personnel responsible for investigating, eliminating or permitting illicit discharges and illicit connections ~~must be trained~~ in the following subject matter:
 - a. The potential effects of illicit discharges and illicit connections on water quality.
 - b. SSO and general spill response and coordination procedures.
 - c. Investigation techniques and procedures.
 - b. The Co-permittee's enforcement tools and procedures.
- 6. ~~The Co-permittees should consider training. At a minimum,~~ personnel responsible for preparing, reviewing or approving Water Quality Management Plans or non-priority project plans or for ensuring their implementation ~~must be trained~~ in the following subject matter:
 - a. The requirements found in Section XII of this Order.
 - b. The related written processes, procedures, and methods for selecting, sizing, and designing source control, site design, and structural treatment control BMPs.
 - c. Investigation techniques and procedures.
 - d. The Co-permittee's enforcement tools and procedures.

XVII. NOTIFICATION REQUIREMENTS

- A. When Co-permittees become aware of a site or incident within their jurisdiction that poses an imminent threat to human health or the environment, the Co-Permittee(s) must take the following actions:
 - 1. Provide oral or electronic mail notification to Regional Board staff of the imminent threat within 24 hours of becoming aware.
 - 2. Submit a written report within five (5) business days following the initial notification to Regional Board staff. The report must provide the following information:
 - a. Details of the location, nature and circumstances of the threat to

- human health or the environment.
 - b. Details of any corrective action(s) taken or planned to mitigate the threat and prevent its reoccurrence.
 - c. Identity of the responsible parties.
 - d. Describe any enforcement actions taken or planned by the Co-Permittee.
3. Record incidences and the related report in the applicable construction, industrial or commercial site database.
- B. For the purposes of this Section, sewage spills in excess of 1,000 gallons and all reportable quantities of hazardous waste spills, as per 40 CFR § 117 and 40CFR § 302, constitute imminent threats to human health or the environment.
- C. If, during the course of a site inspection or complaint investigation, Co-permittees or their representatives become aware of a known, suspected, or threatened violation of applicable waste discharge requirements (i.e. State-wide General Industrial or Construction Permits, etc.), the Permittee must provide written notice to Regional Board staff~~the Executive Officer~~.
- 1. Where circumstances do not pose an imminent threat to human health or the environment, the written notice must be provided on a quarterly basis. For the purposes of this Provision, each quarter of the monitoring and reporting period constitutes a reporting period, with the notice due within 30-days of the end of each period.
 - 2. The notice must include the location, nature and circumstance of the known, suspected, or threatened violation(s); prior history of any relevant violations of state and local requirements; and action(s) taken or planned by the Co-permittee(s) to bring the site operator into compliance.

XVIII. TOTAL MAXIMUM DAILY LOAD IMPLEMENTATION

The provisions in this section require compliance with water quality-based effluent limits ("WQBELs") that implement waste load allocations ("WLAs"). USEPA guidance^{19, 20} provides discretion regarding how TMDLs are incorporated into permits for NPDES-regulated municipal stormwater discharges, including expressing effluent limitations as BMPs or other similar requirements rather than as numeric effluent limitations.

The WLAs have been established in Total Daily Maximum Loads ("TMDLs") that have been adopted and approved by the Regional Board or promulgated by USEPA and are now effective. Consistent with USEPA's recommendation, this Section implements TMDLs through an iterative BMP-based approach capable of achieving the WLAs in accordance with the associated compliance schedule. Consistent with this requirement, this Order includes a process for developing a BMP-based approach (development of a WQBEL compliance plan), which, when adopted by the Regional Board, shall become the final water quality-based effluent limitation(s)²¹. The WLAs can be used to assess if additional BMPs are necessary.

The Co-permittees that are subject to each TMDL are shown in Appendix A. The applicable WQBELs are specified in Appendices B through H.

A. General TMDL Provisions

1. The TMDL provisions implement and are consistent with the assumptions and requirements of the WLAs established within the TMDLs including implementation plans and schedules where provided for in the State adoption and approval of the TMDL (40 CFR 122.44(d)(1)(vii)(B); CWC 13263 (a)).
- ~~1.2.~~ The responsible Co-permittees identified in Appendix A must comply with the applicable WQBELs shown in Appendices B through H according to the methods described in this Section (Section XVIII).
- ~~2.3.~~ The TMDLs shown in Appendices G and H were promulgated by USEPA and, as of the adoption of this Order, do not have implementation plans or schedules. Unless and until implementation plans and schedules are developed provided, Co-permittees responsible for complying with the WQBELs in Appendices G and H must either: (1) demonstrate that the applicable WQBELs have been achieved by the effective date of this Order; OR (2) demonstrate compliance through any one of the means identified in Subsections XVIII.B. through XVIII.D.E. below.

¹⁹ USEPA, 2002. Establishing Total Maximum Daily Load (TMDL) Wasteload Allocations (WLAs) for Storm Water Sources and NPDES Permit Requirements Based on Those TMDLs.

²⁰ USEPA, 2014. 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 WLAs".

²¹ Examples of WQBELs compliance plans include plans such as the *BMP Strategic Plan for the Santa Ana-Delhi and San Diego Creek Sub-Watersheds (December 4, 2013)* and the *Newport Bay Fecal Coliform Source Management Plan (December 31, 2009)*.

- ~~3.4.~~ A Co-permittee may comply with WQBELs through any lawful means.
5. The responsible Co-permittees must submit reports to the Regional Board which are consistent with the requirements of the TMDL.
- ~~4.6.~~ Compliance with the requirements in Section XVIII satisfies the requirements for the relevant water quality standards in Sections IV.A through IV.C.

B. Provisions for WLAs in State-Adopted TMDLs Where Final Compliance Deadlines Have Passed

1. Appendices B, C, D and F include WQBELs where the final compliance deadline established by the underlying TMDL has passed²². The responsible Co-permittees must comply immediately with these final WQBELs. Compliance with final WQBELs shall be determined using one of the following methods:
- a. The responsible Co-permittees may demonstrate compliance with final WQBELs using monitoring data as follows:
 - i. Demonstrating that there are no exceedances of receiving water limitations using monitoring data that has been collected and analyzed pursuant to an approved TMDL monitoring plan or the Monitoring and Reporting Program R8-2015-0001; OR
 - ii. Demonstrating that there are no exceedances of WLAs ~~at MS4 outfalls~~ which have been designated pursuant to the requirements of an approved TMDL monitoring plan or Monitoring and Reporting Program R8-2015-0001; OR
 - iii. Demonstrating that there is no discharge from the responsible Co-permittees' MS4(s) to the receiving water during the time period subject to the WLA. OR
 - iv. Exceedances of a WLA occur at a frequency that is less than the frequency specified in the "Water Quality Control Policy for Developing California's Clean Water Act Section 303(d) List" (September 2004) as amended or revised.
 - b. Co-permittee(s) may fully implement a Time Schedule Order ("TSO") issued by the Regional Board pursuant to California Water Code Section 13300. The TSO must include a WQBEL compliance plan consistent with Section X.VIII.C.i.a.v. The responsible Co-permittees may request a TSO if they believe that additional time to comply with final WQBELs is necessary.

²² Appendix C contains compliance dates where some have passed and others have not. Consequently, Appendix C appears in both Subsections XVIII.B. and XVIII.C.
Attach B.1 - Redline of MS4 Permit.docx

C. Provisions for WLA's in State-Adopted TMDLs Where Final Compliance Deadlines Have Not Passed

- i. WQBELs set forth in Appendices C and E are based on TMDLs where the final compliance deadlines have not passed²³. The responsible Co-permittees must achieve compliance with the WQBELs by the final compliance dates set forth in Appendices C and E by one of the following methods:
 - a. The responsible Co-permittees may demonstrate compliance with applicable WQBELs using monitoring data as follows:
 - i. ~~Demonstrating~~ that there are no exceedances of receiving water limitations using monitoring data that has been collected and analyzed pursuant to an approved TMDL monitoring plan or Monitoring and Reporting Program R8-2015-0001; OR
 - ii. ~~Demonstrating~~ that there are no exceedances of WLAs ~~at MS4 outfalls~~ which have been designated pursuant to the requirements of an approved TMDL monitoring plan or Monitoring and Reporting Program R8-2015-0001; OR
 - iii. ~~Demonstrating~~ that there is no discharge from the responsible Co-permittees' MS4(s) to the receiving water during the time period subject to the WLA. OR
 - iii-iv. Exceedances of a WLA occur at a frequency that is less than the frequency specified in the "Water Quality Control Policy for Developing California's Clean Water Act Section 303(d) List" (September 2004) as amended or revised.
 - b. The responsible Co-permittees may implement an approved plan designed to comply with final WQBELs ("WQBEL compliance plan") according to the following requirements:
 - a. The Co-permittees must submit written notice to the Executive Officer of their intent to develop a WQBEL compliance plan within 180 days of the effective date of this Order or two (2) years prior to the final compliance date, whichever is shorter.
 1. For WQBELs where the related TMDL ~~has an implementation plan that includes a~~ requires ment that the ~~Co-permittees development of~~ a compliance plan, the ~~draft~~ WQBEL compliance plan must be submitted consistent with the schedule specified in the ~~implementation plan~~ Basin Plan Amendment. ~~Otherwise, the draft WQBEL plan must be submitted within six (6) months of submission of the written notice of intent to develop the plan.~~
 2. For WQBELs where a compliance plan is not a required element of the related TMDL, the compliance plan must

²³ See footnote 18.

be submitted within 18 months of the written notice of intent to the EO.

~~2.3.~~ For WQBELs where a compliance plan has already been developed for the related TMDL and is currently being implemented, the responsible Co-permittees may request in their written notification that the Executive Officer approve the plan as satisfying the requirements of Subsection XVIII.C.

b. A WQBEL compliance plan may be developed separately by a Permittee or by a group of Permittees

~~b.c.~~ A WQBEL compliance plan may be developed separately for a specific WQBEL or a group of WQBELs may be combined and addressed in one plan, subject to the discretion of the Regional Board.

~~c.d.~~ At a minimum, the draft WQBEL compliance plan must contain the following:

- i. A characterization of the water quality in the receiving waters, as it pertains to the applicable WQBELs;
- ii. Quantification of the contributions of MS4 discharges to exceedances in related pollutants from the responsible Co-permittees' MS4 outfalls to the receiving waters;
- iii. A description of the BMPs that are currently being employed to control the pollutant(s);
- iv. A description of any proposed new BMPs, or modification of currently-employed BMPs, necessary to achieve the WQBEL(s);
- v. An analysis that provides reasonable assurance that the proposed actions will achieve the final WQBEL(s). The analysis must be supported, in part, by peer-reviewed models that are in the public domain where such models are available and appropriate. Alternatively, t~~(The analysis can include trend analyses that demonstrate that no additional actions are necessary to achieve the final WQBEL(s).)-~~
- vi. A description of the adaptive management process that will be used to evaluate the effectiveness of the BMPs to achieve the WQBEL(s) and make improvements as necessary; AND
- vii. A time schedule for the implementation of the BMPs that includes key milestones.

~~d.e.~~ Any draft WQBEL compliance plans is subject to the review and approval of the Executive Officer. Responsible Co-permittees must modify the plan within 60-days of written notification by the Executive Officer. Upon approval

by the Executive Officer, the plan is considered final and the responsible Co-permittees must fully implement the final WQBEL compliance plan. To be considered fully implementing an approved plan, responsible Co-permittee(s) must carry out all actions consistent with the final WQBEL compliance plan and related time schedules contained therein.

e-f. Draft WQBEL compliance plans will be subject to a 30-day public review period. All final WQBEL compliance plans must be made available to the public and posted to the responsible Co-permittee website(s), the Principal Permittee's website, or by another method acceptable to the Executive Officer.

f-g. Except for inconsequential grammatical or technical corrections, changes to final WQBEL compliance plans are subject to the approval of the Executive Officer following 30-days public review as described above.

iv-v. Co-permittee(s) may fully implement a Time Schedule Order ("TSO") issued by the Regional Board pursuant to California Water Code Section 13300. The TSO must include a WQBEL compliance plan consistent with Section X.VIII.C.i.a.v. The responsible Co-permittees may request a TSO if they believe that additional time to comply with final WQBELs is necessary.

D. Provisions for TMDLs Established by USEPA

1. WQBELs in Appendices G and H are based on TMDLs promulgated by USEPA. These TMDLs do not include an implementation plan adopted pursuant to California Water Code Section 13242. ~~However, USEPA has included recommendations for implementation as part of the TMDLs.~~ The responsible Co-permittees, subject to the WQBELs in Appendices G and H must achieve compliance with these WQBELs by one of the following methods:

- a. The responsible Co-permittees may demonstrate compliance with applicable WQBELs using monitoring data as follows:
 - i. Demonstrateing that there are no exceedances of receiving water limitations using monitoring data that has been collected and analyzed pursuant to an approved TMDL monitoring plan or the Monitoring and Reporting Program R8-2015-0001; OR
 - ii. Demonstrateing that there are no exceedances of WLAs ~~at MS4 outfalls~~ which have been designated pursuant to the requirements of an approved TMDL monitoring plan or the Monitoring and Reporting Program R8-2015-0001; OR
 - iii. There is no discharge from the responsible Co-permittees' MS4(s) to the receiving water during the time period subject to the WLA. OR

~~iii.~~iv. Exceedances of a WLA occur at a frequency that is less than the frequency specified in the "Water Quality Control Policy for Developing California's Clean Water Act Section 303(d) List" (September 2004) as amended or revised.

b. The responsible Co-permittees may implement an approved plan designed to comply with final WQBELS ("WQBEL compliance plan") according to the following requirements:

- i. The Co-permittees must submit written notice to the Executive Officer of their intent to develop a WQBEL compliance plan within 180 days of the effective date of this Order.
- ii. For WQBELS where a compliance plan has already been developed for the related TMDL and is currently being implemented, the responsible Co-permittees may request in their written notification that the Executive Officer approve the plan as satisfying the requirements of Subsection XVIII.D.

iii. A WQBEL compliance plan may be developed separately by a Co-permittee or by a group of Co-permittees.

