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CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
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ORDER R8-2026-0034
NPDES NO. CAS618000

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT AND WASTE DISCHARGE REQUIREMENTS FOR DISCHARGES OF POLLUTANTS IN RUNOFF FROM THE MUNICIPAL SEPARATE STORM SEWER SYSTEMS IN THE COUNTIES OF ORANGE, RIVERSIDE, AND SAN BERNARDINO WITHIN THE SANTA ANA REGION

SANTA ANA REGIONAL MS4 PERMIT

I. ADMINISTRATIVE INFORMATION

The following Dischargers are subject to waste discharge requirements as set forth in this Order:

Table 1: Permittees

<table>
<tr><td>Orange County Principal Permittee
CAS 618030</td><td colspan="2">County of Orange</td></tr>
<tr><td rowspan="14">Permittees
Attachment B Figure 2 depicts the jurisdictional boundaries of these Permittees.</td><td>Orange County Flood Control District</td><td>City of Lake Forest</td></tr>
<tr><td>City of Anaheim</td><td>City of Los Alamitos</td></tr>
<tr><td>City of Brea</td><td>City of Newport Beach</td></tr>
<tr><td>City of Buena Park</td><td>City of Orange</td></tr>
<tr><td>City of Costa Mesa</td><td>City of Placentia</td></tr>
<tr><td>City of Cypress</td><td>City of Santa Ana</td></tr>
<tr><td>City of Fountain Valley</td><td>City of Seal Beach</td></tr>
<tr><td>City of Fullerton</td><td>City of Stanton</td></tr>
<tr><td>City of Garden Grove</td><td>City of Tustin</td></tr>
<tr><td>City of Huntington Beach</td><td>City of Villa Park</td></tr>
<tr><td>City of Irvine</td><td>City of Westminster</td></tr>
<tr><td>City of La Habra</td><td>City of Yorba Linda</td></tr>
<tr><td>City of La Palma</td><td></td></tr>
<tr><td>Riverside County Principal Permittee</td><td colspan="2">Riverside County Flood Control and Water Conservation District</td></tr>
</table>

CAS 618033		
Permittees Attachment B Figure 3 depicts the jurisdictional boundaries of these Permittees.	County of Riverside	City of Lake Elsinore
	City of Beaumont	City of Menifee
	City of Calimesa	City of Moreno Valley
	City of Canyon Lake	City of Norco
	City of Corona	City of Perris
	City of Eastvale	City of Riverside
	City of Hemet	City of San Jacinto
	City of Jurupa Valley	
San Bernardino County Principal Permittee **CAS 618036**	San Bernardino County Flood Control District	
Permittees Attachment B Figure 4 depicts the jurisdictional boundaries of these Permittees	San Bernardino County	City of Montclair
	City of Big Bear Lake	City of Ontario
	City of Chino	City of Rancho Cucamonga
	City of Chino Hills	City of Redlands
	City of Colton	City of Rialto
	City of Fontana	City of San Bernardino
	City of Grand Terrace	City of Upland
	City of Highland	City of Yucaipa
	City of Loma Linda	
Permittees Attachment B Figure 5 depicts the jurisdictional boundaries of these Permittees	City of Claremont	City of Pomona

The entities identified in Table 1 above are collectively referred to as the Permittees, which include the Principal Permittees. However, the term “Permittee” only includes the cities of Claremont and Pomona to the extent stated in Appendix 11.

Table 2: Administrative Information

This Order was adopted by the Santa Ana Water Board on:	**September 11, 2026**
This Order will become effective on:	**Adoption + 180 days**
This Order will expire on:	**Effective Date + 5 years.**
The U.S. Environmental Protection Agency (USEPA) and the California Regional Water Quality Control Board, Santa Ana Region have classified this discharge as a major discharge.	
The Permittee must file a Report of Waste Discharge in accordance with title 23, division 3, chapter 9 of the California Code of Regulations and 40 Code of Federal Regulations part 122, as the application for issuance of new waste discharge requirements no later than 180 days in advance of the Order expiration date.	

IT IS HEREBY ORDERED that this Order supersedes Orders R8-2009-0030, R8-2010-0033, R8-2010-0036 and R8-2013-0043 except for enforcement purposes, and, in order to meet the provisions contained in division 7 of the California Water Code and regulations adopted there under, and the provisions of the federal Clean Water Act (CWA), and regulations and guidelines adopted there under, the Permittees must comply with the requirements in this Order.

I, Eric T. Lindberg, Executive Officer, do hereby certify that this Order R8-2026-0034 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 September 11, 2026.

Eric Lindberg
Digitally signed by Eric Lindberg
Date: 2026.09.24 13:40:49 -07'00'
Water Boards

Eric T. Lindberg, P.G. C.H.G.
Executive Officer

Table of Contents

I. ADMINISTRATIVE INFORMATION 1

II. FINDINGS 10
A. Jurisdiction 10
B. Discharge Characteristics and Runoff Management 13
C. Receiving Water Limitations 15
D. Administrative Findings 17

III. PERMITTEE RESPONSIBILITIES 19
A. General 19
B. Additional Responsibilities of the Principal Permittees 20
C. Implementation Agreements 20
D. Legal Authority/Enforcement 21
E. Notification Requirements 21
F. Fiscal Analysis 23
G. Claremont and Pomona 24

IV. DISCHARGE PROHIBITIONS 24
A. Prohibitions – Non-Stormwater Discharges 24
B. Prohibitions – Trash 26

V. TRASH CONTROL 26
A. Trash Control Program 26
B. Track 1 27
C. Track 2 28

VI. RECEIVING WATER LIMITATIONS 31

VII. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS 34
A. Effluent Limitations 34
B. General Compliance Provisions for Water Quality-Based Effluent Limitations (WQBELs) 35

VIII. NEW DEVELOPMENT (INCLUDING SIGNIFICANT REDEVELOPMENT) 36
A. Planning Requirements 36
B. Priority Projects 36
C. General Requirements for Discretionary Priority Projects 39
D. General Requirements for Treatment Control Measures 44
E. Waiver of Treatment Control Measures 46
F. Non-conforming Treatment Control Measures: Demonstration Facilities 47
G. BMP Prioritization Hierarchy 49
H. Post-Construction Treatment Control Credit Programs 52
I. Specific Requirements for Infiltration LID Treatment Control Measures 55
J. Specific Requirements for Harvest and Use LID Treatment Control Measures 57
K. Off-Site Treatment Control Measures: Regional and Sub-Regional Facilities 57
L. Hydrologic Conditions of Concern 58

IX. ILLICIT DISCHARGE DETECTION AND ELIMINATION PROGRAM (IDDE) 61
A. General 61
B. Sanitary Sewer Overflows 62

C. Mobile Businesses....63

X. PUBLIC EDUCATION AND OUTREACH....63

XI. TRAINING PROGRAMS....65
A. Target audience....65
B. Frequency of training....65
C. Record Keeping....65
D. Training curriculum....66
E. Adaptive management of the training program....66

XII. WATERSHED MANAGEMENT PLANS....66
A. Watershed Management Plan Development....66
B. Watershed Management Plan Contents....69
C. Watershed Management Plan Approval and Implementation Process....74
D. Compliance Determination....76
E. Time Schedule Order Applicability....78

XIII. MUNICIPAL INSPECTIONS....80
A. General....80
B. Construction Sites....81
C. Industrial Sites....83
D. Commercial Sites....85

XIV. MUNICIPAL FACILITIES/ACTIVITIES....89
A. Encroachment Permits....89
B. Fixed Facilities....89

XV. PROGRAM EFFECTIVENESS ASSESSMENT....92

XVI. MONITORING AND REPORTING PROGRAM....93

XVII. STANDARD PROVISIONS....93

XVIII. REOPENER AND PERMIT MODIFICATION....94

Appendix 1....97

Appendix 2....101
I. WQBELs for Nitrogen, Total....101
II. WQBELs for Phosphorus, Total....102
III. Compliance Determination....102
IV. Monitoring and Reporting....103

Appendix 3....105
I. WQBELs for Fecal Coliform for REC1....105
II. WQBELs for Fecal Coliform for SHEL....105
III. Compliance Determination....105
IV. Monitoring and Reporting....106

Appendix 4....108
I. WQBELs for Sediment....108

II. Compliance Determination....109
III. Monitoring and Reporting....110

Appendix 5....112
I. WQBELs for Chlordane....112
II. WQBELs for Total DDT....112
III. WQBELs for Dieldrin....112
IV. WQBELs for Total PCBs....112
V. WQBELs for Toxaphene....113
VI. Compliance Determination....113
VII. Monitoring and Reporting....115

Appendix 6....117
I. General....117
II. WQBELs for Chlorpyrifos....117
III. WQBELs for Diazinon....118
IV. Compliance Determination....118
V. Monitoring and Reporting....119

Appendix 7....121
I. General....121
II. WQBELs for Cadmium, Dissolved....121
III. WQBELs for Chromium....122
IV. WQBELs for Copper, Dissolved....122
V. WQBELs for Lead, Dissolved....123
VI. WQBELs for Mercury....124
VII. WQBELs for Zinc, Dissolved....124
VIII. Compliance Determination....124
IX. Monitoring and Reporting....126

Appendix 8....128
I. General....128
II. WQBELs for Copper....128
III. WQBELs for Lead....129
IV. WQBELs for Zinc....129
V. Alternative Concentration-Based WQBELs....129
VI. Alternative Interim WQBELs for Dry and Wet Weather Discharges....129
VII. Compliance Determination....130
VIII. Monitoring and Reporting....131

Appendix 9....134
I. WQBELs for Selenium....134
II. Requirements for Offset and Trading Program....135
III. Requirements for BMP Strategic Plans....137
IV. Tissue-based Numeric Targets....138
V. Compliance Determination....138
VI. Monitoring and Reporting....139

Appendix 10....141
I. WQBELs for Copper, Dissolved....141
II. Targets for Copper....141
III. Compliance Determination....142

IV. Monitoring and Reporting....143

Appendix 11....147
I. WQBELs for *Escherichia coli*....147
II. Comprehensive Bacterial Reduction Plan....148
III. Compliance Schedule for Wet Winter Conditions....149
IV. Compliance Determination....150
V. Monitoring and Reporting....152
VI. Cities of Claremont and Pomona....152

Appendix 12....155
I. WQBELs for Canyon Lake (2025 Revised TMDLs)....155
II. WQBELs for Lake Elsinore (2025 Revised TMDLs)....156
III. Comprehensive Nutrient Reduction Plan....157
IV. Requirements for Offset Program(s)....158
V. Compliance Determination....160
VI. Implementation Schedules....161
VII. Monitoring and Reporting....165
VIII. WQBELs in Effect from Effective Date of Order R8-2026-0034 through Effective Date of 2025 Revised TMDLs....165

Appendix 13....167
I. WQBELs for Phosphorus, Total....167
II. Compliance Determination....167
III. Monitoring and Reporting....169

Appendix 14....171
I. WQBELs for Escherichia Coli....171
II. Implementation Plan....173
III. Compliance Determination....174
IV. Monitoring and Reporting....175

Attachment A, Glossary....176
Attachment B, Figures....192
Attachment C, Monitoring & Reporting Program....198
Attachment D, Fact Sheet....221
Attachment E, Acronyms....374
Attachment F, Standard Provisions....378

List of Figures & Tables

Table 1: Permittees 1
Table 2: Administrative Information 2
Table 3: Types of Non-Stormwater Discharges Presumed to Not be a Significant Source of Pollutants ..25
Table 4: Summary Schedule for the Development, Review, and Approval of Watershed Management Plans 75
Table 1.1: TMDLs Applicable to Orange County Permittees 97
Table 1.2: TMDLs Applicable to Riverside County Permittees 98
Table 1.3: TMDLs Applicable to San Bernardino County Permittees 99
Table 2.1 Summary of Nutrients Effluent Limitations for San Diego Creek and Newport Bay Watershed 102
Table 2.2 Summary of Nutrients Total TMDL Allocations for Newport Bay Watershed 103
Table 4.1: Baseline Distribution of Habitat Types in the Upper Newport Bay Ecological Reserve 108
Table 5.1: Summary of WQBELs by Receiving Waters for Organochlorine Compounds (Grams per Year) 113
Table 5.2: Summary of Total TMDL Allocations for San Diego Creek, Upper and Lower Newport Bay, expressed on an annual basis. 114
Table 6.1: Summary of WQBELs for Runoff from MS4 Permittees for Discharges of Chlorpyrifos into Upper Newport Bay and into San Diego Creek (ng/L) 118
Table 6.2: Summary of WQBELs for Runoff from MS4 Permittees for Diazinon into Upper Newport Bay, and into San Diego Creek (ng/L)..... 118
Table 6.3: Summary of Total TMDL Allocations for Diazinon and Chlorpyrifos by Receiving Waterbody 119
Table 7.1: Summary of Hardness-based WQBELs for Dissolved Cadmium in San Diego Creek 122
Table 7.2: Summary of Hardness-based Dissolved Copper WQBELs for San Diego Creek..... 123
Table 7.3: Summary of Hardness-based Dissolved Lead WQBELs for San Diego Creek..... 123
Table 7.4: Summary of Hardness-based Dissolved Zinc WQBELs for San Diego Creek..... 124
Table 7.5: Numeric Targets (µg/L) for Metals Based on Flow Tiers for San Diego Creek 125
Table 7.6. Numeric Targets (µg/L) for Metals in Newport Bay 126
Table 7.7 Numeric Targets for Chromium and Mercury in Rhine Channel..... 126
Table 8.1: Summary of Wet Weather Concentration-Based Effluent Limitations 129
Table 12.1: Summary of Nutrient WQBELs for Runoff from MS4s into Canyon Lake from Sub-watersheds below Mystic Lake 156
Table 12.2: Summary of Nutrient WQBELs for Runoff from MS4s into Lake Elsinore..... 157
Table 12.3: Numeric Targets for Canyon Lake and Lake Elsinore 161
Table 12.4: Phase II (Years 1-20) Tasks and Schedule 161

List of Appendices

Appendix 1:	Applicable TMDL Requirements for Permittees
Appendix 2:	Water Quality-Based Effluent Limitations for Nutrients in the Newport Bay/San Diego Creek Watershed
Appendix 3:	Water Quality-Based Effluent Limitations for Fecal Coliform in Newport Bay
Appendix 4:	Water Quality-Based Effluent Limitations for Sediment in the Newport Bay/San Diego Creek Watershed
Appendix 5:	Water Quality-Based Effluent Limitations for Organochlorine Compounds in San Diego Creek, Upper and Lower Newport Bay
Appendix 6:	Water Quality-Based Effluent Limitations for the Diazinon and Chlorpyrifos TMDL for San Diego Creek and Upper Newport Bay
Appendix 7:	Water Quality-Based Effluent Limitations for Toxic Pollutants in San Diego Creek and Newport Bay
Appendix 8:	Water Quality-Based Effluent Limitations for Metals in San Gabriel River and Impaired Tributaries
Appendix 9:	Water Quality-Based Effluent Limitations for Selenium in Freshwater, Newport Bay Watershed
Appendix 10	Water Quality-Based Effluent Limitations for Copper in Upper and Lower Newport Bay
Appendix 11:	Water Quality-Based Effluent Limitations for Bacterial Indicator TMDL in the Middle Santa Ana River Watershed
Appendix 12:	Water Quality-Based Effluent Limitations for Nutrient TMDL in Lake Elsinore and Canyon Lake
Appendix 13:	Water Quality-Based Effluent Limitations for Nutrient TMDL for Dry Hydrological Conditions in Big Bear Lake
Appendix 14:	Water Quality-Based Effluent Limitations for San Gabriel River, Estuary and Tributaries Indicator Bacteria TMDL

List of Attachments

Attachment	Description
A.	Glossary
B.	Maps of Permit Areas/Watersheds
C.	Monitoring and Reporting Program
D.	Fact Sheet
E.	Acronyms
F.	Standard Provisions

II. Findings

A. Jurisdiction

1. **MS4 Ownership or Operation.** Each of the Permittees listed in Table 1 above, owns or operates a municipal separate storm sewer system (MS4), through which it discharges stormwater and non-stormwater into waters of the U.S. within the Santa Ana Region. Non-stormwater is a discharge that is not generated by precipitation. 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 services a population of less than 100,000; 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. section 402(p) of the CWA requires that discharges of pollutants in runoff from MS4s be regulated under a National Pollutant Discharge Elimination System (NPDES) Permit.

2. **Executive Officer Delegation of Authority.** The Santa Ana Regional Water Quality Control Board (Santa Ana Water Board), through Resolution R8-2019-0056, has delegated all matters that may legally be delegated to its Executive Officer to act on its behalf pursuant to Water Code section 13223. Therefore, the Executive Officer is authorized to act on the Santa Ana Water Board's behalf on any matter within this Order unless such delegation is unlawful under Water Code section 13223, or this Order explicitly states otherwise. The Santa Ana Water Board authorizes the Executive Officer to make non-substantive changes to this Order to correct typographical errors, including correcting misspellings/grammar, ensuring correct cross-references, correcting formatting/numbering, and conforming changes made during the development and adoption of this Order that were inadvertently not carried through the entire Order. The Executive Officer shall provide public notice of any non-substantive changes.

3. **Designation of Board.**

   a. Water Code section 13228 authorizes the Executive Officer of a Regional Water Quality Control Board (Regional Water Board) to grant a written request, made by an entity that is subject to regulation by more than one Regional Water Board, that one Regional Water Board be designated to regulate the matter.

   b. The Santa Ana Water Board is designated to regulate discharges of pollutants in MS4 runoff from the entire jurisdiction of the City of Menifee, including those discharges into the San Diego Region. The San Diego Regional Water Quality Control Board is designated to regulate discharges of pollutants in MS4 runoff from the entire jurisdictions of the Cities of Laguna Hills, Laguna Woods, Murrieta and Wildomar, including those discharges from those cities into the Santa Ana Region. The City of Lake Forest discharges into the San Diego and Santa Ana Regions.

Each regional water quality control board will regulate the discharges from the City of Lake Forest into its region.

c. The Cities of Claremont and Pomona are located within Los Angeles County, but a portion of their MS4 discharges flow to the Middle Santa Ana River Watershed. The Cities of Pomona and Claremont are Permittees under this Order, but only for purposes of complying with Appendix 11. The Cities of Claremont and Pomona are not subject to the requirements of this Order except as explicitly stated in Appendix 11. Discharges of all other pollutants are regulated through NPDES Permit No. CAS004004, Order R4-2021-0105, as subsequently amended.

4. **Legal and Regulatory Authority.** This Order is issued pursuant to section 402 of the federal Clean Water Act (CWA) and implementing regulations (40 Code of Federal Regulations [CFR] part 122) adopted by the United States Environmental Protection Agency (USEPA), and chapter 5.5, division 7 of the California Water Code (commencing with section 13370). This Order serves as a National Pollutant Discharge Elimination System (NPDES) Permit for discharges of pollutants in 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 Water Code (commencing with section 13260). The Regional Water 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 section 122.26(a)(1)(v). The USEPA has established that the permitting authority, in this case the Santa Ana Water Board, has the flexibility to establish system- or region-wide permits affecting multiple Permittees (40 CFR § 122.26(a)(3)(ii)). The system- or region-wide nature of this Order will ensure consistency of regulation within watersheds and is expected to result in overall cost savings for the Permittees and the Santa Ana Water Board. Federal regulations make it clear that each Permittee need only comply with Permit conditions relating to discharges from the MS4s for which it is an operator (40 CFR § 122.26(a)(3)(vi)). This Order does not require the Permittees to manage stormwater that originated outside of their jurisdictional boundaries (see Attachment B, Figure 1).

5. **CWA NPDES Permit Conditions.** Pursuant to CWA section 402(p)(3)(B), NPDES permits for discharges from MS4s shall: (1) include a requirement to effectively prohibit non-stormwater discharges into MS4s; (2) require 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 such other provisions as the Santa Ana Water Board determines 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-stormwater discharges into MS4s with some exceptions listed in section IV of this Order. This Order requires controls to reduce the discharge of pollutants in runoff from the MS4s to the MEP, and such other provisions that the Santa Ana Water Board has determined are appropriate to control pollutants.

6. **Monitoring Requirements.** CWA section 308(a) and 40 CFR sections 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 sections 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). Water Code section 13383 authorizes a Regional Water Board to establish monitoring, inspection, entry, reporting and recordkeeping requirements. This Order establishes monitoring and reporting requirements to implement federal and State requirements.

7. **Non-Stormwater and Stormwater Discharges.** The discharge of pollutants from the MS4 is subject to the MEP standard and other provisions the Santa Ana Water Board determines appropriate to control pollutants whether the pollutants are transported by stormwater or non-stormwater. In addition, this Order requires each Permittee to effectively prohibit discharges of non-stormwater into its MS4 unless such discharges are authorized by an NPDES Permit consistent with 40 CFR section 122.26(d)(2)(i)(B). Certain non-stormwater discharges may be permitted under various NPDES Permits adopted by the Santa Ana Water Board and the State Water Resources Control Board (State Water Board). These Permits include, but are not limited to, NPDES Permit No. CAG998001, *General Waste Discharge Requirements for Discharges to Surface Waters that Pose an Insignificant (De Minimis) Threat to Water Quality* (De Minimis Permit); NPDES Permit No. CAG990002, *General NPDES Permit for Discharges from Utility Vaults and Underground Structures to Waters of the United States* (General Utility Vaults Permit); NPDES Permit No. CAG140001, *Statewide NPDES Permit for Drinking Water System Discharges to Waters of the United States*; and NPDES Permit No. CAG918002, *General Waste Discharge Requirements for Discharges to Surface Waters Resulting from De Minimis Discharges, Groundwater Dewatering Operations, and/or Groundwater Cleanup/Remediation Operations at Sites within the Newport Bay Watershed*. Non-stormwater discharges permitted under these and other NPDES Permits are not subject to the discharge prohibitions herein.

8. **Limits of Permittees' Jurisdiction Over Runoff.** The Permittees may lack or have limited legal jurisdiction over runoff into their MS4s from agricultural sources, some state and federal facilities, Native American tribal lands, utilities, special districts, and other entities. The Santa Ana Water Board recognizes that the Permittees can only be held responsible for discharges of pollutants from such entities to the extent that the Permittees have the authority to eliminate or control the pollutants. "Eliminate or control" may include, without limitation, treatment or structural control measures. While these limitations are recognized, the Permittees are expected to control pollutants in discharges into and from their MS4s according to CWA section 402(p)(3)(B).

B. Discharge Characteristics and Runoff Management

1. **Potential Beneficial Use Impairment.** The discharge of pollutants from MS4s may cause or contribute to exceedances of applicable water quality standards in receiving waters. 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.

2. **Pollutants Generated by Land Development.** Land development has created and threatens to create new sources of non-stormwater discharges and pollutants in stormwater discharges as human population increases. Land development increases the impervious surfaces, which is a significant factor in hydromodification. This also brings higher levels of automobile emissions, automobile maintenance wastes, municipal sewage, nutrients, 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 washed off by non-stormwater or stormwater flows into and from the MS4s. As a result of the increased imperviousness in urban areas, less rainwater can infiltrate through and flow over 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 pollution control measures and best management practices (BMPs) can minimize these impacts to water quality.

3. **Pollutants in Runoff from MS4s.** The most common pollutants in runoff from MS4s include total suspended solids, sediment, selenium, 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 and debris. Pollutants in runoff are often generated by persons or activities over which the Permittees typically have the authority to enact measures to control those pollutants. The Santa Ana Water Board recognizes that the Permittees' authority is not equal for all persons or activities in their jurisdictions. Nonetheless, the Permittees are required to exercise their authority consistent with the requirements of the Clean Water Act, other applicable laws, and this Order.

4. **Human Health and Aquatic Life Impairment.** Pollutants in runoff discharged from the MS4s may adversely affect human health and/or aquatic organisms. Adverse human health effects can include gastrointestinal diseases and infections. Adverse physiological responses in aquatic organisms to pollutants in runoff include impaired reproduction, growth

anomalies, decreased diversity, and mortality. These responses may be the result of different mechanisms, including bioaccumulation of toxins. During bioaccumulation, toxins move up the food chain and may affect both aquatic and non-aquatic organisms, including human health and wildlife. Increased volume, velocity, and duration of stormwater runoff greatly accelerate the erosion of downstream natural channels. These alter stream channels and habitats and can adversely affect aquatic and terrestrial organisms.

5. **Long Term Planning and Implementation.** Federal regulations require municipal stormwater permits to expire five years from adoption, after which the permit must be renewed and reissued. The Santa Ana Water Board recognizes that water quality degradation and impacts to beneficial uses in the Santa Ana Region have occurred over several decades and will not be fully addressed during the five-year permit term.

6. **Adaptive Management Process.** This Order is based on an adaptive approach that, in summary, is comprised of planning, implementing, evaluating, and improving pollution control measures and BMPs carried out as part of the Permittees' stormwater programs. Some iterations will occur during this Permit term, and are likely to occur over multiple Permit terms, to achieve water quality standards. This Order includes requirements that compel a methodical approach to implement the adaptive management process. This Order also includes requirements for conducting program effectiveness assessments (PEAs). PEAs are a necessary component of the process. The purposes of conducting PEAs include:

    a. Tracking progress towards meeting performance metrics and/or water quality standards;

    b. Providing feedback to Permittees' program managers regarding the commitment of resources, including the cessation of ineffective management practices;

    c. Providing feedback to Permittees' program managers, in part, to identify effective control measures/BMPs and program modifications; and,

    d. Assessing reductions in pollutant loads to receiving waters and potential relationships to the control measures/BMPs implemented.

    Performance metrics that are not prescribed by this Order or incorporated by reference but are developed exclusively by the Permittees as part of PEAs, shall not be used as the basis for enforcement action against any of the Permittees for failure to satisfy those metrics. The intent of the Santa Ana Water Board is that the Permittees constructively use those performance metrics, and the related monitoring, as part of a process to iteratively improve the performance of their stormwater programs in a timely manner to attain receiving water limitations and effluent limitations, to

effectively prohibit non-stormwater discharges, and to remove pollutants in runoff from MS4s to the maximum extent practicable.

These performance metrics are not a substitute for compliance with any of these general requirements according to the deadlines within or incorporated by reference into this Order. If a requirement has a deadline, non-enforceable performance metrics are intended to be useful, interim indicators until compliance is assessed through the analysis and interpretation of monitoring data according to a schedule under the Monitoring and Reporting Program. Permittees are also required to annually evaluate the validity of their performance metrics and methods of measurement and make modifications accordingly.

C. Receiving Water Limitations

1. **Recognizing *City and County of San Francisco v. U.S.EPA* Does Not Apply to MS4 NPDES Permits.** This Order conditions the discharge of pollutants from MS4s to satisfy requirements of Clean Water Act section 402(p)(3)(B). The recent U.S. Supreme Court decision *City and County of San Francisco, California v. Environmental Protection Agency* (2025) 145 S.Ct. 704 holds that NPDES permits issued by the U.S. EPA to implement Clean Water Act section 301(b)(1)(C) (33 U.S.C. § 1311(b)(1)(C)) may not include "end-result requirements," which are provisions that do not spell out what a permittee must do or refrain from doing; rather, they make a permittee responsible for the quality of the water in the body of water into which the permittee discharges pollutants. Under the Clean Water Act, MS4 discharges are not required to strictly comply with water quality standards pursuant to Clean Water Act section 301(b)(1)(C). (*Defenders of Wildlife v. Browner* (9th Cir. 1999) 191 F.3d 1159.) MS4 discharges must meet a technology-based standard of prohibiting non-storm water discharges and reducing pollutants in the discharge to the Maximum Extent Practicable (MEP) in all cases, but requiring strict compliance with water quality standards (e.g., by imposing numeric effluent limitations) is at the discretion of the permitting agency. (33 U.S.C. § 1342(p)(3)(B); *Defenders of Wildlife, supra*.) To the extent NPDES permitting authorities impose conditions requiring discharges to meet water quality standards, either strictly or through an iterative process, they are relying on authority in Clean Water Act section 402(p)(3)(B) to include "such other provisions as the Administrator or the State determines appropriate for the control of such pollutants." (33 U.S.C. § 1342(p)(3)(B)(iii).) This order is not based on Clean Water Act section 301(b)(1)(C). Nothing in the U.S. Supreme Court's holding in *City and County of San Francisco* addressed section 402(p)(3)(B), and the U.S. Supreme Court grounded its decision limiting end-result requirements in Clean Water Act section 301(b)(1)(C). (*City and County of San Francisco, supra*, at pp. 10-20.) As a result, *City and*

County of San Francisco does not limit the inclusion of receiving water limitations in this MS4 NPDES order.

2. **Recognizing State Water Board Precedential Decisions.** This order includes receiving water limitations not only in recognition of the authority conveyed by Clean Water Act section 402(p)(3)(B) and recognized by *Defenders of Wildlife*, but alternatively as a matter of independent state law authority (33 U.S.C. § 1370). Under the Porter-Cologne Water Quality Control Act, waste discharge requirements must implement applicable water quality control plans, which include the beneficial uses to be protected for a given water body and the water quality objectives reasonably required for that protection. (Wat. Code, § 13263.) When implementing requirements under the Porter-Cologne Act that are not compelled by federal law, the Water Boards have some flexibility to consider other factors, such as economics, when establishing the appropriate requirements. (Wat. Code, §§ 13241, 13263; *City of Burbank v. State Water Resources Control Bd.* (2005) 35 Cal.4th 613.) Accordingly, since the Water Boards have discretion under federal law to determine whether to require MS4 discharges to strictly comply with water quality standards identified in applicable water quality control plans and federal water quality criteria, the Water Boards may also utilize the flexibility under the Porter-Cologne Act to decline to require MS4 discharges to strictly comply with water quality standards. (See also, State Water Board Order WQ 2015-0075 (*Los Angeles MS4*), p. 14, n. 51.)

   Multiple State Water Board precedential decisions guide and control the Water Boards in requiring MS4 NPDES permits to include receiving water limitations based on state water quality standards identified in applicable water quality control plan and applicable federal water quality criteria and to implement such limitations through an iterative process, and over time through appropriate watershed management plans. (State Water Board Orders WQ 98-01 (*Environmental Health Coalition*), WQ 99-05 (*Environmental Health Coalition*), WQ 2001-15 (*Building Industry Association of San Diego*), WQ 2015-0075.) That iterative process involves reporting of the exceedance of an applicable water quality standard, submission of a report describing proposed improvements to BMPs expected to better meet water quality standards and an implementation schedule, and implementation of these new or improved BMPs in accordance with the approved schedule. (State Water Board Order WQ 99-05, pp. 2-3; see also State Water Board Order WQ 2001-15, pp. 7-9.) The State Water Board previously found it appropriate to require implementation of BMPs in lieu of numeric water quality-based effluent limitations to meet water quality standards. (See State Water Board Orders WQ 91-03 (*Citizens for a Better Environment*), WQ 91-04 (*Natural Resources Defense Council),* WQ 98-01, WQ 2001-15.) In 2015, the State Water Board supplemented its prior precedent and included further

direction to allow appropriate watershed management plans to provide an additional pathway for compliance with water quality standards. (WQ 2015-0075, pp. 15-17.) The State Water Board's precedential decisions direct the Water Boards to require compliance with water quality standards through incorporation of receiving water limitations provisions consistent with State Water Board Order WQ 99-05.

3. Because City and County of San Francisco did not construe Clean Water Act section 402(p)(3)(B) or apply to MS4 NPDES permits, but also in recognition that states may include such other provisions as determined appropriate for the control of pollution from MS4s (33 U.S.C. § 1342(p)(3)(B)(iii)) and include more stringent requirements than the federal Clean Water Act (33 U.S.C. § 1370) and that multiple State Water Board precedential orders require inclusion of receiving water limitations and provisions incorporating an iterative approach to implementing water quality standards, this Order retains receiving water limitations consistent with State Water Board Order WQ 2015-0075 and prior precedent.

D. Administrative Findings

1. **Standard Provisions.** Standard Provisions, which apply to all NPDES Permits in accordance with 40 CFR section 122.41, and additional conditions applicable to specified categories of permits in accordance with 40 CFR section 122.42, are provided in Attachment F to this Order.

2. **Fact Sheet.** The Fact Sheet (Attachment D) for this Order contains background information, regulatory and legal citations, references and additional explanatory information and data in support of the requirements of this Order. The Fact Sheet is consistent with 40 CFR sections 124.8 and 124.56. The Fact Sheet is hereby incorporated into this Order and constitutes part of the Findings of this Order.

3. **Order Attachments.** Attachments A through F and Appendices 1-14 are incorporated into this Order.

4. **Public Outreach.**

   a. In accordance with state and federal laws and regulations, the Santa Ana Water Board notified the 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 Fact Sheet.

a. The Santa Ana Water Board has satisfied the outreach requirements set forth in Water Code section 189.7 by conducting equitable, culturally relevant community outreach to promote meaningful civil engagement from potentially impacted communities throughout the permit development process. More information on outreach efforts can be found in section XXIII of the Fact Sheet, Attachment D.

5. **Public Hearing.** The Santa Ana Water Board held a public hearing on July 24, 2026, and heard and considered all comments pertaining to the terms and conditions of this Order. Details of the public hearing are provided in the Fact Sheet.

6. **Executive Officer Approval of Plans**. Wherever this Order requires the Executive Officer to provide public review before taking action on a Permittee submittal, any interested person may submit written comments to the Executive Officer during the public review period. The Executive Officer may increase, but not decrease, any public review period specified in this Order. An interested person who has submitted timely written comments may request the full Santa Ana Water Board to reconsider the Executive Officer's approval at a public meeting. A Permittee that disagrees with the Executive Officer's denial or partial denial of a submittal may also request reconsideration by the full board. The Santa Ana Water Board may decline reconsideration, in its sole discretion.

7. **Effective Date.** This Order serves as an NPDES Permit pursuant to CWA section 402 or amendments thereto and becomes effective ninety (90) days after the date of its adoption, provided that the Regional Administrator, USEPA Region IX, does not object to this Order.

8. **Expiration Date and Renewal.** The Permittees, individually or jointly, 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)).

9. **Review by the State Water Board.** Any person aggrieved by this action of the Santa Ana Water Board may petition the State Water Board to review the action in accordance with Water Code section 13320 and California Code of Regulations, title 23, sections 2050, *et seq*. The State Water Board must receive the petition by 5:00 p.m., 30 days after the Santa Ana Water Board action, except that if the thirtieth day following the action falls on a Saturday, Sunday or State holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions will be provided upon request or may

be found on the Internet at:

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

PERMIT REQUIREMENTS

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

III. PERMITTEE RESPONSIBILITIES

A. General

The Permittees (inclusive of the Principal Permittees) shall be responsible for the management of storm drain systems within their jurisdiction. To carry out the requirements of this Order, the Permittees must:

1. Document the control measures or BMPs that are employed within each of their respective jurisdictions.

2. Develop and apply performance metrics to achieve continual improvement and demonstrate the effectiveness of their projects and programs. Permittees must use and document performance metrics to track and assess the effectiveness of individual control measures and BMPs or systems of control measures and BMPs and execute timely program and project improvements to attain receiving water limitations (section VI) and effluent limitations (section VII), effectively prohibit non-stormwater discharges (section IV) and reduce pollution to the maximum extent practicable.

3. Evaluate the validity of performance metrics and the validity of those methods used to measure achievement of performance metrics.

4. Collaborate with one another as appropriate 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 to comply with this Order.

6. Develop and execute necessary interagency agreements.

7. Maintain records, perform monitoring and analysis, and submit reports to determine compliance with the requirements of this Order.

8. Prepare and submit information related to their respective programs and projects to the Principal Permittee that is necessary to develop an Annual Progress Report for submittal to the Executive Officer.

9. Establish account(s) in the State Water Board's online database, currently known as Storm Water Multiple Application and Report Tracking System (SMARTS) within 30-days of being directed to do so in writing by the Executive Officer. Each Permittee will be responsible to complete the following:

   a. Designate at least one Legally Responsible Person or Principal Signatory account holder per 40 CFR section 122.22(a).

   b. Designate and establish at least one assisting account holder with an equivalence to the Legally Responsible Person, or at minimum a Duly Authorized Representative or Approved Signatory per 40 CFR section 122.22(b).

   c. File with the State Water Board a signed original Electronic Authorization Form for both the Legally Responsible Person and Duly Authorized Representative account holders for each related organization in the online database per 40 CFR section 3.3.

   d. Protect the online account login information for each account holder from being shared or delegated to others and from unauthorized use.

   e. Maintain up-to-date contact information for the associated account(s) and active permit(s) per 40 CFR section 127.22.

B. Additional Responsibilities of the Principal Permittees

In addition to the general responsibilities specified in section III.A above, the Principal Permittees are responsible for the overall coordination of the stormwater program for those receiving waters that they discharge to. To carry out the requirements of this Order, the Principal Permittees must:

1. Coordinate with Permittees in their respective counties the submission of common reports, including the Annual Progress Report as required by this Order.

2. Monitor and report the progress of plans, projects, and programs in their respective counties as required by this Order.

3. Compile information provided by the Permittees in their respective counties as required by this Order.

4. Either individually or in coordination with the Permittees, conduct chemical, physical, and biological water quality monitoring as required by the approved Program Monitoring and Reporting Plan (see Monitoring and Reporting Program) and required by this Order.

C. Implementation Agreements

The Permittees must execute inter-agency and inter-Permittee agreements necessary to satisfy the requirements of this Order.

D. Legal Authority/Enforcement

Each Permittee must establish and maintain legal authority adequate to control the discharge of pollutants in runoff to their MS4s pursuant to the requirements of this Order, including the following:

1. Review and update, as necessary, existing local municipal ordinances, plans, policies and procedures to comply with the requirements of this Order within one year of the effective date of this Order and as needed thereafter.

2. Document the legal authorities and mechanisms used to implement the various program elements required by this Order to control the discharge of pollutants in runoff to the MS4.

3. Establish and maintain legal authority to enter and inspect the Permittee's fixed facilities and active construction sites, and gather evidence (including pictures, video, samples, statements, and documents) necessary to determine compliance with this Order, including the prohibition on illicit discharges to the MS4, and to determine compliance with Permittee's ordinances, permits, conditions and other requirements related to the control of discharges of pollutants to their MS4s.

4. Maintain adequate legal authority to impose progressive sanctions to obtain compliance with their regulatory requirements related to the control of pollutants to their MS4s.

5. **Legal Authority Assessment Report**: Each Permittee must submit a statement certified by its chief legal counsel in the second Annual Progress Report, and every five years thereafter that this Order remains in effect, that the Permittee has the legal authority within its jurisdiction to implement and enforce each of the requirements contained in 40 CFR section 122.26(d)(2)(i)(A-F) and this Order. Each Permittee must track and evaluate challenges brought in a court of law to its legal authority to control pollutants in runoff to its MS4; any challenges that result in an adverse judgment in a court of law must be presented in the Annual Progress Report.

E. Notification Requirements

1. When Permittees discover a release or threatened release of pollutants to the MS4 within their jurisdiction that poses an imminent threat to human health or the environment (including, but not limited to sewage spills in excess of 1,000 gallons, oil spills that could impact wildlife, spills of reportable quantities of hazardous substances defined in 40 CFR parts 117 & 302, etc.), the Permittee(s) must take the following actions:

a. Provide oral or electronic mail notification to the Santa Ana Water Board within 24 hours of discovery. A hazardous materials notification for a reportable incident provided to the California Office of Emergency Services State Warning Center may also be used to satisfy this requirement.

b. Submit a written report within five (5) business days following the initial notification to the Santa Ana Water Board providing the following information, if available:

i. The location, nature, and circumstances of the threat to human health or the environment.

ii. Any corrective action(s) taken or planned to mitigate the threat and prevent its reoccurrence.

iii. Describe any enforcement actions taken or planned by the Permittee.

iv. Identity:

1) Owner of the site or facility.

2) Operator of the site or facility, if different.

3) Name of the site or facility.

2. If, during the course of a site inspection or a complaint investigation, Permittees find evidence of a discharge in violation of applicable waste discharge requirements (e.g. Industrial or Construction General Permits, etc.) or of a known violation of local ordinances, the Permittee must include this information in the reports listed below. Permittees must submit a report on January 31 and July 31 of each calendar year concerning such facilities within their jurisdiction that are known not to have authorization to discharge waste under an NPDES stormwater permit (non-filers under section III.E.2.a) or are known to have release pollutants (section III.E.2.b) not in compliance with waste discharge requirements regulating stormwater. These include, without limitation, facilities or sites that are subject to: (1) NPDES Permit No. CAS000002, NPDES General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Construction General Permit); (2) NPDES Permit No. CAS000001, NPDES General Permit for Storm Water Discharges Associated with Industrial Activities (Industrial General Permit); (3) NPDES Permit No. CAG618001, Sector-Specific General Permit for Storm Water Runoff Associated with Industrial Activities from Scrap Metal Recycling Facilities within the Santa Ana Region (Scrap Metal Permit). Notification shall not prevent or delay the Permittees from independently taking appropriate actions to bring facilities into compliance with their local ordinances, rules, and regulations. The semi-

annual report must include the following:

a. **Facilities without Permit Coverage**. Facilities that are known of not having authorization to discharge waste under an NPDES stormwater permit, including sites subject to Senate Bill 205. The report must include, at a minimum, the following documentation:

   i. Name of the facility;

   ii. Location of the facility;

   iii. Operator of the facility;

   iv. Owner of the facility;

   v. A description of the activity being conducted at the site or facility that is known to be subject to the Construction General Permit, Industrial General Permit, Scrap Metal Permit, and/or Clean Water Action section 401 Water Quality Certification.

   vi. The estimated acreage of disturbed soil or the SIC Code of the facility (if available).

b. **Facilities with Known Discharges**. If, during a site inspection or complaint investigation, Permittees or their representatives become aware of a known discharge in violation of applicable waste discharge requirements (e.g., Industrial General Permit, Construction General Permit, Scrap Metal Permit, etc.) or local ordinances, the Permittee must include this information in the semi-annual report. At a minimum, the following information must be provided:

   i. The WDID number of the facility, if applicable;

   ii. The location, nature, and circumstance of the known discharge(s);

   iii. Prior history of any known violations of state and local requirements; and,

   iv. Action(s) taken or planned by the Permittee(s) to bring the site operator into compliance.

F. Fiscal Analysis

Consistent with 40 CFR section 122.26 (d)(2)(vi), the Permittees must prepare and submit a fiscal analysis report to the Executive Officer of the Santa Ana Water Board. The report must include the following: annual capital and operation and maintenance expenditures incurred during the prior year to comply with this Order and an estimate of the costs for the upcoming permit year. The analysis must be submitted with the Annual Progress Report (see Attachment C,

Monitoring and Reporting Program No. R8-2026-0034). The report must substantially conform to fiscal reporting guidance issued by USEPA or the State Water Board when available and in effect. Each Permittee shall also describe in the Annual Progress Report the source(s) of funds used in the past year, and proposed for the coming year, to meet necessary expenditures to implement the requirements of this Order.

G. Claremont and Pomona

The Cities of Claremont and Pomona shall only be responsible for compliance with this Order as explicitly stated in Appendix 11, including Notification Requirements in section III.E, Standard Provisions in Attachment F of this Order, and Monitoring and Reporting requirements only as necessary to demonstrate compliance with Appendix 11. The Cities of Claremont and Pomona are not otherwise subject to the requirements of this Order. Discharges other than bacteria to the Middle Santa Ana River remain regulated under Order R4-2021-0105, including subsequent amendments.

IV. DISCHARGE PROHIBITIONS

A. Prohibitions – Non-Stormwater Discharges

1. In accordance with CWA section 402(p)(3)(B)(ii), each Permittee must effectively prohibit non-stormwater discharges from entering the MS4 for which it is an owner and/or operator and discharging to receiving waters, unless the discharge is covered by an exception in section IV.A.2 below.

2. Exceptions to Prohibition of Non-Stormwater Discharges. The following categories of non-stormwater discharges are authorized and conditionally exempt from being effectively prohibited by section IV.A.1:

   a. Authorized non-stormwater discharges separately regulated by an individual or general NPDES permit, or return flows from irrigated agriculture or agricultural stormwater runoff from irrigated lands regulated by Waste Discharge Requirements or a waiver of Waste Discharge Requirements.

   b. Temporary non-stormwater discharges authorized pursuant to sections 104(a) or 104(b) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) that either: (i) will comply with water quality standards as applicable or relevant and appropriate requirements (“ARARs”) under section 121(d)(2) of CERCLA; or (ii) are subject to either (a) a written waiver of ARARs pursuant to section 121(d)(4) of CERCLA or (b) a written determination that compliance with ARARs is not practicable considering the exigencies of the situation pursuant to 40 CFR. section 300.415(j).

   c. Discharges from essential non-emergency firefighting activities, provided appropriate BMPs are implemented to reduce pollutants based on the

California Department of Forestry and Fire Protection, Office of the State Fire Marshal's Water-Based Fire Protection Systems Discharge Best Management Practices Manual (September 2011) for water-based fire protection system discharges, or equivalent BMP manual for fire training activities and post-emergency firefighting activities.

d. Discharges from landscape irrigation, provided that any discharge must be minimized through the implementation of an ordinance specifying water efficient landscaping standards, as well as an outreach and education program focusing on water conservation and landscape water use efficiency. Permittees must implement BMPs to minimize runoff and prevent introduction of pollutants to the MS4 and receiving water, including landscape water use efficiency requirements for landscaping, requirements for drought tolerant, native vegetation for new and replacement landscaping; requirements for the use of less toxic options for pest control and landscape management; and public education regarding landscape management. This does not require Permittees to implement BMPs on private property.

e. The Authorized Non-Stormwater Discharges listed in Table 3 below unless such discharges are identified by the Permittee(s) or the Executive Officer as a significant source of pollutants. With the recommendation of the Permittees or based on Substantial Evidence, as defined in the Glossary, the Executive Officer is authorized to add or remove types of discharges to Table 3 below, by way of written notice to the Permittees and after providing a minimum of 30 days for public comment.

Table 3: Types of Non-Stormwater Discharges Presumed to Not be a Significant Source of Pollutants

Air conditioning condensate
Passive foundation or footing drains
Water from crawl space pumps
Water line flushing
Non-commercial vehicle washing
Dechlorinated water from freshwater swimming pools and fountains (except cleaning wastewater and filter backwash)
Diverted stream flow
Rising groundwater and natural springs

Uncontaminated groundwater infiltration (defined in 40 CFR § 35.2005(20)) to MS4s[1]
Uncontaminated pumped groundwater
Flow from riparian habitats and wetlands
Emergency firefighting flows necessary for the protection of life and property

B. Prohibitions – Trash

The discharge of trash to surface waters of the State and the deposition of trash where it may be discharged into surface waters of the State is prohibited. Compliance with this prohibition shall be achieved as specified in section V.

V. TRASH CONTROL

A. Trash Control Program

1. Each Permittee subject to this Order with regulatory authority over Priority Land Uses, Equivalent Alternative Land Uses, or land uses designated by the Santa Ana Region Executive Officer (Designated Land Uses), and must implement a program to reduce or eliminate the discharge of trash to ocean waters, inland surface waters, enclosed bays, estuaries, and along shorelines or adjacent areas in amounts that adversely affect beneficial uses or cause nuisance. Permittees shall comply with this provision and the prohibition in section IV.B by installing, operating, and maintaining either:

    a. **Track 1: Full Capture Systems** for all storm drains that capture runoff from Priority Land Uses, Designated Land Uses, and Equivalent Alternate Land Uses in each Permittee's jurisdiction. A Full Capture System is a treatment control measure, or series of treatment control measures that traps all particles that are 5 mm or greater, and has a design treatment capacity that is either:

        i. Not less than the peak flow rate of runoff resulting from a one-year, one-hour storm in the system's drainage area, or

        ii. Appropriately sized to and designed to carry at least the same flows as the corresponding storm drain.

    Full capture systems must be certified by the Executive Director of the State Water Board or their designee. As of the adoption date of this Order, certified Full Capture Systems can be found at the following link:

    Certified Full Capture System List of Trash Treatment Control Devices

[1] 40 CFR 122.26 (d)(2)(iv)(B)(1)

b. **Track 2:** Any combination of Full Capture Systems, multi-benefit projects, other treatment control measures, and source control measures within either each Permittee's jurisdiction or within the jurisdiction of the Permittee and contiguous Permittees, that achieves **Full Capture System Equivalency**. Each Permittee may determine the locations or land uses within its jurisdiction to implement any combination of controls. Full Capture System Equivalency is the trash load that would be reduced if full capture systems were installed, operated, and maintained for all storm drains that capture runoff from Priority Land Use areas. Permittees must quantify this trash load reduction target by using an approach, and technically acceptable and defensible assumptions and methods for applying the approach, as part of an approved Program Monitoring and Reporting Plan (see Attachment C, Monitoring and Reporting Program).

   The Track 1 and Track 2 methods of compliance are outlined in State Board Resolution No. 2015-0019, *Amendment to the Water Quality Control Plan for Ocean Waters of California to Control Trash and Part 1 Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (Trash Provisions).

2. The Executive Officer has the authority to designate specific land uses, including areas that generate substantial amounts of trash, as areas requiring compliance under the Trash Provisions and this Order (Designated Land Uses).

3. As of the effective date of this Order, each Permittee with applicable land use authorities has provided written notice to the Executive Officer of their intent to either install Full Capture Systems (Track 1) or to pursue Full Capture System Equivalency (Track 2). These notices were provided in accordance with the Santa Ana Water Board's Orders dated June 2, 2017, issued pursuant to Water Code section 13383. The information previously submitted in response to the 13383 Orders may be used in whole or in part to satisfy the requirements of sections V.B, V.C, and V.D.

B. Track 1

The following requirements of this section V.B. apply to Permittees that chose Track 1 pursuant to section V.A.1.:

1. Permittees must install, operate, and maintain Full Capture Systems in all storm drains that capture runoff from the Priority Land Uses, Designated Land Uses (if required by the Executive Officer), and Equivalent Alternate Land Use areas (if approved by the Executive Officer as specified in section V.B.2 below) in each Permittee's jurisdiction, as defined in the Glossary and section V.A.1 of this Order.

2. The Permittees may request to substitute one or more of the Priority Land Use areas with Alternate Land Use areas within their jurisdiction that

generate(s) rates of trash equivalent to or greater than the Priority Land Use area(s) being substituted. The request must be made in writing and is subject to the Executive Officer's approval. The Permittees must demonstrate in the request that the Alternate Land Use area(s) generate rates of trash equivalent to or greater than the Priority Land Use(s) being substituted. Comparative trash generation rates shall be based on quantified measures such as street sweeping and catch basin cleanup records; mapping; visual trash presence surveys, or other empirical information as required by the Executive Officer.

3. The Permittees must include the following information in their Annual Progress Report:

   a. The type and location of all Full Capture Systems installed for the control of trash within their jurisdiction;

   b. A summary of the status of inspections and maintenance activities related to the Full Capture Systems, including the results of any investigations due to third party complaints;

   c. A map with the following information:

      i. Priority Land Uses;

      ii. Designated Land Uses (if any);

      iii. Equivalent alternative land uses (if any);

      iv. Drainage areas;

      v. Total area and percentage area served by Full Capture Systems;

      vi. Type and location of all existing and proposed Full Capture Systems.

4. Each Permittee first electing to follow Track 1 and then wishing to change to Track 2 must submit a Trash Implementation Plan that complies with section V.C.2. below within 6 months after notifying the Santa Ana Water Board of the proposed change. This plan is subject to review and approval by the Executive Officer.

C. Track 2

The following requirements of this section V.C. apply to Permittees that chose Track 2 pursuant to section V.A.1.:

1. Permittees must install, operate, and maintain any combination of Full Capture Systems, multi-benefit projects, other treatment control measures, and/or institutional control measures to attain Full Capture System Equivalency as defined in the Glossary and section V.A.1.b. of this Order. Each Permittee shall demonstrate that such combinations achieve Full

Capture System Equivalency. Each Permittee may determine which controls to implement to achieve compliance with the Full Capture System Equivalency; it is, however, the Santa Ana Water Board's expectation that each Permittee will elect to install Full Capture Systems where such installation is not cost-prohibitive.

2. The Permittees may request to substitute one or more of the Priority Land Use areas with alternate land use areas within their jurisdiction that generate(s) rates of trash equivalent to or greater than the Priority Land Use area(s) being substituted. The request must be made in writing and is subject to the Executive Officer's approval. The Permittees must demonstrate in the request that the alternate land use area(s) generate rates of trash equivalent to or greater than the Priority Land Use(s) being substituted. Comparative trash generation rates shall be based on quantified measures such as street sweeping and catch basin cleanup records; mapping; visual trash presence surveys, or other empirical information as required by the Executive Officer.

3. Each Permittee must carry out its trash control program according to a Trash Implementation Plan approved by the Executive Officer. Upon approval, the Plan must be implemented and maintained. The Plan must include the following:

    a. The specific locations of all its significant trash generating areas;

    b. If locations or land uses of significant trash generating areas are different than Priority Land Use areas, the Plan must include justification, based on empirical information, demonstrating that the selected land uses generate trash at higher or equivalent rates compared to the Priority Land Use areas being substituted;

    c. The combination of controls selected, the rationale for the selection, and explanation of how they will achieve Full Capture System Equivalency (section V.A.1.b) by the milestones specified in section V.D of this Order.

4. The Permittees must include the following information in their Annual Progress Report:

    a. The type and number of treatment control measures, institutional control measures, and/or multi-benefit projects have been used and their locations;

    b. The number of Full Capture Systems installed (if any), their locations, and the individual and cumulative area served by them;

c. The effectiveness of the total combination of treatment control measures, institutional control measures, and multi-benefit projects employed to achieve Full Capture Equivalency;

d. A summary of inspection and maintenance activities for Full Capture Systems, including the results of any investigations due to third party complaints.

e. A map with the following information:

i. Priority Land Uses;

ii. Designated land uses;

iii. Equivalent alternative land uses;

iv. Drainage areas;

v. Total area and percentage area served by Full Capture Systems, multi-benefit projects, other treatment control measures, and/or institutional control measures;

vi. Type and location of all existing and proposed Full Capture Systems, multi-benefit projects, other treatment control measures, and/or institutional control measures.

5. If a Permittee first elects to follow Track 2 and then changes to Track 1, they must provide written notice to the Executive Officer of their intent to install Full Capture Systems (Track 1). The Permittee must adhere to the Track 1 compliance milestones in section V.D.

D. Implementation Schedule

All Permittees shall report their status towards compliance with trash requirements of this Order annually in the Annual Progress Report. Permittees shall adhere to the milestone and final compliance deadline below:

1. Interim milestone – Within 2 years from the effective date of this Order, Permittees shall either: 1) install, operate, and maintain Full Capture Systems (Track 1) or equivalent measures (Track 2) for 50 percent or more of the Priority Land Use areas and Equivalent Alternate Land Use areas, or 2) provide evidence of funding allocation, procurement, and/or installation planning sufficient to meet final compliance as indicated in section V.D.2. If the Permittee does not expect to achieve this interim milestone, they must submit a report, within 180 days of the effective date of this Order, that proposes an alternate interim requirement, subject to the approval of the Executive Officer.

2. Final compliance – By December 2, 2030, Permittees shall install, operate, and maintain Full Capture Systems (Track 1) or equivalent measures (Track 2) for 100 percent of the Priority Land Use areas, Designated Land Use areas, and Equivalent Alternate Land Use areas, except for those designated land use areas that have been issued a separate compliance date by the Santa Ana Water Board. In no case may the final compliance date for a designated land use areas be longer than ten years from the date the Executive Officer designates a land use or location as a significant trash generating land use.

3. Permittees shall demonstrate measurable progress toward compliance on an annual basis, such as incremental installation of controls or trash load reductions, sufficient to achieve full compliance by the final deadline.

VI. RECEIVING WATER LIMITATIONS

Discharges of pollutants in runoff from the Permittees' MS4s must not cause or contribute to a condition of nuisance or exceedances of water quality standards (as defined by Beneficial Uses and Water Quality Objectives for applicable surface waters contained in Chapters 3 and 4 of the Basin Plan or the California Ocean Plan, ISWEBE (Parts 1 [Trash Provisions], Part 2 [Bacteria Provisions], and Aquatic Toxicity Provisions), Sediment Quality Provisions, Water Quality Control Plan for Control of Temperature in Coastal and Interstate Waters and Enclosed Bays and Estuaries of California (California Thermal Plan), and amendments to any of the foregoing, including amendments that move a water quality standard to a different plan; or in federal regulations, including but not limited to 40 CFR sections 131.36 [National Toxics Rule] and 131.38 [California Toxics Rule]) for surface waters. Discharges from the MS4 that cause or contribute to the violation of receiving water limitations are prohibited.

A. Discharges of pollutants in runoff from the Permittees' MS4s must use timely iterative implementation of control measures and BMPs and other actions to reduce pollutants in discharges according to the conditions and provisions of this Order. Permittees must implement control measures and other actions to reduce pollutants in the discharges in accordance with their stormwater management program and its components and other requirements of this Order including any modifications. The Permittees' stormwater management program and its components shall be designed to achieve compliance with receiving water limitations. If exceedances of receiving water limitations persist, notwithstanding implementation of the Permittees' stormwater management program and its components and other requirements of this Order, the Permittee shall ensure compliance with discharge prohibitions and receiving water limitations by complying with the following procedure:

1. Upon a determination by either the Permittee or the Santa Ana Water Board that discharges from the MS4 are causing or contributing to an exceedance of an applicable Receiving Water Limitation, the Permittee shall promptly notify the Santa Ana Water Board and thereafter submit a report to the Santa Ana Water Board for approval. The report shall describe the BMPs that are

currently being implemented by the Permittee and additional BMPs, including modifications to current BMPs that will be implemented to prevent or reduce any pollutants that are causing or contributing to the exceedances of receiving water limitations. The report shall include an implementation schedule. The Santa Ana Water Board may require modifications to the report.

2. The Permittee shall submit any modifications to the report required by the Santa Ana Water Board within 30 days of notification.

3. Within 30 days following the Santa Ana Water Board Executive Officer's approval of the report, the Permittee shall revise its stormwater management program and its components and monitoring program to incorporate the approved modified BMPs that have been and will be implemented, an implementation schedule, and any additional monitoring required.

4. The Permittee shall implement its revised stormwater management program and its components and monitoring program according to the approved implementation schedule in the report.

5. So long as the Permittee has complied with the procedures set forth in Part VI.A above and is implementing its revised stormwater management program and its components, the Permittee does not have to repeat the same procedure for continuing or recurring exceedances of the same receiving water limitations unless directed by the Santa Ana Water Board to modify current BMPs or develop additional BMPs. However, compliance with this section VI.A shall not constitute compliance or deemed compliance with receiving water limitations;. each responsible Permittees must demonstrate compliance with receiving water limitations according to section VI.E below.

B. 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 R8-2026-0034 (Attachment C).

C. Permittees that have commingled MS4 discharges are jointly responsible for meeting the requirements of this Order. However, Permittees are only responsible for discharges from the MS4 for which they are owners and/or operators.

D. Where Permittees have commingled MS4 discharges to the receiving water(s), compliance in the receiving water(s) shall be determined for all Permittees contributing to the discharge unless a Permittee or Permittees demonstrate that their discharge did not cause or contribute to the exceedance of the receiving water limitation.

E. Any individual Permittee may demonstrate compliance with receiving water limitations by demonstrating any of the following:

1. There are no exceedances of the receiving water limitation for the specific pollutant in the receiving water(s) at, or downstream of, the Permittee's discharge.

2. The Permittee's discharge did not cause or contribute to the exceedance of the receiving water limitation. A demonstration that the Permittee did not cause or contribute to the exceedance of the receiving water limitation may be made by any of the following:

   a. There was no discharge from the Permittee's MS4 into the affected receiving water(s) during the relevant period.

   b. There are no exceedances of the receiving water limitation for the specific pollutant in the Permittee's MS4 discharge measured at the Permittee's outfall(s) that discharge to the receiving water.

   c. The discharge from the Permittee's MS4 was controlled to a level that it did not cause or contribute to the exceedance in the receiving water(s). The Permittee must support this demonstration using monitoring, modeling, or other technical analysis.

   d. There is an alternative source of the pollutant that caused the exceedance; and that the pollutant is not typically associated with the MS4 discharges; and that the pollutant was not discharged from the Permittee's MS4.

   e. All exceedances are the result of an authorized or exempt non-stormwater discharge specified in section IV.A.2 of this Order during a specific sampling event. The Permittee must support this demonstration with Substantial Evidence.

3. The Permittee is implementing an approved Watershed Management Plan, consistent with the actions and schedules therein, to address the applicable waterbody-pollutant combination pursuant to section XII of this Order. A Permittee that is developing a Watershed Management Plan may demonstrate compliance with Receiving Water Limitations only as stated in section XII.A.

4. For a waterbody-pollutant combination subject to an adopted TMDL, the Permittee is in compliance with all applicable requirements in Appendices 2 through 14, including interim requirements before their respective compliance dates have passed, such as BMP requirements and monitoring and reporting requirements, and final WQBELs on or after their respective compliance dates have passed, for that waterbody-pollutant combination pursuant to section VII of this Order.

F. Except for water body-pollutant combinations subject to an approved Watershed Management Plan, all demonstrations of compliance must be according to methods that have been approved under Monitoring and Reporting Program R8-2026-0034.

G. The Special Protections for Areas of Special Biological Significance (ASBS) contained in Attachment B to State Water Board Resolution No. 2012-0012, as amended or reauthorized by the State Water Board, are hereby incorporated into this Order. The Special Protections apply to discharges of pollutants in 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

VII. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

A. Effluent Limitations

1. **Technology Based Effluent Limitations.** Each Permittee shall reduce pollutants in stormwater discharges from the MS4 to the maximum extent practicable (MEP) according to the requirements of this Order.

2. **Water Quality-Based Effluent Limitations.** Each Permittee shall comply with applicable water quality based effluent limitations (WQBELs) specified in Appendices 2 through 14 of this Order, pursuant to applicable compliance schedules. The WQBELs in this Order implement Total Maximum Daily Loads (TMDLs) and are consistent with the assumptions and requirements of the TMDL waste load allocations (WLAs) assigned to discharges from MS4s.[2]

   The City of Menifee shall also comply with WQBELs or other requirements implementing TMDLs in accordance with the San Diego Regional Water Quality Control Board's regional MS4 permit, Order R9-2013-0001, as amended by Orders R9-2015-0001 and R9-2015-0100 NPDES NO. CAS0109266, as amended or reissued.[3]

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2. According to 40 CFR § 130.2, waste load allocations constitute a type of water quality-based effluent. Pursuant to 40 CFR § 122.2, effluent limitation means any restriction imposed by the permitting authority on quantities, discharge rates, and concentrations of pollutants that are discharged from point sources.

3 As of the date of this Order, no San Diego Water Board TMDLs assign wasteload allocations (WLAs) to the City of Menifee.

B. General Compliance Provisions for Water Quality-Based Effluent Limitations (WQBELs)

1. The responsible Permittees identified in Appendix 1 must demonstrate compliance with the applicable WQBELs in Appendices 2 to 14 through any one of the means identified in this section VII.B or in the applicable Appendix.

2. Methods for demonstrating compliance with WQBELs must be approved by the Executive Officer as part of a Program Monitoring and Reporting Plan (PMRP) described in Monitoring and Reporting Program R8-2026-0034. A Permittee shall demonstrate compliance at the compliance monitoring locations identified in the PMRP unless alternative locations are selected as part of an approved Watershed Management Plan pursuant to section XII of this Order.

3. Permittees that have commingled MS4 discharges are jointly responsible for meeting the requirements of this Order. However, Permittees are only responsible for discharges from the MS4 for which they are owners and/or operators.

4. Where Permittees have commingled MS4 discharges to the receiving water(s), compliance at the outfall discharging to the receiving water(s) or compliance in the receiving water(s) shall be determined for all Permittees contributing to the discharge, unless an individual Permittee demonstrates that its discharge did not cause or contribute to the exceedance through one of the methods described in the applicable TMDL Appendix or in section VI.E. of this Order.

5. Where the final compliance date for achievement of a WQBEL has not passed, Permittees may demonstrate compliance by developing and implementing an approved Watershed Management Plan, consistent with the actions and schedules therein, to address the applicable waterbody-pollutant combination pursuant to section XII of this Order. A Permittee that is developing a Watershed Management Plan may demonstrate compliance with Receiving Water Limitations only as stated in section XII.A.

6. Where a Permittee needs additional time to comply with a WQBEL, the Permittee may request a Time Schedule Order (TSO) pursuant to Water Code sections 13300 and/or 13385(j)(3) for the Santa Ana Water Board's consideration. A Permittee seeking an extension of a compliance deadline, other than a final TMDL compliance date, in an approved Watershed Management Plan does not need a TSO and may request the extension in accordance with the modification provisions in section XII of this Order. If a TSO is issued and the Permittee is in compliance with that TSO, the Santa Ana Water Board will not pursue further enforcement of violations involving the specific waterbody-pollutant combination(s) addressed in the TSO while the TSO is in effect.

VIII. NEW DEVELOPMENT (INCLUDING SIGNIFICANT REDEVELOPMENT)

To reduce the discharge of stormwater pollutants, effectively prohibit non-stormwater discharges, and protect receiving waters, the water quality impacts of development that is subject to a Permittee's authority need to be addressed during each of the three major phases of planning, construction, and use. Accordingly, each Permittee must adopt and implement policies and procedures that are effective at integrating source control and treatment control measures as early in the land-use planning and development process as practicable. Flood control districts without authority to approve projects subject to this section VIII may develop Uniform Technical Guidance Documents, per sections VIII.C.5 and VIII.C.7, that describe the policies and procedures that will be implemented for the types of projects for which the Flood Control District is the lead agency.

A. Planning Requirements

1. Permittees must provide written notice to the Santa Ana Water Board when a Permittee initiates an amendment or update of their General Plan which may directly or cumulatively impact beneficial uses, consistent with the requirements of Government Code section 65350 *et seq*. This written notice shall include a description of the proposed amendment or update, a summary of potential water quality or beneficial use impacts, and a schedule for public review and adoption. This requirement is separate from, and in addition to, any other obligations of the Permittees to provide notice to the Santa Ana Water Board as a Responsible Agency pursuant to CEQA with respect to planning, land use, development, construction, or site cleanup.

2. Permittees must review and update their existing plans and policies as needed to comply with the requirements of this Order.

3. Each Permittee must assess their planning and permitting process and if practicable, develop and implement strategies to overcome or remove barriers to implementing low impact development (LID) control measures at the project, sub-regional or regional scales. For example:

    a. Institutional Barriers – Developing sub-regional or regional facilities to treat runoff from areas where setbacks or lot line allowances limit on-site BMPs. Modify transportation standards to incorporate source control measures, and treatment control measures.

    b. Physical Barriers – Developing sub-regional or regional facilities to treat runoff from areas where soil permeability on individual lots is low.

B. Priority Projects

Priority projects are a subset of projects that have a high potential to threaten water quality. Priority projects are identified as set forth in section VIII.B.5. below.

1. Each Permittee must identify priority projects from among its development applications that are subject to the planning and building authority or land-use authority of the respective Permittee.

    a. Priority projects that are subject to discretionary approval must have source control measures and treatment control measures; these controls must be documented in a WQMP for each project (section VIII.C below).

    b. Priority projects that require ministerial approval must have source control measures incorporated through ordinances, building standards, or similar standardized requirements; or a WQMP.

2. The requirements of this section VIII pertaining to priority projects apply to initial project applications received by the Permittees at least 90 days after the Executive Officer's approval of Uniform Technical Guidance Documents pursuant to section VIII.C.4. The requirements apply to Permittees' projects where design has been initiated at least 90 days after the Executive Officer's approval of Uniform Technical Guidance Documents pursuant to section VIII.C.4. The relevant requirements of Order R8-2009-0030 for Orange County, Order R8-2010-0033 for Riverside County, and R8-2010-0036 for San Bernardino County shall apply to initial project applications received by Permittees until 90 days following the Executive Officer's approval of Uniform Technical Guidance Documents pursuant to sections VIII.C.4 and 5. All other requirements of section VIII pertaining to the general management of approved WQMPs are effective on the effective date of this Order.

3. Each Permittee must employ a standardized form, checklist, or similar mechanism to document the basis for classifying a project as a priority project. Each Permittee is responsible for ensuring the accuracy of information relied on in support of the Permittee's classification.

4. Permittees must consider the whole of the action (CEQA Guidelines, California Code of Regulations, title 14, section 15378) and the larger common plan of development (40 C.F.R. § 122.26 and the CGP) in classifying a project; the Permittees must not piecemeal a project to avoid requirements of this Order.