~~iii.~~iv. A WQBEL compliance plan may be developed separately for a specific WQBEL or a group of WQBELS may be combined and addressed in one plan, ~~subject to the discretion of the Regional Board.~~

~~iv.~~v. At a minimum, the draft WQBEL compliance plan must contain the following:

- A. A characterization of the water quality in the receiving waters, as it pertains to the applicable WQBELS;
- B. Quantification of the MS4 discharges to exceedances in contributions of related pollutants from the responsible Co-permittees' MS4 outfalls to the receiving waters;
- C. A description of the BMPs that are currently being employed to control the pollutant(s);
- D. A description of any proposed new BMPs, or modification of currently-employed BMPs, necessary to achieve the WQBEL(s);
- E. An analysis that provides reasonable assurance that the proposed actions will achieve the final WQBEL(s). The analysis must be supported, in part, by peer-reviewed models that are in the public domain where such models are available and appropriate. Alternatively, ~~(T)he analysis can include trend analyses that demonstrate that no additional actions are necessary to achieve the final WQBEL(s).~~
- F. A description of the adaptive management process that will be used to evaluate the effectiveness of the BMPs to achieve the WQBEL(s) and make improvements as necessary; AND
- G. A time schedule for the implementation of the BMPs that includes specific milestones.

- ~~v.~~vi. Any draft WQBEL compliance plans is subject to the review and approval of the Executive Officer. Responsible Co-permittees must modify the plan within 60-days of written notification by the Executive Officer. Upon approval by the Executive Officer, the plan is considered final and the responsible Co-permittees must fully implement the final WQBEL compliance plan. To be considered fully implementing an approved plan, responsible Co-permittee(s) must carry out all actions consistent with the final WQBEL compliance plan and related time schedules contained therein.
- ~~vi.~~vii. Draft WQBEL compliance plans will be subject to a 30-day public review period. All final WQBEL compliance plans must be made available to the public and posted to the responsible Co-permittee website(s), the Principal Permittee's website, or by another method acceptable to the Executive Officer.
- ~~vii.~~viii. Except for inconsequential grammatical or technical corrections, changes to final WQBEL compliance plans are subject to the approval of the Executive Officer following 30-days public review as described above.

XIX. PROGRAM EFFECTIVENESS ASSESSMENTS

- A. Each Co-permittee must have a program in place to ~~objectively~~ assess the effectiveness of prioritized best management practices or groups of prioritized best management practices ~~employed in each of the elements of~~ their storm water program. The effectiveness assessment approach may be modeled on the most recent guidance from the California Stormwater Quality Association (CASQA)²⁴ or equivalent. The program must be documented in writing.
- B. The Principal Permittee must develop a model program effectiveness assessment. The model assessment must address storm water program elements that are common to all or a majority of the Co-permittees and that are necessary to compile information on the overall performance of the Co-Permittees' collective efforts.
- C. Each Co-permittees' programs must be comprised of the following elements:
 - ~~1. Conceptual generalized model(s) of how each pollutant, or functionally similar group of pollutants, are released to the environment and transported to the receiving water(s) (pollution process).~~
 - ~~2. A description of each of the best management practices (interventions) in the pollution process and where in the process they are intended to be applied.~~
 - ~~3.1.~~ 1. A system to ~~objectively~~ measure the performance of prioritized BMPs or groups of prioritized BMP each intervention or group of

²⁴ California Stormwater Quality Association (CASQA) document *Municipal Stormwater Program Effectiveness Assessment Guidance Document*, May 2007. <https://www.casqa.org/resources/guidance-documents> This document is currently being updated and should be released in 2015.

~~interventions~~. The system must include ~~valid~~ performance metrics (or measures), the method(s) to measure and analyze the metrics, and a method to track and document outcomes.

4.2. Annual evaluation of the ~~validity of the stormwater~~ program; how effective the ~~interventions prioritized BMPs~~ are in achieving the desired outcomes; if the performance metrics and the method(s) for measuring outcomes are ~~valid applicable~~; and any changes found necessary to improve the effectiveness of the ~~interventions or the overall process program~~.

- D. Each Co-permittee must perform assessments of their ~~best management practices stormwater program~~ annually. The results must be included in the Annual Progress Report (see Monitoring and Reporting Program No. R8-2015-0001). Reported outcomes must be ~~expressly~~ compared to the ~~objective~~ requirements of this Order (prescribed performance standards) where they are provided. The Principal Permittee is responsible for compiling and analyzing information where necessary to demonstrate compliance with the requirements of this Order.
- E. Each Co-permittee must have an effective mechanism that solicits input from stakeholders in the development and implementation of the program effectiveness assessments.

XX. FISCAL ANALYSIS

- A. The Co-permittees must prepare and submit a unified fiscal analysis to the Executive Officer of the Regional Board. The analysis must conform to fiscal reporting guidance issued by USEPA when available. The analysis must be submitted with the Annual Progress Report (see Monitoring and Reporting Program No. R8-2015-0001) and, at a minimum, include:
 - 1. An accounting of each Co-permittee's expenditures for the previous fiscal year;
 - 2. An accounting of each Co-permittee's budget for the current fiscal year;
 - 3. A description of the source of funds; AND
 - 4. Each Co-permittee's estimated budget for the next fiscal year.

XXI. PROVISIONS

- A. All reports that are submitted by the Co-permittees according to the requirements of this Order and which are subject to the approval of the Executive Officer will be publicly-noticed and made available at the Regional Board's web site or through other means. Noticed reports will be subject to public review and comment. The Executive Officer will consider all comments received prior to approval of the reports. Any unresolved, significant issues will be scheduled for

a public hearing at a Regional Board meeting prior to approval by the Executive Officer.

- B. The Co-permittees must comply with the requirements of Monitoring and Reporting Program No. R8-2015-0001 (“MRP”), as amended or revised during the term of this Order. The MRP is hereby made a part of this Order. The requirements of the MRP are subject to revision under the direction of the Executive Officer.
 - 1. Any proposed revisions to the MRP must be submitted in writing to the Executive Officer for approval.
 - 2. The Principal Permittee must provide public notice of any proposed revisions. The public notice must include direct notice given to potential and known interested stakeholders.
 - 3. The Executive Officer will provide a minimum of 30-days to interested parties to comment before approving any revisions.
 - 2. The Co-permittees must make available to the public the results of field and laboratory analyses performed on all samples collected pursuant to the MRP.
- C. The NPDES program requirements contained in 40CFR§122.21(a), (b), (d)(2), (f), (p), (h), (i), (j), (k), and (l); and 40CFR§122.42(c) are incorporated into this order by reference.
- D. The Co-permittees must report to the Executive Officer of the Regional Board any known discharges of storm water or non-storm water which may have an impact on human health or the environment.
- E. The Co-permittees must report to the Executive Officer any suspected or known activities on federal, state, or other entity’s land or facilities where the Co-Permittees do not have jurisdiction, where the activities may be contributing pollutants to waters of the U.S.

XXII. PERMIT MODIFICATION

- A. In accordance with 40CFR§122.41(f), this Order may be modified, revoked or reissued prior to its expiration date for the following reasons:
 - 1. To address significant changes in conditions identified in the technical reports required by the Regional Board which were unknown at the time of the issuance of this Order;
 - 2. To incorporate applicable requirements of state-wide water quality control plans adopted by the State Water Resources Control Board or any amendments to the Basin Plan approved by the Regional Board, the State Board, and, if necessary, by the Office of Administrative Law;
 - 3. To incorporate changes needed for consistency with standard provisions and precedential Orders adopted by the State Water Resources Control

Board.

4. To comply with any applicable requirements, guidelines, or regulations issued or approved under the Clean Water Act, if the requirements, guidelines, or regulations contain different conditions or additional requirements than those included in this Order; OR
 5. To incorporate any requirements imposed upon the Co-permittees through the TMDL process.
- B. The filing of a request by the Co-permittees for modification, revocation, and reissuance or termination or a notification of planned changes or anticipated noncompliance does not stay any conditions of this Order.

XXIII. PERMIT EXPIRATION AND RENEWAL

- A. This Order will expire on MONTH DAY, 2019. The Co-permittees must file a report of waste discharge (permit application) no later than 180 days in advance of the expiration of this Order after which this Order may be administratively extended (40 CFR §122.6). The submittal of a report of waste discharge will constitute an application for issuance of new waste discharge requirements (40 CFR § 122.41(b)).
- B. All permit applications (reports of waste discharge), Annual Progress Reports, and other information submitted under this Order must be signed by either a principal executive officer or a ranking elected official (40 CFR § 122.22(a)(3)) or a duly-authorized representative as per 40 CFR § 122.22(b).
- C. This Order shall serve as a National Pollutant Discharge Elimination System (NPDES) Permit pursuant to Section 402(p) of the Clean Water Act, or amendments thereto. This Order shall become effective fifty (50) days after the date of its adoption, provided that the Regional Administrator of the USEPA has no objections. If the Regional Administrator objects to its issuance, this Order shall not become effective until such objection is withdrawn.
- D. Except for enforcement purposes, Order No. R8-2009-0030 is hereby withdrawn upon the effective date of this Order.

XXIV. STANDARD PROVISIONS

- A. Duty to Comply
 1. The Co-permittee(s) must comply with all of the conditions and provisions of this Order. Any noncompliance with the requirements of this Order constitutes a violation of the CWA and the CWC. Noncompliance is grounds for enforcement action and/or removal from Permit coverage.
 2. Any failure to take appropriate corrective action(s) as specified in this Order or as directed by the Executive Officer is also a violation of this

Order.

3. The Co-permittee(s) must comply with effluent standards or prohibitions established under section 307(a) of the CWA for toxic pollutants. Compliance must be achieved within the time provided in the regulations that establish these standards or prohibitions, even if this Permit has not yet been modified to incorporate the requirement.

B. General Permit Actions

If any toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is promulgated under section 307(a) of the CWA for a toxic pollutant which is present in the discharge and that standards or prohibition is more stringent than any limitation on the pollutant in this Permit, this Permit shall be modified or revoked and reissued to conform to the toxic effluent standard or prohibition and the Co-permittees so notified.

C. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for a Co-permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this Permit.

D. Duty to Mitigate

The Co-permittee(s) must take all responsible steps to minimize or prevent any discharge which has a reasonable likelihood of adversely affecting human health or the environment.

E. Proper Operation and Maintenance

The Co-permittees must at all times properly operate and maintain any facilities and systems of treatment and control (and related equipment and apparatuses) which are installed or used by the Co-permittee to achieve compliance with the conditions of this Permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. Proper operation and maintenance may require the operation of back-up or auxiliary facilities or similar systems installed by a Co-permittee when necessary to achieve compliance with the conditions of this Permit.

F. Property Rights

This Permit does not convey any property rights or any sort of exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor does it authorize any infringement of Federal, State, or local laws or regulations.

G. Duty to Provide Information

The Co-permittees must provide to the Regional Board, State Board, or USEPA, within a reasonable time, any requested information to determine compliance with this Permit. The Co-permittees must also furnish, upon

request, copies of records that are required to be kept by this Permit.

H. Inspection and Entry

1. The Co-permittees must allow Regional Board staff, State Board staff USEPA staff, or an authorized representative of the municipal operator of the MS4 receiving the discharge, upon the presentation of credentials and other documents as may be required by law, to:
 - a. Enter upon the Co-permittees premises at reasonable times where a regulated activity is being conducted or where records must be kept under the conditions of this Permit;
 - b. Access and copy at reasonable times any records that must be kept under the conditions of this Permit.
 - c. Inspect at reasonable times the facility; AND
 - d. Take pictures, collect samples, collect evidence, or monitor at reasonable times for the purpose of ensuring Permit compliance.

I. Monitoring and Records

1. Samples and measurements taken for the purpose of monitoring must be representative of the monitored activity.
2. Records of monitoring must include:
 - a. The date, exact place, and time of sampling or measurements;
 - b. The date(s) analyses were performed;
 - c. The individual(s) who performed the analyses;
 - d. The analytical techniques or methods used; AND
 - e. The results of such analysis.
3. The Co-permittees must maintain a paper or electronic copy of all storm water monitoring information, copies of all reports (including the Annual Progress Reports), SWPPPS, and all other required records, including a copy of this Permit, for a period of at least five (5) years from the date generated or date submitted, whichever is later.

J. Electronic Signature and Certification Requirements

All Annual Progress Reports or other information required by this Permit or requested by the Regional Board, State Board, USEPA, or local storm water management agency must be certified and submitted by the Legally Responsible Person ("LRP") or the Duly Authorized Representative ("DAR").

K. Certification

Any person signing documents under Section XXIV.J. above, must make the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for

information submitted is 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.”

L. Anticipated Noncompliance

The Co-permittee(s) must give notice to the Regional Board and local storm water management agency of any planned changes in any municipal activity which may result in noncompliance with this Permit’s requirements.

M. Penalties for Falsification of Reports

Section 309(4) of the CWA provides that any person who knowingly makes a false material statement, representation, or certification in any record or other document submitted or required to be maintained under this Permit, including reports of compliance or noncompliance shall, upon conviction, be punished by a fine of not more than \$10,000 or by imprisonment for not more than two years, or by both.

N. Oil and Hazardous Substance Liability

Nothing in this Permit shall be construed to preclude the institution of any legal action or relieve the Co-permittee(s) from any responsibilities, liabilities, or penalties to which the Co-permittee(s) is or may be subject to under Section 311 of the CWA.

O. Severability

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

P. Penalties for Violations of Permit Conditions

Section 309 of the CWA provided significant penalties for any person who violated a permit condition that implements Sections 301, 302, 306, 307, 308, 318, or 405 of the CWA or any permit condition or limitation implementing any such section in a permit issued under section 401. Any person who violated any permit condition of this Permit is subject to civil penalty not to exceed \$37,500 per calendar day of such violation, as well as any other appropriate sanction provided by Section 309 of the CWA. The Porter-Cologne Water Quality Control Act also provides for civil and criminal penalties, which in some cases are greater than those under the CWA

Q. Transfers (not applicable)

R. Continuation of Expired Permit

1. This Permit continues in full force and effect until a new Permit is issued or the Regional Board rescinds this Permit.
2. Only those Co-permittees authorized to discharge under the expiring Permit are covered by the continued Permit.

S. Other Federal Requirements

All other requirements of 40 CFR § 122.41 and 40 CFR § 122.42 are incorporated into this Permit by reference.