5. The following categories of projects constitute 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 that maintain the original line and grade, hydraulic capacity, level of service, or original purpose of a facility or repairs made to restore a surface to its original condition.

ii. Redevelopment projects do not include those areas where impervious surfaces are replaced as part of the replacement, upgrade, or installation of gas, electric, and telecommunications lines, sanitary sewer, petroleum pipelines, and raw or potable water distribution lines in existing rights of way.

iii. Where a redevelopment project results in the addition or replacement of 50 percent or less of the impervious surfaces of an existing developed site, and the existing development did not have a WQMP, the numeric sizing requirements for treatment control measures apply only to runoff from the impervious areas added or replaced and not from the entire developed site. If any part of the project is subject to a prior WQMP and there are deficiencies in the related pollution controls identified in the prior WQMP, the project must be required to correct the deficiencies.

iv. Where a redevelopment project results in the addition or replacement of more than 50 percent 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 exposed to stormwater, including industrial, commercial, 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 Permittees. This category excludes public drainage improvement projects that do not involve new sources of pollutants.

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. New eating places, described by SIC code 5812, where the area of land development is 5,000 square feet or more.

e. Hillside developments affecting 5,000 square feet or more of land area that has known erosive soil conditions or natural slope is 25 percent or more.

f. Development that includes the construction of 2,500 square feet or more of impervious surface exposed to stormwater 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.

g. Parking lots or other land areas/facilities for the temporary storage of motor vehicles, where the project adds 5,000 square feet or more of

impervious surface exposed to stormwater.

h. New retail gasoline outlets that are either 5,000 square feet or more or are projected to receive an average daily traffic rate of 100 or more vehicles per day.

i. Improvement of existing streets, roads, highways, and freeways adding or replacing 5,000 contiguous square feet or more of impervious surface used by transportation vehicles. This category excludes routine maintenance projects associated with operations and maintenance activities that are conducted on existing lines and facilities and within existing right-of-way or easements.

C. General Requirements for Discretionary Priority Projects

1. Permittees must require priority projects which are subject to discretionary approval to use source control measures and treatment control measures to reduce pollutants in runoff discharged from the project site unless:

   a. A waiver is granted for the requirement for treatment controls according to section VIII.E. or

   b. Credits are used according to section VIII.H. in lieu of treating the project's discharge

2. The treatment control measure(s) may be on-site or off-site.

3. Source control measures and treatment control measures must be designed to maximize retention of the site's design capture volume unless such measures are not Feasible or pose an unmitigable environmental public health hazard.

4. A Water Quality Management Plan (WQMP) documents mitigation of stormwater pollutants and hydrological impacts of a priority project that is subject to a Permittee's discretionary approval. Effective 90 days after the Executive Officer's approval of updated written Uniform Technical Guidance Documents, WQMPs must be prepared in compliance with this Order and those written Uniform Technical Guidance Documents, according to section VIII.C.5. However, a WQMP is not required for a priority project which, in its entirety, is necessary to prevent or mitigate an emergency.

5. **Uniform Technical Guidance Documents**: The model WQMPs, Technical Guidance Documents, and other documents approved under the previous Order qualify as uniform technical guidance documents. However, they may contain conflicts with this Order. If there is a conflict, the requirements of this Order shall prevail.

   a. The Permittees must submit new or updated uniform technical guidance

documents to the Executive Officer for approval within 24 months of the effective date of this Order.

b. The uniform technical guidance documents must implement the requirements of this Order and be written for the benefit of persons responsible for preparing, reviewing, enforcing, and implementing WQMPs.

c. The uniform technical guidance documents may be submitted so they are applicable regionwide, by county, or by watershed. The documents may be submitted for categories of projects, such as road improvement, drainage, commercial, or residential projects. Uniform technical guidance submitted for non-traditional project categories (e.g., road improvement projects, public drainage projects, small residential projects, other projects that differ from typical commercial and residential projects) may define procedural requirements and documentation methods specific to these projects, which may differ from the standard procedural requirements specified elsewhere in Provision VIII.C, subject to Executive Officer approval.

d. The Executive Officer will provide 30 days for public review prior to approving uniform technical guidance documents and subsequent amendments.

e. The Executive Officer shall approve, conditionally approve, or provide written notice identifying revisions necessary for approval of the uniform technical guidance documents. Uniform technical guidance documents are deemed approved after 60 days if the Executive Officer has not approved, conditionally approved, or identified revisions necessary for approval. The Executive Officer may extend the 60-day review period by notifying the Permittees and known interested persons of the extension before the end of the 60-day period.

f. Permittees must ensure that project WQMPs are prepared and implemented according to the uniform technical guidance documents 90-days after approval of the documents by the Executive Officer and the requirements in this Order. Where there is a conflict, this Order shall prevail.

g. Except for inconsequential grammatical or technical corrections, changes to uniform technical guidance documents must be approved by the Executive Officer.

6. **USEPA "Green Streets" Guidance**: Priority projects for improving existing streets, roads, highways, and freeways may be subject to uniform technical documents that establish criteria for the selection of source control measures and treatment control measures according to the principles in USEPA "Green Streets" guidance, ("Managing Wet Weather with Green Infrastructure: Green

Streets", 2008 and "Green Streets Handbook", 2021). Uniform technical guidance documents that use the "Green Streets" Guidance must be approved by the Executive Officer.

7. Permittees may develop uniform technical guidance for public drainage projects, including projects that meet the Priority Project criteria. Such guidance shall establish standardized procedures for assessing the impacts of public drainage projects on the water quality of receiving waters and for evaluating whether existing structural flood control facilities can feasibly be retrofitted to provide additional pollutant removal from stormwater. Uniform technical guidance documents developed pursuant to this provision must be approved by the Executive Officer.

8. Each Permittee must require a Preliminary WQMP for priority projects that are subject to discretionary approval as part of a complete application for a project. Permittees must prepare WQMPs for priority projects that they own. The Preliminary WQMP must be subject to the Permittee's approval. A Preliminary WQMP must be approved or accepted prior to the project's approval by the Permittee's decision-making body (e.g., city council, Board of Supervisors, etc.).

9. Prior to the start of construction on the priority project, the Permittees must approve a Final WQMP. If the project is phased, a Permittee must not allow final construction work to proceed on the subject phase of the project prior to approval of a project Final WQMP for that phase.

10. Permittees must provide that source control measures and treatment control measures are constructed, operated and maintained according to the Final WQMP.

11. Project WQMPs must be prepared by or under the supervision of a registered civil engineer, or other qualified preparer specified in approved Uniform Technical Guidance Documents per VIII.C.5.

12. Final project WQMPs must be approved by or under the supervision of a registered civil engineer acting on behalf of the Permittee, or other qualified reviewer specified in approved Uniform Technical Guidance Documents, acting on behalf of the Permittee.

13. Each Permittee must employ uniform mechanisms to provide efficiency and consistency in their WQMP-approval process. The mechanisms must be subject to routine review by the Permittees during the term of this Order for the purpose of promoting the mechanisms' continual improvement. The results of a review must be reported in the Annual Progress Report. Such mechanisms may include the following:

    a. Standard instructions, drawings, processes, procedures, and methods.

b. Standardized paper or electronic forms, checklists, and worksheets.

c. Model language for project WQMPs or categories of project WQMPs.

d. Standardized models, 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 pollution controls.

14. Permittees must require project proponents to identify, in each approved project WQMP, a source of available funding and a party that will be legally responsible for the long-term performance, operation, and maintenance of source control and on-site or off-site treatment control measures over the life of the project.

15. Permittees must provide that approved Final WQMPs are maintained in a manner that allows for their review by interested parties and facilitates the transfer of responsibility if a transfer of ownership or control of the affected project site occurs.

16. Permittees must require WQMPs to include descriptions of any covenants, conditions, restrictions, easements, or other similar mechanisms necessary for the WQMP's implementation.

17. Permittees must maintain an electronic database adequate to identify sites affected by a Final WQMP that was approved after the effective date of this Order.

    a. The database must be established within 18 months of the effective date of this Order. The database must include the following information:

        i. Type of treatment facility. If a facility 'type' cannot be accurately identified using terminology found in published and generally accepted engineering design manuals, the facility must be identified as undetermined.

        ii. For infiltration LID treatment control measures: depth of invert and screen interval, if applicable.

        iii. Design manuals or other published standards applied to the facility's design.

        iv. Location by watershed and by a scale sufficient for location in the field.

        v. Date first placed in service or date of initial issuance of occupancy permit.

vi. Identifying information for the party responsible for maintenance and their contact information, including emergency contact information.

vii. Records of substantiated performance, maintenance, or nuisance problems identified during any site inspections by the Permittees or brought to their attention.

b. Information in sections VIII.C.16.a.i, iv, vi, and vii for Final WQMPs that were approved prior to the effective date of this Order should be added to the database within the term of this Order as it is discovered in the course of normal municipal program activities.

18. Permittees must refer vector nuisance problems associated with treatment control measures to the local vector control district and respective Permittee within 5 business days of the problem becoming known. The Permittees must cooperate with the local vector control district to remedy any confirmed nuisance problems.

19. The Permittees' staff, contractors, or vendors responsible for preparing, reviewing, or approving WQMPs or for enforcing their implementation must be trained according to section XI of this Order.

20. Each Permittee must have effective standard processes to ensure that the project Final WQMP is internally consistent and free of internal conflicts.

21. As part of the project approval process, each Permittee must apply standard conditions of approval, or some other effective measure(s), that require the proper operation and maintenance of all source control measures and treatment control measures by the project applicant, their successors and assigns over the life of the project according to the approved project Final WQMP. Each Permittee must effectively enforce the measure(s).

22. Each Permittee must implement a mechanism to identify and correct missing, damaged, or deficient source control measures and treatment control measures required by an approved WQMP during the construction of priority projects.

23. Each Permittee must either develop, publish, and apply or use existing published standards and guidelines developed for the purpose of providing that treatment control measures be readily inspected, serviceable and generally of a quality that is satisfactory to the Permittee.

24. Permittees are prohibited from permitting final occupancy or otherwise effectively issuing final approval of a priority project site until all source controls and, where applicable, treatment control measures are constructed, serviceable, and satisfactory to the Permittee.

a. Serviceable facilities must be in working order, maintainable, inspectable, and operate as intended.

b. Where deficiencies exist, the Permittee may permit temporary occupancy only if a time schedule to bring the site into compliance with the project Final WQMP is approved by the Permittee.

c. Permittees must require that certifications by the licensed professional engineer be affixed with said engineer's stamp and maintained as part of the Final WQMP.

25. Each Permittee must have standard processes that provide the following:

a. Approved project Final WQMPs are retained using a system that allows for their retrieval for the life of the project.

b. Approved Final WQMPs are protected by the Permittee's standard record protection practices if fire, information system failure or attack, or other loss or damage occurs.

D. General Requirements for Treatment Control Measures

The following provisions apply to treatment control measures constructed at the priority project site or off-site (section II.C.5). For off-site facilities see additional requirements in section VIII.K.

1. Treatment control measures must:

a. Be identified using standard terminology;

b. Not cause or contribute to a condition of nuisance or pollution, as defined in Water Code section 13050;

c. Not be approved in a 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 Certification, waste discharge requirements, or waiver thereof;

d. Be sized to infiltrate, filter, or remove pollutants from the design capture volume or design capture flow to the maximum extent practicable from their respective tributary areas;

e. Non-proprietary BMPs 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;

f. Proprietary BMPs must have had their expected performance over their

anticipated service life substantiated by qualified independent third parties in field tests using published and recognized protocols. BMPs with performance certified as part of the Washington State Technology Assessment Protocol Ecology (TAPE) program, the New Jersey Corporation for Advanced Technology (NJCAT), or similar program, may be used to satisfy this requirement. Proprietary BMPs must be sized and designed in accordance with manufacturer guidance and the terms of applicable third-party certifications.

2. A single or set of treatment control measures that are volume-based must be sized to infiltrate, filter, or remove pollutants from any of the following design capture volumes from their tributary area:

   a. The volume of runoff produced by a 24-hour, 85th percentile storm event. The volume must be calculated using the applicable county's 85th Percentile Precipitation Isopluvial map or equivalent.

   b. The volume of annual runoff produced by the 85th percentile, 24-hour rainfall event, determined as the maximized capture stormwater 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).

   c. The maximum flow rate of runoff necessary to capture 80 percent or more of the annual runoff volume, based on published and generally accepted methods.

   d. 80 percent or more of the annual runoff volume, based on published and generally accepted methods (e.g., *California Stormwater Best Management Practices Handbook – Industrial/Commercial*).

   e. The volume 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 volume of runoff produced by an 85th percentile, 24-hour rain event.

   Additional requirements for volume-based treatment control measures are set forth below in section VIII.I.

3. A single or set of treatment control measures that are flow-based must be sized to infiltrate, filter, or remove pollutants from any of the following design flows from their tributary area:

   a. The maximum flow rate of runoff produced from a rainfall intensity of 0.2 inches 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.

4. Treatment control measures intended to retain the design capture volume must be designed to infiltrate, evaporate, evapotranspire, or use the volume over a period not to exceed a drawdown period specified in an approved uniform technical guidance document. This drawdown period must be determined such that the combination of design capture volume and drawdown time achieve retention of 80 percent or more of the average annual stormwater runoff volume and such that it mitigates the risk of vectors and causing a nuisance. Any remaining volume must be passed on to another treatment control measure selected according to the requirements of this Order.

5. During the design phase, the design capture volumes and flows may be adjusted according to anticipated changes in hydrology due to environmental changes over the facility's service life.

6. The design capture volume or flow may be treated by routing the runoff through multiple treatment control measures organized in series or parallel. Permittees must require that the design capture volume or flow be calculated for each area tributary to a treatment control or group of treatment control measures.

7. Permittees must require mechanisms designed to indicate the need for maintenance of the treatment control measures. The mechanisms must also be designed to benefit the party responsible for long-term maintenance. The mechanism(s) must be readily identifiable and associated with the treatment control measures; such mechanisms must be documented in the related approved project WQMP.

8. Treatment control measures must be sized and designed by, or under the direction of, a registered civil engineer.

9. Treatment control measures must incorporate design features to minimize the entrainment and bypass of captured pollutants during routine maintenance, normal operation, or overflow.

10. Treatment control measures for stormwater must not be used for treating wastewater.

E. Waiver of Treatment Control Measures

1. Permittees are authorized to waive the requirement to provide treatment controls to remove pollutants if all the following conditions are met:

   a. The employment of treatment control measures has been demonstrated in the project WQMP to not be feasible; or there is no treatment control measure available for which the environmental and public health impacts can be mitigated to an acceptable level.

   b. Source control measures have been incorporated to maximize the reduction of runoff through infiltration, evaporation, etc.

   c. The Executive Officer was provided valid notice of the Permittee's intent to issue the waiver, along with the project WQMP, at least 30 days prior to issuance by the Permittee and the Executive Officer or their delegated staff either approves the waiver, requests additional information, or takes no action as provided in section VIII.E.4 below. The Permittee shall submit the notice to the Executive Officer, upload a copy via SMARTS (when the feature is available), and email to r8_stormwater@waterboards.ca.gov.

   d. The Executive Officer or their delegated staff shall approve or deny the proposed waiver within 30 days of receipt. If no action is taken within 30 days, the waiver shall be deemed approved.

2. The Executive Officer is authorized to issue waivers of the requirement to provide treatment controls for categories of projects where the Executive Officer determines that conditions of section VIII.E.1 are generally satisfied.

   a. The waiver will define eligibility criteria for projects and documentation requirements for Permittees. Permittees that elect to waive the requirement to provide treatment controls pursuant to a categorical waiver are not subject to section VIII.E.1.

   b. The issuance of categorical waivers shall be subject to a minimum 30-day public comment period.

F. Non-conforming Treatment Control Measures: Demonstration Facilities

1. As part of WQMPs, Permittees are prohibited from approving or allowing to be placed into service treatment controls which do not substantially conform to published and generally accepted engineering design criteria or whose expected performance has not been substantiated in field tests by qualified independent third parties using published and recognized protocols (non-conforming treatment control) unless the following requirements are satisfied:

   a. The design of the non-conforming treatment control measure must be based on sound principles of operation and pollutant-removal mechanisms exhibited by similar conforming treatment control measures.

b. The tributary area of any single non-conforming treatment control measure is three (3) acres or less.

c. Collectively, the Permittees approve no more than two-percent (2%) of each county's total WQMP approvals with non-conforming treatment control measures in total in each county within the Santa Ana Region during the term of this Order.

d. A Permittee may request approval from the Executive Officer to exceed the limitation in subsection VIII.F.1.c under exceptional circumstances. The request must demonstrate infeasibility of compliance with the cap and that the proposed measure will achieve comparable performance. The Executive Officer may approve, conditionally approve, or deny the request.

e. Each non-conforming treatment control measure must be subject to a performance monitoring plan designed and carried out to substantiate the expected performance of the facility using published and recognized protocols. The results must be evaluated by a qualified independent third party.

f. The results of the performance monitoring plan must be submitted to the Executive Officer if the responsible Permittee concludes that the expected performance of the facility is similar or better as compared to the most similar conforming treatment control measure.

g. The non-conforming treatment control measure is subject to all other requirements of this Order that do not conflict with the requirements of this section VIII.F.

2. Permittees must require replacement of a non-conforming treatment control measure with a conforming measure if the facility's ability to remove pollutants falls below the performance of 85 percent of facilities in a distribution of a sample population of the most similar conforming measures (e.g., performance is less than approximately one standard deviation below the sample mean or less than the 15th percentile of the sample population's distribution) or that the facility fails to perform to the Permittee's satisfaction. The Permittee must require financial assurance instruments that are adequate to carry out the replacement.

3. Permittees must report both the application for approval and approval of any non-conforming treatment control measures within their jurisdiction to the Principal Permittee in writing for coordination and reporting in the next Annual Progress Report.

4. The Principal Permittee is responsible for coordinating the Permittees in complying with the requirements of this section.

G. BMP Prioritization Hierarchy

The selection of treatment control measures for priority projects shall be prioritized according to the following hierarchy:

1. First Priority - Consideration of Retention LID Treatment Control Measures in WQMPs

a. The Permittees must require that LID treatment control measures that employ harvest and use, evaporation/transpiration, infiltration (collectively, retention LID treatment control measures), 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 section VIII.C.3.e).

b. The Permittees must require retention LID treatment control measures for the design capture volume, or the maximum portion thereof, unless the Permittees demonstrate that such controls are:

   i. Not Feasible; or

   ii. Where environmental and public health hazards of retention LID treatment control measures cannot be mitigated to an acceptable level.

c. Permittees must document the specific basis for the rejection of retention LID treatment control measures in the approved final WQMP. The rejection of retention LID treatment control measures must be supported with Substantial Evidence, as defined in the Glossary.

d. The Permittees must require the project applicant to mitigate the environmental and public health hazards of retention LID treatment control measures.

   i. Mitigation is limited to activities that may be reasonably undertaken as part of the development project and are within the authority of the Permittees to mandate.

   ii. Mitigation is not necessary if feasibility analysis demonstrates the costs disproportionately outweigh the pollution control benefits; any such finding must be documented in the final WQMP and be supported with Substantial Evidence.

2. Second Priority Consideration of Biotreatment Control Measures in WQMPs

a. The Permittees must require that treatment control measures that employ filtration, biological uptake, transformation, and/or degradation of pollutants and incidental infiltration and/or evapotranspiration (biotreatment control measures) be given secondary consideration in the project final WQMP, in cases when any of the following conditions can be demonstrated based on Substantial Evidence:

   i. Retention LID treatment control measures have been demonstrated to not be Feasible;

   ii. The hazards of using retention LID treatment control measures cannot be mitigated to an acceptable level; or

   iii. A retention LID treatment control measure is proposed but cannot be sized to treat the tributary area's entire design capture volume and a complementing biotreatment control measure can be designed to treat the remainder of the design capture volume or flow or a portion thereof.

b. When retention LID treatment control measures are demonstrated to not be Feasible, the Permittees must require biotreatment control measures unless such controls are:

   i. Not Feasible; or

   ii. Where the environmental and public health hazards cannot be mitigated to an acceptable level.

c. Where biotreatment control measures meet the above criteria, the Permittees must document the specific basis for their rejection in the approved final WQMP. The rejection of biotreatment control measures must be based on Substantial Evidence.

d. The Permittees must mitigate the environmental and public health hazards of biotreatment control measures to an acceptable level. 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.

e. Biotreatment control measures must be designed to maximize the infiltration of the design capture volume or flow unless such measures pose an unmitigable environmental hazard or are otherwise not Feasible.

3. Third Priority Consideration of All Other Treatment Control Measures: Non-LID Treatment Control Measures

Non-LID treatment control measures shall be considered only after LID treatment control measures have been considered and rejected according to

sections VIII.G.1 and VIII.G.2 above. Non-LID treatment control measures shall be considered as third priority control measures and selected according to this section.

a. The Permittees must maintain and employ a common schedule which rates the expected performance of specific treatment control measures, or categories of treatment control measures.

   i. The performance of treatment control measures must be rated based on the reasonably-expected level of removal of categories of pollutants. The performance ratings must be classified as high, medium, or low level of removal.

   ii. Any category of treatment control measures must include only those controls that employ the same principle of operation; use similar treatment mechanisms, and which can reasonably be expected to exhibit similar performance in the removal of pollutants.

   iii. The Permittees' assignment of the expected level of performance for the treatment control measures must be based on best available evidence. The evidence must include field performance test data specific to the control measures, and the data must have been collected according to published and recognized protocols and evaluated by a qualified independent third party. Qualifying performance data published in a public database, such as the International Stormwater BMP Database, may be used to satisfy this requirement. Performance certifications from a third-party product testing program (e.g., TAPE, NJCAT) also may be used to satisfy this requirement.

   iv. The categorizations of treatment control measures and their performance ratings must be reviewed and updated as part of updates to the approved uniform technical guidance documents so that they are supported by the best available information.

b. The Permittees must maintain and employ a common schedule of project categories and a corresponding common list of pollutants which can reasonably be expected to be found in urban runoff from those project categories.

c. If non-LID treatment control measures, or systems of non-LID treatment control measures, are the only type of treatment control measure employed to treat the design capture volume or flow from a tributary area of a project, the Permittees must only accept the use of non-LID treatment control measures, or systems of non-LID treatment control measures, that provide either a medium or high level of treatment for the expected

pollutants.

i. The Permittees must use the performance rating schedule in section VIII.G.3.a above and the project category schedule in section VIII.G.3.b above to identify acceptable non-LID treatment control measures for a project.

ii. Approved WQMPs must reflect the use of this prescribed methodology.

4. Fourth Priority Consideration of Offsets through Retrofit of Existing Development

Permittees must require that project proponents give fourth priority consideration to offsetting all or any portion of the untreated design capture volume or flow with treatment of the same or greater design capture volume or flow using treatment control measures (according to sections VIII.F.1, VIII.F.2 and VIII.F.3 above) that are constructed through retrofits of existing development at an off-site location.

a. The retrofit treatment control measure site must be located within the same watershed of the nearest receiving water as the priority project, unless the priority project and retrofit treatment control measure site are located within the credit trading area defined in an approved credit program (according to section VIII.H).

b. The off-site location must not have a pending or submitted development application which would produce similar treatment control measures on its own.

c. The treatment control measure(s) selection process at the off-site location must be subject to the requirements of section VIII as applicable.

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

e. Future redevelopment projects on either the retrofit site or the project site using the retrofit option must consider incorporation of treatment control measures according to the requirements of the Order in effect at the time.

f. The Executive Officer is authorized to prohibit off-site facilities under this section if the programs are found to be abused or risk causing or contributing to violations of receiving water standards.

H. Post-Construction Treatment Control Credit Programs

This Order authorizes the Permittees to allow the transfer of design capture volume or flow credits to priority projects. These credits may be used by a priority project to satisfy requirements in this Order to treat the design capture volume or flow of the project and to address changes in hydrology according to section VIII.L. Credit programs using treatment control measures are subject to the following limitations:

1. The credits shall only be generated when an LID treatment control measure has been designed and is operated to treat the design capture volume or flow from a tributary area that exceeds or does not include the area of a proposed priority project. The generation of the credits by the LID treatment control measure, as a unit of trade, must be directly related to a unit of design capture volume or flow treated by the control measure (e.g., acre-foot, cfs, etc.) generating the credit. Credits must be revocable by the responsible Permitee(s) if the facility is abandoned or is not operated and maintained in substantial conformance with this Order and any approved plans or guidance documents.

2. Credits may only be generated based on the design capture volume or flow produced by the area tributary to, and treated by, the LID treatment control measure. Upsizing a facility to treat in excess of the design capture volume or flow from the tributary area is not allowed. The installation of the LID treatment control measures for credit generation purposes may occur independent of a priority project; in this case, the entire design capture volume or flow may be traded. If the facility is installed in association with a priority project, only the design capture volume or flow from an area outside of the project boundary may be traded.

3. The credits must be generated by an LID treatment control measure, such as a retention basin, which is located on property owned or controlled by the proposed credit generator. The property on which the credit generating facility is located and the property which intends to use the credits need not be contiguous. However, credits must not be allowed to be applied to projects outside of the credit trading area in which the LID treatment control measure is located. Credit trading areas shall be defined in the credit program and approved by the Executive Officer. Funds from credits purchased for a development in a disadvantaged community shall be used toward implementation of LID treatment control measures located within disadvantaged communities or otherwise used in a manner demonstrated to provide equivalent or greater water quality benefits to the affected disadvantaged community, as approved by the Executive Officer in the credit program.

4. The selection process for the credit generating LID treatment control measures must give first priority consideration to retention LID treatment

control measures. The basis for selection must be documented in a plan according to section VIII.G, but not necessarily in a project WQMP. The plan must be subject to the same requirements in this Order related to providing that the plan is readily discoverable by interested parties and protected over the life of the related projects.

5. The credit generating LID treatment control measures must be subject to applicable provisions of sections VIII.D, VIII.F, VIII.G, VIII.K (other than VIII.K.1.a), and VIII.L of this Order. Where there is a conflict, the provisions of this section prevail.

6. The credit generating LID treatment control measures must be constructed, verified, serviceable, and satisfactory to the responsible Permittee prior to final occupancy or use of the first project that is entitled to use the credit generated by the facility.

7. Prior to allowing credit trading, the Permittee(s) within whose jurisdiction(s) the affected projects are located must employ a system of accounting and controls to provide those credits are sold and used once, to relate all uses of credits to the originating LID treatment control measure or credit generating BMPs, to track the ownership and use of credits, and to protect against fraud and abuse.

8. Long-term operation and maintenance of all credit generating LID treatment control measures must be verified by the responsible Permittee(s), whether owned by the Permittee(s) or another entity. To do so, legal and financial safeguards must be in place to protect the project for the duration of its life. As long as the credit generating project is maintained and meets performance standards, the credits generated may remain available for purchase until sold.

9. A credit trading program must have measures in place to account for variables associated with a project, including but not limited to the following: risk of project failure, BMP effectiveness, measurement uncertainty, attenuation of a pollutant between the locations of the generator and the user of credits, and temporal variability.

10. Credit generation and use must not result in adverse impacts and have sufficient standards in place to protect public health with an adequate margin of safety for the population within the area. Permittee(s) must demonstrate in the Annual Progress Report that the program does not cause or contribute to disparate pollution burden for disadvantaged communities or tribal communities within each trading watershed.

11. Permittee(s) must report credit trading program implementation and performance over the past year in the Annual Progress Report.

12. Credit trading programs must be implemented according to a credit trading plan that has been reviewed and approved by the Executive Officer. The Executive Officer shall publicly notice and make available the proposed credit trading plan a minimum of 30 days for public review and comment prior to approval. The Executive Officer shall consider all comments received and may also require amendments or modifications to a proposed credit trading plan prior to approval.

13. Insufficient credit balances or failure to meet other credit trading program conditions as required by section VIII.H. of this Order constitutes a violation of this Order by the Permittee that authorized the use of those credits for a priority project and relied on those credits to demonstrate compliance.

I. Specific Requirements for Infiltration LID Treatment Control Measures

The requirements of this section apply to retention LID treatment control measures that are intended to infiltrate the entire design capture volume or a portion thereof (infiltration LID treatment control measures). The requirements of this section are not intended to apply to bio-treatment control or other treatment control measures that incidentally infiltrate a portion of the design capture volume or flow.

1. The vertical separation from the bottom of the infiltration LID treatment control measures to the mounded seasonally high groundwater level must be 10 feet or more unless the facility is known to pose a low risk of contaminating groundwater; if the facility is low risk, the vertical separation may be reduced to 5 feet according to criteria established in the Permittees' written technical guidance. Where the groundwater does not support or does not have the potential to support beneficial uses, the Permittee may approve infiltration LID treatment control measures 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.

2. The approval of any infiltration LID treatment control measure with a vertical separation from the bottom of the facility to groundwater that is less than 10 feet must be based on site-specific information on groundwater depth.

3. Infiltration LID treatment control measures must be located at a minimum horizontal distance of 100 feet from any water supply wells.

4. The construction method must not result in the compaction of the subgrade of infiltration LID treatment control measures.

5. Infiltration LID treatment control measures must be designed to infiltrate in substantial conformance with minimum or maximum rates recommended in

published and generally accepted engineering design manuals. This provision does not prohibit the use of engineered infiltration substrate, or other methods used to bring the infiltration rate within the recommended design parameters.

6. Infiltration LID treatment control measures which are proposed to be located over, or that could adversely affect, known soil or groundwater contamination must not be approved without an evaluation of potential adverse impacts to groundwater conditions based on Substantial Evidence. Potential adverse impacts include, but are not limited to, mobilization of existing contaminants, expansion of contaminant plumes, or interference with ongoing remediation activities.

7. Infiltration LID treatment control measures used to treat stormwater runoff associated with industrial activity, stormwater runoff from areas subject to motorized vehicular traffic of 25,000 average annual daily traffic, motorized fleet vehicle storage, or other land uses or activities that pose a threat to groundwater quality must employ design features that allow flow into the facility to be readily blocked if an accidental spill or release occurs.

8. Infiltration LID treatment control measures must incorporate one or more practical mechanisms to allow verification of the drawdown 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.

9. Infiltration LID treatment control measures 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 revised.

10. Pretreatment must be provided to prolong the life of the infiltration LID treatment control measure for the duration of the project.
11. The 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.

12. The Permittees must develop, publish, and employ a uniform protocol in their written technical guidance for estimating the drawdown rate used for designing LID treatment control measures that infiltrate.

    a. The protocol must be consistent with those used in independent, published and generally accepted engineering design manuals.

    b. The protocol must employ the best available information for estimating the loss rate.

c. The Permittees must use relevant site-specific methods to estimate soil infiltration rates for the following categories of priority projects:

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 building footprint.

iii. Industrial projects affecting more than 2 acres or greater than 20,000 square feet of building footprint.

J. Specific Requirements for Harvest and Use LID Treatment Control Measures

The Permittees must not accept insufficient demand for harvested stormwater as the sole basis for rejecting Harvest and Use LID treatment control measures (see Glossary) unless the basis is supported by water demand calculations. Calculated estimates must demonstrate that the expected wet season (October 1st - April 30st) water demand is insufficient to use the harvested design capture volume within the appropriate drawdown period (see section VIII.D.4) according to the following:

1. The Permittees must publish and employ tables of daily average wet season demand rates and objective project characteristics necessary to provide sufficient demand for harvested stormwater. The demand rates must be used for estimating anticipated non-potable uses of harvested stormwater.

   a. The rates and thresholds must be based on independent, published and generally accepted rates or methods for calculating average daily wet season demand of harvested stormwater for non-potable uses such as toilet and urinal flushing, landscape irrigation, industrial process supply, evaporative cooling, and vehicle washing.

   b. The rates and thresholds must account for the off-setting effects of rainfall, reclaimed water, water conservation or the inconsistent nature of demand.

   c. Reclaimed water supplies must be based on available supplies, not speculative supplies.

2. Where demand rates are dependent upon variable site occupancy, average daily occupancy during the wet season must be used.

K. Off-Site Treatment Control Measures: Regional and Sub-Regional Facilities

1. Permittees must require that treatment control measures be located on the project site except under the following conditions:

a. A regional or sub-regional BMP has been planned and approved by the Permittees to treat the design capture volume or flow from the project site;

b. A party responsible for the facility's performance (Operator) will maintain ownership or control over the facility over the life of projects located within the facility's tributary area;

c. Any treatment control measures deemed necessary by the 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 final WQMP;

d. The regional or sub-regional facility is constructed, serviceable, and satisfactory to the Permittee, as soon as possible but no later than two years following the first occupancy of any project site in its tributary area.

e. The type of regional or sub-regional facility is selected based on the prioritization hierarchy in section VIII.G.

2. Where a treatment control measure has been approved or constructed according to a final project WQMP, the Permittees are authorized to amend the relevant project WQMP(s) to replace the facility and, if applicable, decommission of the facility, only if:

a. The facility's design capture volume or flow will be treated by an off-site facility that has been reviewed, designed, and approved according to the requirements of this Order;

b. The expected performance of the off-site facility in removing pollutants from its effluent is equal or better than the combined expected performance of the facilities that it will replace; and

c. Permittees employ decommissioning standards and conditions which effectively address the hazards that the decommissioned facility may pose.

L. Hydrologic Conditions of Concern

To mitigate Hydrologic Conditions of Concern (see Glossary), Permittees must have a program that protects the physical, chemical, and biological integrity of waters receiving runoff from new development and significant redevelopment over the development's expected life.