DRAFT

ACRONYMS

ASBS Areas of Special Biological Significance

BMPs Best Management Practices

CCC Criterion Continuous Concentration

CCR California Code of Regulations (State Water Board regulations are in Title 23)

CEQA California Environmental Quality Act

CFR Code of Federal Regulations

CMC Criterion Maximum Concentration

CTR California Toxics Rule

CWA Clean Water Act

CWC California Water Code

DAMP Drainage Area Management Plan

DAR Duly Authorized Representative

DDT Dichlorodiphenyltrichloroethane

HCA Health Care Agency

LA Load Allocation

LID Low Impact Development

LIP Local Implementation Plan

LRP Legally Responsible Person

MOU Memorandum of Understanding

MPN Most Probable Number

MRP Monitoring and Reporting Program, R8-2015-0001

MS4 Municipal Separate Storm Sewer System

NPDES National Pollutant Discharge Elimination System

PCB Polychlorinated Biphenyl

PEA Program Effectiveness Assessment

POTW Publicly-Owned Treatment Works

QAPP Quality Assurance Project Plan

SARA Superfund Amendments and Reauthorization Act of 1986

SIC Standard Industrial Classification

SIP State Implementation Plan or, more formally, Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California

SSO Sanitary Sewer Overflow

SWAMP Surface Water Ambient Monitoring Program

SWRCB State Water Resources Control Board

TDS Total Dissolved Solids

TMDL Total Maximum Daily Load

USEPA United States Environmental Protection Agency

WEF Water Environment Federation

WDID Waste Discharger Identification

WDR Waste Discharge Requirements

WLA Waste Load Allocation

WQBEL water quality-based effluent limit

WQMP Water Quality Management Plan

GLOSSARY

This Glossary has been prepared for the convenience of the reader. This Glossary is not an exhaustive catalog of terminology used in this Order. Additional terminology is defined in the Clean Water Act, USEPA regulations, and the California Water Code; all such terms not appearing below are incorporated into this Permit by reference.

Authorized non-Storm Water Discharges – Non-storm water discharges authorized pursuant to an NPDES permit. Authorized non-storm water includes: uncontaminated condensate from air conditioners, coolers, and compressors and from the outside storage of refrigerated gases or liquids; flows from riparian habitats and wetlands; passive footing and foundation drains or crawlspace pumps; non-commercial vehicle washing; de-chlorinated water from swimming pools; diverted stream flows; uncontaminated groundwater or spring water; landscape watering, provided that all pesticides, herbicides, and fertilizers have been applied according to the approved labeling; discharges from emergency fire-fighting activities; irrigation water/drainage; and waters otherwise not containing waste.

Basin Plan – The Water Quality Control Plan for the Santa Ana River Basin (1995) and subsequent amendments.

Beneficial Uses – The uses of water necessary for the survival or well-being of man, plants, and wildlife. These uses of water serve to promote the tangible and intangible economic, social, and environmental goals. “Beneficial Uses” that may be protected against include, but are not limited to: domestic, municipal, agricultural and industrial supply; power generation; recreation; aesthetic enjoyment; navigation; and preservation and enhancement of fish, wildlife, and other aquatic resources or preserves. Existing beneficial uses are uses that were attained in the surface or groundwater on or after November 28, 1975; and potential beneficial uses are uses that would probably develop in future years through the implementation of various control measures. “Beneficial Uses” are equivalent to “Designated Uses” under federal law (California Water Code Section 13050(f)). Beneficial Uses for the Receiving Waters are identified in the Basin Plan.

Best Management Practices (“BMPs”) – ~~Also known as storm water control measures.~~ 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 (40 CFR § 122.2).

Bioaccumulate – The progressive accumulation of contaminants in the tissues of organisms to a higher concentration than in the surrounding environment. Bioaccumulation may occur through any route, including respiration, ingestion, or direct contact with contaminated water, sediment, pore water, or dredged material. Bioaccumulation occurs with exposure and is independent of the trophic level of the organism.

Bioassessment – The use of biological community information to evaluate the biological integrity of a water body and its watershed. With respect to aquatic ecosystems, bio-assessment is the collection and analysis of samples of the benthic macro invertebrate community together with physical/habitat quality measurements associated with the sampling site and the watershed to evaluate the biological condition (i.e. biological integrity) of a water body.

Biological Integrity – Defined in Karr J.R. and D.R. Dudley. 1981. Ecological perspective on water quality goals. Environmental Management 5:55-68 as: “A balanced, integrated, adaptive community of organisms having a species composition, diversity, and functional organization comparable to that of natural habitat of the region.” Also referred to as ‘ecosystem health’.

Biotreatment Control BMP – A sub-category of structural treatment control BMPs that employ biological uptake, transformation, or degradation of pollutants as their principal mechanism(s) of pollutant removal. Although a portion of the design capture volume or flow may incidentally infiltrate, evaporate, or evapotranspire, the principal of operation involves the discharge of the treated storm water after detention in a densely-vegetated basin and/or passing through porous, biologically-active medium, dense vegetation or both.

California Toxics Rule – Numeric water quality criteria for certain Priority Toxic Pollutants and other water quality standards provisions promulgated by the USEPA for waters in the state of California. The California Toxics Rule is found in 40 CFR § 131.

Clean Water Act Section 402(p) – The federal statute, codified at 33 USC 1342(p), requiring municipal and industrial Co-permittees to obtain NPDES permits for their discharges of storm water.

Clean Water Act Section 303(d)-Listed Water Body – An impaired water body; a water body in which water quality does not meet applicable water quality standards and/or is

not expected to meet water quality standards, even after the application of technology-based pollution controls required by the CWA.

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

Contamination – 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 (inclusive of waters of the U.S.) are affected. (California Water Code Section 13050(k))

Co-permittee(s) – Entities regulated under Order No. R8-2015-0001, inclusive of the Principle Co-permittee.

Criteria – The numeric values and the narrative standards that represent contaminant concentrations that are not to be exceeded in the receiving environmental media (surface water, groundwater, sediment) to protect beneficial uses.

Debris – Debris is defined as the remains of anything destroyed or broken, or accumulated loose fragments of rock.

Design Capture Flow – The calculated flow rate of storm water runoff, typically expressed as cubic feet per second (“cfs”), that must be treated in one or more structural treatment control BMPs according to the requirements of this Order.

Design Capture Volume – The calculated volume of storm water runoff, typically expressed in gallons or cubic feet, that must be treated in one or more structural treatment control BMPs according to the requirements of this Order.

[Development Project/Redevelopment Project – For the purposes of this order projects that include the addition or replacement of impervious surfaces and could reasonably cause water quality or hydrologic impacts. Site improvements or maintenance activities that do not include the addition or replacement of impervious surfaces are exempt from the requirements of Section XII of this Order. Examples of exempted site activities include interior building improvements, roof or siding replacements, sign installations, retaining wall installation, irrigation system installations, routine maintenance activities, and other activities.](#)

Dry Weather – Weather in which there is no precipitation.

Duly Authorized Representative – All reports required by this permit, and other requested information shall be signed by the LRP or by a duly authorized representative of that person. A person is a duly authorized representative only if:

- The authorization is made electronically submitted by the LRP;
- The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated activity such as a position of plant manager, superintendent, position of equal responsibility, or an individual or position having overall responsibility for environmental matters for the municipality.

Effluent – Any discharge of water either to the receiving water or beyond the property boundary controlled by the discharger.

Effluent Limit/Limitation – Means any restriction on quantities, discharge rates, and concentrations of pollutants which are discharged from point sources into Waters of the United States, waters of the “contiguous zone,” or the ocean. (40 CFR §122.2)

Emergency – A sudden, unexpected occurrence, involving a clear and imminent danger, demanding immediate action to prevent or mitigate loss of, or damage to, life, health, property, or essential public services (Public Resources Code Section 21060.3).

Environmentally Sensitive Area (“ESA”) – An area in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which would be easily disturbed or degraded by human activities and developments (Public Resources Code Section 30107.5). These areas include, but are not limited to: water bodies designated with the RARE beneficial use in the Basin Plan (Water Quality Control Plan for the Santa Ana River Basin [1995] and amendments); an area designated in the Ocean Plan as an Area of Special Biological Significance; a water body listed as being impaired pursuant to CWA Section 303(d); areas designated as preserves or their equivalent under the Natural Communities Conservation Program (Multiple Species Habitat Conservation Plan, “MSHCP”) within the Cities and Counties of Orange, Riverside and San Bernardino; or any area designated as such by a public agency with designation powers.

Erosion – The process whereby material (such as sediment) is detached and entrained in water or air and can be transported to a different location. Chemical erosion involves materials that are dissolved and removed and transported.

Executive Officer – The Executive Officer of the Santa Ana Regional Water Quality Control Board or delegated staff.

Grading – The cutting and/or filling of the land surface to a desired slope or elevation.

Harvest and Use Low-Impact Development Best Management Practice (“Harvest and Use LID BMP”) – A sub-category of retention LID BMPs that uses harvest and use of the design capture volume or quantified portion thereof. The captured volume is typically used for non-potable uses such as toilet-flushing, industrial process supply, and landscape irrigation.

Hazardous Substance – Any substance that poses a threat to human health or the environment due to its toxicity, corrosiveness, ignitability, explosive nature or chemical reactivity; any substance designated under 40 CFR §116 pursuant to Section 311(b)(2) of the Clean Water Act (40 CFR § 122.2).

Hydrologic Condition of Concern (“HCOC”) – A condition of a stream or channel, or some reach thereof; or a condition of some other water body (e.g. a vernal pool), where its hydrology is, or is proposed to be, altered by past or future development such that there has been, or could be, cumulatively significant adverse impacts to the physical or biological integrity of the water body. A condition where a proposed development site discharges directly or indirectly to a water body where such conditions are known or suspected to exist based on Substantial Evidence.

Illicit Discharge – Any discharge to a municipal separate storm sewer that is not composed entirely of storm water. This does not include discharges that occur pursuant to an NPDES permit, other than the MS4 Permit, and discharges resulting from fire-fighting activities (40 CFR § 122.26(b)(2)).

Impaired Water Body – Section 303(b) of the CWA requires each of California’s Regional Water Quality Control Boards to routinely monitor and assess the quality of waters of their respective regions. If this assessment indicates that Beneficial Uses are not met, then that water body must be listed under Section 303(d) of the CWA as an Impaired Water Body.

Impervious Surface – That part of a developed parcel that has been modified to reduce the land’s natural ability to absorb and hold rainfall. It includes hard surfaces which cause water to run off the surface in greater quantities or at an increased rate of flow from the flow that existed under natural conditions prior to development. For example, common impervious surfaces include, but are not limited to, rooftops, walkways, patios, courtyards, driveways, parking lots, storage areas, concrete or asphalt paving, gravel roads, or any cleared, graded, graveled, paved, or compacted surfaces, or other surfaces which similarly impede the natural infiltration of surface water into the soil.

Infiltration – The flow of water into the soil by crossing the soil surface.

Infiltration Low-Impact Development Best Management Practice (“Infiltration LID

BMP) – A type of retention LID BMP that employs infiltration at the principal mechanism for the loss of the design capture volume or quantified portion thereof.

Isopluvia – A line on a map drawn through geographical points having the same pluvial (rain, precipitation) index.

Land Disturbance – The clearing, grading, excavation, stockpiling, or other construction activity that results in the possible mobilization of soils or other pollutants into the MS4. This specifically does not include routine maintenance activity to maintain the original line and grade, hydraulic capacity, or original purpose of the facility. This also does not include emergency construction activities required to protect public health and safety.

Legally Responsible Person – The legally responsible person who is responsible for signing, certifying, and electronically submitting Permit Registration Documents, Notices of Termination, and any other documents, reports, or information required by a Permit, the State or Regional Water Board, or U.S. EPA. The LRP must be one of the following:

- For a municipality, State, Federal, or other public agency: a principal executive officer, ranking elected official, city manager, council president, or other public employee with managerial responsibility over the municipality (including, but not limited to, project manager, project superintendent, or resident engineer).

Load Allocations (“LA”) – Distribution or assignment of TMDL pollutant loads to entities or sources for existing and future nonpoint sources, including background loads.

Low-Impact Development (“LID”) – A storm water management and land development strategy that combines a hydrologically functional site design with pollution prevention measures to compensate for land development impacts on hydrology and water quality. LID techniques mimic the site's predevelopment hydrology by using site design techniques that store, infiltrate, evapotranspire, bio-filter or detain runoff close to its source.

Maximum Extent Practicable (“MEP”) - refers to a standard for implementation of storm water management programs. Section 402(p)(3)(B)(iii) of the Clean Water Act requires that municipal storm water permits "shall require controls to reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques, and system design and engineering methods, and such other provisions as the Administrator or the State determines appropriate for the control of such pollutants."

In practice, compliance with the MEP standard is evaluated by how well the Co-Attach B.1 - Redline of MS4 Permit.docx

Permittees implement the "minimum measures" identified by EPA, including: (1) Public education and outreach on storm water impacts; (2) Public involvement/participation; (3) Illicit discharge detection and elimination; (4) Construction site storm water runoff control; (5) Post-construction storm water management in new development and redevelopment; and (6) Pollution prevention/good housekeeping for municipal operations. Collectively, these minimum measures are often referred to as "Best Management Practices" or BMPs. The MEP standard does not require Co-permittees to reduce pollutant concentrations below natural background levels, nor does it require further reductions where pollutant concentrations in the receiving water already meet water quality objectives.

MEP is a technology-based standard established by Congress in CWA section 402(p)(3)(B)(iii) that operators of MS4s must meet. Technology-based standards establish the level of pollutant reductions that dischargers must achieve, typically by treatment or by a combination of source control and treatment control BMPs. MEP generally emphasizes pollution prevention and source control BMPs primarily (as the first line of defense) in combination with treatment methods serving as a backup (additional line of defense). MEP considers economics and is generally, but not necessarily, less stringent than BAT.

A definition for MEP is not provided either in the statute or in the regulations. Instead the definition of MEP is dynamic and will be defined by the following process over time: municipalities propose their definition of MEP by way of their urban runoff management programs. Their total collective and individual activities conducted pursuant to the urban runoff management programs becomes their proposal for MEP as it applies both to their overall effort, as well as to specific activities (e.g., MEP for street sweeping, or MEP for MS4 maintenance). In the absence of a proposal acceptable to the Regional Board, the Regional Board defines MEP.

In a memo dated February 11, 1993, entitled "Definition of Maximum Extent Practicable," Elizabeth Jennings, Senior Staff Counsel, SWRCB addressed the achievement of the MEP standard as follows:

"To achieve the MEP standard, municipalities must employ whatever Best management Practices (BMPs) are technically feasible (i.e., are likely to be effective) and are not cost prohibitive. The major emphasis is on technical feasibility. Reducing pollutants to the MEP means choosing effective BMPs, and rejecting applicable BMPS only where other effective BMPS will serve the same purpose or the BMPS would not be technically feasible, or the cost would be prohibitive. In selecting BMPS to achieve the MEP standard, the following factors may 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 and Reporting Period – For purposes of this Order, the monitoring and reporting period is July 1 to June 30 with a reporting deadline of the following November 15th of each year for Annual Progress Reports.

Municipal Storm Water Conveyance System – (See Municipal Separate Storm Sewer System or MS4).

Municipal Separate Storm Sewer System (“MS4”) – A conveyance or system of conveyances designed to collect and/or transport urban runoff (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, natural drainage features or channels, modified natural channels, man-made channels, or storm drains): (i) Owned or operated by a State, city town, borough, county, parish, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, storm water, or other wastes; (ii) Designated or used for collecting of conveying storm water; (iii) Which is not a combined sewer; (iv) Which is not part of the Publicly Owned Treatment Works (POTW)

as defined at 40 CFR § 122.2 (40 CFR § 126.26(b)(8)).

Most Probable Number (“MPN”) – The most probable number (MPN) of coliform or fecal coliform bacteria per unit volume of a sample. It is expressed as the number of organisms which are most likely to have produced the laboratory results noted in a particular test.

National Pollutant Discharge Elimination System (“NPDES”) Permit – A national program under section 402 of the Clean Water Act for regulation of discharges of pollutants from point sources to waters of the United States. Discharges of pollutants are prohibited unless specifically exempted or authorized by an NPDES permit.

[Non-Priority Project Plan / Non Priority Project Water Quality Plan – for the purposes of this Order the two terms are interchangeable and specified in Provision XII.](#)

Non-Storm Water – Non-storm water consists of all discharges to and from a storm water conveyance system that do not originate from precipitation events (i.e., all discharges from a conveyance system other than storm water). Non-storm water includes illicit discharges, prohibited discharges, and NPDES permitted discharges.

Nuisance – anything which meets all of the following requirements: 1) Is injurious to health, or is indecent, or offensive to the senses, or an obstruction to the free use of property, so as to interfere with the comfortable enjoyment of life or property. 2) Affects at the same time an entire community or neighborhood, or any considerable number of persons, although the extent of the annoyance or damage inflicted upon individuals may be unequal. 3) Occurs during, or as a result of, the treatment or disposal of wastes (CWC Section 13050(m)).

Outfall - A *point source*, as defined by 40 CFR 122.2, at the point where an MS4 discharges to waters of the United States. An outfall does not include open conveyances connecting two municipal separate storm sewers. An outfall does not include pipes, tunnels, or other conveyances which connect segments of the same stream or other waters of the U.S. and are used to convey waters of the U.S. (40 CFR 122.26(b)(9)).

Party – Defined as an individual, association, partnership, corporation, municipality, state or federal agency, or an agent or employee thereof (40 CFR § 122.2).

Permit Area – Areas that are under the jurisdiction of the Santa Ana Regional Water Quality Control Board. These include north and northwestern portions of Orange County, north and western portions of Riverside County and western portions of San Bernardino County. See the Basin Plan for a detailed description of the Regional Board boundaries.

Permit Registration Documents (“PRDs”) – Include the Notice of Intent, Storm Water Pollution Prevention Plan, Site Map and the appropriate filing fee necessary to authorize a discharge under general waste discharge requirements.

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).

pH - An indicator of the acidity or alkalinity of water.

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, runoff from concentrated animal feeding operations, landfill leachate collection systems, vessel, or other floating craft from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture or agricultural storm water runoff.

Pollutant – Any agent that may cause or contribute to the degradation of water quality such that a condition of pollution or contamination is created or aggravated. It includes any type of industrial, municipal, and agricultural waste discharged into water. The term “pollutant” is defined in section 502(6) of the Clean Water Act as follows: “The term ‘pollutant’ means dredged spoil, solid waste, incinerator residue, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt and industrial, municipal, and agricultural waste discharged into water.” It has also been interpreted to include water characteristics such as toxicity or acidity.

Pollution – The alteration of the quality of the Waters of the U.S. by waste, to a degree that unreasonably affects either of the following: 1) The waters for beneficial uses; or 2) Facilities that serve these beneficial uses. Pollution may include contamination (CWC Section 13050(l)).

Pollution Prevention – Practices and processes that reduce or eliminate the generation of pollutants, in contrast to source control, treatment, or disposal.

Principal Permittee – The County of Orange

Priority Toxic Pollutant – A pollutant identified in the California Toxics Rule.

Receiving Waters – Waters of the United States within the Permit area.

Receiving Water Limitations – Waste discharge requirements issued by the Regional Board typically include both: (1) “Effluent Limitations” (or “Discharge Limitations”) that specify the technology-based or water-quality-based effluent limitations; and (2) “Receiving Water Limitations” that specify the water quality

objectives in the Basin Plan as well as any other limitations necessary to attain those objectives. In summary, the “Receiving Water Limitations” provision is the provision used to implement the requirement of CWA SECTION 301(b)(1)(C) that NPDES permits must include any more stringent limitations necessary to meet water quality standards.

Retention Low-Impact Development Best Management Practice

(“Retention LID BMP”) – A sub-category of structural treatment control BMPs that employ retention of the design capture volume or a quantified portion thereof. The retained volume is infiltrated, evaporated, evapotranspired, or used (typically for non-potable uses).

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 and Site Design BMPs – In general, activities or programs to educate the public or provide low-cost non-physical solutions, as well as facility design or practices aimed to limit the contact between pollutant sources and storm water or authorized non-storm water. Examples include: activity schedules, prohibitions of practices, industrial area sweeping, facility maintenance, detection and elimination of illegal and unauthorized discharges, and other non-structural measures. Facility design (structural) examples include providing attached lids to trash containers, canopies for fueling islands, secondary containment, or roof or awning over material and trash storage areas to prevent direct contact between storm water and pollutants

Standard Industrial Classification (“SIC”) Code – Four digit industry code, as defined by the US Department of Labor, Occupational Safety and Health Administration. The SIC Code is used to identify if a facility requires coverage under the Industrial Activities Storm Water Permits.

State Implementation Plan (“SIP”) – Formally known as the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California. The SIP implements the California Toxics Rule.

State Board – California State Water Resources Control Board

Storm Water – Storm water runoff, snowmelt runoff and surface runoff and drainage (40 CFR § 122.26(b)(13)).

Storm Water General Permits – General Permit-Industrial (State Board Order No. 97-03 DWQ, NPDES No. CAS000001), and General Permit-Construction (State Board Order No. 2009-0009-DWQ, NPDES No. CAS000002).

Structural treatment control BMPs – Any system designed and constructed according to published and generally-accepted engineering criteria to remove pollutants from urban runoff. Pollutants are removed by simple gravity settling of particulate pollutants, filtration, biological uptake, media adsorption or any other physical, biological, or chemical process. In this Order, structural treatment control BMPs are classified as LID BMPs and non-LID BMPs. LID BMPs are further sub-classified into Retention LID BMPs and Biotreatment Control BMPs. All of these classes of structural treatment control BMPs are subject to general and specific requirements in this Order.

Substantial Evidence – Facts, reasonable assumptions predicated on facts, or expert opinion supported by facts. Substantial Evidence does not include argument, speculation, unsubstantiated opinion or narrative, or evidence which is clearly erroneous or inaccurate (Public Resources Code Section 21080(e)).

Storm Water Pollution Prevention Plan (“SWPPP”) – A plan developed to minimize and control the discharge of pollutants from the industrial site to storm water conveyance systems. The plan shall identify pollutant sources, control measures for each pollutant source, good housekeeping practices and employee training programs.

Total Dissolved Solids (“TDS”) – A measure of the total dissolved minerals in the water; the total dissolved (filterable) solids as determined by use of the method specified in 40 CFR § 136 (40 CFR § 122.2)

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 Clean Water Act § 303(d), TMDLs must be developed for all water bodies that do not meet water quality standards after application of technology-based controls.

TMDL Implementation Plan – Component of a TMDL that describes actions, including monitoring, needed to reduce pollutant loadings and a timeline for implementation. TMDL implementation plans can include a monitoring or modeling plan and milestones for measuring progress, plans for revising the TMDL if progress toward cleaning up the waters is not made, and the date by which water quality standards will be met (USEPA

Final TMDL Rule: Fulfilling the Goals of the CWA, EPA 841-F-00-008, July 2000).

Toxicity – Adverse responses of organisms to chemicals or physical agents ranging from mortality to physiological responses such as impaired reproduction or growth anomalies.

Turbidity – The cloudiness of water quantified by the degree to which light traveling through a water column is scattered by the suspended organic and inorganic particles it contains. The turbidity test is reported in Nephelometric Turbidity Units (NTU) or Jackson Turbidity Units (JTU)

Uncontaminated Groundwater – Groundwater that is not impaired by waste to a degree which creates a hazard to the public health through poisoning or through the spread of disease

Urban Runoff – Urban runoff is defined as all flows in a storm water conveyance system from urban areas which include residential, commercial, industrial, and construction areas. Urban runoff consists of the following components: (1) storm water runoff and (2) authorized non-storm water discharges (See Section III of this Order). Urban runoff does not include runoff from undeveloped open space, feedlots, dairies, farms, and agricultural fields.

Waste – 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 (CWC Section 13050(d)). Article 2 of CCR Title 23, Chapter 15 (Chapter 15) contains a waste classification system which applies to solid and semi-solid waste which cannot be discharged directly or indirectly to water of the state and which therefore must be discharged to land for treatment, storage, or disposal in accordance with Chapter 15. There are four classifications of waste (listed in order of highest to lowest threat to water quality): hazardous waste, designated waste, nonhazardous solid waste, and inert waste.

Waste Discharge Requirements (“WDR”) – As defined in section 13374 of the California Water Code, the term "Waste Discharge Requirements" is the equivalent of the term "permits" as used in the Federal Water Pollution Control Act, as amended. The Regional Board usually uses the terms "permit" and "Order" to refer to Waste Discharge Requirements for discharges to Waters of the U.S.

Waste Load Allocations (“WLA”) – WLA is the distribution or assignment of pollutant

loads to entities or sources for existing and future point sources according to a TMDL; the maximum quantity of pollutants a discharger is allowed to release into a particular waterway, as set by a regulatory authority. Discharge limits usually are required for each specific water quality criterion being, or expected to be, violated.

Water Quality Assessment – An assessment conducted to evaluate the condition of water bodies which receive process wastewater, storm water and non-storm water discharges.

[Water Quality Based Effluent Limit - Any restriction imposed on discharges or concentrations of pollutants, which are discharged from point sources to waters of the U.S. necessary to achieve a water quality standard. The federal regulations \(40 CFR 122.44\(d\)\(1\)\(vii\)\(B\)\) require that, when NPDES permits incorporate water quality based effluent limitations \("WQBELs"\) developed to protect a narrative water quality criterion, a numeric water quality criterion, or both, the WQBELs must be consistent with the assumptions and requirements of the WLA for the discharge. WQBELs may be numeric or BMP-based.](#)

Water Quality Objective – The limits or levels of water quality constituents or characteristics which are established for the reasonable protection of beneficial uses of water or the prevention of nuisance within a specific area [California Water Code Section 13050(h)].

Water Quality Standards – Consist of beneficial uses, water quality objectives to protect those uses, an anti-degradation policy, and policies for implementation. Water quality standards are found in Regional Water Quality Control Plans and statewide water quality control plans. The USEPA has also adopted water quality criteria (the same as objectives) for California in the National Toxics Rule and California Toxics Rule.

Waters of the State – Any surface water or groundwater, including saline waters, within the boundaries of the State (California Water Code Section 13050(e)). Waters of the State includes waters of the United States.

Waters of the United States – Waters of the United States can be broadly defined as navigable surface waters and tributaries thereto. Groundwater is not considered to be Waters of the United States. As defined in 40 CFR § 122.2, the Waters of the U.S. are defined as: (a) All waters, which are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide; (b) All interstate waters, including interstate "wetlands;" (c) All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sand flats, "wetlands," sloughs, prairie potholes, wet

Attach B.1 - Redline of MS4 Permit.docx

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; a drainage area, catchment, or river basin.

Wet Season – The period of October 1st through May 31st of each year, except where specifically defined otherwise in an approved TMDL Implementation Plan.

Appendix B

Total Maximum Daily Load for Nutrients in San Diego Creek and Newport Bay
(Resolution No. 98-9, as amended by Resolution No. 98-100)
~~Water Quality Based Effluent Limits for Nutrients in Newport Bay~~

~~Appendix B incorporates the waste load allocations ("WLAs") [expressed as Water Quality Based Effluent Limits ("WQBELs")] assigned to urban runoff as identified in the Total Maximum Daily Load for Nutrients in San Diego Creek and Newport Bay (Nutrient TMDL). The WQBELs are consistent with the assumptions and requirements of TMDL implementation requirements and WLAs assigned to discharges from the Co-permittees' MS4s. Responsible Co-Permittees are identified in Appendix A. The following water quality based effluent limits ("WQBELs") apply to discharges of urban runoff from MS4s owned or controlled by those Co-permittees discharging into Newport Bay. The WQBELs in this Appendix are based on the waste load allocations ("WLAs") in the Nutrient TMDL.~~ Compliance with the WQBELs in this Appendix will be determined according to methods described in Section XVIII of Order No. R8-2015-0001.

The Nutrient TMDL ~~was has been~~ approved by ~~the~~ Santa Ana Regional Water Quality Control Board, the State Water Resources Control Board, the Office of Administrative Law ("OAL") and USEPA ~~as follows~~:

- ~~• Regional Board Adoption: April 17, 1998; amendment adopted October 9, 1998~~
- ~~• State Board Approval: May 13, 1998 [Regional Board to confirm]~~
- ~~• OAL Approval: February 10, 1999 [Regional Board to confirm]~~
- ~~• USEPA Approval: April 16, 1999 [Regional Board to confirm]~~

~~The Nutrient TMDL was adopted by the Santa Ana Regional Water Quality Control Board in Resolution No. 98-9 (amended by Resolution No. 98-100). The TMDL was approved by the Office of Administrative Law on February 10, 1999 and April 16, 1999.~~

The compliance deadlines that were adopted as part of this TMDL have passed and the following WQBELs are effective on the effective date of this Order.

I. Final WQBELs

The responsible Co-permittees must comply with the methods described in Section XVIII of Order No. R8-2015-0001 to demonstrate compliance with the following final WQBELs:

A. Reach 1, San Diego Creek

Table B-1: Final Nutrient WQBELs for Reach 1 of San Diego Creek

<u>Nutrient TMDL</u>	<u>2007 Summer Allocation (Apr-Sept)</u>	<u>2012 Winter Allocation (Oct-Mar)^{[2],[3]}</u>	<u>2007 Annual Allocation</u>
<u>Urban Runoff WLA Lbs/season TN^[1]</u>	<u>16,628</u>	<u>55,442</u>	<u>Not Applicable</u>
<u>Urban Runoff WLA Lbs/year TP</u>	<u>Not Applicable</u>	<u>Not Applicable</u>	<u>2,960</u>

¹TIN = (NO3 + NH3); TN = (TIN + organic N)

²Total Nitrogen winter loading limit applies between October 1 and March 31 when the mean daily flow rate in San Diego Creek at Campus Drive is less than 50 cubic feet per second (cfs), and when the mean daily flow rate in San Diego Creek at Campus drive is more than 50 cubic feet per second (cfs), but not as the result of precipitation.