1. Permittees must limit changes in a priority project site's hydrology over the expected life of the project 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 limited such that:

   i. The calculated runoff volume from the site increases by not more than 10 percent over the pre-project condition or

   ii. The calculated time of concentration for runoff from the site decreases by not more than 10 percent over the pre-project condition.

b. The project has the demonstrated capacity to detain, infiltrate, harvest and use, evaporate, or evapotranspire the change in volume of runoff produced by a two-year 24-hour storm event between pre- and post-development land use cover type within an appropriate drawdown period (section VIII.D.4).

c. The project disturbs less than one acre and is not part of a larger common plan of development. Instead, such projects may comply with hydromodification requirements through implementation of water quality and LID requirements in Section VIII (e.g., retention of the 85th percentile, 24-hour storm event) according to the standards and BMP hierarchy described in Sections VIII.D and VIII.G of this Order.

d. All conveyance channels and retention or detention facilities downstream from the priority project are engineered, maintained, and are not otherwise vulnerable to cumulative changes in hydrology that may adversely affect the channels' physical, chemical, or biological integrity. Existing or proposed assessments of downstream conveyance channels and facilities must be substantiated using published and generally accepted methods and documented.

e. A Clean Water Act section 401 Water Quality Certification, Waste Discharge Requirements, or waiver thereof, has been issued authorizing discharges of fill associated with channel modifications that would accommodate the project's changes in hydrology while protecting beneficial uses through on site or off-site mitigation according to the conditions or provisions of the authorization.

f. The Executive Officer grants an individual (for specific conveyance channels or reaches) or general (categories of conveyance channels or reaches) waiver in writing to the Permittee(s).

   i. The granting of such waivers must be supported by objective and relevant studies.

   ii. The Permittees must comply with any conditions placed on the issuance of the waiver by the Executive Officer.

iii. The Executive Officer must provide the public an opportunity to comment on the proposed waiver for a period of not less than 30 days prior to its issuance.

iv. The Executive Officer may withdraw a granted waiver if new information indicates that the waiver is not effective in protecting the physical, chemical, and biological integrity of the affected waters.

2. For those priority projects that do not meet the exceptions in section VIII.L.1 above, the Permittees must mitigate Hydrologic Conditions of Concern according to 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 for those conditions in section VIII.L.2.c, the project WQMP must provide structural control measures that modify runoff volumes and times of concentration from the project site for the 2-year, 24-hour storm event such that:

i. Post-project runoff volumes for the 2-year, 24-hour storm event do not increase by more than 10 percent compared to the pre-project runoff volumes for the 2-year, 24-hour storm event; and,

ii. Post-project times of concentration for the 2-year, 24-hour storm event do not decrease by more than 10 percent compared to the pre-project times of concentration for the 2-year, 24-hour storm event; and

iii. In cases where excess post-project runoff volumes in section VIII.L.2.b.i cannot be retained, as demonstrated by the project proponent, flow rate from the site must be limited to no greater than 110% of the pre-development 2-year, 24-hour peak flow rate.

c. Structural control measures must be provided in accordance with section VIII.L.2.b unless:

i. Source and/or treatment control measures either on-site or off-site already effectively modify runoff volumes and times of concentration such that they satisfy Section VIII.L.2.b above.

d. A representative monitoring program must be carried out for vulnerable channels as part of the Monitoring and Reporting Program to demonstrate the effectiveness of the Permittees' hydromodification controls. A vulnerable channel in this context means one which is susceptible to physical, chemical, or biological changes that may impact beneficial uses.

IX. ILLICIT DISCHARGE DETECTION AND ELIMINATION PROGRAM (IDDE)

Each Permittee must have a program that effectively prohibits illicit connections and illicit discharges into their respective MS4s.

A. General

1. Each Permittee must make available an effective mechanism for the public to report known or suspected illicit discharges and illicit connections.

    a. Each Permittee must have a reporting mechanism that is continuously made available to the public.

    b. Each Permittee must advertise the availability of services that allow residents to dispose of wastes that have the potential to be discharged to their MS4s (e.g., Household Hazardous Waste Program, electronics recycling, etc.).

2. Each Permittee must implement an effective program to detect illicit connections and illicit discharges; to trace the source of illicit connections and illicit discharges; and to eliminate or permit such discharges and connections.

    a. Each Permittees' program may be part of or in support of a comprehensive program led by the Principal Permittee.

    The Permittees' program must be described in written processes and procedures that addresses the required program elements in 40 CFR section 122.26(d)(2)(iv)(B)(1-7).

    b. Each Permittee must employ an information system that tracks instances of known or suspected illicit connections and illicit discharges within their respective jurisdictions.

        i. The database must be designed to document and track compliance with the requirements of this section.

        ii. The database should be designed to guide the Permittees' use of resources towards satisfying the requirements of this section.

    c. The Permittees must maintain maps of their respective MS4s that contain information of sufficient detail and quality to trace the source of suspected illicit connections and illicit discharges in a timely manner.

        i. The maps must be reviewed, updated, and uploaded to SMARTS (when the feature is available) as part of the Annual Progress Report.

3. The Permittees' program must develop and implement procedures for source investigation of illicit connections and illicit discharges. The source investigation must be initiated within three (3) business days of the Permittee becoming aware of a suspected illicit connection or illegal discharge, and in substantial conformance with the procedures.

4. When the source of an illicit connection or illicit discharge is discovered, the Permittee(s) must take action to eliminate the discharge or connection or require that it be subject to appropriate NPDES Permit(s) within 90 days of discovery.

5. Where illicit connections are outside of the Permittee's jurisdiction, the Permittees shall notify the responsible party. Where illicit discharges are known to originate outside of the Permittee's jurisdiction, the Permittees shall notify the responsible party and the Executive Officer of the discharge.

B. Sanitary Sewer Overflows

Sanitary Sewer Overflows (SSOs) shall be treated as a sub-class of illicit discharges subject to the following additional requirements:

1. The Permittees shall provide local sanitation districts 24-hour access to the MS4s to address sewage spills and shall provide updated contact information to enable such access.

2. The Permittees shall have policies and procedures in place to work cooperatively with the local sanitation districts to determine and control the impact of infiltration from leaking sanitary sewer systems on stormwater quality.

3. Each Permittee shall implement control measures necessary to detect infiltration of seepage and leakage from sanitary sewers to the storm drain systems.

4. Permittees that own or operate sanitary sewer systems over one mile in length are subject to the SSP requirements in Order No. 2022-0103-DWQ, "Statewide General Waste Discharge Requirements for Wastewater Collection Agencies" as amended or revised.

5. The Permittees that are not subject to the requirements of Order No. 2022-0103-DWQ, or subsequent renewals, must implement an effective program to detect and mitigate SSOs that discharge into their MS4s in cooperation with the sewage collection/treatment agencies. These Permittees' SSO program(s) must be comprised of the following elements:

    a. Written procedures for responding to and containing SSOs that may discharge into its MS4 in cooperation and coordination with the sewage collection/treatment agencies. Permittees must respond to SSOs that

may discharge into their MS4s according to the written response procedures unless there is a cause to believe that such a response would not be most effective under the circumstances.

b. A field training program for Permittees' staff responsible for responding to SSOs.

c. An awareness-level training program for 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. 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.

6. Each Permittee is responsible for documenting and reporting the outcomes of efforts to detect and mitigate SSOs that may or have discharged into their MS4s in the Annual Progress Report.

7. Permittees with septic systems in their jurisdiction shall maintain a current inventory of septic systems to allow for the identification of potential sources of illicit connections or illicit discharges.

C. Mobile Businesses

Upon identification of an illicit non-storm water discharge from a mobile business (i.e., automobile wash/detail services, carpet cleaners, and pet services), the Permittees must require elimination of the non-storm water discharge.

X. PUBLIC EDUCATION AND OUTREACH

The Permittees must implement a public education and outreach program consistent with the requirements of 40 CFR section 122.26(d)(2)(iv). The program must be designed to measurably: 1) raise awareness of pollution-prevention best practices, 2) cause the audience to take action(s) to reduce pollutants in runoff from MS4s, and 3) increase awareness about the importance of stormwater management for public health/community health, environmental quality, and local water resilience.

A. The audiences that the program must include:

1. The general audience, consisting of all residents and commercial and industrial establishments; and

2. Target audiences selected from the general audience to address high priority runoff pollution issues as identified by the Permittees in accordance with this

section. Target audiences may include, but are not limited to, mobile businesses, homeowner associations, universities and schools, disadvantaged communities, etc.

B. The Principal Permittees are responsible for developing and coordinating a unified communication strategy and for monitoring and reporting the effectiveness in achieving the goals and objectives of the program.

C. **Public Education Campaign:** The Permittees must implement a public education campaign according to a written plan to address high priority runoff pollution goals over the term of this Order. A pollution goal may be to reduce certain polluting behaviors in target audiences, increase public participation in reporting certain discharges, increase public stewardship of certain waterbodies, or other similar goals. A public education campaign may be a continuation of activities occurring before the adoption of this Order and continue after its expiration, and/or build upon existing programs. The Permittees must:

1. Identify specific pollution goals and related measurable objectives of the public education campaign(s). Issues may be identified for the entire permit area, for each watershed, or for each city;

2. Prioritize its runoff pollution goals based on available water quality data, public survey results, local conditions, social science research, and other objective information as appropriate;

3. Identify and analyze target behaviors and target audiences to achieve the selected pollution goals;

D. The Permittees must provide effective written publications and website content to assist construction and industrial dischargers in controlling pollutants in stormwater runoff. Written publications must be available to the Permittees' inspectors for distribution to inspected facilities as needed.

E. Each Permittee must conduct, no later than 60 months from the effective date of this Order, at least one effectiveness assessment/evaluation of their outreach efforts during the permit term. Assessment methods may include:

1. Measurement of the general audiences' knowledge of runoff pollution and changes in the general audiences' behavior(s) that have occurred to prevent runoff pollution;

2. Measurement of specific changes in behavior(s) in the audience targeted through the public education campaigns described in section X.D that have occurred to achieve the associated high priority MS4 runoff pollution goals(s).

F. Results of the assessment(s) must be summarized in the applicable Annual Report, and shall include the following:

1. A summary of how the effectiveness assessment/evaluation was implemented;

2. An analysis of the results of the effectiveness assessment/evaluation;

3. A discussion of the planned or future outreach campaigns to influence awareness and/or behavior changes regarding stormwater runoff pollution prevention measures.

XI. TRAINING PROGRAMS

Each Permittee must have an effective training program for their staff, contractors, and vendors whose duties or responsibilities impact the Permittee's capacity to satisfy the requirements of this Order (collectively, personnel). While Permittees are required to directly train their own staff, they are also ultimately responsible for duties performed by contractors and vendors to support compliance. Permittees must establish a process to verify the training of all personnel involved in activities covered by this Permit. The training program should be developed to address the following:

A. Target audience

1. The training program shall consider all applicable Permittee staff, including but not limited to stormwater program managers, CEQA practitioners, construction/industrial/commercial/residential inspectors, planners, plan checkers, engineers, maintenance personnel, and managers of all the above staff.

2. The training program shall identify the knowledge and skills necessary for all personnel, commensurate with their duties and program responsibilities.

3. Permittees shall reasonably verify that contractors and vendors performing activities covered by this Order possess the requisite training or qualifications.

B. Frequency of training

1. Personnel covered under section XI.A.1 above must receive training for the purpose of effectively performing or overseeing duties or responsibilities that directly or indirectly affect the Permittee's compliance with this Order. These include duties or responsibilities to perform or oversee activities to directly comply; duties or responsibilities that, if performed incorrectly, may result in violations; and duties or responsibilities that may directly or incidentally detect violations or lapses in program performance.

2. New hires of Permittees' staff must receive their initial training within 6 months of their hiring date. Refresher training must be provided to personnel once every two years.

C. Record Keeping

1. Each Permittee must maintain records demonstrating that personnel have satisfied the requirements of the training program. Records must be maintained for a minimum of five (5) years. Individual training records for contractor or vendor personnel are not required.

2. Training records may be maintained for staff and contract vendors as a part of a regionwide training registry to facilitate the transferability of records, or through another mechanism acceptable to the Executive Officer.

D. Training curriculum

1. The training module for each category of personnel shall define the required competency, outline the curriculum, and include a procedure at the end of the training program to determine that trainees have acquired the requisite knowledge to carry out their duties. Training modules shall provide proof that personnel have completed training, such as a Certificate of Completion, attendance sheets, or other equivalent method.

2. Each Permittee must employ a method to objectively demonstrate that upon completion of training, personnel have the necessary level of knowledge and skill commensurate with their duties and responsibilities.

3. The Permittees must establish a documented training curriculum that is commensurate with the duties and responsibilities of the affected personnel.

E. Adaptive management of the training program

The training program must be reviewed every two years for the purpose of achieving continual improvement of its effectiveness and must be updated accordingly.

XII. WATERSHED MANAGEMENT PLANS

Participation in a Watershed Management Plan (WMP) is a voluntary, alternative compliance option for Permittees that gives them the flexibility to implement the requirements of this Order through watershed-specific strategies, control measures, and BMPs. Specifically, the development and implementation of, and the Permittees' compliance with, WMPs will serve as an alternate method to comply with receiving water limitations in section VI (Receiving Water Limitations) and/or with WLAs that are expressed as WQBELs in section VII (Effluent Limitations and Discharge Specifications) according to this section. WMPs may only be used for WQBELs whose final compliance dates have not yet passed or where no final compliance date is specified. This section and other requirements in this Order pertaining to WMPs do not apply to Permittees not participating in an approved WMP.

A. Watershed Management Plan Development

1. To initiate the process of developing a WMP, the responsible Permittees must provide a written Notice of Intent (NOI) to the Executive Officer. The NOI must indicate their intent to develop a WMP to achieve WQBELs and/or receiving water limitations within a watershed. A Permittee may only develop a WMP for compliance with WQBELs where the final compliance date has not passed, or no final compliance date is specified.

2. Permittees must provide notice of their preparation of WMPs either "proactively" or "reactively" as follows:

   a. **Proactive preparation of WMPs**: Permittees may proactively develop a WMP by providing an NOI to the Executive Officer within 90 days of the effective date of this Order. If a new or revised TMDL is adopted and this Order is amended to incorporate the WLA as a WQBEL, Permittees may proactively develop a WMP for that waterbody-pollutant combination by providing an NOI to the Executive Officer within 90 days of the effective date of the amendment of the Order. Permittees may request an extension of time to submit an NOI, subject to the approval of the Executive Officer. Permittees that are granted an extension must demonstrate compliance with section VI (Receiving Water Limitations) and section VII (Effluent Limitations and Discharge Specifications) for the subject waterbody-pollutant combination(s) until the NOI is received. Permittees will not be deemed in compliance with these sections during the extension period. Permittees that do not submit an NOI within 90 days of the effective date of this Order or by an extended deadline are not eligible to use proactive WMPs as an alternative compliance method.

   b. **Reactive preparation of WMPs**: Permittees may reactively prepare a WMP in response to a violation of receiving water limitations in section VI of this Order. A reactive WMP is not allowed where there is a corresponding WLA expressed as a WQBEL, this includes pollutant-waterbody combinations where the final compliance date has not passed and therefore the discharge is not yet subject to final WQBELs. Permittees must provide an NOI to the Executive Officer no more than 90 days after receiving notice of such violation. Permittees who do not submit an NOI during this period are not eligible to use WMPs as an alternative compliance method. WMPs may not be reactively prepared for compliance with WQBELs. Reactively submitted NOIs are not subject to extensions by the Executive Officer.

3. A single NOI may be submitted for multiple waterbody-pollutant combinations and WMPs.

4. A valid NOI must include the following elements[4]:

[4] NOIs are subject to sections V.B.3 and 5 in Attachment F.

a. Identities of the responsible Permittees who will be participating in the development of the WMP.

b. Copies of any available executed or draft agreements that are necessary to develop the WMP.

c. The contact information for representatives for each of the responsible Permittees.

d. Descriptions of the pollutants and management area (watershed) over which the WMP will apply.

e. Descriptions of any models or similar analyses that may be used to prepare the WMP.

f. A schedule for the development of the WMP that is as short as practical. The final deadline for submitting a final WMP shall not exceed 24 months from the date of the NOI. The development schedule shall provide clear, specific milestones with deadlines as well as a final deadline for the development of the final WMP. Of these milestones, the development schedule must identify a minimum of three (3) Critical Milestones, excluding the final deadline. Critical Milestones and the final deadline are enforceable. The combination of non-Critical Milestones and enforceable, Critical Milestones must be sufficiently detailed to allow early detection of any deviations in the schedule that may cause the Permittees to miss Critical Milestones or the final deadline for submitting the final WMP.

5. The Executive Officer is authorized to accept or reject an NOI and to designate Critical Milestones. Upon the Executive Officer's rejection of an NOI, Permittees must immediately comply with the WQBELs and receiving water limitations for the subject waterbody-pollutant combination. If an NOI includes multiple waterbody-pollutant combinations, the Executive Officer may accept an NOI with respect to specific waterbody-pollutant combinations while rejecting others.

6. The Santa Ana Water Board will provide at least a 30-day public review period prior to acceptance of an NOI by the Executive Officer.

7. Permittees must implement the development schedule for the WMP, as designated in the NOI accepted by the Executive Officer, except as follows:

   a. **Changes to Critical Milestones**: Critical Milestones and/or the final deadline for submittal of the final WMP may be changed under exceptional circumstances subject to the following conditions:

      i. Permittees must request a change, in writing, at least 30 days prior to the date of applicable milestone/deadline. The written request must include justification for the extension and/or change.

ii. The Executive Officer will provide a minimum of 14 days for public review of a request for a change to the development schedule prior to approving the request.

b. **Changes to Non-Critical Milestones**: Non-Critical Milestones may be changed at the discretion of the Permittees subject to the following conditions:

i. The deviation from the non-critical milestone in the schedule is not expected to result in a violation of Critical Milestones or the final deadline.

ii. The Executive Officer must be notified in writing of the change within 30 days.

iii. The notification must include an explanation for the deviation and a description of the revised schedule.

Compliance with the implementation schedule will be assessed based on the Critical Milestones and final deadlines as approved or later amended by the Executive Officer.

8. For proactive preparation of WMPs, Permittees in compliance with section XII.A will be deemed in compliance with section VI (Receiving Water Limitations) and section VII (Effluent Limitations and Discharge Specifications) for the subject waterbody-pollutant combination(s) until approval of the WMP. Compliance is demonstrated only where the approved WMP is being designed and implemented to achieve applicable receiving water limitations and WQBELs. However, (i) if the final WMP submittal deadline is extended beyond 24 months from the date of the NOI pursuant to section XII.A.7.a, the Permittee shall not be deemed in compliance during the period of extension until approval of the WMP; and (ii) in no event shall a Permittee without an approved WMP be deemed in compliance for more than 33 months from the date the Permittee submitted the NOI.

9. For the reactive preparation of WMPs, Permittees shall not be deemed in compliance with section VI (Receiving Water Limitations) for the subject waterbody-pollutant combination(s) until approval of the WMP. Compliance is demonstrated only where the Permittee is implementing an approved WMP in compliance with sections XII.A.7, XII.C.8 through C.12, and XII.D. WMPs may not be reactively prepared for compliance with WQBELs in section VII (Effluent Limitations and Discharge Specifications).

B. **Watershed Management Plan Contents**

1. **Water Quality Characterization:** The WMP shall include an evaluation of existing water quality conditions, including characterization of stormwater and non-stormwater discharges from the MS4 and receiving water quality.

The characterization must be adequate to support the identification of water quality priorities and sequencing of management actions. The evaluation shall include, at a minimum, the routine water quality data collected over the last five years pursuant to the Permittee(s) monitoring and reporting program(s) and approved TMDL monitoring programs. The WMP should include an explanation of the process used to determine what available data was relevant, how information considered was used, and why any relevant available data was disregarded.

2. **Source Assessment:** The WMP shall identify known and suspected stormwater and non-stormwater pollutant sources in discharges to the MS4 and from the MS4 to receiving waters and any other stressors related to MS4 discharges causing or contributing to the water quality priorities. Permittees shall include a description of other potential sources that were considered and excluded, together with the supporting information and rationale.

3. **Prioritization of Pollutants:** Using the information obtained during the water quality characterization/source assessment, the waterbody-pollutant combinations shall be prioritized in the WMP. The WMP may be developed for more than one pollutant. The WMP shall provide a clear explanation justifying the criteria used to prioritize the pollutant(s) and methods for the selection of the priority waterbody-pollutant combinations. Highest priority shall be given to waterbody-pollutant combinations for which a WQBEL is in place with interim and final compliance dates that occur within the Permit term.

4. **Watershed Control Measures:** The WMP shall identify strategies, control measures, and BMPs for waterbody-pollutant combinations in the WMP that will be implemented through the Permittees' jurisdiction-specific stormwater management programs, and collectively on a watershed scale. The goal will be to create a cost-effective program that focuses the responsible Permittees' individual and collective resources on water quality priorities. The WMP's strategies, control measures, and BMPs must be designed to cause discharges of pollutants in runoff from the Permittees' MS4s to comply with WQBELs and receiving water limitations. All WMPs must include the following:

    a. **Existing Watershed Control Measures:** A description of the existing strategies, control measures, and BMPs that are being employed to control the pollutant(s). The description must be adequate to fully characterize the conditions under which exceedances have occurred or may occur and to distinguish new or modified strategies, control measures, and BMPs.

    b. **New or Modified Watershed Control Measures:** A description of any proposed new strategies, control measures, and BMPs or modifications thereof.

i. Watershed control measures may include but are not limited to:

1) Modification or substitution of procedures or practices at facilities owned or controlled by the responsible Permittees.

2) Modification of the messages and target audiences of public education campaigns.

3) Adoption and enforcement of ordinances or standards designed to reduce certain pollutants.

4) Incentive programs or land use practices designed to discourage, substitute, or preempt certain polluting practices.

5) Incentive programs designed to encourage source control measures and treatment control measures in existing development (retrofit programs).

6) Planning and execution of stream or habitat restoration, pollution offset, or rehabilitation projects that provide or contribute to objectively demonstrable and sustainable improvements in the physical, chemical, or biological integrity of the receiving waters.

7) Planning and implementation of regional or sub-regional treatment control measures such as retention, detention, and infiltration basins.

8) Planning and implementation of targeted source investigation and abatement programs.

9) Adoption and pursuit of land-use or transportation planning goals and objectives that implement and support low impact development that may reduce or eliminate pollutants.

ii. The WMP shall clearly identify which watershed control measures are addressing which WQBELs and receiving water limitations.

1) For treatment control measures, there must be a description of the number, type, and locations of projects and the consequent volume of runoff proposed to be captured or the reduction in the pollution load or concentration that will be attained.

2) Where regional and sub-regional structural treatment control measures (see Glossary) are proposed in the WMPs and such facilities are not subject to requirements pertaining to project WQMPs, the responsible Permittees must provide that regional and sub-regional structural treatment control measures comply

with the requirements of section VIII.D (General Requirements for Treatment Control Measures of this Order and, if applicable, sections VIII.I (Specific Requirements for Infiltration LID Treatment Control Measures) and section VIII.J (Specific Requirements for Harvest and Use LID Treatment Control Measures).

3) For source control measures, there must be a description of the nature and level of effort of implementation.

iii. The WMP may make modifications as appropriate to the management programs that the Permittees have adopted to comply with 40 CFR section 122.26(d)(2)(iv)(A)-(D); however, the Permittees must continue to meet the minimum control measures contained therein and to comply with this Order.

c. **Identification of Information Gaps**: Permittees may execute studies or pilot programs that fill information gaps in stormwater pollution control science to support the employment of effective strategies, control measures, and BMPs.

d. **Schedule**: A schedule for the implementation of new or modified watershed control measures to comply with WQBELs or receiving water limitations. For watershed priorities not subject to TMDL WQBELs, the schedule shall include measurable milestones tied to the receiving water and/or MS4 discharge indicators. The schedule shall set forth the dates on which the completion of discrete tasks and the achievement of clear, specific milestones will be achieved.

i. **Critical Milestones:** The schedule must identify a minimum of three (3) Critical Milestones (see Glossary), excluding the final deadline for compliance. Critical Milestones, together with the final compliance deadline are enforceable. The final deadline for implementing or modifying watershed control measures must be as short as practicable, considering the technological, operational, and economic factors that affect the design, development, and implementation of the watershed control measures; or otherwise, must not exceed any applicable final compliance deadline for TMDL WLAs expressed as WQBELs in Appendices 2 through 14. The time frame between each Critical Milestone must not exceed five years, unless otherwise approved by the Executive Officer.

ii. **Non-Critical Milestones:** Each WMP shall also contain Non-Critical Milestones (see Glossary). Together with enforceable Critical Milestones, the Non-Critical Milestones in the schedule for implementation of BMPs must be sufficiently detailed to allow early detection of any deviations in the schedule that may cause the Permittees to miss Critical Milestones or the final deadline for WQBEL compliance or attainment of receiving water limitations.

e. **Financing Strategy:** An estimate of the capital and operation and maintenance costs of implementing the WMP and a financial strategy to fund those costs shall be provided in the WMP. Additionally, the WMP shall discuss which program costs have secured funding and the corresponding funding sources. If funding is not available for near-term watershed control measures identified in the WMP (within 5 years from the effective date of this Order), discuss how Permittee(s) plan to obtain funding and what the anticipated funding sources are. The strategy shall be prepared or overseen by qualified people, such as certified public accountants, using suitable standard practices (e.g., discounting, sensitivity analysis, disclosure of assumptions and limitations, etc.).

f. **Reasonable Assurance Analysis (RAA)**: For drainage areas not addressed by retaining the runoff volume of the 85th percentile, 24-hour storm event[5], a Reasonable Assurance Analysis (RAA) must be included. The RAA must demonstrate that implementation of the watershed control measures in the WMP will reasonably ensure that the Permittee's MS4 discharges achieve applicable WQBELs and do not cause or contribute to exceedances of receiving water limitations. An RAA is an objective analysis that quantifiably predicts the performance of watershed control measures using the best available information.

i. An RAA must be performed for each pollutant unless the pollutants' sources, their fate and transport, or method of control correlates so that the conclusions of an analysis for one pollutant can reasonably be extrapolated to other pollutants. The justifications for extrapolating must be provided in the analysis.

ii. The RAA must be supported, in part, by peer-reviewed mathematical models where such models are publicly available and predictive for the waterbody, pollutant, and management actions being evaluated. Where a demonstration can be made, to the satisfaction of the Executive Officer, that a predictive model and/or a suitable dataset for use in a model are not available, the RAA may rely on an alternate model and/or dataset that provides a similar level of predictive performance. Where a demonstration can be made that available models or datasets are not sufficiently predictive for the waterbody, pollutant, or management actions being evaluated, the RAA may rely on alternative quantitative methods. Alternative quantitative methods may include, but are not limited to, published BMP effectiveness data, monitoring-based analysis, and other quantitative lines of evidence.

iii. The RAA must have its predictive performance quantified and validated using generally accepted methods. Permittees must disclose their level of confidence in the analysis' predictive ability based on Substantial Evidence, including a discussion of the

[5] As defined in the Glossary.

uncertainties in the analysis. The analysis must include an assessment of the risks that may cause or contribute to the failure of the plan and the measures that will be taken to mitigate those risks.

iv. The RAA may be prepared based on available written guidance to conduct an RAA, such as the *Guidance for Conducting Reasonable Assurance Analysis for Watershed Management Program* dated March 25, 2014 prepared by the Los Angeles Water Board and *Developing Reasonable Assurance: A Guide to Performing Model-Based Analysis to Support Municipal Stormwater Program Planning* dated February 2017 prepared by Paradigm Environmental for USEPA Region 9.

C. Watershed Management Plan Approval and Implementation Process

1. The WMP is subject to review and approval by the Executive Officer. The Executive Officer is authorized to approve the WMP subject to conditions. The Executive Officer may also elect to seek consideration and/or approval by the Santa Ana Water Board of the WMP. If a WMP includes multiple pollutants, the Executive Officer may approve the WMP with respect to some pollutants while rejecting it for others.

2. The Executive Officer will provide at least a 30-day public review period prior to approval of any WMP or any proposed amendments to Critical Milestones or final compliance deadlines in an approved WMP.

3. The final compliance deadline in the WMP must be as short as possible and must not exceed any applicable final compliance date for TMDL WLAs expressed as WQBELs in Appendices 2 through 14.

4. The approved final WMP must be fully implemented by the responsible Permittees according to Critical Milestones and final compliance deadlines identified in the plan or as part of conditions of approval specified by the Executive Officer. The responsible Permittees must provide a written notification to the Executive Officer, no later than 14 days following each Critical Milestone or final compliance deadline specified in an approved WMP, of the status of compliance or non-compliance thereof. Compliance is demonstrated by timely achievement of each enforceable milestone and final deadline, not solely by reporting progress toward them.

5. The Permittees must provide any information that is missing from their final WMP and any proposed amendments, or submit changes to the plan or amendments, pursuant to a written request by the Executive Officer by the date specified in the request. If the Permittees have not provided the requested information by the date specified in the written request, the Permittees must comply with receiving water limitations in section VI (Receiving Water Limitations) and WQBELs in section VII (Effluent Limitations and Discharge Specifications) for those waterbody-pollutant

combinations that are the subject of the WMP.

6. The Executive Officer will approve or deny approval of a final WMP within three (3) months of its submission, except where additional information has been requested pursuant to Section XII.C.5. In that case, the 3-month period begins when the Permittee submits the requested information. If the final proactive WMP is not approved by the applicable deadline, the Permittee will no longer be deemed in compliance with receiving water limitations in section VI (Receiving Water Limitations) and WQBELs in section VII (Effluent Limitations and Discharge Specifications) for those waterbody-pollutant combinations that are the subject of the WMP during any extension period, even if the Executive Officer authorizes additional time to complete the WMP. In no event shall the Permittee be deemed in compliance beyond the date set forth in section XII.A.8 if the WMP is not approved by that date.

7. The schedule for development, review, and approval process of a WMP is summarized in Table 4. The table is for convenience purposes only and does not supersede any provisions in this Order.

Table 4: Summary Schedule for the Development, Review, and Approval of Watershed Management Plans

Task	Party to Complete Task:	Deadline
Submit Notice of Intent (NOI)	Permittees	Within 90 days of becoming aware of a receiving water limitations violation (reactive) or within 90 days of the Effective Date of this Order (proactive).
The Executive Officer provides the NOI for public notice.	Santa Ana Water Board	Not less than 30 days prior to the expected date of approval of the notice.
Final Watershed Management Plan (WMP) is submitted to the Executive Officer.	Permittees	Not more than two years from the date the Water Board receives the written NOI to prepare a WMP.
Provide any missing information to complete the final WMP and/or provide amended Plan according to the Executive Officer's written instructions.	Permittees	By the date specified in the Executive Officer's written notice.
The Executive Officer provides the complete, final WMP and any proposed conditions of approval for public notice.	Santa Ana Water Board	Not less than 30 days prior to the expected date of approval of the final WMP.

Begin implementation of the WMP	Permittees	Immediately upon Executive Officer approval of final WMP

8. The responsible Permittees must make the final WMP, as later amended or revised, accessible to the public by posting the plan to their website(s), the Principal Permittee's website, or another method acceptable to the Executive Officer.

9. Except for inconsequential grammatical or technical corrections and changes to Non-Critical Milestones, the final WMP may be amended by the Permittees upon approval of the Executive Officer following a 30-day public notice and comment period. The Executive Officer may either: (1) request additional information, (2) approve the proposed amendments as is, (3) approve, subject to conditions, or (4) reject the proposed amendments. Non-Critical Milestones must be amended according to the requirements in XII.A.7.b.

10. All proposed amendments must include an explanation of the purpose and need for the amendments.

11. After a final WMP is approved, responsible Permittees must reevaluate the conclusions of Reasonable Assurance Analyses based on new information, information that was previously unknown, and the degree of progress in implementing the WMP. The reevaluation schedule must be included as part of the WMP NOI. Reevaluations shall occur as soon as possible, but no more than thirty-six (36) months after initial WMP approval, and within thirty-six (36) months after each subsequent reevaluation thereafter. The Executive Officer is authorized to waive this requirement for subsequent reevaluations based on factors such as the absence of new information that would substantially alter conclusions and insufficient time to implement activities that may affect the conclusions of the reevaluation. If the reevaluation indicates that modifications are needed to the WMP, the Permittees shall propose a schedule for amending the WMP subject to the approval of the Executive Officer. The WMP shall be amended according to the approved schedule.

12. Permittees shall implement an adaptive management process for each approved WMP. Based on the results of the adaptive management process, the Permittee(s) may propose WMP modifications necessary to improve the effectiveness of the WMP, including but not limited to new compliance deadlines and interim requirements (except for those final compliance deadlines established in a TMDL) and new or substitute watershed control measures.

D. Compliance Determination

1. A submitted NOI to prepare a WMP, compliance with the Critical Milestones and final compliance deadline in a WMP development schedule, or implementation of an approved final WMP according to the requirements of this Order serves as an alternative to comply with receiving water limitations in section VI (Receiving Water Limitations), with WLAs expressed as WQBELs in section VII (Effluent Limitations and Discharge Specifications) whose final compliance dates have not yet passed or where there is no final compliance date.

2. The approval of a WMP, in whole or part, by the Santa Ana Water Board or the Executive Officer shall mean that the responsible Permittees will be deemed in compliance with section VI (Receiving Water Limitations) and section VII (Effluent Limitations and Discharge Specifications) for those pollutant-waterbody combinations that the approval applies to, provided that the WMP is being fully implemented and is reasonably expected, based on a Reasonable Assurance Analysis and adaptive management, to achieve applicable receiving water limitations and WQBELs by the final compliance deadline, and that the final compliance deadline specified in the WMP has not passed. This does not prohibit the Permittees from requesting to change the final compliance deadline by seeking an amendment of the WMP, provided that the extension does not exceed any applicable final compliance date for TMDL WLAs expressed as WQBELs in Appendices 2 through 14.

3. A Permittee shall be deemed in compliance with final WQBELs and receiving water limitations in sections VI and VII, if the Permittee has retained stormwater and all conditionally exempt, non-essential non-stormwater, as defined in section IV.A (Prohibitions – Non-Stormwater Discharges) of this Order. The retained stormwater must include stormwater runoff up to and including the volume equivalent to the 85th percentile, 24-hour event for the drainage area tributary to the applicable receiving water for that waterbody, provided that the Permittee is implementing all actions and schedules in an approved WMP. These actions include but are not limited to the ongoing monitoring and adaptive management requirements in sections XII.C.9 and XII.C.10 of this Order.

4. The responsible Permittee(s) must comply directly with the receiving water limitations in section VI and achieve the WQBELs in Appendices 2 through 14 according to the requirements of section VII unless the Permittee alternatively complies with this section.