³Assumes 67 non-storm days

<u>Total Nitrogen¹—Summer² (pounds/season)</u>	<u>Total Nitrogen¹—Winter^{3, 4, 5} (pounds/season)</u>	<u>Total Phosphorous—Annual (pounds/year)</u>
<u>16,628</u>	<u>55,442</u>	<u>2,960</u>

Table B-1 Notes:

- ~~1. Total Nitrogen = NO₃ + NH₃ + organic N~~
- ~~2. Summer season: April through September~~
- ~~3. Winter season: October through March~~
- ~~4. The WQBEL for winter Total Nitrogen applies between October 1 and March 31 when the mean daily flow rate in San Diego Creek at Campus Drive is less than 50 cubic feet per second (“cfs”) and when the mean daily flow rate in San Diego Creek at Campus Drive is above 50 cfs but not as the result of precipitation.~~
- ~~5.1. Assumes 67 non-storm days.~~

B. Reach 2, San Diego Creek: 5.5 pounds per day Total Nitrogen

Table B-2: Nutrient WQBELs for Reach 2 of San Diego Creek

<u>Nutrient TMDL</u>	<u>2012 Allocation^[1]</u>
<u>Urban Runoff WLA</u>	<u>5.5 lbs/day TN</u>

¹Total nitrogen loading limit applies when the mean daily flow rate at San Diego Creek at Culver Drive is below 25 cfs, and when the mean daily flow rate in San Diego Creek at Culver Drive is above 25 cfs, but not as the result of precipitation.

- ~~1. This WQBEL for Total Nitrogen applies when the mean daily flow rate in San Diego Creek at Culver Drive is below 25-cfs and when~~

~~the mean daily flow rate in San Diego Creek at Culver Drive is above 25 cfs but not as the result of precipitation.~~

II. Monitoring and Reporting Requirements

a. Monitoring

Responsible Permittees shall conduct monitoring consistent with the requirements of the TMDL. Such monitoring can be integrated into the overall monitoring requirements specified in Attachment A, Monitoring and Reporting Program.

b. Reporting

Responsible Permittees shall submit reports consistent with the requirements of the TMDL and include recommendations for revisions to the TMDL, if appropriate.

Appendix C

Total Maximum Daily Loads for Fecal Coliform in Newport Bay
(Resolution No. 99-10)
~~Water Quality-Based Effluent Limits for Fecal Coliform in Newport Bay~~

~~Appendix C incorporates the waste load allocations (“WLAs”) [expressed as Water Quality Based Effluent Limits (“WQBELs”)] assigned to urban runoff as identified in the Total Maximum Daily Load for Fecal Coliform in Newport Bay (Fecal Coliform TMDL). The WQBELs are consistent with the assumptions and requirements of TMDL implementation requirements and WLAs assigned to discharges from the Co-permittees’ MS4s. Responsible Co-Permittees are identified in Appendix A. The following water quality-based effluent limits (“WQBELs”) apply to discharges of urban runoff from MS4s owned or controlled by those Co-permittees discharging into Newport Bay. The WQBELs in this Appendix are based on the waste load allocations in the Fecal Coliform TMDL. Compliance with the WQBELs in this Appendix will be determined according to methods described in Section XVIII of Order No. R8-2015-0001.~~

The Fecal Coliform TMDL ~~was has been~~ approved by ~~the~~ Santa Ana Regional Water Quality Control Board, the State Water Resources Control Board, the Office of Administrative Law (“OAL”) and USEPA ~~as follows:~~

- ~~Regional Board Adoption: April 9, 1999~~
- ~~State Board Adoption: TBD [Regional Board to confirm]~~
- ~~OAL Approval: December 24, 1999 [Regional Board to confirm]~~
- ~~USEPA Approval: February 28, 2000 [Regional Board to confirm]~~

~~The Fecal Coliform TMDL was adopted by the Santa Ana Regional Water Quality Control Board in Resolution No. 99-10. The TMDL was approved by OAL on December 24, 1999 and February 28, 2000. Unless indicated otherwise below, the compliance deadlines that were adopted as part of this TMDL have passed and the following WQBELs are effective on the effective date of this Order.~~

I. Final WQBELs

- A. The responsible Co-permittees must comply with the methods described in Section XVIII of Order No. R8-2015-0001 to demonstrate compliance with the following final WQBEL to protect the water-contact recreation (REC-1) beneficial use:

Table C-1: Final WQBEL to protect REC-1

<u>Fecal Coliform TMDL</u>	<u>As soon as possible, but no later than December 30, 2014</u>
----------------------------	---

Urban Runoff Waste Load Allocation for Fecal Coliform (REC-1)	5-Sample/30-day Geometric Mean less than 200 organisms/100mL, and not more than 10% of the samples exceed 400 organisms/100mL for any 30-day period¹.
--	---

~~1 – The geometric mean shall be calculated based on a minimum of 5 representative samples taken over a 30-day period.~~

WQBEL to protect REC-1	Compliance Date
5-sample/30-days geometric mean less than 200 organisms/100mL and not more than 10% of the samples exceed 400 organisms/100mL for any 30-day period¹.	As soon as possible but no later than December 31, 2014.

Table C-1 Notes:

- ~~1. The geometric mean shall be calculated based on a minimum of 5 representative samples of urban runoff taken over a 30-day period.~~
- B. The responsible Co-permittees must comply with the methods described in Section XVIII of Order No. R8-2015-0001 to demonstrate compliance with the following final WQBEL to protect the shell fish harvesting (SHEL) beneficial use:

Table C-2: Final WQBEL to protect SHEL

Fecal Coliform TMDL	As soon as possible, but no later than December 30, 2019
Urban Runoff (SHEL) Waste Load Allocation for Fecal Coliform	Monthly Median less than 14 MPN/ 100mL, and not more than 10% of the samples exceed 43 MPN/ 100mL.

WQBEL to protect REC-1	Compliance Date
Monthly median less than 14 MPN/100mL and not more than 10% of the samples exceed 43 MPN/100mL	As soon as possible but no later than December 31, 2019.

II. Monitoring and Reporting Requirements

a. Monitoring

Responsible Permittees shall conduct monitoring consistent with the requirements of the TMDL. Such monitoring can be integrated into the overall monitoring requirements specified in Attachment A, Monitoring and Reporting Program.

b. Reporting

Responsible Permittees shall submit reports consistent with the requirements of the TMDL and include recommendations for revisions to the TMDL, if appropriate

- ~~C. The responsible Co-permittees must provide an updated TMDL report for both the final WQBELs to protect REC-1 and SHEL no later than 60 days from the effective date of this Order. The TMDL report must:~~
- ~~1. Integrate and evaluate the results of the studies performed as part of Tasks 1 through 7 of the Fecal Coliform TMDL implementation plan (Table 5-9g of the Basin Plan);~~
 - ~~2. Include recommendations for revisions to the TMDL if appropriate; and~~
 - ~~3. Include recommendations for interim WQBELs and related compliance schedules.~~

Appendix D

Water Quality-Based Effluent Limits for Sediment in Upper Newport Bay

The following water quality-based effluent limits ("WQBELs") apply to discharges of urban runoff from MS4s owned or controlled by those Co-permittees discharging into Upper Newport Bay. The WQBELs in this Appendix are based on the requirements in the Sediment TMDL, exclusive of the load allocations. Compliance with the WQBELs in this Appendix will be determined according to methods described in Section XVIII of Order No. R8-2015-0001.

The Sediment TMDL has been approved by Santa Ana Regional Water Quality Control Board, the State Water Resources Control Board, the Office of Administrative Law ("OAL") and USEPA. The Sediment TMDL was adopted by the Santa Ana Regional Water Quality Control Board in Resolution No. 98-101. The TMDL was approved by OAL on February 2, 1999 and April 16, 1999. The compliance deadlines that were adopted as part of this TMDL have passed and the following WQBELs are effective on the effective date of this Order.

I. Final WQBELs

The responsible Co-permittees must comply with the methods described in Section XVIII of Order No. R8-2015-0001 to demonstrate compliance with the following final WQBELs:

- A. Discharges of urban runoff must not transport more than 2,500 tons of sediment per year, calculated as a 10-year running average, into Newport Bay from urban areas.
- B. Discharges of urban runoff must not transport more than 2,500 tons of sediment per year, calculated as a 10-year running average, into San Diego Creek and its tributaries.
- C. Sediment in discharges of urban runoff must not alter the distribution of habitat types in the 700-acre Upper Newport Bay Ecological Reserve, in Table D-1 below or as revised by the Department of Fish and Wildlife, by more than 1%.

Table D-1: Baseline Distribution of Habitat Types in the Upper Newport Bay Ecological Reserve

Habitat Type	Acres	Permissible Change (acres)
Marine-aquatic	210	2.1

Mudflat	214	2.1
Salt marsh	277	2.8
Riparian	31	3.1

~~D. The depths of the Unit 1 and 2 Sediment Basins (a.k.a. Unit I/III and Unit II) must be maintained at a minimum of 7 feet below mean sea level.~~

~~E. Bathymetric and vegetation surveys must be performed no less than once every three years, or as agreed to by the Executive Officer, in a manner to determine compliance with the above requirements for sediment.~~

~~1. Bathymetric and vegetation surveys must be performed within one year following any monitoring period in which monitoring at San Diego Creek at Jamboree Boulevard and Campus Drive (Site ID: SDMF05) shows that more than 250,000 tons of sediment were discharged into Newport Bay.~~

~~2. Bathymetric and vegetation surveys must be conducted by July 1st of each year that they are performed, and must be submitted by December 31 of the same year.~~

~~F. All in-channel and foothill sediment-control basins tributary to Newport Bay must have an available sediment capacity that is 50% or more of each facilities' design capacity prior to November 15th of each year.~~

Appendix E

Total Maximum Daily Loads for Organochlorine Compounds in the San Diego Creek and Newport Bay Watersheds (Resolution No. R8-2011-0037)
~~Water Quality-Based Effluent Limits for Organochlorine Compounds in Newport Bay and San Diego Creek~~

~~Appendix E incorporates the waste load allocations (“WLAs”) [expressed as Water Quality Based Effluent Limits (“WQBELs”)] assigned to urban runoff as identified in the Total Maximum Daily Loads for Organochlorine Compounds in the San Diego Creek and Newport Bay Watersheds (OC Compounds TMDL). The WQBELs are consistent with the assumptions and requirements of TMDL implementation requirements and WLAs assigned to discharges from the Co-permittees’ MS4s. Responsible Co-Permittees are identified in Appendix A.~~

~~The following water quality-based effluent limits (“WQBELs”) apply to discharges of urban runoff from MS4s owned or controlled by those Co-permittees discharging into Newport Bay and San Diego Creek as indicated. The WQBELs in this Appendix are based on the waste load allocations (“WLAs”) in the Organochlorine Compound TMDL. Compliance with the WQBELs in this Appendix will be determined according to methods described in Section XVIII of Order No. R8-2015-0001. The compliance deadlines for these WQBELs have not yet passed.~~

The Organochlorine OC Compounds TMDL ~~that the following WQBELs are based on~~ has been ~~was~~ approved by the Santa Ana Regional Water Quality Control Board, the State Water Resources Control Board, the Office of Administrative Law (“OAL”) and USEPA as follows:

- Regional Board Adoption July 15, 2011
- State Board Adoption: October 16, 2012
- OAL Approval: July 26, 2013
- USEPA Approval: November 12, 2013

~~The Organochlorine Compound TMDL was adopted by the Santa Ana Regional Water Quality Control Board in Resolution No. R8-2011-0037 (modifying Resolution No. R8-2007-0024). The TMDL was approved by OAL on July 26, 2013 and by USEPA on November 12, 2013. Chlordane, dieldrin, DDT and PCBs are part of the earlier USEPA-promulgated TMDL whose WLAs were superseded by the Regional Board’s TMDL. As a result, the pollutant-water body WLAs established by USEPA’s TMDL do not appear below.~~

I. WQBELs

~~I. A.~~ A. The responsible Co-permittees must comply with the methods described in Section XVIII of Order No. R8-2015-0001 to demonstrate

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compliance with the final WQBELs in Table E-1. These WQBELs must be met as soon as possible but not later than December 31, 2020:

Table E-1: WQBELs by Receiving Water for Organochlorine Compounds

Receiving Water	Waste Load Allocation WQBEL (g/year)			
	Total DDT	Chlordane	Total PCB	Toxaphene
San Diego Creek	128.3	--	--	1.9
Upper Newport Bay	51.8	30.1	29.8	n/a
Lower Newport Bay	19.1	11.0	78.1	--

II. Monitoring and Reporting Requirements

a. Monitoring

Responsible Permittees shall conduct monitoring consistent with the requirements of the TMDL. Such monitoring can be integrated into the overall monitoring requirements specified in Attachment A, Monitoring and Reporting Program.

b. Reporting

Responsible Permittees shall submit reports consistent with the requirements of the TMDL and include recommendations for revisions to the TMDL, if appropriate.

Appendix F

Total Maximum Daily Loads for Diazinon and Chlorpyrifos in the San Diego Creek and Newport Bay Watersheds (Resolution No. R8-2003-0039)

Water Quality-Based Effluent Limits for the Diazinon & Chlorpyrifos TMDL for Upper Newport Bay and San Diego Creek

Appendix F incorporates the waste load allocations (“WLAs”) [expressed as Water Quality Based Effluent Limits (“WQBELs”)] assigned to urban runoff as identified in the Total Maximum Daily Load for Diazinon and Chlorpyrifos in the San Diego Creek and Newport Bay Watersheds (Diazinon and Chlorpyrifos TMDL). The WQBELs are consistent with the assumptions and requirements of TMDL implementation requirements and WLAs assigned to discharges from the Co-permittees’ MS4s Responsible Co-Permittees are identified in Appendix A.

The following water quality-based effluent limits (“WQBELs”) apply to discharges of urban runoff from MS4s owned or controlled by those Co-permittees discharging into Upper Newport Bay or San Diego Creek as indicated. The WQBELs in this Appendix are based on the waste load allocations in the Diazinon & Chlorpyrifos TMDL.

Compliance with the WQBELs in this Appendix will be determined according to methods described in Section XVIII or Order No. R8-2015-0001.

The Diazinon ~~and~~ Chlorpyrifos TMDL ~~has been~~was approved by Santa Ana Regional Water Quality Control Board, the State Water Resources Control Board, the Office of Administrative Law (“OAL”) and USEPA as follows:

- Regional Board Adoption: April 4, 2003
- State Board Adoption: [Regional Board to confirm]
- OAL Approval: January 5, 2004
- USEPA Approval: [Regional Board to confirm]

The Diazinon & Chlorpyrifos TMDL was adopted by the Santa Ana Regional Water Quality Control Board in Resolution No. R8-2003-0039. The TMDL was approved by OAL on January 5, 2004 and February 13, 2004. The compliance deadline that was adopted as part of this TMDL has passed and the following WQBELs are effective on the effective date of this Order.

I. Final WQBELs

The responsible Co-permittees must comply with the methods described in Section XVIII of Order No. R8-2015-0001 to demonstrate compliance with the final WQBELs in Table F-1:

Table F-1: WQBELs for Chlorpyrifos and Diazinon in Upper Newport Bay and San Diego Creek

Receiving Water	Chlorpyrifos (ng/L)		Diazinon (ng/L)	
	Acute Concentration (24-hour average)	Chronic Concentration (4-consecutive day average)	Acute Concentration (24-hour average)	Chronic Concentration (4-consecutive day average)
Upper Newport Bay	18	8.1	--	--
San Diego Creek	18	12.6	72	45

II. Monitoring and Reporting Requirements

a. Monitoring

Responsible Permittees shall conduct monitoring consistent with the requirements of the TMDL. Such monitoring can be integrated into the overall monitoring requirements specified in Attachment A, Monitoring and Reporting Program.

b. Reporting

Responsible Permittees shall submit reports consistent with the requirements of the TMDL and include recommendations for revisions to the TMDL, if appropriate.

Appendix G

Total Maximum Daily Load for Toxics in San Diego Creek and Newport Bay Watersheds

(Resolution No. XX)

Water Quality-Based Effluent Limits for Toxic Pollutants (Metals and Selenium) into San Diego Creek and Newport Bay

Appendix G incorporates the waste load allocations ("WLAs") [expressed as Water Quality Based Effluent Limits ("WQBELs")] assigned to urban runoff as identified in the Total Maximum Daily Loads for Toxics in the San Diego Creek and Newport Bay Watershed (Toxics TMDL). The WQBELs are consistent with the assumptions and requirements of TMDL implementation requirements and WLAs assigned to discharges from the Co-permittees' MS4s. Responsible Co-Permittees are identified in Appendix A. The following water quality-based effluent limits ("WQBELs") apply to discharges of urban runoff from MS4s owned or controlled by those Co-permittees discharging into San Diego Creek and Newport Bay as indicated.

The WQBELs in this Appendix are based on the waste load allocations in the Toxics Pollutants (Metals and Selenium) TMDL. The TMDL was promulgated by USEPA on June 14, 2002. Several pollutant-waterbody combinations in the Toxics TMDL have been subsequently superseded by Basin Plan Amendments adopted by the Regional Board (diazinon and chlorpyrifos; organochlorinated compounds). Therefore, the WLAs for the Toxics TMDL are limited to the pollutants identified in this Appendix G. Other Basin Plan Amendments, such as selenium, are currently under development and are anticipated to be adopted during the term of this Order. Once any additional Basin Plan Amendments that supersede WLAs contained in the Toxics TMDL are effective, this Order will be re-opened and modified accordingly.

Compliance with the WQBELs in this Appendix will be determined according to methods described in Section XVIII of Order No. R8-2015-0001.

Compliance with the WQBELs in this Appendix will be determined according to methods developed pursuant to Subsection II.B. of Monitoring and Reporting Program R8-2015-0001. Compliance deadlines for the WQBELs in this Appendix were not established; these WQBELs are effective on the effective date of this Order.

I. Final WQBELs

The responsible Co-permittees must comply with the methods described in Section XVIII of Order No. R8-2015-0001 to demonstrate compliance with the final WQBELs in the following Tables G-1, G-2, G-3, and G-4.

Table G-1: ~~Concentration-based~~ WQBELs for Metals in San Diego Creek at Campus Drive¹

	Base Flow (flow < 20-cfs; hardness = 400 mg/L)		Small Flows (21 ≤ flow ≤ 181-cfs; hardness = 322 mg/L)		Medium Flows (182 ≤ flow ≤ 815- cfs; hardness = 236 mg/L)		Large Flows (flow > 815-cfs; hardness = 197 mg/L)
	Acute (µg/L)	Chronic (µg/L)	Acute (µg/L)	Chronic (µg/L)	Acute (µg/L)	Chronic (mg/L)	Acute (µg/L)
Cadmium, dissolved	19.1	6.2	5.3 15.1	4.5 4.3	4.2 10.8	4.0 8.2	8.9
Copper, dissolved	50	29.3	40	24.3	30.2	18.7	25.5
Lead, dissolved	281	10.9	224	8.8	162	6.3	134
Zinc, dissolved	379	382	316	318	243	224	208

1. Actual ambient hardness must be determined for each monitoring sample regardless of which flow condition exists.

Table G-2: WQBELs for ~~Discharges of~~ Metals into Newport Bay

	Acute Concentrations (24-hour average) (µg/L)	Chronic Concentrations (4 consecutive day/96-hour average) (µg/L)	Mass-based Loads (pounds/year)
Cadmium, dissolved ¹	42	9.3	9,589
Copper, dissolved	4.8	3.1	3,043
Lead, dissolved	210	8.1	17,638
Zinc, dissolved	90	81	174,057

1. Values for dissolved cadmium apply only to discharges to Upper Newport Bay

Table G-3: WQBELs for ~~Discharges into the~~ Rhine Channel

Mercury (kg/year)	Chromium (kg/year)
0.0171	5.66

Table G-4: WQBELs for Discharges of Selenium in San Diego Creek at Campus Drive

	Base Flows Flow < 20-cfs	Small Flows (21 ≤ flow ≤ 181- cfs)	Medium Flows 182 ≤ flow ≤ 814-cfs)	Large Flows (flow > 814-cfs)	Annual Total ¹
Maximum Permissible Annual Load (pounds/year)	0.4	1.0	1.0	5.3	7.6

1. ~~4-~~ Sum of loading capacity for San Diego Creek only (based on 5 µg/L applied to all flow tiers)

2. ~~Selenium TMDLs are currently under development for the Newport Bay watershed. Once adopted and effective the permit will be reopened to incorporate the revised WQBELs.~~

II. Monitoring and Reporting Requirements

a. Monitoring

Responsible Permittees shall conduct monitoring consistent with the requirements of the TMDL. Such monitoring can be integrated into the overall monitoring requirements specified in Attachment A, Monitoring and Reporting Program.

b. Reporting

Responsible Permittees shall submit reports consistent with the requirements of the TMDL and include recommendations for revisions to the TMDL, if appropriate.

Appendix H

Total Maximum Daily Loads for Metals in San Gabriel River Watershed
(Resolution No. ~~XX~~)
Water Quality-Based Effluent Limits for Coyote Creek

Appendix H incorporates the waste load allocations (“WLAs”) [expressed as Water Quality Based Effluent Limits (“WQBELs”)] assigned to urban runoff as identified in the Total Maximum Daily Loads for Metals in the San Gabriel River Watershed (San Gabriel River TMDLs). The WLAs apply to Coyote Creek, which discharges to the San Gabriel River. The WQBELs are consistent with the assumptions and requirements of TMDL implementation requirements and WLAs assigned to discharges from the Co-permittees’ MS4s Responsible Co-Permittees are identified in Appendix A. ~~The following water quality-based effluent limitations (“WQBELs”) apply to discharges of urban runoff from MS4’s owned or controlled by those Co-permittees discharging into Coyote Creek.~~

~~These WQBELs are based on the waste load allocations and requirements in the~~ The San Gabriel River Metals TMDL ~~was~~ promulgated by the USEPA on March 26, 2007. The Los Angeles Regional Water Quality Control Board adopted a Basin Plan Amendment to incorporate an implementation plan and compliance schedule for this TMDL.

Compliance with the WQBELs in this Appendix will be determined according to methods described in Section XVIII of Order No. R8-2015-0001. The Responsible Permittees shall comply with final WLAs by September 30, 2026.

~~Compliance with the WQBELs in this Appendix will be determined according to methods developed pursuant to Subsection II.B. of Monitoring and Reporting Program R8-2015-0001. Compliance deadlines for the WBELs in this Appendix were not established; unless noted otherwise, these WQBELs are effective on the effective date of this Order.~~

I. WQBELs

The responsible Co-permittees must comply with the methods described in Section XVIII of Order No. R8-2015-0001 to demonstrate compliance with the final WQBELs in the following Tables:

Table H-1: WQBELs for Discharges in Coyote Creek

	<u>Daily Maximum (kg/day)</u>		
	Copper, total recoverable (kg/day)	Lead, total recoverable (kg/day)	Zinc, total recoverable (kg/day)

Dry Weather ¹	0.941	--	--
Wet Weather ²	24.71 µg/L x daily storm volume (L) in liters	96.99 µg/L x daily storm volume (L) in liters	144.57 µg/L x daily storm volume (L) in liters

1. Calculated based upon the median flow at LACDPW gauge station F354-R of 19 cfs multiplied by the numeric target of 20 µg/L minus direct air deposition of 0.002 kg/day.
2. In Coyote Creek, wet weather TMDLs apply when the maximum daily flow in the creek is equal to or greater than 156 cfs measured at LACDPW gauge station F354-R, located at the bottom of the creek, just above the Long Beach WRP.

Noted for Table H-1:

1. These WLA are calculated based on the median flow at the U.S. Army Corps of Engineers' stream gauge station F-354-R of 19 cfs multiplied by the target concentration of 20 µg/L, minus direct air deposition of 0.002 kg/day.
2. Wet weather WQBELs apply when the maximum daily flow in the creek is equal or greater than 156 cfs, as measured F-354-R below Spring Street in the City of Long Beach.

II. Monitoring and Reporting Requirements

a. Monitoring

Responsible Permittees shall conduct monitoring consistent with the requirements of the TMDL. Such monitoring can be integrated into the overall monitoring requirements specified in Attachment A, Monitoring and Reporting Program.

b. Reporting

Responsible Permittees shall submit reports consistent with the requirements of the TMDL and include recommendations for revisions to the TMDL, if appropriate.

I. Specific Monitoring Requirements

- A. Runoff samples and flow volumes must be taken at the Los Angeles County Department of Public Work's storm water mass emission station at Coyote Creek (Monitoring Station S13)⁴.
- B. The daily storm volume to be sampled must be generated by a rain event that produces a peak flow that is equal to or greater than 156 cfs.
- C. Responsible Co-permittees will develop a plan for sampling, analysis, and reporting whether or not discharges are exceeding the Waste Load Allocations in this Appendix according to Subsection II.B.2. of Monitoring and Reporting Program R8-2015-0001.

⁴ Coyote Creek Monitoring Station S13 is located at the U.S. Army Corps of Engineers stream gauge station F-354-R below Spring Street in Long Beach.

Attachment A

**STATE OF CALIFORNIA
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SANTA ANA REGION**

**3737 Main Street, Suite 500, Riverside, CA 92501-3348
(951) 782-4130 • Fax (951) 781-6288
<http://www.waterboards.ca.gov/santaana>**

MONITORING AND REPORTING PROGRAM NO. R8-2015-0001

for

**Order No. R8-2015-0001
NPDES Permit No. CAS618030**

**Orange County Flood Control District, the County of Orange
And
The Incorporated Cities therein within the Santa Ana Region
Area-wide Urban Storm Water Runoff**

January XX, 2015

Revision No.	Date Requested	Approval Date

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I. General

- A. The requirements of this Monitoring and Reporting Program (“MRP”), as presented or later amended, may be met through the Co-permittees’ participation in state-wide, national, regional or local monitoring programs, subject to the discretion of the Executive Officer.
- B. The Executive Officer is authorized to review and approve proposed changes to this MRP. The Executive Officer will provide a minimum of 30-days for public review prior to approving any proposed changes.
- C. To avoid duplication of effort, monitoring work performed by parties other than the Co-permittees may be substituted for work described in the MRP provided that the work meets the requirements of the MRP and Order No. R8-2015-0001.
- D. The Co-permittees may supplement monitoring data that is required to be collected by this MRP and subsequent amendments with other valid data sources for the purpose of improving any related analysis.
- E. Except for Priority Toxic Pollutants identified in the California Toxics Rule, all sample collection, handling, storage, and analysis must be completed in conformance with 40 CFR Part 136; with adopted guidance developed by the State Water Resources Control Board pursuant to California Water Code Section 13383.5; or with other methods satisfactory to the Executive Officer.
- F. Unless otherwise specified differently, 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 (State Implementation Plan or “SIP”) must be used for the analyses of all samples.
- G. The term “acute”, as used in Order No R8-2015-0001 and the MRP, shall have the same meaning as “criterion maximum concentration” or “CMC” (24-hour average concentration) unless specified otherwise.
- H. The term “chronic”, as used in Order No R8-2015-0001 and the MRP, shall have the same meaning as “criterion continuous concentration” or “CCC” (4-day or 96-hour average concentration) unless specified otherwise.
- I. Each Co-permittee is responsible for the accuracy and completeness of the monitoring program(s) and related products for the watershed(s) to which the Co-permittee discharges. However, the Principal Permittee may develop and implement those programs and submit related work products on behalf of the Co-permittees.
- J. All reports submitted to the Regional Board pursuant to the requirements of Order No. R8-2015-0001 must include a statement identifying the provision(s) for which the report is intended to comply with.
- K. Unless paper copies are expressly requested by Regional Board staff, all reports and submittals must be provided in an electronic format consistent with written guidance provided by the Executive Officer.

II. Water Quality Monitoring

A. Goals

The Co-permittees must develop and implement an effective water quality monitoring program to achieve the following goals:

1. To develop useful information in support an effective program to control the discharge of pollutants in urban runoff.
2. To characterize the condition of water quality in receiving waters with respect to water quality standards; identify trends; and identify pollutants found in urban runoff that may adversely affect the beneficial uses of the receiving waters.
3. To characterize pollutant loads or concentrations in discharges from the MS4s relative to applicable waste load allocationswater quality based effluent limits and identify and quantify significant water quality problems related to urban runoff.
4. To identify and quantify other sources of pollutants to the maximum extent possible (e.g. atmospheric deposition, legacy pollutants, etc.) that may adversely affect the beneficial uses of the receiving waters.
5. To identify the sources of, and to prohibit illicit discharges.
6. To identify those waters, which without additional action to control pollution from urban runoff, cannot reasonably be expected to attain or maintain applicable water quality standards necessary to sustain the beneficial uses designated in the Basin Plan.
7. To objectively evaluate the effectiveness of BMPs implemented according to the Co-permittees' related programs, including, to the extent possible, quantifying the reasonably achievable reductions of pollutants in discharges or the receiving waters that are attributable to the BMP(s).
8. To evaluate and describe the costs and benefits of BMPs, implemented according to the Co-permittees' related programs, to the public and stakeholders.