5. The Executive Officer is authorized to rescind an approved WMP or accepted NOI for WMP development according to the following process. If the Executive Officer determines that a Permittee has failed to comply with any of the provisions in this section related to developing a WMP, or to meet the Critical Milestones in a final WMP, the Executive Officer may provide written Notice of Violation (NOV) to the responsible Permittees.

a. The NOV shall provide 90 days from the date of issuance to correct the deficiencies. If, after issuance of written NOV(s), a Permittee does not address the identified deficiencies within the specified timeframe, either through performance of the requirement or by pursuing an acceptable amendment of the WMP, the Executive Officer may conclude that the Permittee has constructively abandoned development or implementation of the WMP.

b. Upon concluding that the WMP has been constructively abandoned, the Executive Officer will provide written notice to the responsible Permittee(s) that they have not developed or implemented a WMP and inform the Permittee(s) of their responsibility to immediately comply with section VI (Receiving Water Limitations) and section VII (Effluent Limitations and Discharge Specifications) of this Order. The responsible Permittee can no longer rely on the development or implementation of the WMP under the NOI or the approved WMP as a means of demonstrating compliance with this section.

c. Once the Executive Officer has issued a written NOV to the responsible Permittee, the NOV and any action taken by the responsible Permittee(s) to come back into compliance does not preclude any additional enforcement action by the Executive Officer for violations of the requirement(s) in effect at the time of the NOV. The Executive Officer will make NOVs issued according to this section available for public review.

E. Time Schedule Order Applicability

1. WMPs may be used to comply with WLAs expressed as WQBELs where the final compliance date has not passed or where no final compliance date has been specified in the TMDL. If the final date to comply with WQBELs in this Order passes while responsible Permittee(s) are implementing an approved WMP, a Permittee may request a TSO pursuant to Water Code sections 13300 and 13385(j)(3). TSO requests may be made either individually or jointly. TSOs are subject to all the following conditions:

   a. The request for a time schedule order must be in writing and include all the following information:

      i. A statement of the purpose and justification for the time schedule that the Permittee(s) propose to achieve the final WQBEL(s);

      ii. A detailed time schedule of specific actions that the Permittee(s) will take to achieve the final WQBEL(s). The time schedule shall not exceed five years;

      iii. Data which demonstrates the current quality of the relevant MS4 discharge(s) to the receiving waters in terms of concentration, density, and/or load;

iv. A detailed description and chronology of treatment control measures and source control efforts, since the effective date of the TMDL, to reduce the discharge of the pollutant(s) from the MS4 to the receiving waters subject to the TMDL;

v. A demonstration that the proposed time schedule is as short as possible, considering the technological, operational, and economic factors that affect the design, development, and implementation of the control measures that are necessary to comply with the final WQBEL(s); and

vi. If the term of the requested TSO exceeds one year, the request must also include proposed interim requirements and a time schedule for their achievement. The interim requirements shall include interim effluent limitations for the pollutant or pollutants of concern, and actions and milestones leading to compliance with the effluent limitation.

vii. Any other information described in Water Code section 13263.3, subdivision (d)(2).

2. Where a Permittee believes that additional time to comply with a final receiving water limitation compliance deadline set within a WMP is necessary, and the Permittee fails to timely request or is not granted an extension by the Executive Officer, a Permittee may request a time schedule order pursuant to California Water Code section 13300. TSO requests may be made individually or jointly. The request must be in writing and shall include:

i. A statement of the purpose and justification for the time schedule that the Permittee(s) propose to achieve the receiving water limitations;

ii. A detailed time schedule of specific actions that the Permittee(s) will take to achieve the receiving water limitations;

iii. Data which demonstrates the current quality of the relevant MS4 discharge(s) to the receiving waters in terms of concentration, density, and/or load;

iv. A detailed description and chronology of treatment control measures and source control efforts to reduce the discharge of the pollutant(s) from the MS4 to the receiving waters subject to the TSO;

v. A demonstration that the proposed time schedule is as short as reasonably possible; and

vi. If the term of the requested TSO exceeds one year, the request should also include proposed interim requirements and a time schedule for their achievement.

XIII. MUNICIPAL INSPECTIONS

Each Permittee must have a program for inspecting construction, industrial, and commercial sites within their jurisdictions to minimize or reduce the discharge of pollutants to the MS4. Inspections and related enforcement actions must be carried out to enforce compliance with applicable municipal ordinance(s), plans, permits, or other requirements related to the control of discharges of pollutants to their MS4s.

A. General

1. Each Permittee must have written policies and procedures that describe how inspections and related enforcement actions are carried out.

2. Each Permittee must have an inventory of construction, industrial, and commercial sites subject to inspection. Each Permittees' inventory of sites must be maintained in an electronic-format database or spreadsheet application.

3. The inventory must be updated annually through reconciliation with other database inventories of businesses in each Permittee's jurisdiction. From all other sources, the inventory must be updated within 45 business days of the Permittee first becoming aware of the presence of a new site. 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 treatment control measures; and

   d. Location (address and latitude/longitude or equivalent location information).

4. The Executive Officer must be notified of any known or threatened violation of applicable waste discharge requirements (i.e., State-wide Construction General Permit, etc.), discovered during inspections according to section III.E.2 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.

5. Except as provided for in section III.E of this Order, Permittees must investigate complaints regarding potential or alleged discharge(s) of pollutants from construction, industrial, and 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.

6. Permittees must address non-compliance with a series of effective, progressive actions to compel compliance.

7. Permittees must conduct inspections of all approved treatment control measures according to the following schedule:

   a. All privately-owned or operated treatment control measures must be inspected a minimum of once every 5 years. The Permittees may, alternatively, require owners/operators of privately-owned treatment control measures to submit evidence documenting proper operations and maintenance.

   b. All Permittee-owned or operated treatment control measures must be inspected annually prior to October 1st.

8. If Santa Ana Water Board staff inspects a construction, industrial, or commercial site, the Permittee may substitute Santa Ana Water Board staff's inspection for an inspection required under this Order for the same site.

B. Construction Sites

1. The Permittee's construction site inventory must include sites where building or grading permits are applicable, the site discharges or may discharge to an MS4, the project duration is anticipated to exceed two weeks, and where activities at the site include the following:

   a. Soil movement;

   b. Uncovered storage of materials or wastes, such as construction materials, dirt, sand, fertilizer, or landscaping materials;

   c. Exterior mixing of cementitious products (i.e., concrete, mortar, or stucco).

2. Construction sites shall be included in the Permittees' inventory regardless of whether the site is subject to the Construction General Permit (NPDES No. CAS000002) or an individual NPDES stormwater permit.

3. Permittees must categorize all construction sites in their inventory as either a high priority, medium priority, or low priority as follows:

a. A construction site must be considered high priority if it meets any of the following criteria:

i. The site is over one acre and encompasses a tributary to a waterbody listed according to Clean Water Act section 303(d), as being impaired by sediment or turbidity;

ii. The site meets risk level 3 criteria as defined in NPDES Permit No. CAS000002 (Construction General Permit, as amended or revised); or

iii. The site encompasses a tributary to, and within 500 feet of, an area defined by the Ocean Plan as an Area of Special Biological Significance (ASBS).

b. A construction site must be considered medium priority if its area of disturbed soil consists of between 5 acres and up to, but not including 20 acres and is not otherwise a high priority site.

c. All other sites may be considered low priority.

d. 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 the receiving water(s), and the sensitivity of the receiving water(s) to potential pollutants from the site.

e. The Executive Officer is authorized to direct a Permittee to designate a site as high priority based on consideration of factors or circumstances in section XIII.B.4.d above.

4. Each Permittee must inspect construction sites in their inventory which have an expected or actual duration of more than two weeks.

a. Qualifying construction sites must be inspected according to the following schedule:

i. June 1st through September 30th of each year: all construction sites must be inspected at a frequency where sediment and other pollutants are properly controlled, and unauthorized, non-stormwater discharges are prevented.

ii. October 1st through May 31st of each year:

1) High priority sites must be inspected once every two (2) months in their entirety.

2) Medium priority sites must be inspected twice during this period.

3) Low priority sites must be inspected once during this period.

iii. Where a Permittee determines that pollution controls or their maintenance are inadequate or out of compliance, the site must be re-inspected until the deficiency is corrected.

b. Each Permittee's inspection records must document, at a minimum, that the inspector:

i. Observed if the site has obtained coverage under the Construction General Permit, if applicable, during the initial inspection and if a change in ownership occurs;

ii. Observed if the onsite pollution controls are appropriate to control erosion and sediments for the phase of construction;

iii. Identified, through visual observation, any non-stormwater discharges, and associated pollutant sources;

iv. Observed if pollution controls have been properly implemented and maintained at the site.

v. Documented evidence of non-compliance or threatened non-compliance with requirements related to the control of discharges of pollutants to the Permittee's MS4s; and

vi. Identified and communicated to the site representative non-compliance with requirements related to the control of discharges of pollutants to the Permittee's MS4s.

c. Inspection records must be maintained for a minimum of five (5) years from the date of the project's completion.

C. Industrial Sites

1. Each Permittee must maintain an inventory of all industrial sites under their jurisdiction where the site discharges or may discharge to the MS4. Industrial sites shall be included in the Permittees' inventory regardless of whether the site is subject to the Industrial General Permit (NPDES No. CAS000001), Scrap Metal Permit (NPDES Permit No. CAG618001), or other individual NPDES stormwater permits. Flood control district Permittees are exempt from this requirement.

2. Permittees must categorize all industrial sites in their inventory as either high priority, medium priority, or low priority.

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

i. The site is subject to section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA);

ii. The site has been authorized to discharge waste (coverage) under the Industrial General Permit (except for sites under a No Exposure Certification), the Scrap Metal Permit, or has coverage under an individual NPDES stormwater permit;

iii. The site has a history of unauthorized non-stormwater discharges;

iv. The site encompasses a tributary to, and within 500 feet of, an area defined by the Ocean Plan as an Area of Special Biological Significance (ASBS);

v. Facilities that handle or generate pollutants for which the receiving waters are impaired; and,

vi. Facilities that have a demonstrated or significant potential to release pre-production plastic or nurdles into the environment.

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

i. Quantity of materials or wastes used or stored outside;

ii. The potential for pollutants to be mobilized by stormwater;

iii. Facility size;

iv. Proximity to a receiving waterbody;

v. The presence of an infiltration LID treatment control measure that accepts stormwater associated with industrial activity; or

vi. Any other relevant factors.

c. The Executive Officer is authorized to direct a Permittee to designate a site as high priority based on consideration of factors or circumstances in section XIII.C.2.b above.

d. Any 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. The Executive Officer may rescind that approval for cause with written notification to the Permittee(s).

3. Each Permittee must inspect industrial sites in their inventory according to the following:

a. Industrial sites must be inspected according to the following schedule:

   i. High priority sites must be inspected once per year in their entirety.

   ii. Medium priority sites must be inspected once every two years.

   iii. Low priority sites must be inspected once every five years.

b. An inspection of an industrial site that is covered by the Industrial General Permit, Scrap Metal Permit, or other individual NPDES stormwater permit and performed by Santa Ana Water Board staff, USEPA, or representatives thereof may be substituted for any one of the above-required inspections for the same site.

c. Where a Permittee determines that a site is out of compliance with their ordinances, the industrial site must be re-inspected until the site regains compliance.

d. Permittees must document inspections of industrial sites. The documentation must demonstrate, at a minimum, that the inspector:

   i. Verified during the initial inspection that the site has obtained coverage under the Industrial General Permit, the Scrap Metal Permit, or other individual NPDES stormwater permit, if applicable;

   ii. Identified, through visual observation, any non-stormwater discharges and uncontrolled potential pollutant sources;

   iii. Verified that pollution controls have been properly implemented and maintained at the site;

   iv. Recorded evidence of non-compliance or threatened non-compliance with requirements related to the control of discharges of pollutants to the Permittee's MS4s; and

   v. Identified and alerted the site representative of non-compliance with requirements related to the control of discharges of pollutants to the Permittee's MS4s.

e. Inspection records for a facility operator must be maintained for a minimum of five (5) years following termination of business at the site.

D. Commercial Sites

1. Each Permittee must maintain an inventory of commercial sites subject to the Permittees jurisdiction, listed in section XIII.D.1.b below, and that discharges or may discharge to the MS4. Flood control district Permittees are exempt from this requirement.

a. Each Permittees' inventory must be maintained in an electronic-format database. The database records must include information on the following attributes:

   i. Site/business ownership;

   ii. Site area;

   iii. Any related approved Water Quality Management Plans and associated treatment control measures; and

   iv. Location (latitude/longitude in decimal-degrees or NAD83/WGS84 format).

b. Commercial sites include, but are not limited to those fixed facilities engaged in the following activities:

   i. Aircraft maintenance, fueling, or cleaning;
   ii. Animal care such as petting zoos and boarding and training facilities;
   iii. Automobile and other motor vehicle body repair or painting;
   iv. Automobile impound and storage;
   v. Automobile mechanical repair, maintenance, fueling, or cleaning;
   vi. Botanical or zoological gardens;
   vii. Building material retail and storage;
   viii. Cemeteries;
   ix. Eating or drinking establishments with primary SIC codes of 5812 or 5813;
   x. Golf courses, parks, and other recreational areas;
   xi. Landscape and hardscape installation;
   xii. Machinery and equipment repair, maintenance, fueling, or cleaning;
   xiii. Marina operations;
   xiv. Nurseries and greenhouses;
   xv. Painting and coating;
   xvi. Pest control service;
   xvii. Pool, lake, and fountain cleaning;
   xviii. Portable sanitary service;
   xix. Transportation services for passengers, parcels, or freight;
   xx. Watercraft maintenance, fueling, or cleaning;
   xxi. Any commercial sites that encompasses a tributary to, and within 500 feet of, an area defined by the Ocean Plan as an Area of Special Biological Significance; and
   xxii. Other commercial sites that the Permittee determines may be a significant contributor of pollutants to the MS4.

2. Each Permittee must prioritize all commercial sites (except for eating or drinking establishments, see section XIII.D.4 below) in their inventory as either “high priority”, “medium priority” or “low priority”.

    a. Each Permittee must categorize a minimum of 5 percent of their inventoried commercial sites as “high priority” and a minimum of 15 percent of their inventoried commercial sites as “medium priority”. All other commercial sites may be categorized as “low priority”.

    b. Permittees must exercise their discretion and consider site-specific factors that could cause a commercial site to be categorized as a higher priority. These factors include, but are not limited to, soil erosion potential, site slope, proximity to a receiving waterbody, and the sensitivity of the receiving waters to potential pollutants from the site.

    c. Any 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.

        i. 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.

        ii. The Executive Officer may rescind that approval for cause with written notification to the Permittee(s).

3. Each 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.

    a. Prioritized commercial sites must be inspected according to the following schedule:

        i. High priority sites must be inspected once per year in their entirety.

        ii. Medium priority sites must be inspected once every two years.

        iii. Low priority sites must be inspected once every five (5) years.

    b. Permittees must document inspections of commercial sites. The Permittees documentation must demonstrate, at a minimum, that the inspector:

        i. Identified through visual observation of any non-storm water discharges, evidence of non-storm water discharges, and potential pollutant sources;

ii. Assessed the effectiveness of BMPs implemented at the site;

iii. Recorded evidence of non-compliance or threatened non-compliance;

iv. Notified the site operator and provided the applicable BMP Fact Sheet(s) and any other relevant published educational materials if the inspector identifies non-compliance or a threat of non-compliance with relevant requirements or determines that BMPs are ineffective.

c. 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.

d. Permittees must address non-compliance observed through inspections with a series of effective, progressive actions to ultimately compel compliance.

e. Commercial site inspectors must be trained according to section XI of this Order;

f. The Executive Officer must be notified of any known violation of applicable waste discharge requirements received by internal departments or divisions discovered during inspections of commercial sites.

4. The Permittees may cause inspections of eating or drinking establishments to occur on their behalf by another party such as consultants. These inspections are anticipated to occur, for example, as part of the Orange County Health Care Agency (OCHCA) restaurant inspection program. In such cases, the following apply:

a. The inspections must occur, in part, to enforce the local Permittee's requirements related to the control of discharges of pollutants to their MS4s.

b. Where the inspecting agency staff observes alleged violations of a local Permittee's requirements related to the control of discharges of pollutants to their MS4s, the Permittee must initiate an investigation of the alleged violation within two (2) business days of the inspection date.

c. Permittees must respond to referrals from a health care agency (HCA) or other entity performing an inspection on behalf of the Permittee within three (3) business days of the matter being brought to their attention.

XIV. MUNICIPAL FACILITIES/ACTIVITIES

Each Permittee must implement a program for the operation and maintenance activities for their fixed facilities, their field operations, and drainage facilities for the purpose of ensuring that such activities do not adversely impact water quality.

A. Encroachment Permits

Each Permittee must ensure that applicants for encroachment permits for permanent connection to its MS4 facilities are notified in writing of their obligations to comply with stormwater ordinances, WQMP(s), and stormwater permits (e.g., Industrial General Permit, Construction General Permit, Scrap Metal Permit).

B. Fixed Facilities

1. Each Permittee must maintain an inventory of fixed facilities that are owned or controlled by the Permittee, which have the potential to discharge pollutants in runoff. The inventory must include the following at a minimum:

    a. Catch basins, storm drain inlets/outlets, outfalls, 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. Potable water distribution facilities;
    h. Hazardous waste treatment, disposal, and recovery facilities;
    i. Corporation, maintenance, and storage yards;
    j. Airfields;
    k. Parks, golf courses, and recreation areas;
    l. Cemeteries;
    m. Public buildings (police and fire stations and training facilities, libraries, etc.)
    n. Stadiums and other special event venues;
    o. Equestrian facilities;
    p. Animal shelters and kennels;
    q. Boat yards and marinas;
    r. Public parking facilities; and
    s. Areas or facilities that discharge directly to lagoons, the ocean, or Environmentally Sensitive Areas.

2. Each Permittee shall inspect at least 80 percent of its outfalls, open channels, catch basins, storm drain inlets, and stormwater basins on an annual basis, with 100 percent of the facilities addressed in a two-year period. Permittees must mechanically or physically clean the facilities if the inspections reveal that the volume is about 25 percent full or if accumulated sediment or debris impairs the hydraulic capacity of the facility. The MS4 clean out schedule and accomplishments shall be included in the Annual Progress Report.

a. Trash must be physically removed from the systems in a timely manner when found.

b. Where other agencies' authorization is required to remove trash from the systems (i.e., CWA section 404 permit), the Permittee must make a good faith effort to secure the necessary authorizations and remove the accumulated trash in a timely manner.

c. When a Permittee receives a complaint or observes nuisance odors, ponding, or other indicators of reduced hydraulic capacity within storm sewer conveyance lines that are not directly observable, the Permittee shall investigate the affected line and remove any material causing a condition of nuisance or impairing capacity.

3. A Permittee may propose an alternate schedule for visual inspection and mechanical or physical cleaning of open channels, catch basins, storm drain inlets, and stormwater basins (collectively referred to as systems in this section) under the Permittees' control. If approved, the schedule shall be an alternative to the schedule prescribed by section XIV.B.2 above.

   a. The proposed schedule must be justified by observed field information.

   b. The proposed schedule is subject to the approval of the Executive Officer.

4. Except for the systems described in XIV.B.3. above, each Permittee must categorize fixed facilities that they own or control into high priority, medium priority, and low priority sites.

   a. The following fixed facilities must be categorized as high priority sites:

      i. Municipal landfills;
      ii. Publicly owned treatment works;
      iii. Waste incinerators;
      iv. Solid waste transfer facilities;
      v. Land application sites;
      vi. Corporation, maintenance, and storage yards;
      vii. Hazardous waste treatment, disposal, and recovery facilities;
      viii. Land-side areas of airfields;
      ix. Facilities that are located adjacent or within an Environmentally Sensitive Area or that discharge directly to an Environmentally Sensitive Area.

   b. Permittees must categorize all other fixed facilities according to a uniform objective ranking system developed by the applicable Principal Permittee. The ranking system must be based on the following factors:

      i. The degree to which potentially polluting activities occur in areas exposed to stormwater.

ii. The quantity of potentially polluting materials used or stored at the facility.

iii. Whether the activities at a site could produce pollutants that cause or contribute to the impairment of a waterbody listed pursuant to CWA section 303(d).

iv. The risk of a release of a pollutant.

v. The occurrence of known or suspected non-stormwater discharges.

vi. The size of a facility, the number of employees assigned to the facility, and the number of visitors.

5. Each Permittee must report their inventory of fixed facilities and each facilities' assigned priority category in the first Annual Progress Reports required under this Order in a searchable electronic format that is acceptable to the Executive Officer. Updates must be submitted in subsequent Annual Progress Reports.

6. Except for the systems described in XIV.B.3 above, the 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.

7. Permittees must carry out inspections of fixed facilities to: identify and correct observed violations of the municipal ordinance or other requirements related to the control of pollutants to the MS4; identify and correct unnecessary deviations from standard operating procedures (see section XIV.B.10, below); internally enforce relevant discharge requirements; and identify and eliminate known or suspected unauthorized non-stormwater discharges.

8. Permittees must implement a program to prevent the discharge of pollutants from Permittees' field activities and fixed facilities. The program must include:

   a. Documentation of pollution controls and BMPs to be implemented by person(s) performing field activities on behalf of Permittees.

   b. A training program to provide Permittees' staff with an awareness of the responsibilities described in standard operating procedures relevant to their duties (See section XI Above).

   c. An inspection program for field activities in order to: identify and correct observed violations of the municipal code or ordinance related to protecting water quality; identify and correct unnecessary deviations from pollution controls and BMPs; internally enforce compliance with relevant waste

discharge requirements; and identify and eliminate or minimize known or suspected non-stormwater discharges.

9. Each Permittee must employ effective controls that prevent materials or waste associated with municipal facilities or activities from being dispersed by wind or stormwater runoff.

10. Each Permittee shall comply with pesticide regulations pertaining to the use, application, and disposal of pesticides in California Code of Regulations, chapter 4, subchapters 3, 4, and 5 and shall implement an Integrated Pesticide Management (IPM) program. The term “pesticide” includes herbicides, rodenticides, insecticides, etc. consistent with the common meaning of the term.

    a. Each Permittee must develop and implement an Integrated Pest Management (IPM) program that considers a combination of techniques for pest prevention. Permittees may partner with other agencies and organizations to develop and implement the IPM program. Permittees may refer to available IPM guidelines, such as the UC Division of Agriculture and Natural Resources Publication 8093, “Establishing Integrated Pest Management Policies and Programs: A Guide for Public Agencies”.

    b. Each Permittee shall annually:

        i. Prepare and update an inventory of pesticides used by all internal departments, divisions, and other operational units;

        ii. Quantify pesticide use by staff and hired contractors; and,

        iii. Demonstrate implementation of IPM alternatives (e.g., UC IPM safer alternatives) where feasible to reduce pesticide use.

XV. PROGRAM EFFECTIVENESS ASSESSMENT

Each Permittee must have a program in place to assess the effectiveness of individual control measures and BMPs or systems of control measures and BMPs employed in each of the elements of their stormwater program and any approved Watershed Management Plan as defined in section XII. The assessment program must provide information to the Permittee that is adequate to attain receiving water limitations (section VI) and effluent limitations (section VII), effectively prohibit non-stormwater discharges (section IV) and reduce pollution to the maximum extent practicable. The assessment program must be documented in writing.

A. The Principal Permittees may develop a model effectiveness assessment program for use by the Permittees. If developed, each Permittee must perform assessments in substantial conformance with the method unless the method conflicts with the requirements of this Order. In the event of any conflict, the requirements of this Order prevail.

B. Methods used to monitor, measure, and analyze program activities must be conducted in a manner that is representative of the monitored activity.

C. Each Permittees' assessment program must be comprised of the following elements:

1. A hypothesis of the process of how each pollutant, or functionally similar group of pollutants, are released to the environment and transported to the receiving water(s).

2. A description of each of the control measures and BMPs, where and at what level of effort they are intended to be applied in the hypothesized pollution process, and how they will reduce or prevent pollutants from being transported to the receiving water(s).

3. Processes that measure the performance of individual control measures and BMPs or systems of control measures and BMPs. The process must include the control measure(s) and BMP(s) that are being assessed, the expected outcome(s), the performance metric(s) used to assess the outcome(s), and the method(s) used to measure.

4. An assessment of the effectiveness of the program. The assessment must evaluate the following:

    a. How effective the individual or system of control measures and BMPs are in achieving the desired outcomes;

    b. If the performance metrics are supported by substantial evidence and are appropriate for evaluating compliance with applicable requirements;

    c. If the method(s) for measuring outcomes are effective; and

    d. Any changes found necessary to improve the effectiveness of the individual or systems of control measures and BMPs or the overall process.

5. An assessment of any barriers to implementing changes to improve the effectiveness of control measures and BMPs.

XVI. MONITORING AND REPORTING PROGRAM

The Permittees must comply with Monitoring and Reporting Program (MRP) R8-2026-0034, Attachment C, and any revisions thereto, which are hereby made a part of this Order.

XVII. STANDARD PROVISIONS

The Permittees must comply with the Standard Provisions in Attachment F, and any revisions thereto, which are hereby made a part of this Order.

XVIII. REOPENER AND PERMIT MODIFICATION

The following describes the conditions in which the Permit may be reopened, modified, or revoked.

A. This Order may be modified or revoked and reissued prior to its expiration date for cause, in accordance with the provisions of 40 CFR sections 122.44, 122.62, 122.63, 122.64, 124.5, 125.62, and 125.64. Cause for taking such action includes, but is not limited to, changes made to:

1. Address significant changes in conditions identified in the technical reports required by the Santa Ana Water Board which were unknown at the time of the issuance of this Order;

2. Address changed conditions identified or other sources deemed significant by the Santa Ana Water Board;

3. Incorporate applicable requirements of statewide water quality control plans, policies or precedential orders adopted by the State Water Board;

4. Incorporate provisions as a result of future amendments to the Basin Plan, such as a new or revised water quality objective or the adoption or revision of a TMDL, including the program of implementation and time schedule for implementation. As soon as possible after the effective date of a revised TMDL, where the revisions warrant a change to the provisions of this Order, the Santa Ana Water Board may modify this Order consistent with the assumptions and requirements of the revised WLA(s), including the program of implementation.

5. 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.

6. Address endangerment to human health or the environment resulting from the permitted activity, including information that the discharge(s) regulated by this Order may have the potential to cause or contribute to adverse impacts on water quality and/or beneficial uses.

7. Incorporate effluent limitations for toxic constituents determined to be present in significant amount in the discharge through a more comprehensive monitoring program included as part of this Order.

8. Upon the consent of the Permittee(s), make corrections or allowances

for changes in the permitted activity, following the procedures under 40 CFR section 122.63, if processed as a minor modification. Minor modifications include but are not limited to:

a. Correct typographical errors;

b. Require more frequent monitoring or reporting by a Permittee; or

c. Change an interim compliance date in a schedule of compliance, provided the new date is not more than 120 days after the date specified in the existing permit and does not interfere with attainment of the final compliance date requirement.

9. 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 a Permittee's discharge, and that standard 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 Permittees so notified.

   The filing of a request by the 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.

Appendix 1

Appendix 1

APPLICABLE TMDL REQUIREMENTS FOR PERMITTEES

Table 1.1: TMDLs Applicable to Orange County Permittees

Permittee	Newport Bay/SDC Nutrients TMDL	Fecal Coliform TMDL	Sediment TMDL	Organochlorine TMDL	Diazinon & Chlorpyrifos TMDL	Toxic Pollutants (Metals) TMDL	Coyote Creek Metals TMDL	Selenium TMDL	Copper TMDL[6]	Coyote Creek Bacterial TMDL
County of Orange	X	X	X	X	X	X	X	X	X	X
Orange County Flood Control District	X	X	X	X	X	X	X	X	X	X
City of Anaheim							X			X
City of Brea							X			X
City of Buena Park							X			X
City of Costa Mesa	X	X	X	X	X	X		X	X	
City of Cypress							X			X
City of Fountain Valley										
City of Fullerton							X			X
City of Garden Grove										
City of Huntington Beach										
City of Irvine	X	X	X	X	X	X		X	X	
City of Laguna Hills[7]	X	X	X	X	X	X		X	X	
City of Laguna Woods[5]	X	X	X	X	X	X		X	X	
City of La Habra							X			X
City of La Palma							X			X
City of Lake Forest	X	X	X	X	X	X		X	X	
City of Los Alamitos							X			X
City of Newport Beach	X	X	X	X	X	X		X	X	
City of Orange	X	X		X	X	X		X	X	
City of Placentia							X			X
City of Santa Ana	X	X	X	X	X	X		X	X	

[6] Will become effective upon approval by USEPA.

[7] Laguna Hills and Laguna Woods are not permittees under this Order. The waste load allocations are incorporated into and will be enforced by the Santa Ana Water Board through the San Diego Regional Water Quality Control Board's regional MS4 permit.

City of Seal Beach							X			X
City of Stanton										
City of Tustin	X	X	X	X	X	X		X	X	
City of Villa Park										
City of Westminster										
City of Yorba Linda							X			X

Table 1.2: TMDLs Applicable to Riverside County Permittees

Permittee	Middle Santa Ana River Bacterial TMDL	LE/CL Nutrient TMDLs
Riverside County	X	X
City of Beaumont		X
City of Calimesa		
City of Canyon Lake		X
City of Corona	X	
City of Eastvale	X	
City of Hemet		X
City of Jurupa Valley	X	
City of Lake Elsinore		X
City of Menifee		X
City of Murrieta[8]		X
City of Moreno Valley		X
City of Norco	X	
City of Perris		X
City of Riverside	X	X
City of San Jacinto		X
City of Wildomar[6]		X

[8] Pursuant to the Water Code section 13228 designation between the Santa Ana Water Board and the San Diego Regional Water Quality Control Board (see Finding II.A.3.b), the Cities of Murrieta and Wildomar are expected to continue to participate in the Lake Elsinore and Canyon Lake TMDL Task Force.

Table 1.3: TMDLs Applicable to San Bernardino County Permittees

Permittee	Nutrient TMDL for Dry Hydrological conditions for Big Bear Lake	Middle Santa Ana River Bacterial TMDL	Coyote Creek Bacterial TMDL	Coyote Creek Metals TMDL
San Bernardino County	X	X	X	X
San Bernardino County Flood Control District	X	X	X	X
City of Big Bear Lake	X			
City of Chino Hills		X	X	X
City of Chino		X		
City of Colton				
City of Fontana		X		
City of Grand Terrace				
City of Highland				
City of Montclair		X		
City of Ontario		X		
City of Rancho Cucamonga		X		
City of Redlands				
City of Rialto		X		
City of San Bernardino				
City of Upland		X		

Table 1.4: TMDLs Applicable to the Cities of Claremont and Pomona

Permittee	Applicable TMDLs
City of Claremont	**Middle Santa Ana River Bacterial TMDL**
City of Pomona	

Appendix 2

Appendix 2

WATER QUALITY-BASED EFFLUENT LIMITATIONS FOR NUTRIENTS IN THE NEWPORT BAY/SAN DIEGO CREEK WATERSHED

The following water quality-based effluent limitations (WQBELs) apply to discharges of runoff from MS4s owned or operated by Permittees discharging into Newport Bay as indicated in Appendix 1. The WQBELs in this Appendix are based on and consistent with the assumptions and requirements of the Nutrient TMDLs for the Newport Bay/San Diego Creek. The compliance date of December 31, 2012, specified in the Basin Plan has passed.

I. WQBELs for Nitrogen, Total

A. Total Nitrogen is the sum of nitrate (NO_3), nitrite (NO_2), ammonia, and organic nitrogen. However, for the purposes of the following WQBELs, Total Nitrogen shall mean the sum of NO_3, ammonia, and organic nitrogen.

B. Daily Effluent Limitation – Discharges of runoff from MS4s into Reach 2 of San Diego Creek must not transport more than 5.5 pounds of total nitrogen per day to Newport Bay during non-storm conditions, subject to the following conditions:

1. This effluent limitation only applies when the mean daily flow rate is less than 25 cubic feet per second (cfs) and when the mean daily flow rate is above 25 cfs but is not the result of precipitation.

2. Flow must be measured in San Diego Creek at Culver Drive.

3. The Daily Effluent Limitation is averaged on a yearly basis for days when the above conditions exist.

C. Winter Effluent Limitation – Discharges of runoff from MS4s into San Diego Creek must not transport more than 55,442 pounds of total nitrogen into Newport Bay during each wet season.

1. This effluent limitation applies between October 1 and March 31 of each year.

2. This effluent limitation applies where the mean daily flow rate in San Diego Creek is less than 50 cfs and to mean daily flow rates more than 50 cfs that are not the result of precipitation.

3. Flows must be measured in San Diego Creek at Campus Drive.

D. Summer Effluent Limitation – Discharges of runoff from MS4s into San Diego Creek must not transport more than 16,628 pounds of total nitrogen into Newport Bay during the dry season.

1. This effluent limitation applies between April 1 to September 30 of each year and is measured at San Diego Creek at Campus Drive.

II. WQBELs for Phosphorus, Total

A. Discharges of runoff from MS4s must not transport more than 2,960 pounds of total phosphorous per year into Newport Bay.

Table 2.1 Summary of Nutrients Effluent Limitations for San Diego Creek and Newport Bay Watershed

Pollutant	Pounds per year (lbs/yr)	Annual Total Allocation for San Diego Creek, Reach 2, During Non-Storm Conditions (lbs/day)	Summer Allocation for Newport Bay Watershed lbs/season Apr. 1–Sep 31	Winter Allocation for Newport Bay Watershed lbs/season Oct. 1–Mar. 30
Total Nitrogen	--	5.5	16,628	55,442
Total Phosphorus	2,960	--	--	--

III. Compliance Determination

Permittees responsible for complying with the WQBELs must demonstrate compliance through any of the means identified in section VII of Order R8-2026-0034 (Order) or as shown in this section III of Appendix 2. Processes used to analyze data and support demonstrations of compliance, as well as compliance monitoring locations, must be approved by the Executive Officer as part of the PMRP.

A. Demonstrate that there are no exceedances of the WQBEL in the Permittee's MS4 discharge at the compliance point(s) identified in the PMRP.

B. Demonstrate that there is no discharge from the Permittee's MS4(s) during the relevant time period.

C. Demonstrate that the Permittee's MS4 discharge did not cause or contribute to an exceedance of the WQBEL, because the exceedance is the result of an authorized or exempt non-stormwater discharge specified in section IV.A.2 of the Order during a specific sampling event. The Permittee must support this demonstration with measurements of the water quality of the specific authorized or conditionally exempt essential non-stormwater discharge(s) alleged to have caused or contributed to the exceedance of the WQBEL.

D. Demonstrate that all non-stormwater and all stormwater runoff up to and including the volume equivalent to the 85th percentile, 24-hour storm event is retained for the drainage area tributary to the applicable receiving waters. The runoff retention must occur according to an approved Watershed Management Plan under section XII of the Order and include ongoing monitoring and adaptive management.