B. Water Quality Monitoring Plan Development

1. The Co-permittees must prepare a draft Water Quality Monitoring Plan ("Plan") according to the goals, requirements, and specifications described in this Section (Section II.), State Board Resolution No. 2012-0012, and Order No. R8-2015-0001. To the extent practical, the Plan should be comprised of a single document, however, it may be composed of different components subject to the Co-permittees' discretion.
 - a. The initial draft Plan must be submitted for approval to the Executive Officer within 6 months of the adoption of Order No. R8-2015-0001.
 - b. The Executive Officer will provide a minimum public review period of 30-days prior to approving the Plan.

2. The Water Quality Monitoring Plan must be designed to objectively evaluate the effectiveness of the best management practices being implemented in the watersheds to meet the respective water quality standards ~~or waste load allocations~~.
3. The Water Quality Monitoring Plan must describe processes and a schedule for determining and reporting compliance with each of the Water Quality-Based Effluent Limits (“WQBELs”) and requirements in Appendices B through H of Order No. R8-2015-0001 and for identifying and reporting exceedances of applicable water quality standards. The Plan must include cycles of monitoring, analysis, and reporting for all of the ~~WQBELs/WLAs~~ and ~~that addresses~~ applicable water quality standards.
 - a. A complete cycle must be as short as practicable, comply with applicable TMDL deadlines and assessment periods found in Chapter 5 of the Basin Plan, ~~or otherwise must and should~~ not exceed once every 5 years.
 - b. ~~A complete cycle~~ ~~The schedule for determining compliance~~ should consider the availability of data and a reasonable period after which BMPs may affect water quality.
 - c. Any required data collection and analyses must comply with those specified in the relevant TMDL, including averaging and assessment periods, found in Chapter 5 of the Basin Plan
4. The Water Quality Monitoring Plan must also include, at a minimum, descriptions of the locations of ID/IC, receiving, and outfall monitoring locations; an explanation for the locations’ selection; the sampling frequencies; parameters to be sampled; descriptions of sampling methods; and the data analysis and reporting schedule (see Subsection K below).
5. The Water Quality Monitoring Plan must be written in an instructive manner for the benefit of persons responsible for its implementation.
6. The Water Quality Monitoring Plan must include a quality assurance program plan (“QAPP”) ~~for data which is collected to determine compliance with water quality standards or waste load allocations~~.
 - a. The QAPP must be prepared by qualified persons in conformance with the State’s SWAMP Quality Assurance Program Plan¹, as amended or revised, and with USEPA’s *Guidance for Quality Assurance Project Plans*² and *Requirements for Quality Assurance Project Plans*³ as appropriate.
 - b. Data collected according to the QAPP, including laboratory and quality control results, must be delivered using California Environmental Data Exchange Network (“CEDEN”) data templates⁴.

¹ Available at: http://www.waterboards.ca.gov/water_issues/programs/swamp/tools.shtml#qa

² USEPA, *Guidance for Quality Assurance Project Plans*, EPA QA/G-5, December 2002.

³ USEPA, *Requirements for Quality Assurance Project Plans*, EPA QA/R-5, March 2001.

⁴ CEDEN data templates and documentation are available at : <http://ceden.org>

- c. The QAPP must include quality control and sample handling guidelines against which collected data must be verified; where the guidelines are not met, the affected data must be identified as such using appropriate verification codes.
7. Until the ~~initial~~ draft Water Quality Monitoring Plan is approved, the Co-permittees must continue monitoring as described in the 2013-2014 Annual Progress Report. Changes to the monitoring are prohibited except with the approval of the Executive Officer.
8. On an annual basis, ~~t~~The Co-permittees must evaluate the Water Quality Monitoring Plan and propose subsequent changes as needed at least annually. Proposed changes must be submitted by August 1 of each year following the approval of the ~~initial~~ Water Quality Monitoring Plan. The ~~Co-permittees must submit subsequent~~ proposed changes to the Plan must befor approved by the Executive Officer⁵. ~~If no changes are proposed, the Executive Officer must be notified so in writing.~~
9. Except for inconsequential grammatical or technical corrections, the Water Quality Monitoring Plan may be amended by the Co-permittees only with the approval of the Executive Officer.
10. The Co-permittees must fully implement the Water Quality Monitoring Plan and any subsequent changes as approved by the Executive Officer.
11. The Executive Officer will allow a minimum of 30-days for public review and comment before approving a Water Quality Monitoring Plan or any proposed changes.
12. The approved Water Quality Monitoring Plan, as amended, must be posted for public access at ocwatersheds.com or using other media acceptable to the Executive Officer. The posted Plan must be full, true, and accurate.

C. General Water Quality Monitoring Requirements

1. The sampling method and practice must minimize bias.
2. Water quality parameters that are tested using valid field instruments are not required to be analyzed by a laboratory.
 3. The Co-permittees must employ sample collection methods that support regional comparisons of data, unless site conditions make alternate methods necessary.
 4. For each monitoring location and event, the Co-permittees must record observed conditions or circumstances that may influence monitoring results or affect conclusions made from the monitoring data.
 5. Wet-weather sampling events ~~may not be consecutive and~~ must be separated by a minimum of two (2) days of dry weather (no precipitation).
 6. Locations and frequencies of monitoring performed to meet the objectives of to determine compliance with the waste load allocations in Appendices

⁵ The Co-permittees are not prohibited from proposing changes earlier or more frequently than required particularly where approval is needed to coincide with upcoming monitoring efforts.

B through H of Order No. R8-2015-0001 must be consistent with these the requirements specified in the relevant TMDL.

D. Outfall Monitoring Requirements

The water quality monitoring program must include representative monitoring of urban runoff from MS4 outfalls under storm and dry-weather conditions.

1. The Co-permittees must identify representative outfall monitoring locations in the permit area.
2. Each outfall monitoring location must be sampled every two years on an alternating basis; some sites may be sampled every odd year while the remainder will be sampled every even year. The nature, number and distribution of samples are described below in this Section.
3. Stream gauges, or equally-effective methods, must be deployed during sampling events for the purpose of estimating mass loading of pollutants at each of the monitoring locations and for calculating flow-weighted event mean concentrations.
4. The Co-permittees must sample urban runoff produced by three separate storm events (“wet-weather sample”) per season at each outfall monitoring location. The Executive Officer may allow exceptions to sampling three storm events when climatic conditions create good cause.
 - a. The Co-permittees must make a reasonable effort so that one of the three sampled storm events is of the first storm water runoff of each season from each outfall monitoring location designated to be sampled during the applicable even or odd monitoring year.
 - i. A sample for this event must be collected ~~from each outfall monitoring location during the applicable even or odd monitoring year. Each sample must that~~ represents the “first flush” of the storm and consist of a composite of discrete samples collected in the first hour of the storm.
 - ii. A ~~second subsequent composite storm water~~ sample for this event must be collected after the storm’s first hour, starting two hours after completion of the first flush sampling; ~~–. †~~ This sample must consist of a composite of discrete storm water samples collected every two (2) hours during a 96-hour period, or until storm flow is insufficient to allow continued storm water sampling.
 - iii. ~~Except for the “first flush” samples, discrete samples must be composited into a single sample.~~ After the first flush composite sampling is completed, the Permittees may adjust the compositing schedule based on storm conditions observed.
 - b. For storm events occurring after the first storm event of the season, a minimum of three (3) composite samples must be collected at each outfall monitoring location during the applicable even or odd monitoring year as follows.

- d. Additional parameters that are known or suspected to contribute to the impairment of the beneficial uses of the receiving waters must also be tested for at the direction of the Executive Officer.
- e. The list of parameters in Table 1 are subject to change, subject to the approval of the Executive Officer and a demonstration of good cause by the Co-permittees. Modifications to the list of parameters in Table 1 may occur for individual monitoring sites or from storm event sampling or dry weather sampling or both based on the supporting technical justification.

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Table 1: Initial Outfall Monitoring Parameters

Parameter		Wet-weather samples	Dry-weather samples	Sediment samples
Nutrients	Nitrate plus nitrite	X	X	
	Total ammonia	X	X	
	Total Kjeldahl nitrogen	X	X	
	Total phosphate	X	X	
	Orthophosphate	X	X	
Dissolved organic carbon		X		
Total organic carbon		X	X	X
Total suspended solids		X	X	
Volatile suspended solids		X	X	
Chloride		X	X	X
Sulfate		X	X	X
Turbidity		X	X	
pH		X	X	X
Oil and grease			X	
Temperature		X	X	
Dissolved oxygen		X	X	
Electrical conductivity		X	X	
Hardness		X	X	
Particle size distribution				X
Neonicotinoids		X	X	X
Total and dissolved heavy metals	Cadmium	X	X	X
	Chromium	X	X	X
	Copper	X	X	X
	Lead	X	X	X
	Mercury	X	X	X
	Nickel	X	X	X
	Selenium	X	X	X
	Silver	X	X	X
	Zinc	X	X	X
Organo-phosphate pesticides	Chlorpyrifos	X		
	Diazinon	X		

	Dimethoate	X		
	Malathion	X		
Bacterial indicators	Total coliform	X	X	
	Fecal coliform	X	X	
	Enterococcus	X	X	

E. Receiving Waters Monitoring Requirements

The Water Quality Monitoring Program must include monitoring in the receiving waters to which the outfalls, that are monitored according to Section II.C. (above), discharge.

1. Each receiving water monitoring location must be sampled every two years on an alternating basis; some sites may be sampled every odd year while the remainder will be sampled every even year. The nature, number and distribution of samples are described below ~~in this Section~~.
 - a. Twice each year on samples taken from monitoring locations during the applicable even- or odd-year in Huntington Harbour, East Garden Grove-Wintersburg Tide Gate, Bolsa Chica and Talbert Marsh stations.
 - b. Four times per year, on a quarterly basis during the applicable even- or odd-year, on samples taken from monitoring locations in Upper and Lower Newport Bay.
- ~~1.~~
2. The Co-permittees must sample sediment under dry-weather conditions (“sediment sample”) quarterly (4 times per year) at the same frequencies included in Provision II.E.1 above during sampling years at receiving water monitoring locations to be specified in the Water Quality Monitoring Plan.
3. All sediment samples must be tested for the parameters indicated in Table 2 ~~above~~.
4. In addition to the parameters indicated in Table 2, samples must be tested in the manner as follows:
 - a. Sediment samples taken from Newport Bay must be tested for Total DDT, Dieldrin, Chlordane, PCBs, and Toxaphene.
 - b. Additional parameters that are known or suspected to contribute to the impairment of the beneficial uses of the receiving waters must also be tested for at the direction of the Executive Officer.
5. Samples taken for receiving water monitoring must be tested for the parameters shown in Table 2 ~~below~~ and in the following manner:
 - a. Measurements of specific conductance, pH, temperature, and dissolved oxygen must be taken of the water column’s profile at one-meter increments, from the water surface to the bottom of each monitoring location.

- b. Water samples that are tested for nutrients must be collected near the surface of the water at the monitoring location.
- c. Water samples that are tested for metals, pesticides, total and dissolved organic carbon, and toxicity must consist of a composite of samples collected at the monitoring location in a manner that represents the average concentrations in the water column.
- d. The list of parameters in Table 2 are subject to change, subject to the approval of the Executive Officer and a demonstration of good cause by the Co-permittees. Modifications to the list of parameters in Table 1 may occur for individual monitoring sites or from storm even sampling or dry weather sampling or both based on the supporting technical justification.

6. Wet-weather, dry-weather, and sediment samples taken from Upper Newport Bay must also be tested for selenium.
7. Sediment samples taken from representative receiving water monitoring locations must also be tested once each year for benthic infauna using methods in the Region 8 Storm Water Ambient Monitoring Program ("SWAMP") Field Operations Manual.
8. Sediment samples taken from monitoring locations in Upper Newport Bay must also be tested for organochlorine pesticides and PCBs.
9. Additional parameters that are known to contribute to the impairment of the beneficial uses of the receiving waters must also be tested for at the direction of the Executive Officer.

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Table 2: Initial Parameters for receiving water monitoring

Parameter		Wet-weather samples	Dry-weather samples	Sediment samples
Nutrients	Nitrate plus nitrite	X	X	
	Total ammonia	X	X	
	Total Kjeldahl nitrogen	X	X	
	Total phosphate	X	X	
	Orthophosphate	X	X	
Dissolved organic carbon			X	
Total organic carbon		X	X	X
Total suspended solids		X	X	
Volatile suspended solids		X	X	
Turbidity		X	X	
pH		X	X	X
Oil and grease			X	
Temperature		X	X	
Dissolved oxygen		X	X	
Electrical conductivity		X	X	
Hardness		X	X	
Particle size distribution				X
Total and dissolved heavy metals	Cadmium	X	X	X
	Chromium	X	X	X
	Copper	X	X	X
	Lead	X	X	X
	Mercury	X	X	X
	Nickel	X	X	X
	Silver	X	X	X
	Zinc	X	X	X
Organo-phosphate pesticides	Chlorpyrifos		X	X
	Diazinon		X	X
Bacterial indicators	Total <i>coliform</i>	X	X	
	Fecal <i>coliform</i>	X	X	
	<i>Enterococcus</i>	X	X	
Glyphosate		X	X	

F. Toxicity Testing

The water quality monitoring program must include toxicity testing, ~~analyzed using USEPA's Test of Significant Toxicity approach~~⁶.