E. Demonstrate that the receiving waterbody is meeting the combined WLAs and Load Allocations (Total TMDL Allocations) designated in the TMDL, as specified in the Basin Plan. For reference, Total TMDL Allocations are summarized in Table 2.2.

Table 2.2 Summary of Nutrients Total TMDL Allocations for Newport Bay Watershed

TMDL Targets	Allocation	Summer Allocation lbs/season (April – Sept)	Winter Allocation lbs/season (Oct – Mar)
Newport Bay Watershed Total Nitrogen	--	153,861	144,364
Newport Bay Watershed Total Phosphorous	62,080 lbs/year	--	--

IV. Monitoring and Reporting

Monitoring and reporting requirements shall be as outlined in the Monitoring and Reporting Program (MRP) in Attachment C of this Order.

Appendix 3

Appendix 3

WATER QUALITY-BASED EFFLUENT LIMITATIONS FOR FECAL COLIFORM IN NEWPORT BAY

The following water quality-based effluent limitations (WQBELs) apply to discharges of runoff from MS4s owned or operated by those Permittees discharging into Newport Bay as indicated in Appendix 1. The WQBELs in this Appendix are based on and consistent with the assumptions and requirements of the Fecal Coliform TMDLs for Newport Bay. The compliance date of December 30, 2014, for the Water Contact Recreation[9] (REC1) beneficial use specified in the Basin Plan has passed. As of the date of issuance of this permit, a Time Schedule Order (TSO) (R8-2019-0050) has been issued. TSO R8-2019-0050 was amended by TSO R8-2023-0063, providing a time schedule to attain the REC1 WQBELs by December 6, 2023. However, the compliance date of December 31, 2030, for the Shellfish Harvesting[10] (SHEL) beneficial use has not passed.

I. WQBELs for Fecal Coliform for REC1

A. The geometric mean concentration of fecal coliform at representative locations in Newport Bay must not exceed 200 organisms/100 milliliters (mL).

B. The geometric mean concentration of fecal coliform in Newport Bay must be calculated using a minimum of 5 representative samples taken per calendar month. The geometric mean concentration must be calculated for each monitored location.

C. Of the representative samples taken, no more than 10 percent can exceed 400 organisms/100mL for any 30-day period.

II. WQBELs for Fecal Coliform for SHEL

A. By December 31, 2030, the monthly median of representative samples of fecal coliform across Newport Bay must not exceed 14 most probable number (“MPN”)/100 mL; and

B. Of the representative samples taken of fecal coliform, not more than 10 percent can exceed 43 MPN/100 ml.

III. Compliance Determination

Permittees responsible for complying with the WQBELs must demonstrate compliance through any of the means identified in section VII of Order No. R8-2026-0034 (Order) or as shown in this section III of Appendix 3. Processes used to analyze data and support demonstrations of compliance, as well as compliance

[9] As defined in the Basin Plan

[10] As defined in the Basin Plan

monitoring locations, must be approved by the Executive Officer as part of the PMRP.

A. Demonstrate that there are no exceedances of the WQBEL in the Permittee's MS4 discharge at the compliance point(s) identified in the PMRP.

B. Demonstrate that there is no discharge from the Permittee's MS4(s) during the relevant time period.

C. Demonstrate that the Permittee's MS4 discharge did not cause or contribute to an exceedance of the WQBEL, because the exceedance is the result of an authorized or exempt non-stormwater discharge specified in section IV.A.2 of the Order during a specific sampling event. The Permittee must support this demonstration with measurements of the water quality of the specific authorized or conditionally exempt essential non-stormwater discharge(s) alleged to have caused or contributed to the exceedance of the WQBEL.

D. Where the final compliance date for achievement of the WQBEL has not passed, develop and implement an approved Watershed Management Plan addressing the waterbody-pollutant combination pursuant to section XII of the Order. The Watershed Management Plan is only available to demonstrate compliance with the WQBEL for SHEL, as the compliance date for REC1 has passed.

E. Demonstrate that all non-stormwater and all stormwater runoff up to and including the volume equivalent to the 85th percentile, 24-hour storm event is retained for the drainage area tributary to the applicable receiving waters. The runoff retention must occur according to an approved Watershed Management Plan under section XII of the Order and include ongoing monitoring and adaptive management.

F. Demonstrate that an alternative indicator (e.g., *enterococci*) in the receiving water is below levels that are equivalent to a risk to human health less than 32 illnesses/1000 people.

G. Demonstrate, through an approved epidemiological study or quantitative microbial risk assessment (QMRA), that the risk to human health is less than 32 illnesses/1000 people in the receiving water. This compliance method only applies to the REC1 WQBELs in section I of this Appendix 3

IV. Monitoring and Reporting

Monitoring and reporting requirements shall be as outlined in the Monitoring and Reporting Program (MRP) in Attachment C of this Order.

Appendix 4

Appendix 4

WATER QUALITY-BASED EFFLUENT LIMITATIONS FOR SEDIMENT IN THE NEWPORT BAY/SAN DIEGO CREEK WATERSHED

The following water quality-based effluent limitations (WQBELs) apply to discharges of runoff from MS4s owned or operated by Permittees discharging into Upper Newport Bay as indicated in Appendix 1. The WQBELs in this Appendix are BMP-based and based on and consistent with the assumptions and requirements of the Sediment TMDLs for Upper Newport Bay/San Diego Creek Watershed. The compliance date of April 16, 2009 (10 years from the date of sediment TMDL approval by USEPA) specified in the Basin Plan has passed.

I. WQBELs for Sediment

A. Permittees must achieve all the following:

1. Sediment in discharges from the Permittees' MS4s must not alter the distribution of habitat types in the 700-acre Upper Newport Bay Ecological Reserve identified in Table 4.1 below by more than 1 percent.

Table 4.1: Target Baseline Distribution of Habitat Types in the Upper Newport Bay Ecological Reserve[1,2]

Habitat Type	Acres	Permissible Change (acres)
Marine aquatic	210	2.1
Mudflat	214	2.14
Salt marsh	277	2.77
Riparian	31	0.31

2. A minimum depth of 7 feet below mean sea level shall be maintained in the Unit 1 and 2 Sediment Basins in Upper Newport Bay.

3. All in-channel and foothill sediment control basins throughout the drainages in the watershed shall be maintained to have at least 50 percent of design capacity available prior to November 15 of each year. The Permittees shall

[1] Habitat acreage figures are from the Basin Plan and do not reflect changes to the acreages in the Reserve since completion of the Upper Newport Bay Ecosystem Restoration Project in 2010.

[2] The California Department of Fish and Wildlife manages the Reserve to address wildlife needs.

submit a report by November 15 of each year certifying whether the sediment basins in the watershed have at least 50 percent capacity.

B. Permittees may comply with the targets in Table 4.1 for habitat types as follows:

1. Conduct bathymetric and vegetation surveys of Upper Newport Bay. This information will be used to evaluate compliance with the acreage and depth targets.

2. If monitoring for total sediment load in San Diego Creek at Campus Drive shows that more than 250,000 tons of sediment were discharged to the Bay in a single year, bathymetric and vegetation surveys shall be conducted to determine the amount of sediment deposition in the two in-Bay basins and the other marine aquatic habitat areas and to determine changes in the areal extent of the existing aquatic wildlife and endangered species habitat areas.

3. Demonstration of compliance with the WQBELs for Sediment shall occur according to an approved PMRP (see MRP 2026-00XX). Demonstrations shall be consistent with the Monitoring and Reporting Program No. 99-74 (As amended on February 14, 2014, June 6, 2019, and August 24, 2020). Changes to the program may be approved by the Executive Officer after a 30-day public comment period.

4. If monitoring data indicates that habitat acreages have changed by more than 1 percent due to sediment deposition as indicated in section I.A.1, the minimum depth of 7 feet below mean sea level is not maintained in the Unit 1 and 2 sediment basins as indicated in section I.A.2, or the sediment basin capacity is less than 50 percent prior to November 15 as indicated in section I.A.3, the Permittees shall implement corrective actions, including sediment removal and/or additional sediment control measures as appropriate, to meet the WQBELs. The WQBELs shall be used to evaluate compliance actions and not as numeric WQBELs.

C. Submit an annual report via SMARTS by February 27 of each year providing the monitoring data and information collected by the Permittees, including the flow and suspended solids monitoring data, the scour studies, the bathymetric and vegetation surveys (and any additional information collected). The monitoring shall be completed prior to July 1 of each year, and this information shall be used to determine the maintenance requirements of all sediment basins in the watershed.

II. Compliance Determination

Permittees responsible for complying with the WQBELs must demonstrate compliance through any of the means identified in section VII of Order R8-2024-0001 (Order) or as shown in this section II of Appendix 4. Processes used to analyze data and support demonstrations of compliance, as well as compliance

monitoring locations, must be approved by the Executive Officer as part of the PMRP.

A. Demonstrate that there are no violations of the WQBELs' required actions in section I of Appendix 4 using the compliance point(s) identified in the PMRP.

B. Demonstrate that the Permittee's MS4 discharge did not cause or contribute to violations of the WQBELs in section I of Appendix 4, because the exceedance is the result of an authorized or exempt non-stormwater discharge specified in section IV.A.2 of the Order during a specific sampling event. The Permittee must support this demonstration with measurements of the water quality of the specific authorized or conditionally exempt essential non-stormwater discharge(s) alleged to have caused or contributed to the exceedance of the WQBEL.

C. Demonstrate that all non-stormwater and all stormwater runoff up to and including the volume equivalent to the 85th percentile, 24-hour storm event is retained for the drainage area tributary to the applicable receiving waters. The runoff retention must occur according to an approved Watershed Management Plan under section XII of the Order and include ongoing monitoring and adaptive management requirements.

D. Demonstrate that the Permittees have reduced the target annual average total sediment load in the watershed to 125,000 tons per year, thereby reducing the sediment load to Newport Bay to the combined Waste Load Allocations and Load Allocations (Total TMDL Allocations) of 62,500 tons per year and limiting sediment deposition in the drainages to approximately 62,500 tons per year. The reduction shall be calculated as 10-year running average amount of suspended solids measured in San Diego Creek at Jamboree Boulevard and Campus Drive.

III. Monitoring and Reporting

Monitoring and reporting requirements shall be as outlined in the Monitoring and Reporting Program (MRP) in Attachment C of this Order.

Appendix 5

Appendix 5

WATER QUALITY-BASED EFFLUENT LIMITATIONS FOR ORGANOCHLORINE COMPOUNDS IN SAN DIEGO CREEK, UPPER AND LOWER NEWPORT BAY

The following water quality-based effluent limitations (WQBELs) apply to discharges of runoff from MS4s owned or operated by Permittees discharging into Newport Bay and San Diego Creek as indicated in Appendix 1. The WQBELs in this Appendix for dieldrin and the WQBELs for the Rhine Channel are based on and consistent with the assumptions and requirements of USEPA's TMDLs for Toxic Pollutants (Organochlorine Compounds). These TMDLs were all effective upon promulgation by USEPA and do not include a compliance date. The remaining WQBELs in this Appendix are based on and consistent with the assumptions and requirements of the Organochlorine Compounds TMDL adopted by the Santa Ana Water Board for San Diego Creek, Upper and Lower Newport Bay, and Rhine Channel. The compliance date of December 31, 2020, specified in the Basin Plan has passed.

I. WQBELs for Chlordane

A. Discharges of runoff from MS4s must not transport more than 30.1 grams per year (g/yr) of chlordane into Upper Newport Bay.
B. Discharges of runoff from MS4s must not transport more than 11 g/yr of chlordane into Lower Newport Bay
C. Discharges of runoff from MS4s must not transport more than 0.1 gram of chlordane into the Rhine Channel per year.

II. WQBELs for Total DDT

A. Discharges of runoff from MS4s must not transport more than 51.8 g/yr of total DDT into Upper Newport Bay.
B. Discharges of runoff from MS4s must not transport more than 19.1 g/yr of total DDT into Lower Newport Bay.
C. Discharges of runoff from MS4s must not transport more than 128.3 g/yr of total DDT into the San Diego Creek and its tributaries.
D. Discharges of runoff from MS4s must not transport more than 0.7 g/yr of total DDT into the Rhine Channel.

III. WQBELs for Dieldrin

A. Discharges of runoff from MS4s must not transport more than 4.45 g/yr of Dieldrin into Lower Newport Bay.
B. Discharges of runoff from MS4s must not transport more than 183.4 g/yr of Dieldrin into the San Diego Creek and its tributaries.
C. Discharges of runoff from MS4s must not transport more than 0.13 g/yr of Dieldrin into the Rhine Channel.

IV. WQBELs for Total PCBs

A. Discharges of runoff from MS4s must not transport more than 29.8 g/yr of total PCBs into Upper Newport Bay.
B. Discharges of runoff from MS4s must not transport more than 78.1 g/yr of total PCBs into Lower Newport Bay.
C. Discharges of runoff from MS4s must not transport more than 4.1 g/yr of total PCB into the Rhine Channel.

V. WQBELs for Toxaphene

A. Discharges of runoff from MS4s must not transport more than 1.9 g/yr of Toxaphene into the San Diego Creek and its tributaries.

Table 5.1: Summary of WQBELs by Receiving Waters for Organochlorine Compounds (Grams per Year)

Receiving Waters	Total DDT (g/yr)	Chlordane (g/yr)	Total PCBs (g/yr)	Dieldrin (g/yr)	Toxaphene (g/yr)
San Diego Creek and Tributaries	128.3			183.4	1.9
Upper Newport Bay	51.8	30.1	29.8	--	--
Lower Newport Bay	19.1	11.0	78.1	4.45	--
Rhine Channel	0.7	0.1	4.1	0.13	--

VI. Compliance Determination

Permittees responsible for complying with the WQBELs must demonstrate compliance through any of the means identified in section VII of Order No. R8-2026-0034 (Order) or as shown in this section VI of Appendix 5. Processes used to analyze data and support demonstrations of compliance, as well as compliance monitoring locations, must be approved by the Executive Officer as part of the PMRP.

A. Demonstrate that there are no exceedances of the WQBEL in the Permittee's MS4 discharge at the compliance point(s) identified in the PMRP.

B. Demonstrate that there is no discharge from the Permittee's MS4(s) during the relevant time period.

C. Demonstrate that the Permittee's MS4 discharge did not cause or contribute to an exceedance of the WQBEL, because the exceedance is the result of an authorized or exempt non-stormwater discharge specified in section IV.A.2 of the Order during a specific sampling event. The Permittee must support this

demonstration with measurements of the water quality of the specific authorized or conditionally exempt essential non-stormwater discharge(s) alleged to have caused or contributed to the exceedance of the WQBEL.

D. Demonstrate that all non-stormwater and all stormwater runoff up to and including the volume equivalent to the 85th percentile, 24-hour storm event is retained for the drainage area tributary to the applicable receiving waters. The runoff retention must occur according to an approved Watershed Management Plan under section XII of the Order and include ongoing monitoring and adaptive management requirements.

E. Demonstrate that the receiving waterbody is meeting the combined WLAs and Load Allocations (Total TMDL Allocations) designated in the TMDL, as specified in the Basin Plan. For reference, Total TMDL Allocations are summarized in Table 5.2.

F. For WQBELs implementing EPA-issued TMDLs (dieldrin for Lower Newport Bay and San Diego Creek, and DDT, chlordane, PCBs and dieldrin for the Rhine Channel), develop and implement an approved Watershed Management Plan addressing the waterbody-pollutant combination pursuant to section XII of the Order. The schedule for attaining the WQBELs shall be as short as possible.

Table 5.2: Summary of Total TMDL Allocations for San Diego Creek, Upper and Lower Newport Bay, expressed on an annual basis.

	Total Allocation (grams per year)				
Waterbody	**Total DDT**	**Toxaphene**	**Chlordane**	**Total PCBs**	**Dieldrin***
San Diego Creek and Tributaries	396	6	--	--	262
Upper Newport Bay	160	--	93	92	--
Lower Newport Bay	59	--	34	241	5.93
Rhine Channel*	2.9	--	0.33	16.2	0.53

*Total TMDL Allocations from the USEPA TMDLs

VII. Monitoring and Reporting

Monitoring and reporting requirements shall be as outlined in the Monitoring and Reporting Program (MRP) in Attachment C of this Order.

Appendix 6

Appendix 6

WATER QUALITY-BASED EFFLUENT LIMITATIONS FOR THE DIAZINON & CHLORPYRIFOS TMDL FOR SAN DIEGO CREEK AND UPPER NEWPORT BAY

The following water quality-based effluent limitations (WQBELs) apply to discharges of runoff from MS4s owned or operated by Permittees discharging into Upper Newport Bay and its tributaries or San Diego Creek as indicated in Appendix 1. The WQBELs in this Appendix are based on and consistent with the assumptions and requirements of the Diazinon & Chlorpyrifos TMDLs for San Diego Creek and Upper Newport Bay. The compliance date of December 1, 2007 specified in the Basin Plan has passed.

I. General

A. For Appendix 6, acute concentration shall mean the average concentration measured in samples collected over a 24-hour period.

B. For Appendix 6, chronic concentration shall mean the average concentration measured in samples collected over a 96-hour period.

II. WQBELs for Chlorpyrifos

A. Discharges of Chlorpyrifos in runoff from MS4s into Upper Newport Bay shall not exceed the acute concentration of 18 nanograms per liter (ng/L).

B. Discharges of Chlorpyrifos in runoff from MS4s into Upper Newport Bay shall not exceed the chronic concentration of 8.1 ng/L.

C. Discharges of Chlorpyrifos in runoff from MS4s into San Diego Creek shall not exceed the acute concentration of 18 ng/L.

D. Discharges of Chlorpyrifos in runoff from MS4s into San Diego Creek shall not exceed the chronic concentration of 12.6 ng/L.

Table 6.1: Summary of WQBELs for Runoff from MS4 Permittees for Discharges of Chlorpyrifos into Upper Newport Bay and into San Diego Creek (ng/L)

Receiving Waters	Acute Concentration (ng/L)	Chronic Concentration (ng/L)
Upper Newport Bay	18	8.1
San Diego Creek	18	12.6

III. WQBELs for Diazinon

A. Discharges of Diazinon in runoff from MS4s into San Diego Creek shall not exceed the acute concentration of 72 ng/L.

B. Discharges of Diazinon in runoff from MS4s into San Diego Creek shall not exceed the chronic concentration of 45 ng/L.

Table 6.2: Summary of WQBELs for Runoff from MS4 Permittees for Diazinon into San Diego Creek (ng/L)

Receiving Waters	Acute Concentration (ng/L)	Chronic Concentration (ng/L)
San Diego Creek	72	45

IV. Compliance Determination

Permittees responsible for complying with the WQBELs must demonstrate compliance through any of the means identified in section VII of Order No. R8-2026-0034 (Order) or as shown in this section IV of Appendix 6. Processes used to analyze data and support demonstrations of compliance, as well as compliance monitoring locations, must be approved by the Executive Officer as part of the PMRP.

A. Demonstrate that there are no exceedances of the WQBEL in the Permittee's MS4 discharge at the compliance point(s) identified in the PMRP.

B. Demonstrate that there is no discharge from the Permittee's MS4(s) during the relevant time period.

C. Demonstrate that the Permittee's MS4 discharge did not cause or contribute to an exceedance of the WQBEL, because the exceedance is the result of an authorized or exempt non-stormwater discharge specified in section IV.A.2 of the Order during a specific sampling event. The Permittee must support this demonstration with measurements of the water quality of the specific authorized or conditionally exempt essential non-stormwater discharge(s) alleged to have caused or contributed to the exceedance of the WQBEL.

D. Demonstrate that all non-stormwater and all stormwater runoff up to and including the volume equivalent to the 85th percentile, 24-hour storm event is retained for the drainage area tributary to the applicable receiving waters. The runoff retention must occur according to an approved Watershed Management Plan under section XII of the Order and include ongoing monitoring and adaptive management requirements.

E. Demonstrate that the receiving waterbody is meeting the combined WLAs and Load Allocations (Total TMDL Allocations) designated in the TMDL, as specified in the Basin Plan. Total TMDL Allocations are summarized in Table 6.3. below.

Table 6.3: Summary of Total TMDL Allocations for Diazinon and Chlorpyrifos by Receiving Waterbody

Waterbody	Diazinon		Chlorpyrifos	
	Acute (ng/L)	Chronic (ng/L)	Acute (ng/L)	Chronic (ng/L)
San Diego Creek	80	50	20	14
Upper Newport Bay	-	-	20	9

V. Monitoring and Reporting

Monitoring and reporting requirements shall be as outlined in the Monitoring and Reporting Program (MRP) in Attachment C of this Order.

Appendix 7

Appendix 7

WATER QUALITY-BASED EFFLUENT LIMITATIONS FOR TOXIC POLLUTANTS (METALS) IN SAN DIEGO CREEK AND NEWPORT BAY

The following water quality-based effluent limitations (WQBELs) apply to discharges of runoff from MS4s owned or operated by Permittees discharging into San Diego Creek and Newport Bay as indicated in Appendix 1. The WQBELs in this Appendix are based on and consistent with the assumptions and requirements of the TMDLs for Toxic Pollutants (Metals) in San Diego Creek and Newport Bay. There are also specific WQBELs for Rhine Channel, a small, closed-ended navigation channel located in the western part of Newport Bay. These TMDLs were all effective upon promulgation by USEPA.

As indicated below, the WQBELs for copper discharges to Newport Bay shall be superseded by the WQBELs in Appendix 10 upon the effective date of the Copper TMDLs for Newport Bay adopted through Santa Ana Water Board Resolution R8-2022-0012; the WQBELs for all other metals and the WQBEL for copper discharges to San Diego Creek remain effective and unchanged by the adoption of the Copper TMDLs.

I. General

A. For Appendix 7, acute concentration shall mean the average concentration of dissolved metals measured in representative samples taken in a 24-hour period.

B. For Appendix 7, chronic concentration shall mean the average concentration of dissolved metals measured in representative samples taken in a 96-hour period.

II. WQBELs for Cadmium, Dissolved

A. Discharges of runoff from MS4s must not transport more than 9,589 pounds of dissolved cadmium into Upper Newport Bay per year.

B. Discharges of dissolved cadmium in runoff from MS4s to Upper Newport Bay must not exceed:

1. Acute concentrations of 42 micrograms per liter (µg/L).

2. Chronic concentrations of 9.3 µg/L.

C. Discharges of runoff from MS4s to San Diego Creek at Campus Drive must not exceed the concentrations shown in Table 7.1 below under the indicated flow conditions. Actual ambient hardness must be determined for each monitoring sample regardless of which flow condition exists.

Table 7.1: Summary of Hardness-based WQBELs for Dissolved Cadmium in San Diego Creek

Flow	Base ≤20 cfs	Small 21 to 181 cfs	Medium 182 to 815 cfs	Large >815 cfs
Hardness	400 mg/L	322 mg/L	236 mg/L	197 mg/L
Acute (µg/L)	19.1	15.1	10.8	8.9
Chronic (µg/L)	6.2	5.3	4.2	--

cfs = cubic feet per second

III. WQBELs for Chromium

A. Discharges of runoff from MS4s must not transport more than 5.66 kilograms per year (kg/yr) of chromium into Rhine Channel.

IV. WQBELs for Copper, Dissolved

A. Discharges of runoff from MS4s must not transport more than 3,043 pounds of dissolved copper into Newport Bay per year. This WQBEL shall be superseded by the WQBELs in Appendix 10 upon the effective date of the Copper TMDLS for Newport Bay adopted through Santa Ana Water Board Resolution R8-2022-0012.

B. Discharges of dissolved copper in runoff from MS4s to Newport Bay must not exceed:

   1. Acute concentrations of 4.8 micrograms per liter (µg/L).

   2. Chronic concentrations of 3.1 µg/L.

   This WBQBEL shall be superseded by the WQBELs in Appendix 10 upon the effective date of the Copper TMDLS for Newport Bay adopted through Santa Ana Water Board Resolution R8-2022-0012.

C. Discharges of dissolved copper in runoff from MS4s to San Diego Creek at Campus Drive must not exceed the concentrations shown in Table 7.2 below under the indicated flow conditions. This WBQBEL shall not be superseded by the WQBELs in Appendix 10. Actual ambient hardness must be determined for each monitoring sample regardless of which flow condition exists.

Table 7.2: Summary of Hardness-based Dissolved Copper WQBELs for San Diego Creek

Flow	Base ≤20 cfs	Small 21 to 181 cfs	Medium 182 to 815 cfs	Large >815 cfs
Hardness	400 mg/L	322 mg/L	236 mg/L	197 mg/L
Acute (µg/L)	50	40	30.2	25.5
Chronic (µg/L)	29.3	24.3	18.7	--

cfs = cubic feet per second

V. WQBELs for Lead, Dissolved

A. Discharges of runoff from MS4s must not transport more than 17,638 pounds of dissolved lead into Newport Bay per year.

B. Discharges of dissolved lead in runoff from MS4s to Newport Bay must not exceed:

1. Acute concentrations of 210 micrograms per liter (µg/L).

2. Chronic concentrations of 8.1 µg/L.

C. Discharges of dissolved lead in runoff from MS4s to San Diego Creek at Campus Drive must not exceed the concentrations shown in Table 7.3 below under the indicated flow conditions. Actual ambient hardness must be determined for each monitoring sample regardless of which flow condition exists.

Table 7.3: Summary of Hardness-based Dissolved Lead WQBELs for San Diego Creek

Flow	Base ≤20 cfs	Small 21 to 181 cfs	Medium 182 to 815 cfs	Large >815 cfs
Hardness	400 mg/L	322 mg/L	236 mg/L	197 mg/L
Acute (µg/L)	281	224	162	134
Chronic (µg/L)	10.9	8.8	6.3	--

cfs = cubic feet per second

VI. WQBELs for Mercury

A. Discharges of runoff from MS4s must not transport more than 0.0171 kg/yr of mercury into Rhine Channel.

VII. WQBELs for Zinc, Dissolved

A. Discharges of runoff from MS4s must not transport more than 174,057 pounds of dissolved zinc into Newport Bay per year.

B. Discharges of dissolved zinc in runoff from MS4s to Newport Bay must not exceed:

1. Acute concentrations of 90 micrograms per liter (µg/L).

2. Chronic concentrations of 81 µg/L.

C. Discharges of dissolved zinc in runoff from MS4s to San Diego Creek at Campus Drive must not exceed the concentrations shown in Table 7.4 below under the indicated flow conditions. Actual ambient hardness must be determined for each monitoring sample regardless of which flow condition exists.

Table 7.4: Summary of Hardness-based Dissolved Zinc WQBELs for San Diego Creek

Flow	Base ≤20 cfs	Small 21 to 181 cfs	Medium 182 to 815 cfs	Large >815 cfs
Hardness	400 mg/L	322 mg/L	236 mg/L	197 mg/L
Acute (µg/L)	379	316	243	208
Chronic (µg/L)	382	318	244	--

cfs = cubic feet per second

VIII. Compliance Determination

Permittees responsible for complying with the WQBELs must demonstrate compliance through any of the means identified in section VII of Order No. R8-2026-0034 (Order) or as shown in section VIII of Appendix 7. Processes used to analyze data and support demonstrations of compliance, as well as compliance monitoring locations, must be approved by the Executive Officer as part of the PMRP.

A. Demonstrate that there are no exceedances of the WQBEL in the Permittee's MS4 discharge at the compliance point(s) identified in the PMRP.

B. Demonstrate that there is no discharge from the Permittee's MS4(s) during the relevant time period.

C. Demonstrate that the Permittee's MS4 discharge did not cause or contribute to an exceedance of the WQBEL, because the exceedance is the result of an authorized or exempt non-stormwater discharge specified in section IV.A.2 of the Order during a specific sampling event. The Permittee must support this demonstration with measurements of the water quality of the specific authorized or conditionally exempt essential non-stormwater discharge(s) alleged to have caused or contributed to the exceedance of the WQBEL.

D. Develop and implement an approved Watershed Management Plan addressing the waterbody-pollutant combination pursuant to section XII of the Order. The schedule for attaining the WQBELs shall be as short as possible.

E. Demonstrate that all non-stormwater and all stormwater runoff up to and including the volume equivalent to the 85th percentile, 24-hour storm event is retained for the drainage area tributary to the applicable receiving waters. The runoff retention must occur according to an approved Watershed Management Plan under section XII of the Order and include ongoing monitoring and adaptive management requirements.

F. Demonstrate that the receiving waterbody is meeting the numeric targets designated in the USEPA's TMDL for Toxic Pollutants in San Diego Creek and Newport Bay. For reference, numeric targets are summarized below in Tables 7.5 through 7.7. Actual ambient hardness must be determined for each monitoring sample regardless of which flow condition exists.

Table 7.5: Numeric Targets (µg/L) for Metals Based on Flow Tiers for San Diego Creek

Dissolved Metal	Base flows (≤20 cfs) hardness @ 400 mg/L		Small flows (21-191 cfs) hardness @ 322 mg/L		Medium flows (182-815 cfs) hardness @ 236 mg/L		Large flows (>815 cfs) hardness @ 197 mg/L
	Acute	Chronic	Acute	Chronic	Acute	Chronic	Acute
Cadmium (µg/L)	19.1	6.2	15.1	5.3	10.8	4.2	8.9
Copper (µg/L)	50	29.3	40	24.3	30.2	18.7	25.5
Lead (µg/L)	281	10.9	224	8.8	162	6.3	134

Zinc (µg/L)	379	382	316	318	243	244	208

Table 7.6. Numeric Targets (µg/L) for Metals in Newport Bay

Metal	Dissolved saltwater acute target (µg/L)	Dissolved saltwater chronic target (µg/L)	Alternative target in saltwater sediments (mg/kg dry)
Cadmium (Cd)	42	9.3	0.67
Copper (Cu)*	4.8	3.1	18.7
Lead (Pb)	210	8.1	30.2
Zinc (Zn)	90	81	124

* The copper numeric targets shall be superseded by Appendix 10 upon the effective date of the Copper TMDLS for Newport Bay adopted through Santa Ana Water Board Resolution R8-2022-0012.

Table 7.7 Numeric Targets for Chromium and Mercury in Rhine Channel

Metal	Sediment dry target (mg/kg dry)	Alternative fish tissue target (mg/kg wet)
Chromium (Cr)	52	0.2
Mercury (Hg)	0.13	0.3*

* The Mercury tissue target is interpreted as 0.3 mg/kg wet methylmercury (EPA proposed criteria and USFWS 2000).

IX. Monitoring and Reporting

Monitoring and reporting requirements shall be as outlined in the Monitoring and Reporting Program (MRP) in Attachment C of this Order.

Appendix 8

Appendix 8

WATER QUALITY-BASED EFFLUENT LIMITATIONS FOR METALS IN SAN GABRIEL RIVER AND IMPAIRED TRIBUTARIES

The following water quality-based effluent limitations (WQBELs) apply to discharges in runoff from MS4s owned or operated by Permittees discharging into Coyote Creek, which is located within the jurisdiction of the Los Angeles Water Board. The WQBELs are based on and consistent with the assumptions and requirements of the Metals TMDLs into San Gabriel River and Impaired Tributaries promulgated by the USEPA on March 26, 2007, and the corresponding implementation plan adopted by the Los Angeles Water Board through Resolution R13-004. The implementation plan establishes compliance date of September 30, 2023, for dry weather discharges and September 30, 2026, for wet weather discharges. The compliance date for dry weather discharges has passed.

I. General

A. Runoff samples and flow volumes used to assess compliance with the WQBELs in this Appendix must be taken at the Los Angeles County Department of Public Works (LACDPW) flow gauge station F354-R, located just above the Long Beach Water Reclamation Plant. This location assesses the Permittees' compliance on a collective basis (including Los Angeles County MS4 Permittees, Orange County MS4 Permittees, and Caltrans located within the drainage area).. The Executive Officer is authorized to use alternative locations and methods to assess compliance of the Permittees as part of the PMRP developed and approved according to Monitoring and Reporting Program R8-2026-0034.

B. Wet weather WQBELs apply when the maximum daily flow in the creek is equal to or greater than 156 cubic feet per second (cfs), as measured at station F-354-R or approved alternative locations.

C. Dry weather WQBELs apply when the maximum daily flow in the creek is less than 156 CFS, as measured at station F-354-R or approved alternative locations.

D. The percentage area of the developed portion of the Coyote Creek watershed covered by MS4 Permittees was calculated to be 91.5 percent.

II. WQBELs for Copper

A. *Dry weather* discharges of runoff from MS4s into Coyote Creek must not transport more than 0.941 kilogram per day (kg/d) of total recoverable copper.

B. By September 30, 2026, total recoverable copper in discharges of runoff from MS4s during *wet weather* into Coyote Creek must not exceed a maximum daily mass load calculated using the following formula:

Maximum daily wet weather mass load for total recoverable copper (kg/d) = Daily storm volume (L) x 24.71

III. WQBELs for Lead

A. By September 30, 2026, total recoverable lead in discharges of runoff from MS4s during *wet weather* into Coyote Creek must not exceed a mass load calculated using the following formula:

Maximum daily wet weather mass load for total recoverable lead (kg/d) = Daily storm volume (L) x 96.99

IV. WQBELs for Zinc

A. By September 30, 2026, total recoverable zinc in discharges of runoff from MS4s during *wet weather* into Coyote Creek must not exceed a mass load calculated using the following formula:

maximum daily wet weather mass load for total recoverable zinc (kg/d) = Daily storm volume (L) x 144.57

V. Alternative Concentration-Based WQBELs

A. In lieu of compliance with the mass-based WQBELs for *wet weather* in sections II to IV of Appendix 8 above, Permittees may demonstrate compliance with the wet weather concentration-based WQBELs identified in Table 8.1 below, by September 30, 2026:

Table 8.1: Summary of Wet Weather Concentration-Based Effluent Limitations

	Copper, total recoverable	Lead, total recoverable	Zinc, total recoverable
Wet Weather*	24.71 µg/L	96.99 µg/L	144.57 µg/L

* As measured at LACDPW Station F-354-R or approved alternative locations.

B. In lieu of calculating the mass load of copper discharged to Coyote Creek during *dry weather* in section II.A above, Permittees may demonstrate compliance with the dry-weather, concentration-based WQBEL of 20 µg/L total recoverable copper in dry weather discharges.

VI. Alternative Interim WQBELs for Dry and Wet Weather Discharges

In lieu of compliance with the mass-based or alternative concentration-based WQBELs above, Permittees may demonstrate compliance with the following:

A. Permittees shall immediately attain a 70 percent reduction in the difference between the last copper loading value calculated prior to 2013 and the dry-weather WQBEL of 0.941 kg/day.

B. Permittees shall immediately achieve a 35 percent reduction in the difference between the last copper, lead, and zinc loading values calculated prior to 2013 and their respective wet weather WQBELs in sections II, III, and IV above of this Appendix 8.

C. By September 30, 2023, Permittees shall attain a 65 percent reduction in the difference between the last copper, lead, and zinc loading values calculated prior to 2013 and their respective wet weather WQBELs in sections II, III, and IV above of this Appendix 8.

VII. Compliance Determination

Permittees responsible for complying with the mass-based, concentration-based, or percent reduction-based WQBELs must demonstrate compliance through any of the means identified in section VII of Order R8-2026-0034 (Order) or as shown in this section VII of Appendix 8. Processes used to analyze data and support demonstrations of compliance, as well as compliance monitoring locations, must be approved by the Executive Officer as part of the PMRP.

A. Demonstrate that there are no exceedances of the WQBELs in the Permittee's MS4 discharge at the compliance point(s) identified in the PMRP.

B. Demonstrate that there is no discharge from the Permittee's MS4(s) during the relevant time period.

C. Demonstrate that the Permittee's MS4 discharge did not cause or contribute to an exceedance of the WQBEL, because the exceedance is the result of an authorized or exempt non-stormwater discharge specified in section IV.A.2 of the Order during a specific sampling event. The Permittee must support this demonstration with measurements of the water quality of the specific authorized or conditionally exempt essential non-stormwater discharge(s) alleged to have caused or contributed to the exceedance of the WQBEL.

D. For wet weather compliance only, demonstrate that there are no exceedances of the Alternative Concentration-Based WQBELs specified in section V of Appendix 8 in the Permittee's MS4 discharge at the compliance point(s) identified in the PMRP.

E. Demonstrate attainment of the Alternative Interim WQBELs specified in section VI of Appendix 8.

F. Where the final compliance date for achievement of the WQBEL has not passed, develop and implement an approved Watershed Management Plan addressing the waterbody-pollutant combination pursuant to section XII of the Order.

G. Demonstrate that all non-stormwater and all stormwater runoff up to and including the volume equivalent to the 85th percentile, 24-hour storm event is retained for the drainage area tributary to the applicable receiving waters. The runoff retention must occur according to an approved Watershed Management Plan under section XII of the Order and include ongoing monitoring and adaptive management requirements.

H. Demonstrate that the receiving waterbody is meeting the combined WLAs and Load Allocations (Total TMDL Allocations) designated in the TMDL, as specified in the Los Angeles Water Board's Basin Plan.

VIII. Monitoring and Reporting

Monitoring and reporting requirements shall be as outlined in the Monitoring and Reporting Program (MRP) in Attachment C of this Order.

Appendix 9

Appendix 9

WATER QUALITY-BASED EFFLUENT LIMITATIONS FOR SELENIUM IN FRESHWATER, NEWPORT BAY WATERSHED

The following water quality-based effluent limitations (WQBELs) apply to discharges of runoff from MS4s owned or operated by Permittees discharging into the Newport Bay watershed as indicated in Appendix 1. The WQBELs in this Appendix are based on and consistent with the assumptions and requirements of the Selenium TMDL for freshwater in the Newport Bay watershed. The Phase I compliance date was June 20, 2025. The Phase II compliance date is 30 years after the effective date of reconsidered selenium TMDLs. Phase II actions must commence on June 20, 2027, if reconsidered selenium TMDLs are not in effect at that time. Appendix 9 may be reopened if necessary to implement revisions to the TMDLs or implementation schedule in the Basin Plan. The compliance date specified in the Basin Plan has not passed.

Permittees must make appropriate efforts to control selenium in stormwater and authorized non-stormwater runoff from their MS4s in order to attain the WQBELs outlined below. The WQBELs must be attained as soon as possible, but not later than the date specified.

I. WQBELs for Selenium

Permittees must comply with any of the following WQBELs as soon as possible but no later than 30 years from the Reconsidered TMDL effective date (see Basin Plan, Chapter 6, section 4.c):

A. CTR-based Water Column WQBELs: Discharges of selenium in dry-weather runoff from MS4s to Newport Bay at Costa Mesa Channel must not exceed concentrations of 5 µg Se/L in the water column.

1. This WQBEL is derived from the CTR and expressed as an arithmetic mean that is calculated semi-annually. The first semi-annual period used to calculate the arithmetic mean is April 1 through September 30. The second semi-annual period is October 1 through March 31.

2. This WQBEL applies to dry-weather conditions. Dry-weather conditions exclude days with 0.1 inches of rain or more and the following 3 days. Rainfall is measured at the Tustin-Irvine Ranch Rain Gauge Station or an alternative station approved by the Executive Officer. Demonstrations of compliance with the WQBEL must represent these same conditions.

B. Conditional Mass-based WQBELs: Applies when a discharger participates in an approved Offset and Trading Program AND offsets the entirety of their discharge (concentration x flow), including any offset ratio. Requirements for the Offset and Trading Program are found in Section II below.

C. Tissue-based Water Column WQBELs:

1. Discharges of selenium in dry-weather runoff from MS4s to the San Diego Creek, the Santa Ana-Delhi Channel, and the Big Canyon Wash must not exceed concentrations in the water column equivalent to the default values for the Tissue-based Water Column WQBELs:

   a. 10 µg Se/L for discharges to the San Diego Creek; AND

   b. 11 µg Se/L for discharges to the Santa Ana-Delhi Channel; AND

   c. 1 µg Se/L for discharges to the Big Canyon Wash.

2. This WQBEL is based on probable water column concentrations that are expected to achieve tissue-based numeric TMDL targets and are derived from the biodynamic model, as detailed in the Linkage Analysis of the Selenium TMDL. Future data may warrant revising the assumptions and factors of the biodynamic model. The Santa Ana Water Board can reopen this permit to modify the WQBELs based on such updated modeling without amending the Basin Plan. Any such modification to the allocations will be subject to a public review process that may be broader in scope than the permit amendment.

3. Compliance will be assessed based on discharges from the Costa Mesa Channel.

4. This WQBEL applies to dry-weather conditions. Dry-weather conditions exclude days with 0.1 inches of rain or more and the following 3 days. Rainfall is measured at the Tustin-Irvine Ranch Rain Gauge Station or an alternative station approved by the Executive Officer. Demonstrations of compliance with the WQBEL must represent these same conditions.

II. Requirements for Offset and Trading Program

Permittees may elect to carry out an Offset and Trading Program designed to eliminate excess selenium loads from point and non-point sources (primarily rising groundwater). The Offset and Trading Program must be managed to ensure that the net effect on water quality and beneficial uses of continued point source discharges of selenium mitigated by offsets is better than would be expected if the regulated discharge were prohibited altogether.

A. Permittees must meet the following eligibility requirements to participate in the Offset and Trading Program by demonstrating that:

1. There are no reasonably feasible or practicable conventional treatment technologies available that can achieve compliance with the applicable water quality objective for selenium at the point of discharge.

2. It is not feasible or practicable to eliminate the discharge because it would pose unreasonable risk to human health, public safety, the natural environment, or cause economic hardship on the surrounding community.

3. The point source discharge that relies on offsets to achieve compliance with the WQBELs is not expected to unreasonably or adversely affect the beneficial uses of the receiving water downstream after the excess selenium load from the discharge is offset by reductions in the selenium load from other discharges.

B. The excess selenium load from a discharge shall mean the mass of selenium in the discharge that exceeds the mass of selenium in a discharge of the same volume and duration where the concentration is equal to the relevant WQBEL.

C. The activities occurring under the Offset and Trading Program must offset the Permittees' estimated discharges of excess selenium plus an amount that accounts for uncertainty in the estimate. To account for uncertainty, a factor of safety of 2 must be used to calculate the amount of excess selenium that must be offset for a given discharge.

D. Estimates of the selenium load from a discharge must be based on empirical measurements of concentrations, flow, and duration at representative points of discharge.

E. The estimate of the selenium removed from discharges to the receiving waters must be based on empirical measurements of concentration, flow, and duration of the treated flow and subsequent discharge to the receiving waters, if any. Estimates must be based on measured quantities of selenium removed, not speculative or theoretical quantities.

F. The excess selenium load from a discharge to San Diego Creek, Santa Ana-Delhi Channel, and Big Canyon Wash must be offset by activities to reduce selenium loads in the same watershed. The Permittee must not offset discharges of selenium using load reductions that they are already responsible for.

G. If Permittees elect to carry out an Offset and Trading Program, they must prepare and submit a plan to implement the Offset and Trading Program according to the requirements of this Appendix and the Offset and Trading Program requirements of the Santa Ana Region's Basin Plan, starting on page 6-95 as of the date of issuance of this Order.

H. The Offset and Trading Program plan must be approved by the Executive Officer following a 30-day public review period to be used for compliance. Except for inconsequential grammatical corrections, changes to the plan are subject to the approval of the Executive Officer. Responsible Permittees must implement the plan upon approval by the Executive Officer.

I. Where the Offset and Trading Program is not implemented consistent with the terms and conditions specified by the Executive Officer, Permittees may not rely on the Offset and Trading Program as a method to demonstrate compliance with the WQBELs in section I of Appendix 9. Notwithstanding any other enforcement option available, the Santa Ana Water Board may also elect to terminate eligibility to participate in the Offset and Trading Program, require a higher offset ratio from the non-compliant Permittee, or impose additional terms and conditions to ensure full compliance by the non-compliant Permittee.

III. Requirements for BMP Strategic Plans

The following requirements apply during to Phase I and Phase II of TMDL implementation.

A. The BMP Strategic Plan must document the Permittees' projects and programs that are designed to attain the relevant WQBEL. The BMP Strategic Plan must include the following:

1. A description of the roles and responsibilities of the parties that will implement the BMP Strategic Plan;

2. A description of the source control activities and their levels of effort that prevent or minimize new or existing discharges of selenium;

3. A description of projects that result in reductions of selenium in discharges, including their characteristics, level of effort, and the expected quantities of selenium removed during the planning period;

4. A program to evaluate and report on the technical, social, and economic feasibility of deploying available and emerging technology to control the discharge of selenium a minimum of once every five years;

5. A schedule for the completion of projects or the accomplishment of measurable goals; and

6. A planning period over which the above projects and programs will be carried out.

B. The BMP Strategic Plan must also contain all the required elements outlined in the Santa Ana Region's Basin Plan, starting on page 6-91 as of the date of issuance of this Order.

C. Responsible Permittees must evaluate and report on the effectiveness of their projects and programs under the BMP Strategic Plan according to the requirements of Monitoring and Reporting Program R8-2026-0034.

D. The BMP Strategic Plan must be reviewed and approved by the Executive Officer, subject to a 30-day public review period.

1. Responsible Permittees must fully implement a BMP Strategic Plan upon approval.

2. Except for inconsequential technical or grammatical changes, amendments to a BMP Strategic Plan are subject to the review and approval of the Executive Officer, subject to a 30-day public review period.

E. Where the BMP Strategic Plan is not implemented consistent with the approved plan and schedule, Permittees may not rely on the BMP Strategic Plan as a method to demonstrate compliance with the WQBELs in section I of Appendix 9.

IV. Tissue-based Numeric Targets

The tissue-based numeric targets are established in the Basin Plan. The tissue-based water column waste load allocations and load allocations are expected to result in attainment of the applicable tissue-based numeric targets; however, bioaccumulation within watershed food webs may differ from the conditions modeled in development of the TMDLs. Therefore, where the applicable tissue-based numeric targets in the Basin Plan are attained over the specified averaging period within the applicable Assessment Area, the corresponding waste load allocations and load allocations shall be deemed attained.

Permittees may not demonstrate compliance with the WQBELs in this Appendix through attainment of tissue-based numeric targets unless and until revised tissue-based targets are adopted and become effective, and this Permit is amended, if necessary, to implement those revised objectives and any associated implementation requirements.

V. Compliance Determination

Permittees responsible for complying with the WQBELs must demonstrate compliance through any of the means identified in section IV of Order No. R8-2026-0034 (Order) or as shown in this section IV of Appendix 9. Processes used to analyze data and support demonstrations of compliance, as well as compliance monitoring locations, must be approved by the Executive Officer as part of the PMRP.

A. Implement an approved BMP Strategic Plan, consistent with the approved plan and schedule, according to section III of Appendix 9, for all areas where the MS4 Permittee is identified as a Regulated Party.

B. Demonstrate that the Permittee’s MS4 discharge to the receiving waters is offset by reductions in selenium pursuant to an approved Offset and Trading Program that meets the requirements of section II of this Appendix 9.

C. Demonstrate that there are no exceedances of the WQBEL in the Permittee's MS4 discharge at the compliance point(s) identified in the PMRP. This showing may be made in the receiving waters and/or in the effluent at the discharge point at MS4 outfalls.

D. Demonstrate that there is no discharge from the Permittee's MS4(s) during the relevant time period.

E. Demonstrate that the Permittee's MS4 discharge did not cause or contribute to an exceedance of the WQBEL, because the exceedance is the result of an authorized or exempt non-stormwater discharge specified in section IV.A.2 of the Order during a specific sampling event. The Permittee must support this demonstration with measurements of the water quality of the specific authorized or conditionally exempt essential non-stormwater discharge(s) alleged to have caused or contributed to the exceedance of the WQBEL.

F. Demonstrate attainment of the tissue-based numeric targets in accordance with section IV of this Appendix 9. This compliance option may not be used unless and until the conditions specified in section IV for the use of the tissue-based numeric targets are satisfied.

VI. Monitoring and Reporting

Monitoring and reporting requirements shall be as outlined in the Monitoring and Reporting Program (MRP) in Attachment C of this Order.

Appendix 10

Appendix 10

WATER QUALITY-BASED EFFLUENT LIMITATIONS FOR COPPER IN UPPER AND LOWER NEWPORT BAY

The following water quality-based effluent limitations (WQBELs) apply to discharges of runoff from MS4s owned or operated by Permittees discharging into Newport Bay as indicated in Appendix 1. The WQBELs in this Appendix are based on and consistent with the assumptions and requirements of the TMDLs for Copper in Upper and Lower Newport Bay adopted through Santa Ana Water Board Resolution R8-2022-0012. The WQBELS in this Appendix will not be effective unless and until the Copper TMDLs are approved by USEPA. The compliance date is 12 years after the date of USEPA approval of the Copper TMDLs. In the interim, these WQBELs are used as numeric action limits to trigger planning actions as discussed in section IV of this Appendix.

Upon the effective date of the Copper TMDLs, Permittees must attain the WQBELs below as soon as possible, but no later than 12 years after USEPA approval of the Copper TMDLs.

I. WQBELs for Copper, Dissolved

A. Discharges of runoff from MS4s must not transport more than 2,501 pounds of dissolved copper into Newport Bay per year.

II. Targets for Copper

A. The numeric targets for dissolved copper in Newport Bay are the CTR saltwater criteria for dissolved copper and include:

1. Acute concentrations of 4.8 micrograms per liter (µg/L).

2. Chronic concentrations of 3.1 µg/L.

B. The targets for sediment Cu are both numeric and alternative targets. The alternative sediment quality objectives (SQOs) target may be achieved as an alternative to the numeric sediment Cu target

1. The copper sediment numeric target is 34 µg/g.

2. The alternative sediment quality objectives (SQOs) is the sediment quality condition of Unimpacted or Likely Unimpacted, determined by chemistry, toxicity and benthic analyses (per the SQOs methodology specified in the State Water Board's Sediment Quality Provisions (SWRCB 2018))

a. If the condition of Unimpacted or Likely Unimpacted is met, the alternative sediment Cu SQOs target is achieved.

b. If the condition of Unimpacted or Likely Unimpacted is not demonstrated, then stressor identification analyses must be conducted per the SQOs methodology (Sediment Quality Provisions) to determine whether Cu is the cause of the impacted condition. If Cu is not shown to be the cause of the impacted condition, the alternative sediment Cu SQOs target is achieved.

C. The Targets for copper shall be used to evaluate compliance actions and not as numeric WQBELs.

III. Compliance Determination

Permittees responsible for complying with the WQBELs must demonstrate compliance through any of the means identified in section VII of Order R8-2026-0034 (Order) or as shown in this section III of Appendix 10. Processes used to analyze data and support demonstrations of compliance, as well as compliance monitoring locations, must be approved by the Executive Officer as part of the PMRP.

A. Demonstrate that there are no exceedances of the WQBEL in the Permittee's MS4 discharge at the compliance point(s) identified in the PMRP.

B. Demonstrate that there is no discharge from the Permittee's MS4(s) during the relevant time period.

C. Demonstrate that the discharge from the Permittee's MS4 did not cause or contribute to an exceedance of the WQBEL, because the exceedance is the result of an authorized or exempt non-stormwater discharge specified in section IV.A.2 of the Order during a specific sampling event. The Permittee must support this demonstration with measurements of the water quality of the specific authorized or conditionally exempt essential non-stormwater discharge(s) alleged to have caused or contributed to the exceedance of the WQBEL.

D. Demonstrate that all non-stormwater and all stormwater runoff up to and including the volume equivalent to the 85th percentile, 24-hour storm event is retained for the drainage area tributary to the applicable receiving waters. The runoff retention must occur according to an approved Watershed Management Plan under section XII of the Order and include ongoing monitoring and adaptive management.

E. Where the final compliance deadline for the achievement of the WQBEL has not passed, develop and implement an approved Watershed Management

Plan addressing the waterbody-pollutant combination pursuant to section XII of the Order.

F. Demonstrate that the receiving waterbody is meeting the combined mass-based WLAs and Load Allocations (Total TMDL Allocation of 11,646 dissolved copper (lbs/year)) designated in the TMDL Table 6, and as specified in the Basin Plan.

G. Demonstrate that the tributary and storm drain discharges are meeting the combined mass-based Waste Load Allocations and Load Allocations (Total TMDL allocation of 3,176 dissolved copper (lbs/year)) designated in the TMDL Table 6, and as specified in the Basin Plan.

IV. Monitoring and Reporting

Monitoring and reporting requirements shall be as outlined in the Monitoring and Reporting Program (MRP) in Attachment C of this Order. In addition, Permittees shall comply with the following:

A. The responsible Permittees shall submit for approval by the Executive Officer, individually or collectively, implementation plan(s) and schedule(s) to monitor flows and concentrations and determine if measured loads of copper from tributary and storm drain runoff meet the WQBELs. The proposed plan(s) shall include monitoring and quantification of dissolved copper and total copper in water, and water quality parameters (DOC, pH, salinity, temperature, and TSS). These plan(s) shall also quantify copper loads in tributary and storm drain runoff.

    1. The plan(s) and schedule(s) shall be submitted as soon as possible but no later than three months after USEPA approval of the TMDLs.

    2. Upon approval by the Executive Officer, the responsible Permittees shall implement their plan(s) and schedule(s) and submit an annual report that includes the data and an assessment of that data, with respect to achieving the mass-based WQBEL in section I.A of this Appendix 10.

B. The responsible Permittees shall submit for approval by the Executive Officer implementation plan(s) and schedule(s) to evaluate the local impacts of discharges of copper from the larger storm drains (48 to 78 inches in diameter) in the Upper and Lower Bay. The six larger storm drains in the Bay include El Paseo, Carnation, Polaris, PCH West, Arches West, and Arches East.

    1. The plan(s) and schedule(s) shall be submitted by the earlier of (i) three months after USEPA approval of the TMDLs or (ii) the first PMRP due date in Appendix C, section VI.A.

2. The proposed plan(s) shall include monitoring and quantification of dissolved and total copper in larger storm drain discharges and in-Bay receiving waters near storm drains, and include water quality parameters (DOC, pH, salinity, temperature, TSS). Monitoring of in-Bay receiving waters must be adequate to determine whether any receiving water is impaired based on the CTR criteria consistent with the methodology in the State Listing Policy.

3. The plan shall include a recommended reporting program/schedule.

4. The proposed plan shall include monitoring and evaluation of in-Bay sediments near storm drain outlets using the SQOs methodology (chemistry, toxicity, and benthic community analyses) per the Sediment Quality Provisions to evaluate attainment of the Sediment Targets in this Appendix 10 section II. Toxicity analysis and trend analysis shall use the Effects Range Median (ERM) sediment guideline (270 µg/g). Sampling should be conducted in the Lower Bay and lower Upper Bay, including areas that previously exceeded the sediment copper ERM guideline and areas with no or limited SQOs or sediment copper data (in particular, marinas). If using the alternative SQOs target to demonstrate compliance, responsible Permittees must conduct stressor identification studies if the sediment condition is not Unimpacted or Likely Unimpacted to determine whether copper is the cause of the impacted condition.

5. Upon approval by the Executive Officer, the responsible Permittees shall implement their plan(s) and schedule(s) to evaluate the local impacts of discharges of copper from the larger storm drains in the Upper and Lower Bay and submit a report that includes the data and an evaluation of the data.

6. These requirements may be included in the PMRP and existing Annual Reports.

C. Consistent with the PMRP, if the Copper loads in the WQBELs in section I of this Appendix 10 are exceeded, responsible Permittees shall develop and submit plan(s) and schedule(s) to achieve the WQBELs.

1. The proposed plan(s) and schedule(s) shall include a reporting program.

2. The plan(s) and schedule(s) must be submitted as soon as possible but no later than three (3) months from the finding that the WQBELs have not been achieved, as determined by the Executive Officer.

3. Upon approval by the Executive Officer, the responsible Permittees shall implement their plan(s) and schedule(s) and submit a report that identifies the actions taken and the effectiveness of those actions and

evaluate progress towards meeting the mass-based WQBEL in section I.A of this Appendix 10.

D. Consistent with the PMRP, if impairment for copper is found in the water column (based on exceedances of the CTR criteria consistent with the assessment methodology in the State Listing Policy), the responsible Permittees shall develop and submit a plan(s) and schedule(s) to reduce copper discharges from storm drains to impacted areas and correct the impairment. Impairment shall be found if the monitoring required by Appendix 10, section IVB shows that dissolved copper concentrations in receiving waters adjacent to storm drain outlets exceed applicable CTR criteria resulting in localized impacts to water quality over a sufficient period of representative monitoring, consisting of at least one year of data capturing multiple storm events sufficient to evaluate localized impact, or if the Executive Officer otherwise determines that an impairment exists. The proposed plan(s) and schedule(s) shall include a reporting program.

    1. Upon approval by the Executive Officer, the responsible Permittees shall implement their plan(s) and schedule(s) to correct impairment in the water column, resulting from copper discharges from storm drains in the Upper and Lower Bay. The reports submitted shall identify actions taken and the effectiveness of those actions and evaluate progress towards meeting the copper CTR criterion and the concentration-based WQBEL in section I.B of this Appendix 10.

    2. These requirements may be included in the PMRP and Annual Reports.

Appendix 11

Appendix 11

WATER QUALITY-BASED EFFLUENT LIMITATIONS FOR BACTERIAL INDICATOR TMDL IN THE MIDDLE SANTA ANA RIVER WATERSHED

The following water quality-based effluent limitations (WQBELs) apply to discharges in runoff from MS4s owned or operated by Permittees discharging into the Middle Santa Ana River (MSAR) Watershed as indicated in Appendix 1, which includes the cities of Claremont and Pomona. The WQBELs in this Appendix are based on and consistent with the assumptions and requirements of the Bacterial Indicator TMDLs for MSAR Watershed. The compliance date for Dry Summer Conditions specified in the Basin Plan passed on December 31, 2015, while the compliance date for Wet Winter Conditions is December 31, 2025. Upon the effective date of the Basin Plan amendment set forth in Resolution R8-2026-0014, the compliance date for Wet Winter WQBELs shall be extended to December 31, 2035.

Permittees must take effective measures to control bacteria in stormwater and authorized non-stormwater runoff from their MS4s to comply with the WQBELs below.

I. WQBELs for *Escherichia coli*

A. During *Wet Winter Conditions* (November 1 through March 31), MS4 Permittees' projects and programs must achieve the following effluent limitation as soon as possible, but not later than December 31, 2025. Upon the effective date of the basin plan amendment set forth in Resolution R8-2026-0014, the compliance date for Wet Winter WQBELs shall be extended to December 31, 2035.

   1. The 5-sample, 30-day logarithmic mean of *Escherichia coli* in the receiving waters is less than 113 organisms/100 mL and not more than 10 percent of the samples exceed 212 organisms/100 mL for any 30-day period.

B. During *Dry Summer Conditions* (April 1 through October 31), MS4 Permittees' projects and programs must achieve the following effluent limitation:

   1. The 5-sample, 30-day logarithmic mean of *Escherichia coli* in the receiving waters is less than 113 organisms/100 mL and not more than 10 percent of the samples exceed 212 organisms/100 mL for any 30-day period.

C. *Santa Ana River, Reach 3 Only*: The above WQBELs for *Escherichia coli* are temporarily suspended when high flow conditions preclude safe recreation in or near freshwater stream channels that have been engineered, heavily modified or maintained to serve as flood control facilities. Specifically, WQBELs are suspended when: stream velocity is greater than 8 feet per second or the product of stream depth and velocity is greater than 10 square feet per second. Where representative stream gauge data is not available, the WQBELs are suspended when rainfall in the tributary area is greater than or equal to 0.5 inches in 24 hours. The suspension ends 24-hours after the event, unless measured stream flow falls

within normal pre-storm conditions (i.e., flow velocity is less than the 98th percentile, as calculated from a calibrated hydrograph).

D. The WQBELs in Section I of this Appendix apply to Permittees that discharge into the impaired waterbodies of the middle Santa Ana River watershed found in Chapter 6 of the Basin Plan, Table 6-1w. The impaired waterbodies are: Santa Ana River, Reach 3, Chino Creek, Reach 1 and Reach 2, Mill Creek in Prado Area, Cucamonga Creek, Reach 1, and Prado Park Lake.

II. Comprehensive Bacterial Reduction Plan

The Permittees must implement projects and programs for the control of bacteria according to a plan that complies with the requirements of this section and that has been approved by the Executive Officer. This plan will be called a Comprehensive Bacterial Reduction Plan (CBRP). The Permittees must:

A. Revise or amend the CBRP for Dry Summer Conditions to comply with the requirements of section I above. The initial draft CBRP or amendment must be submitted to the Executive Officer for approval within two years of the effective date of this Order, or as prescribed by the Executive Officer. The Executive Officer is authorized to approve the draft or amendments as submitted, require additional information, or approve them subject to conditions.

1. Permittees must implement the revised or amended CBRP upon approval. Except for inconsequential grammatical or technical corrections, subsequent updates or amendments to CBRP are subject to the review and approval of the Executive Officer. Updates or amendments must be submitted for approval not less than 30 days prior to implementation of the proposed changes.

2. The revised or amended CBRP must include those best management practices (BMPs) that are or will be implemented within the Permittees' jurisdiction for the control of bacteria, the levels of effort for their implementation, the methods for determining compliance with the WQBELs, and the method(s) for evaluating the effectiveness of those practices.

3. Permittees must continue to implement the existing CBRP until the revised CBRP is approved by the Santa Ana Water Board or the Executive Officer.

B. Participate in watershed-wide projects and programs where the Permittee deems that there is a mutual interest or benefit to achieving the WQBELs in section I.A above.

C. Develop and apply objective performance metrics to track and assess the effectiveness of individual BMP or systems of BMPs described in the Permittees'

CBRP. The Permittees must include the WQBELs as part of these performance metrics.

D. Any updated or new CBRPs are subject to the approval of the Executive Officer. The Executive Officer will provide a minimum of 30 days for public review prior to approving the updated or new CBRPs.

E. Following the applicable compliance dates, the numeric WQBELs in section I of this Appendix 11 become enforceable, and the CBRP serves to track and control BMPs implemented by the Permittees to attain and maintain compliance with the WQBELs. Dry weather WQBELs are enforceable upon the effective date of this Order. Wet weather WQBELs remain enforceable until the effective date of the Basin Plan amendment adopted in Resolution R8-2026-0014, which extends the applicable compliance date. Prior to the Wet Winter compliance date, Permittees may comply with Wet Winter WQBELs by implementing the compliance schedule in section III of this Appendix.

III. Compliance Schedule for Wet Winter Conditions

The following requirements take effect on the effective date of the Basin Plan amendment set forth in Resolution R8-2026-0014:

A. Within two (2) years of the effective date, responsible Permittees shall identify, evaluate and select early projects to attain the WQBELS in section I.A in a Work Plan. The Work Plan will describe the projects selected for implementation, expected water quality benefits and stakeholder(s) responsible for implementation of each project(s), and the schedule for implementation.

   1. Upon approval of the Work Plan by the Executive Officer, the responsible agencies will begin implementation of the Work Plan.

B. Within one (1) year of the effective date, responsible Permittees shall submit a High Flow Suspension Study to the Santa Ana Water Board. The purpose of this study is to develop a methodology for use in the MSAR watershed to support assessments of attainment with the WQBELs when the high flow suspension conditions apply.

C. Within one (1) year of the effective date, responsible Permittees shall prepare and submit a Study Plan (consistent with existing watershed Monitoring Plan and Quality Assurance Project Plan (QAPP)) that identifies sample locations, constituents to be sampled, sampling protocols/frequency, data analysis procedures, source tracking, prioritization and risk assessment protocols, etc. The Study Plan will be submitted to the Santa Ana Water Board's Executive Officer for review and approval.

   1. The purpose of this study is to collect bacteria-related data (including appropriate bacterial indicators, human markers and pathogens) during wet

weather to identify specific activities, operations, and processes in urban or agricultural areas that contribute controllable sources of bacterial indicators. This study should be conducted over two to three wet seasons to (a) increase the number of samples collected across the multiple MSAR subwatersheds; (b) provide data needed to understand the degree of variability in E. coli concentrations both spatially and temporally; and (c) provide data regarding degree to which human sources of bacterial indicators or viruses are present in wet weather flows.

2. Within two (2) years after the approval of the Study Plan, responsible Permittees shall complete this study and submit a Wet Weather Controllable Sources Report to the Santa Ana Water Board Executive Officer.

D. Within four (4) years of the effective date, or within one (1) year of submittal of the Study in provision III.C above, whichever is later, submit Wet Weather Source Prioritization Strategy to Santa Ana Water Board Executive Officer.

E. Within five (5) years of the effective date, or within one (1) year of submittal of the Strategy in provision III.D above, whichever is later, submit the Wet Weather CBRP to Santa Ana Water Board for Santa Ana Water Board or Executive Officer approval.

1. The Wet Weather CBRP will:

a. Identify preferred options or set of options for responsible entities to implement to attain the WQBELs in section I.A of this Appendix.

b. Include an implementation schedule; and

c. Identify potential funding that may be available to support implementation.

2. Within six (6) months of Santa Ana Water Board or Executive Officer approval of the Wet Weather CBRP, submit Work Plan for Implementation of Wet Weather CBRP. The Work Plan will include a schedule with milestones to implement the preferred option of the set of options in the CBRP Upon approval of the Work Plan, Permittees must implement the Work Plan.

3. Except for inconsequential grammatical or technical corrections, subsequent updates or amendments to CBRP are subject to the review and approval of the Executive Officer. Updates or amendments must be submitted for approval not less than 30 days prior to implementation of the proposed changes.

IV. Compliance Determination

Permittees responsible for complying with the WQBELs must demonstrate compliance through any of the means identified in section VII of Order No. R8-2026-0034 (Order) or as shown in section III of this Appendix 11. Processes used to analyze data and support demonstrations of compliance, as well as compliance monitoring locations, must be approved by the Executive Officer as part of the PMRP. The Permittees must demonstrate compliance by any of the following means:

A. Demonstrate that there are no exceedances of the WQBEL in the Permittee's MS4 discharge at the compliance point(s) identified in the PMRP. This demonstration may be made in the receiving water by showing there are no exceedances at, or downstream of, the Permittee's MS4 discharge.

B. Demonstrate that there is no discharge from the Permittee's MS4(s) during the relevant time period.

C. Demonstrate that the Permittee's MS4 discharge did not cause or contribute to an exceedance of the WQBEL, because the exceedance is the result of an authorized or exempt non-stormwater discharge specified in section IV.A.2 of the Order during a specific sampling event. The Permittee must support this demonstration with measurements of the water quality of the specific authorized or conditionally exempt essential non-stormwater discharge(s) alleged to have caused or contributed to the exceedance of the WQBEL.

D. Where the final compliance date for achievement of the WQBEL has not passed, develop and implement an approved Watershed Management Plan addressing the waterbody-pollutant combination pursuant to section XII of the Order. The Watershed Management Plan is only available to demonstrate compliance with the WQBEL for *Wet Winter Conditions*, as the compliance date for *Dry Summer Conditions* has passed. The CBRP may function as a Wet Winter Conditions WMP if it meets the requirements of section XII of the Order; the CBRP cannot serve as an alternative means of compliance with the WQBEL for Dry Summer Conditions.

E. Demonstrate that all non-stormwater and all stormwater runoff up to and including the volume equivalent to the 85th percentile, 24-hour storm event is retained for the drainage area tributary to the applicable receiving waters. The runoff retention must occur according to an approved Watershed Management Plan under section XII of the Order and include ongoing monitoring and adaptive management.

F. Demonstrate that an alternative indicator (e.g., enterococci) in the Permittee's MS4 discharge is below levels that are equivalent to a risk to human health less than 32 illnesses/1000 people.

G. Demonstrate, through an approved epidemiological study or quantitative microbial risk assessment (QMRA), that the risk to human health is less than 32 illnesses/1000 people.

V. Monitoring and Reporting

Permittees shall comply with monitoring and reporting requirements as outlined in the Monitoring and Reporting Program (MRP) in Attachment C of this Order.

VI. Cities of Claremont and Pomona

This Appendix 11 applies to the cities of Claremont and Pomona in its entirety, except as explicitly stated otherwise. In addition:

A. Requirements for the cities of Claremont and Pomona also include the Notification Requirements in section III.E of this Order and all Standard Provisions in Attachment F of this Order.

B. The cities of Claremont and Pomona must effectively prohibit non-stormwater discharges of bacteria from entering the MS4 for which they are an owner and/or operator and discharging to receiving waters, unless the discharge is covered by an exception in section IV.A.2 of Order R8-2026-0034 or in Order R4-2021-0105, including subsequent amendments.