1. Toxicity testing must be performed twice per season on *wet-weather samples* taken from representative outfall monitoring locations during the applicable even or odd monitoring year, using *Ceriodaphnia*, sea urchin fertilization, and mysid survival and growth as follows:
 - a. Toxicity testing must be performed on *wet-weather samples* representing the "first-flush" of the first storm of the season (See Provision II.D.4.a.i. above).
 - b. Toxicity testing must also be performed on *wet-weather samples* taken from the second and third sampling events that represent the 24-hour period following the "first-flush" (See Provision II.D.4.b. above).
2. Toxicity testing must be performed twice per season on *wet-weather samples* taken from receiving water monitoring locations during the applicable even or odd monitoring year, using sea urchin fertilization and mysid survival and growth.
3. Toxicity testing must be performed on *dry-weather samples* using *Ceriodaphnia*, *Selanastrum*, and *Hyalella azteca* as follows:
 - a. Twice each year on samples taken from monitoring locations during the applicable even or odd monitoring year in Carbon Creek, Coyote Creek, East Garden Grove-Wintersburg Channel, Bolsa Chica Channel, and Fullerton Creek.
 - b. Four times per year, on a quarterly basis during the even or odd monitoring year, on samples taken from monitoring locations in Peters Canyon Wash, San Diego Creek at Campus Drive and Harvard Avenue, and Santa Ana Delhi Channel.
4. Toxicity testing must be performed on representative *dry-weather samples* quarterly (four times per year) at the applicable even- and odd-year receiving water monitoring stations during the even or odd monitoring year on representative *dry-weather samples* in Newport Bay using sea urchin fertilization and/or mysid survival and growth. The sampling frequency will be consistent with Provision II.E.1 above.
5. Toxicity tests must be performed once annually on *sediment samples* collected from the applicable even- and odd-year receiving water monitoring sites. The Toxicity tests must be performed using a 10-day amphipod (*Eohaustorius estuaries*) survival test in solid-phase sediment and a 48-hour bivalve (*Mytilus galloprovincialis*) embryo development test at the sediment-water interface.
6. If Toxicity tests of *sediment samples* collected in two consecutive monitoring years (even or odd years) indicate zero percent survival of the

⁶-USEPA. 2010. *National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document*. EPA 833-R-10-003. US Environmental Protection Agency, Office of Wastewater Management, Washington D.C.

test organisms within the first hour, Toxicity Identification Evaluations must be performed on samples taken from those same locations during the third consecutive monitoring year of sampling.

- a. Toxicity Identification Evaluations must be performed in substantial conformance with published and generally-accepted methods⁷.

G. Benthic Invertebrate Taxonomy

1. The water quality monitoring program for harbors and estuaries must include annual (one time per year) identification of the taxonomy of benthic invertebrate communities. Taxonomy must be identified in those sediment samples taken from monitoring locations in waters of the U.S. during their scheduled even or odd sample years consistent with the receiving water monitoring requirements.

H. Illicit Discharges and Illicit Connections

The Water Quality Monitoring Plan must include monitoring to detect illicit discharges and illicit connections.

1. The Co-permittees must monitor a minimum of 30 monitoring stations annually during the dry season (May 1 through September 30).
2. Monitoring to detect illicit discharges and illicit connections must occur at the locations and frequencies specified in the Water Quality Monitoring Plan. Monitoring locations and frequencies are subject to change according to Provision II.B.6. above.
3. For each monitoring station, the Co-permittees must characterize the base line hydrology of the dry-weather discharges and the water quality parameters of the discharge. Based on this information, the Co-permittees must employ statistical process control methods to establish flow and water quality parameter thresholds that indicate when an illicit discharge may have occurred or when an illicit connection may exist. The Co-permittees must also use odor, color, clarity, unusual wildlife morbidity or mortality, sheen, staining, corrosion, unnatural deposits, and other subjective indicators to identify suspected illicit discharges or illicit connections
4. The Co-permittee that is the local jurisdiction must initiate (or cause to be initiated) an investigation to identify the known or most likely source(s) of the suspected illicit discharge or illicit connection (source investigation) where indicators developed pursuant to Provision II.H.3. above are found.
5. When dry-weather discharges are found at the monitoring locations, the discharge must be tested for the parameters specified in Table 3 below using the test method type(s) indicated.

⁷ E.g. U.S. EPA. 2007. Sediment Toxicity Identification Evaluation (TIE) Phases I, II, and III Guidance Document EPA/600/R-07/080, Office of Research and Development. Washington, DC. Available at: <http://www.epa.gov/nheerl/publications/files/Sediment TIE Guidance Document.pdf>

6. A source investigation must occur in substantial conformance with a common set of written techniques and procedures developed by the Co-permittees as part of the written program describe in Provision VII.D. of Order No. R8-2015-0001.
 - a. Except as provided for in Section XVII, indications of a potential illicit discharge or connection must be investigated within three (3) business days of the Co-permittee (including the Principal Permittee) becoming aware of it.
 - b. A source investigation may only be regarded as concluded after the cause(s) of the illicit discharge has been identified or additional monitoring fails to detect a subsequent exceedance of the same parameter(s) after 180 days. In the interim, the Co-permittee that is the local jurisdiction must put forth a good faith effort to identify the source(s) of a suspected illicit discharge or illicit connection.

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Table 3: Parameters for Illicit Discharge and Illicit Connection Discharge Monitoring

Parameter		Test Method Type	
		Field	Laboratory
Ammonia		X	
Nitrate		X	
Soluble phosphorus		X	
Total organic carbon ("TOC")			X
pH		X	
Oil and grease (if oil sheen is present) or Total petroleum hydrocarbons			X
Temperature		X	
Dissolved oxygen		X	
Electrical conductivity		X	
Hardness		X	
Dissolved Heavy Metals	Arsenic		X
	Cadmium		X
	Hexavalent chromium	X	
	Total chromium		X
	Copper	X	X
	Lead		X
	Mercury		X
	Nickel		X
	Selenium		X
	Silver		X
	Zinc		X
Organophosphate Pesticides	Diazinon		X
	Chlorpyrifos		X
	Malathion		X
	Dimethoate		X
Bacterial Indicators	Total coliform		X
	Fecal coliform		X
	<i>Enterococcus</i>		X
MBAS		X	

I. Bacterial Indicators

The Water Quality Monitoring Plan must include an effective monitoring program for bacterial indicators.

1. The Co-permittees must sample discharges from the outfalls/tributaries and ocean water in the surf zone 25-yards up-coast and 25-yards down-coast from those discharges on a weekly basis.
 - a. Samples must be measured for total coliform, fecal coliform, and *Enterococcus*.
 - b. At the time of sample collection, the Co-permittees must estimate the flow rate of the discharge from the respective outfall/tributary and measure and record the temperature of the discharge and of the surf zone down-coast from the outfall/tributary.
 - c. If no hydrologic connection exists between the outfall and the surf zone, only a down-coast sample is needed.
2. The Co-permittees must sample dry-weather discharges at representative monitoring locations.
 - a. Samples must be measured for total coliform, fecal coliform, and *Enterococcus*.
 - b. Sample events must be coordinated with the Orange County Health Care Agency and the Orange County Sanitation District or their successors in order to augment their monitoring program and improve the collective data's ability to resolve trends, comparisons, and correlations within and between the sites.

J. Bioassessment Monitoring

1. The Co-permittees must conduct bioassessment monitoring in conformance with the Surface Water Ambient Monitoring Program ("SWAMP").
2. Bioassessment monitoring must be completed at the monitoring locations specified by the most recent Stormwater Monitoring Coalition ("SMC") monitoring plan. The monitoring locations and parameters may be adjusted during the monitoring year according to recommendations from the SMC so that they are consistent with the SMC monitoring plan.
- ~~3. Co-permittees must perform a minimum of one Causal Assessment during the term of Order No. R8-2015-0001 to identify the likely causes of the biological condition at the monitoring locations.~~
- ~~4. Causal Assessments must be conducted according to the USEPA Stressor Identification Guidance Document (2000) or an equivalent guidance acceptable to the Executive Officer.~~

~~5.3.~~ _____ The bioassessments must include monitoring of urban runoff for the parameters shown in Table 4 below.

~~6. Toxicity tests which produce a zero percent survival of the test organisms within the first hour must be evaluated using Toxicity Identification Evaluations.~~

Table 4: Bioassessment water quality test parameters

Nutrients	Nitrate plus nitrite	Hardness	
	Total ammonia	Total and dissolved heavy metals	Arsenic
	Total Kjeldahl nitrogen		Cadmium
	Total phosphorus		Chromium
	Orthophosphate		Copper
Total organic carbon	Lead		
Total suspended solids	Mercury		
Chloride	Nickel		
Sulfate	Selenium		
Turbidity	Silver		
pH	Zinc		
Oil and grease (if sheen is present)	Organophosphate pesticides	Diazinon	
Temperature		Chlorpyrifos	
Dissolved oxygen		Malathion	
Electrical conductivity		Dimethoate	

K. Data Analyses

1. The Water Quality Monitoring Plan must include a schedule of statistically-valid analyses that will be performed on collected data.
2. The schedule of analyses must include a description of the statistical analyses that will be performed, the purpose of each analysis, the data sets and sub-sets that will be analyzed, and the time periods or thresholds at which each analysis will be performed.
3. The schedule of analyses must satisfy schedules specified in this MRP, established in relevant adopted TMDLs, and this Order.
4. The Water Quality Monitoring Plan must include the supporting rationale for the schedule of analyses.
5. The applicable schedule of analyses and the results of the performed analyses must be reported in the Annual Progress Report.

L. Special Studies

1. The water quality monitoring program must include the performance of special studies. The special studies must be carried out for those purposes in Section II.A. above, where other elements of the monitoring program are insufficient.
2. The Co-permittees must provide documentation of any special studies to be performed in support of their storm water program. The documentation must be provided annually via a reporting mechanism acceptable to the Executive Officer (e.g. as a stand-alone report, or as part of the Annual Progress Report or other annually-required report). The documentation must include a schedule of proposed actions, a description work products to be completed, and the achievement of milestones along with any changes or updates for any special studies big carried out. This information must be included in the Annual Progress Report each year.

III. Program Effectiveness Assessments and Reporting

- A. All reports and plans required by this Order must be signed by a duly authorized representative for the Principal Permittee and submitted to the Executive Officer of the Regional Board under penalty of perjury.
- B. The Co-permittees must submit all information and materials necessary to comply with, or demonstrate compliance with, the requirements of this Order to the Principal Permittee in a timely manner. All submittals by the Co-permittees must be signed by a duly authorized representative for the respective Co-permittee under penalty of perjury.
- C. Data transmittals to the Regional Board must be in the form developed by the Stormwater Monitoring Coalition ("SMC") and approved by the State Water Resources Control Board in the document entitled "Standardized Data Exchange Formats" for the purpose of providing a standard format for all data transfers and allow data to be universally shared and evaluated as part of various programs.
- D. The Co-permittees must submit an Annual Progress Report to the Executive Officer of the Regional Board and to the Regional Administrator of the USEPA – Region 9 no later than November 15th of each year. The Executive Officer may grant an extension of up to 90-days with cause upon the receipt of a written request from the Principal Permittee. The reporting period must address actions taken to comply with the requirements of Order No. R8-2015-0001 and this MRP through June 1 of the reporting year. The Annual Progress Report must include the following:
 1. A schedule of all actions required by Order No. R8-2015-0001 during the reporting period, ~~any outstanding actions required by Order No. R8-2015-0001 and Order No. R8-2009-0030~~, and the status of efforts to carry out the scheduled actions ~~and satisfy the related requirements~~.
 2. The results of each Co-permittees' program effectiveness assessment and the results of the Principal Permittee's overall evaluation of those results.

- a. The results of water quality monitoring; the results of scheduled analyses of the water quality monitoring data; and any related conclusions reached by the Co-permittees.
- b. The status of special studies carried out according to the previous reporting period's work plan and the work plan for the upcoming reporting period (See Section II.K. above)
- c. The status of efforts to reduce and/or eliminate the discharge of trash and debris (See Subsection VII.D. of Order No. R8-2015-0001).
- d. The status of efforts to detect and mitigate SSOs (See Subsection VII.E. of Order No. R8-2015-0001).
- e. The unified fiscal analysis (See Section XX of Order No. R8-2015-0001).

IV. Reporting Schedule Summary

Table 5, below, summarizes information that must be reported to the Executive Officer and the items' deadlines. Deliverables are in the order in which they appear in Order No. R8-2015-0001. The table is provided for the convenience of the reader and should not be used as a substitute for reviewing the contents of Order No. R8-2015-0001, this MRP, or the Technical Report.

- A. With the exception of deliverables with capitalized titles, Order No. R8-2015-0001, this MRP, and this summary do not establish formal nomenclature. Deliverables with no formal nomenclature may be identified in a manner suitable to the Co-permittees, but they must be identified by a written statement of purpose, declaring which Provision(s) they are intended to comply with.
- B. Deliverables that are submitted with the Annual Progress Report do not need to consist of separate documents; they may be incorporated into the Annual Progress Report. But they must be readily-identifiable, denoted elements (e.g. separate chapters) and include a statement of purpose as described above.
- C. The Co-permittees must submit deliverables in an electronic format. To preserve their authenticity, all deliverables submitted in an electronic format must not be readily-alterable. All deliverables must be in a format that is viewable using widely-available software.

Table 5: Reporting Schedule Summary

Deliverable	Source Provision(s)	Deadline
Draft plan	IV.C.1.	Varies, but generally triggered by water quality monitoring results and analyses. Due within 6 months of the Co-permittees becoming aware of an exceedance of water quality standards. If requested in writing by the Executive Officer, due as specified in the written request.
Legal authority assessment report	VI.B.	Reported as needed as part of Annual Progress Report.
Trash and debris BMP report	VII.E.1.	Reported as part of Annual Progress Report.
Trash and debris technology evaluation report	VII.E.2.	Reported as part of Annual Progress Report.
BMP retrofit study updates	XII.A.8.	12 months from date of adoption.
Structural treatment control BMP waiver notice	XII.L.	30-days prior to Co-permittee's issuance of the waiver.
Draft watershed maps	XII.N.3.	6 months from date of adoption.
General audience survey	XIII.E.1.b.	60 months from the date of adoption.
Initial imminent threat notice	XVII.A.1.	24 hours of Co-permittees becoming aware.
Imminent threat report	XVII.A.2.	5 business days after initial imminent threat notice.
Known/suspected WDR violations report	XVII.C.	30-days following the end of each calendar quarter: January 30 th , April 30 th , July 30 th , and October 30 th of each year.
Program Effectiveness Assessment	XIX.D.	Reported as part of the Annual Progress Report
Unified fiscal analysis	XX.A.	Reported as part of the Annual Progress Report
Report of Waste Discharge	XXIII.A.	180-days before expiration of this Order.
Water Quality Monitoring Plan	XXIV.I., MRP II.B.1. and MRP II.B.6.	6 months from date of adoption; proposed revisions due August 1, each year
Annual Progress Report	XXIV.I. and MRP III.D.	Annually by November 15th of each year <u>commencing 2016</u> .

Ordered by:

Kurt V. Berchtold
Executive Officer

Date

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