C. Discharges of pollutants in runoff from the Permittees' MS4s must not cause or contribute to a condition of nuisance or exceedances of water quality standards. The applicable water quality standards are the statewide bacteria water quality objectives in Part 3 of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California - Bacteria Provisions (Feb. 4, 2019), or any site- or region-specific bacteria water quality objectives applicable to the receiving water(s) in question that take effect after the effective date of this Order. Discharges from the MS4s that cause or contribute to the violation of these receiving water limitations are prohibited. Discharges of all other pollutants are regulated through NPDES Permit No. CAS004004, Order R4-2021-0105, as subsequently amended. The cities of Claremont and Pomona may demonstrate compliance with this requirement as set forth in section VI.E of this Order.

D. For the Cities of Claremont and Pomona, the Monitoring and Reporting Program in Attachment C of this Order, as required by Section V of this Appendix, applies only to monitoring and reporting related to demonstrating compliance with the requirements of this Appendix for bacteria discharges to the Middle Santa Ana River. Monitoring and reporting activities required under this Appendix may be conducted in coordination with other Permittees subject to this Appendix.

Nothing in this Appendix establishes monitoring or reporting requirements for pollutants or receiving waters not addressed by this Appendix.

Appendix 12

Appendix 12

WATER QUALITY-BASED EFFLUENT LIMITATIONS FOR NUTRIENT TMDL IN LAKE ELSINORE AND CANYON LAKE

The following water quality-based effluent limitations (WQBELs) apply to discharges in runoff from MS4s owned or operated by Permittees discharging into Canyon Lake and Lake Elsinore as indicated in Appendix 1. These WQBELs are based on and consistent with the assumptions and requirements of the 2004 Lake Elsinore and Canyon Lake Nutrient TMDLs, as amended by Resolution R8-2025-0014 ("2025 Revised TMDLs"[1]). However, the 2025 Revised TMDLs have not yet been approved by USEPA. These TMDLs are being implemented as phased TMDLs. This means that the WQBELs that implement the TMDLs are also phased based on USEPA's approval.

Phase I of the 2004 TMDLs covered 2005 through December 31, 2020. However, the 2004 TMDLs and their implementing WQBELs remain in effect until USEPA approves the 2025 Revised TMDLs. This approval becomes the effective date of the 2025 Revised TMDLS which begins Phase II.

Phase II begins on the effective date of the 2025 Revised TMDLs and runs through 20 years after the effective date.

Phase III covers years 21 through 30 after the effective date. The final compliance date to attain the waste load allocations specified in the Basin Plan is as soon as possible but no later than 30 years from the effective date of the 2025 Revised TMDLs.

The WQBELs in Sections I through VI implement the 2025 Revised TMDLs. These take effect immediately upon USEPA approval of the 2025 Revised TMDLs. Sections VII and VIII apply on the effective date of Order R8-2026-0034. The WQBELs in Section VIII implement the 2004 TMDL and will remain in effect until USEPA approves the 2025 Revised TMDLs.

I. WQBELs for Canyon Lake (2025 Revised TMDLs)

A. Effective as soon as possible, but no later than [*20 years* from the effective date of the 2025 Revised TMDLs], discharges of runoff from MS4s must not transport more than 3,939 kg of total Phosphorus and 11,326 kg of total Nitrogen into Canyon Lake per year.

B. Effective as soon as possible, but no later than [*30 years* from the effective date of the 2025 Revised TMDLs], discharges of runoff from MS4s must not transport more than 1,970 kg of total Phosphorus and 8,371 kg of total Nitrogen into Canyon Lake per year.

[1] The 2025 Revised TMDLs are synonymous with reference to the 2024 Nutrient TMDLs, as described and adopted by Resolution No. R8-2025-0014.

C. The total Phosphorus and total Nitrogen loads shall be calculated using a running average of ten (10) consecutive estimates of annual loads.

D. Any nutrient loads that exceed the WQBELs in Table 12.1 below may be offset by reductions in nutrient loads from in-lake sediments. This must be implemented through approved offset programs, as set forth in section V of this Appendix 12.

Table 12.1: Summary of Nutrient WQBELs for Runoff from MS4s into Canyon Lake from Sub-watersheds below Mystic Lake

	Phase II Interim WQBELs		Phase III WQBELs	
	Total Phosphorus (kg/yr) Ten year running average	Total Nitrogen (kg/yr) Ten year running average	Total Phosphorus (kg/yr) Ten year running average	Total Nitrogen (kg/yr) Ten year running average
Runoff from MS4s	3,939	11,326	1,970	8,371

II. WQBELs for Lake Elsinore (2025 Revised TMDLs)

A. Effective as soon as possible, but no later than [*20 years* from the effective date of the 2025 Revised TMDLs], discharges of runoff in MS4s from sources downstream of Canyon Lake must not transport more than 548 kg of total Phosphorus and 1,575 kg of total Nitrogen from the sources downstream of Canyon Lake and 1,876 kg of total Phosphorus and 5,395 kg of total Nitrogen from the watershed above Mystic Lake per year, as interim WQBELs.

B. Effective as soon as possible, but no later than [*30 years* from the effective date of the 2025 Revised TMDLs], discharges of runoff in MS4s from sources downstream of Canyon Lake must not transport more than 274 kg of total Phosphorus and 1,164 kg of total Nitrogen and 938 kg of total Phosphorus and 3,987 kg of total Nitrogen from the watershed above Mystic Lake per year.

C. The nutrient loads shall be calculated using a running average of ten (10) consecutive estimates of annual loads.

D. Any nutrient loads that exceed the applicable WQBELs in Table 12.2 below may be offset by reductions in nutrient loads from in-lake sediment. This must be implemented through approved offset programs, as set forth in section V of this Appendix 12.

Table 12.2: Summary of Nutrient WQBELs for Runoff from MS4s into Lake Elsinore

	Phase II Interim WQBELs		Phase III WQBELs	
	Total Phosphorus (kg/yr) Ten year running average	Total Nitrogen (kg/yr) Ten year running average	Total Phosphorus (kg/yr) Ten year running average	Total Nitrogen (kg/yr) Ten year running average
Runoff from MS4s in Watershed downstream from Canyon Lake	548	1,575	274	1,164
Runoff from MS4s in Watershed Above Mystic Lake	1,876	5,395	938	3,987

III. Comprehensive Nutrient Reduction Plan

The Permittees must implement projects and programs for the control of nutrients according to a plan that complies with the requirements of this Order and that has been approved by the Executive Officer. This plan will be called a Comprehensive Nutrient Reduction Plan (CNRP). The Permittees must:

A. Revise or amend their CNRP to comply with the requirements of this Order. The initial draft CNRP or amendment must be submitted to the Executive Officer for approval within one year of the effective date (USEPA approval) of the 2025 Revised TMDLs. The Permittees may submit the plan individually, jointly, or through a collaborative effort with other dischargers. The Executive Officer is authorized to approve the draft or amendments as submitted, require additional information, or approve them subject to conditions.

   A. The CNRP update must include a reasonable assurance analysis that demonstrates implementation of planned projects, including participation in any proposed offset projects, will collectively result in the lakes meeting the Phase II interim numeric targets or, alternatively, demonstrate that the Permittees will, individually or collectively, meet the Phase II milestones, accounting for offset credits.

B. The CNRP update must include quantification of the extent to which Low Impact Development and structural treatment best management practices (BMPs) have been implemented with urban development and the resultant change to watershed nutrient loads. In general, retention-based BMPs are typically known for being effective at removing nutrients. However, such BMPs may also remove or divert runoff that would otherwise enter the lakes and be a critical resource in maintaining water elevations. The CNRP update should evaluate the advantages and disadvantages of implementing BMPs that retain runoff in the watershed versus potential impacts on lake water quality. The updated CNRP should also evaluate BMPs that treat and release runoff as an alternative to retention-based BMPs.

C. The CNRP update must include those best management practices (BMPs) that are or will be implemented within each Permittees' jurisdiction for the control of nutrients, the levels of effort for their implementation, the methods for demonstrating compliance with the milestones and WQBELs, and the method(s) for evaluating the effectiveness of those practices according to the requirements of Order No. R8-2026-0034.

D. The Permittees shall review the CNRP within one year past the end of Phase II and submit revisions to the Executive Officer for approval.

E. Whenever the CNRP is revised or amended, Permittees will continue to implement the existing CNRP until the revised or amended CNRP is approved.

B. The Executive Officer will provide a minimum of 30 days for public review prior to approving substantive revisions or amendments to the CNRP.

C. Permittees shall continue to implement the existing CNRP (section VIII), including any approved revisions, until the revised or amended CNRP is approved according to this section III. Permittees must implement the revised or amended CNRP upon approval. Except for inconsequential grammatical or technical corrections, subsequent updates or amendments to the CNRP are subject to the review and approval of the Executive Officer. Updates and amendments must be submitted for approval not less than 30 days prior to implementation of the proposed changes.

D. Permittees shall participate in watershed-wide projects and programs where the Permittee deems that there is a mutual interest or benefit to achieving nutrient WLAs

IV. Requirements for Offset Program(s)

Permittees may elect to carry out an offset program, or programs, designed to reduce excess nitrogen and phosphorus loads from point and non-point sources. The offset program(s) must be approved by the Executive Officer following a 30-day public review period.

A. The excess nitrogen and phosphorus loads shall mean the mass of nitrogen and phosphorus in the discharge that exceeds the mass of nitrogen and phosphorus in a discharge as allowed by the TMDL's load or waste load allocations.

B. The activities occurring under the offset program must offset the Permittee's estimated discharges of excess nitrogen and phosphorus and be demonstrated based on scientifically defensible analysis.

C. Permittees relying on nutrient offset credits to demonstrate attainment of Phase II milestones or compliance with Phase III WQBELs shall annually submit documentation (individually or collectively) to the Santa Ana Water Board demonstrating the use of such credits from an approved offset program.

D. Estimates of the nitrogen and phosphorus loads from a discharge must be based on empirical measurements of concentrations and flown at representative points of discharge that are part of an approved monitoring program or PMRP.

E. The estimate of the nitrogen and phosphorus removed from discharges to the receiving waters must be supported, in part, by locally measured quantities of nitrogen and phosphorus removed, not speculative or theoretical quantities.

F. There are currently two offset programs in place. For Lake Elsinore, the Lake Elsinore Aeration and Mixing System (LEAMS) was installed and is operating to reduce the internal loading of phosphorus and nitrogen from sediment in Lake Elsinore. For Canyon Lake, a semi-annual, large-scale aluminum sulfate ("alum") application is used to offset excess phosphorus. Within one year from the effective date of the 2025 Revised TMDLs, plans for these offset programs or alternative programs must be submitted for review and approval by the Executive Officer. Until these plans have been approved, Permittees must implement the existing offset programs as described in the CNRP or as revised, subject to the Executive Officer's approval.

G. All offset program plans are subject to a 30-day written public comment period before approval by the Executive Officer. Except for inconsequential grammatical corrections, changes to the plans are subject to the approval of the Executive Officer. Responsible Permittees must implement the plans upon approval by the Executive Officer.

H. Where the offset program is not implemented consistent with the terms and conditions of the approved program, Permittees may not rely on the offset program as a method to demonstrate compliance with the WQBELs in sections I and II of Appendix 12.

V. Compliance Determination

Permittees responsible for complying with the WQBELs in Sections I and II of this Appendix 12 must demonstrate compliance through any of the means identified in section VII of Order No. R8-2026-0034 (Order) or as shown in section V of this Appendix 12. Processes used to analyze data and support demonstrations of compliance, as well as compliance monitoring locations, must be approved by the Executive Officer as part of the PMRP.

A. Implement an approved Comprehensive Nutrient Reduction Plan (or equivalent Watershed Management Plan) in accordance with section III of this appendix. This includes participating in pollution offset strategies and reducing external nutrient loads from the watershed as set forth in the approved plan.

B. Demonstrate attainment of the Phase II Interim Numeric Targets or Phase III Numeric Targets, as applicable, using in-lake water quality data collected over a minimum 10-year period. For reference, Phase II Interim Numeric Targets and Phase III Numeric Targets are summarized in Table 12.3 below.

C. Demonstrate that there are no exceedances of the applicable WQBELs in Sections I and II of this Appendix 12 in the Permittee's MS4 discharge (individually or collectively) at the compliance point(s) identified in the PMRP.

D. Demonstrate that there are no exceedances of the applicable WQBELs in Sections I and II of this Appendix 12 (individually or collectively) by offsetting nitrogen and phosphorus loads pursuant to an approved Offset Program that meets the requirements of section V of this appendix.

E. Demonstrate attainment of the Phase II Interim Numeric Targets or Phase III Numeric Targets, as applicable, for the lakes by offsetting loads in the lakes pursuant to an approved Offset Program that meets the requirements of section V of this appendix. For reference, Phase II Interim Numeric Targets and Phase III Numeric Targets are summarized in Table 12.3 below.

F. Demonstrate that there are no exceedances of the applicable WQBELs in Sections I and II of this Appendix 12 in the Permittee's MS4 discharge, through implementation of volume retention pollution controls or BMPs that retain sufficient runoff volume such that the downstream load from a given drainage area is equal to or less than would occur in the reference watershed condition. The runoff retention must occur according to an approved Watershed Management Plan under section XII of the Order and include ongoing monitoring and adaptive management.

Table 12.3: Numeric Targets for Canyon Lake and Lake Elsinore

	Phase II Interim Numeric Targets		Phase III Numeric Targets	
	Total Phosphorous (kg/yr) Ten year running average	Total Nitrogen (kg/yr) Ten year running average	Total Phosphorous (kg/yr) Ten year running average	Total Nitrogen (kg/yr) Ten year running average
Canyon Lake	5,017	16,298	2,608	12,230
Lake Elsinore	21,994	133,248	13,683	114,963

VI. Implementation Schedules

Implementation of tasks and schedule in this section is expected to achieve attainment of the Numeric Targets. The following tasks are incorporated as interim WQBELs. Tasks and schedule applicable to MS4s for Phase II (*Years 1-20)* are included in Table 12.4 below. Tasks and schedule applicable to MS4s for Phase III (*Years 21-30*), pages 73 through 80 of Resolution R8-2025-0014, Attachment A, Tasks 1-13, are hereby incorporated by reference into this Order as interim WQBELs. (Only the LEAMS Operators are responsible for Task 10.)

Table 12.4: Phase II (Years 1-20) Tasks and Schedule

Task	Description	Schedule
1. Revise Existing Watershed Implementation Plan(s)	Revise existing CNRP (or prepare equivalent watershed management plan)	Submit revised CNRP (or equivalent watershed management plan) to the Regional Board within one (1) year of the effective date of the 2025 Revised TMDLs. (See section III.) Continue to implement existing CNRP, as applicable, until revised CNRP (or equivalent watershed management plan) is approved by the Santa Ana Water Board or the Executive Officer. (See section III.D.)
2. Review and re-authorize existing In-lake Project(s) for Canyon Lake, and/or approve new In-Lake Project(s)	Evaluate effectiveness of the Canyon Lake Alum Project and potential feasibility of implementation of other in-lake projects	In coordination with entities responsible for implementation of Canyon Lake TMDLs, continue existing Canyon Lake Alum Project during implementation of Task 4. Within one (1) year of the effective date of the 2025 Revised TMDLs, submit a report to the Santa Ana Water Board's Executive Officer that evaluates the effectiveness, and offsets provided by the existing alum project, and the feasibility of other in-lake projects to manage nutrients. Report shall include recommendations to revise the existing alum offset program, if determined necessary. Upon receipt of Report, the Santa Ana Water Board's Executive Officer will review to determine if the existing alum program should be re-**authorized and** will evaluate any proposed new in-lake projects for authorization. If in-lake projects other than alum are recommended for implementation, they shall be submitted as a revision to the CNRP for approval by the Executive Officer. The revised CNRP must include a schedule for implementation for any proposed projects.
3. Evaluate In-Lake Project Options to Improve Water Quality in Lake Elsinore	Identify and evaluate feasible water quality control options that may be implemented to improve and maintain water quality in Lake Elsinore; identify preferred option or set of options	Within one (1) year of the effective date of the 2025 Revised TMDLs, the City of Lake Elsinore and Riverside County, in coordination with Elsinore Valley Municipal Water District, shall submit a report to the Santa Ana Water Board's Executive Officer that assesses in-lake project options for Lake Elsinore, identifies a preferred option or set of options and potential funding sources that may be available to support implementation.
4. Implementation of Preferred Project Option or Options for Lake Elsinore	Prepare schedule to implement findings from Task 5 based on available funding and schedule	Within 18 months of the effective date of the 2025 Revised TMDLs, the City of Lake Elsinore and Riverside County, in coordination with Elsinore Valley Municipal Water District, shall submit an implementation schedule for proposed project(s) to the Santa Ana Water Board's Executive Officer. Implement the schedule as approved by the Santa Ana Water Board's Executive Officer. The implementation schedule should include a task to develop a proposed Offset Program that is associated with implementation of the preferred option, or options, once they are operational.

5. Revise Lake Elsinore Water Quality Criteria Based on In-Lake Treatment Controls, if necessary	Develop Work Plan to revise water quality criteria applicable to Lake Elsinore	Five (5) years after new or enhanced in-lake controls are fully operational, as a result of work completed in Task 4, if deemed necessary, Permittees may, in coordination with other entities responsible for implementation of Lake Elsinore and Canyon Lake TMDLs, submit a Work Plan with implementation schedule to the Santa Ana Water Board's Executive Officer for review and approval. Implement the Work Plan, as approved.
6. Study to Evaluate Cyanobacteria in Lake Elsinore	Evaluate HAB conditions in Lake Elsinore and options to manage cyanobacteria and toxicity	Within five (5) years of the effective date of the 2025 Revised TMDLs, in coordination with other entities responsible for implementation of Lake Elsinore and Canyon Lake TMDLs, submit a report to the Santa Ana Water Board that provides the findings from this Study. Depending on the results of this Study, it may be appropriate to conduct a follow up study after completion of task 4 to further evaluate HAB conditions in Lake Elsinore after implementation of a preferred in-lake project(s) for Lake Elsinore.
7. Study of Performance of Watershed Controls	Evaluate performance of watershed controls included in the revised and approved CNRP (or equivalent watershed management plan)	Within five (5) years of the effective date of the 2025 Revised TMDLs, in coordination with agricultural operators, submit a Work Plan for conducting the Study to the Santa Ana Water Board's Executive Officer for review and approval. Complete the Study per the schedule in the approved Work Plan.
8. Study for Evaluating Reference Watershed Conditions	Conduct Study to validate basis for estimation of an appropriate reference watershed conditions	Within five (5) years of the effective date of the 2025 Revised TMDLs, in coordination with other entities responsible for implementation of Lake Elsinore and Canyon Lake TMDLs, submit a Work Plan for conducting the Study to the Santa Ana Water Board's Executive Officer for review and approval. Complete the Study per the schedule in the approved Work Plan.
9. Study of Lake-bottom Sediment Sampling and Core Flux Experiments	Evaluate status of nutrient enrichment in lake sediments	In coordination with other entities responsible for implementation of Lake Elsinore and Canyon Lake TMDLs: Round 1: Within five (5) years after the effective date of the 2025 Revised TMDLs, submit a Sediment Study Report to the Santa Ana Water Board that provides study results and updated estimates of internal nutrient loads. Round 2: Within 15 years after the effective date of the 2025 Revised TMDLs, submit a Sediment Study Report to the Santa Ana Water Board's Executive Officer that provides study results and updated estimates of internal nutrient loads.

10. Fishery Management	Evaluate status of Common Carp population in Lake Elsinore fishery	By August 15 of every 10th year from the effective date of the 2025 Revised TMDLs, in coordination with other entities responsible for implementation of Lake Elsinore and Canyon Lake TMDLs, conduct a study of the fishery in Lake Elsinore to evaluate the Common Carp population to determine the need for additional carp management activities to support attainment of the TMDLs.
11. Evaluate Status of Attainment with Interim Numeric Targets and Milestones	Evaluate status of TMDL attainment	By August 15 of every 3rd year from the effective date of the 2025 Revised TMDLs, submit a report on the status of attainment of the Phase II interim numeric targets and milestones applicable to Permittees
12. Monitoring and Reporting	Update existing PRMPs for these TMDLs	Continue to implement the existing LECL monitoring program until an updated PRMP has been approved. Within one (1) year of the effective date of the 2025 Revised TMDLs, submit an updated monitoring program for Executive Officer approval.

VII. Monitoring and Reporting

Monitoring and reporting requirements shall be as outlined in the Monitoring and Reporting Program (MRP) in Attachment C of this Order.

VIII. WQBELs in Effect from Effective Date of Order R8-2026-0034 through Effective Date of 2025 Revised TMDLs

Findings II.F.17 through 23 and II.K.3 and 4, and Effluent Limitations sections VI.D.2.f through l of Order R8-2010-0033 (CAS No. 618033), are hereby incorporated by reference into this Order.

Appendix 13

Appendix 13

WATER QUALITY-BASED EFFLUENT LIMITATIONS FOR NUTRIENT TMDL FOR DRY HYDROLOGICAL CONDITIONS IN BIG BEAR LAKE

The following water quality-based effluent limitations (WQBELs) apply to discharges of runoff from MS4s owned or operated by Permittees discharging into Big Bear Lake as indicated in Appendix 1. These WQBELs are based on and consistent with the assumptions and requirements of the Nutrient TMDL for Dry Hydrological Conditions in Big Bear Lake. The compliance date of December 31, 2015, specified in the Basin Plan has passed.

I. WQBELs for Phosphorus, Total

A. The annual average discharge of total phosphorous from MS4s into Big Bear Lake during dry hydrological conditions must not exceed 475 pounds.

1. Dry hydrological conditions shall mean a period of time where the average annual inflow from tributaries to Big Bear Lake ranges from 0 to 3,049 acre-feet, average lake levels range from 6,671 to 6,735 feet and annual precipitation range from 0 to 23 inches.

2. Tributary inflow must be measured when collecting water quality samples to calculate total phosphorus loads.

3. The Permittees must determine the rate of influx of sediment and phosphorus loads to Big Bear Lake at the mouths of Rathbun, Summit, Knickerbocker Creeks, and from other outfalls within the jurisdiction of the Permittees.

II. Compliance Determination

Permittees responsible for complying with the WQBELs must demonstrate compliance through any of the means identified in section VII of Order No. R8-2026-0034 (Order) or as shown in section II of this Appendix 13. Processes used to analyze data and support demonstrations of compliance, as well as compliance monitoring locations, must be approved by the Executive Officer as part of the PMRP.

A. Demonstrate that there are no exceedances of the WQBEL in the Permittee's MS4 discharge at the compliance point(s) identified in the PMRP.

B. Demonstrate that there is no discharge from the Permittee's MS4(s) during the relevant time period.

C. Demonstrate that the discharge from the Permittee's MS4 did not cause or contribute to an exceedance of the WQBEL, because the exceedance is the result of an authorized or exempt non-stormwater discharge specified in section IV.A.2 of the Order during a specific sampling event. The Permittee must support this demonstration with measurements of the water quality of the specific authorized or conditionally exempt essential non-stormwater discharge(s) alleged to have caused or contributed to the exceedance of the WQBEL.

D. Demonstrate that all non-stormwater and all stormwater runoff up to and including the volume equivalent to the 85th percentile, 24-hour storm event is retained for the drainage area tributary to the applicable receiving waters. The runoff retention must occur according to an approved Watershed Management Plan under section XII of the Order and include ongoing monitoring and adaptive management.

E. Demonstrate that the receiving waterbody is meeting the combined WLAs and Load Allocations (Total TMDL Allocations) during dry weather conditions designated in the TMDL, as specified in the Basin Plan and shown below:

1. The annual average concentration of Total Phosphorus in Big Bear Lake is no greater than 35 µg/L;

    a. To determine the annual average concentration of Total Phosphorus in Big Bear Lake, nutrient concentrations of composite samples collected from both the photic zone and discrete bottom must be averaged by station number and month. A calendar year average is then obtained for each sampling location by averaging the average of each month. Finally, the separate annual averages for each location are averaged to determine the lake-wide average. The open-water sampling locations used to determine the annual average are MWDL1, MWDL2, MWDL6, and MWDL9 (see Basin Plan, 1.B.4. Implementation, Task 4.2, Table 6-1a-i).

2. Macrophyte coverage is 30-40 percent on a total lake area basis, calculated as a 5-year running average based on measurements taken at peak macrophyte growth as determined in the Aquatic Plant Management Plan (Basin Plan 1.B.4, Implementation, Task 6C);

3. 95 percent eradication of Eurasian Watermilfoil and any other invasive aquatic vascular plant species, on a total area basis; and

4. The growing season (May 1 through October 31 each year) average for Chlorophyll *a* concentration is no greater than 14 ug/L.

a. For Chlorophyll *a*, the open-water sampling locations used to determine the growing season average are MWDL1, MWDL2, MWDL6 and MWDL9 (see 1.B.4. Implementation, Task 4.2, Table 6-1a-i). The Chlorophyll *a* data from the photic samples is averaged by station number and month; a growing season average is obtained for each sampling location by averaging the average of each month; and finally, the separate growing season averages for each location are averaged to determine the lake-wide average.

III. Monitoring and Reporting

Monitoring and reporting requirements shall be as outlined in the Monitoring and Reporting Program (MRP) in Attachment C of this Order.

Appendix 14

Appendix 14

WATER QUALITY-BASED EFFLUENT LIMITATIONS FOR SAN GABRIEL RIVER, ESTUARY AND TRIBUTARIES INDICATOR BACTERIA TMDL

The water quality-based effluent limitations (WQBELs) of this Appendix apply to discharges of indicator bacteria in runoff from MS4s owned or operated by Permittees that discharge into Coyote Creek, as indicated in Appendix 1. The WQBELs are based on and consistent with the assumptions and requirements of the San Gabriel River, Estuary and Tributaries Indicator Bacteria TMDL, adopted by the Los Angeles Water Board on June 10, 2015 (TMDL). The TMDL sets limits based on geometric means and single samples of indicator bacteria for fresh waters designated for REC-1 use. These limits were used in the WQBELs below since Coyote Creek is a freshwater tributary to San Gabriel River and is designated for water contact recreational use (REC-1).

The TMDL establishes different compliance dates for the WQBEL that is based on calculated geometric means and for the WQBELs that are based on single samples taken during Dry Weather and for Wet Weather. The compliance dates are summarized in Table 14.1, below.

Table 14.1: Summary of Compliance Dates and Applicable WQBELs

	Single Sample WQBEL for Dry Weather	Single Sample WQBEL for Wet Weather	Geometric Mean WQBEL
June 14, 2026	X		
June 14, 2036	X	X	X

The single sample WQBELs for dry and wet weather are expressed as a limit on the number of days on which exceedances of a numeric target are allowed to occur. The Geometric Mean WQBEL has no allowable exceedance days. It may not be exceeded at any time after the compliance date.

I. WQBELs for Escherichia Coli

Permittees must implement measures to control indicator bacteria in stormwater and authorized non-stormwater runoff from their MS4s which attain the WQBELs below.

A. Single Sample WQBEL for Dry Weather

1. For purposes of this section, dry weather shall mean days that do not meet the criteria for wet weather conditions, as described below.

2. By June 14, 2026, the density of *Escherichia coli* in a single sample taken from the receiving waterbody shall not exceed 235 CFU or MPN/100 mL more than 5 days per year if sampling is conducted daily and 1 day per year if sampling is conducted weekly. If Permittees use alternative sampling frequencies, the allowable number of exceedance days will be based on section I.A.3, below. Allowable exceedance days are set on an annual basis, beginning April 1 and ending March 31. See Table 14.2.

3. If a sampling frequency other than daily or weekly is approved, the Single Sample WQBEL for Dry Weather shall be calculated as follows.

$$\text{Allowable Exceedance Days (AED)} = \frac{284 \text{ dry days}}{365 \text{ days}} * \text{X} \frac{\text{samples}}{\text{year}} * 5.9\% \qquad (\text{eq. } 1)$$

Where X is the total number of sampling days per year from an approved monitoring plan; and 5.9% is the chance of exceeding the numeric limit in the reference system.

If the fractional remainder for the calculated AED exceeds 1/10th, round up the AED to the nearest integer (e.g., 4.12 is rounded up to 5). Otherwise, round down the AED to the nearest integer (e.g., 4.02 is rounded down to 4).

B. Single Sample WQBEL for Wet Weather

1. For purposes of this section, wet weather shall mean days of 0.1 inch of rain or more plus three days following the rain event. Dry weather conditions occur on days that do not meet the criteria for wet weather conditions.

2. By June 14, 2036, the density of *Escherichia coli* in a single sample taken from the receiving waterbody must not exceed 235 CFU or MPN/100 mL more than 11 days per year if sampling is conducted daily and 2 days per year if sampling is conducted weekly. If Permittees use alternative sampling frequencies, the allowable number of exceedance days will be based on section I.B.5, below. Allowable exceedance days are set on an annual basis, beginning April 1 and ending March 31.

3. The Single Sample WQBEL for Wet Weather shall not apply to days that are subject to a High Flow Suspension (HFS). See Table 14.2.

4. For purposes of this section, HFS days are days where rainfall occurs that is greater than or equal to ½ inch and the 24 hours afterwards. Rainfall shall be measured at the nearest local rain gauge, using local Doppler radar, or using widely accepted rainfall estimation methods. HFS days on which a sample exceeds 235/100 mL do not count toward the allowable number of exceedance days.

5. If a sampling frequency other than daily or weekly is approved, the Single Sample WQBEL for Wet Weather shall be calculated as follows.

$$\text{Allowable Exceedance Days} = \frac{81 \text{ wet days}}{365 \text{ days}} * \text{X} \frac{\text{sample days}}{\text{year}} * 5.9\% \qquad (\text{eq. } 2)$$

Where X is the total number of sampling days per year from an approved monitoring plan; and 5.9% is the chance of exceeding the numeric limit in the reference system.

If the fractional remainder for the calculated AED exceeds 1/10th, round up the AED to the nearest integer (e.g., 4.12 is rounded up to 5). Otherwise, round down the AED to the nearest integer (e.g., 4.02 is rounded down to 4).

Table 14.2: Summary of Allowable Number of Exceedance Days for Single Sample WQBELs

	Daily Sampling	Weekly Sampling	Other Frequency
Dry Weather	5	1	See eq. 1
Wet Weather	11 (not including HFS days)	2 (not including HFS days)	See eq. 2

C. Geometric Mean WQBEL

1. By June 14, 2036, the geometric mean of the density Escherichia coli in samples collected from the receiving waterbody must not exceed 126 CFU or MPN/100 mL.

2. Geometric means must be calculated weekly as a rolling geometric mean using 5 or more samples collected in a six-week period. All weeks shall begin on Sunday. The geometric mean WQBEL must not be exceeded at any time after June 14, 2036.

II. Implementation Plan

A. Permittees responsible for complying with the WQBELs must implement their pollution controls according to an approved implementation plan. The implementation plan shall describe how each permittee intends to individually or cooperatively achieve the WQBELs in Section I.A through I.C of this Appendix. The implementation plan must be submitted to the Executive Officer for approval within 180 from the effective date of this Order.

1. The implementation plan must include the pollution controls that will be used and their level of effort, a schedule for implementation, and proposed milestones that will be subject to enforcement if not met. Outfall monitoring and related analyses to determine compliance with the WQBELs will be developed based on requirements in the Monitoring and Reporting Plan (MRP) in Attachment C of this Order.

2. An approved Watershed Management Plan that addresses the waterbody-pollutant combinations of this TMDL will satisfy the requirement for an implementation plan.

III. Compliance Determination

Permittees responsible for complying with the WQBELs must demonstrate compliance through any of the means identified in section VII of Order No. R8-2026-0034 (Order) or as shown in section II of Appendix 14. Processes used to analyze data and support demonstrations of compliance, as well as compliance monitoring locations, must be approved by the Executive Officer as part of the Program Monitoring and Reporting Plan (PMRP) according to the MRP in Attachment C of this Order.

A. Demonstrate that there are no exceedances of the WQBEL in the Permittee's MS4 discharge at the compliance point(s) identified in the PMRP. This demonstration may be made in the receiving water by showing there are no exceedances at, or downstream of, the Permittee's MS4 discharge.

B. Demonstrate that there is no discharge from the Permittee's MS4(s) during the relevant time period.

C. Demonstrate that the Permittee's MS4 discharge did not cause or contribute to an exceedance of the WQBEL, because the exceedance is the result of an authorized or exempt non-stormwater discharge specified in section IV.A.2 of the Order during a specific sampling event. The Permittee must support this demonstration with measurements of the water quality of the specific authorized or conditionally exempt essential non-stormwater discharge(s) alleged to have caused or contributed to the exceedance of the WQBEL.

D. Where the compliance date(s) for achievement of the WQBEL(s), as shown in Table 14.1, has not passed, develop and implement an approved Watershed Management Plan addressing the waterbody-pollutant combination pursuant to section XII of the Order.

E. Demonstrate that all non-stormwater and all stormwater runoff up to and including the volume equivalent to the 85th percentile, 24-hour storm event is retained for the drainage area tributary to the applicable receiving waters. The runoff retention must occur according to an approved Watershed Management

Plan under section XII of the Order and include ongoing monitoring and adaptive management requirements.

F. Demonstrate that an alternative indicator (e.g., enterococci) in the Permittee's MS4 discharge is below levels that are equivalent to a risk to human health less than 32 illnesses/1000 people.

G. Demonstrate, through an approved epidemiological study or quantitative microbial risk assessment (QMRA), that the risk to human health is less than 32 illnesses/1000 people.

IV. Monitoring and Reporting

A. Monitoring and reporting requirements shall be as outlined in the MRP in Attachment C of this Order.

Attachment A

Glossary

Attachment A

GLOSSARY

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. These definitions apply throughout the Order, even where the terms are not capitalized.

85th Percentile, 24-Hour Storm Event - The 85th percentile, 24-hour storm event is a statistical design storm defined through a hydrologic analysis of long-term rainfall records for a particular geographic area. At the most basic level, the design storm represents the 85th percentile, 24-hour rainfall depth (typically measured in inches of rain) among all 24- hour rainfall depths evaluated in the historical record. Analyses that define this storm event often express the 85th percentile, 24-hour storm event as an "isohyetal" or "isopluvial" map with contour lines connecting areas with the same 85th percentile, 24-hour rainfall depth. In some situations (e.g. in storm hydrographs), the temporal distribution of rainfall during the 85th percentile, 24-hour storm event may be assumed.

Adaptive Management – A methodical process for incrementally improving outcomes of projects and programs used to control the discharge of pollutants where a best management practice (BMP)-based method of compliance is used. This Order requires the execution of an adaptive management process for the continual improvement of projects and programs, Watershed Management Plans, and the Monitoring and Reporting Program during the permit term to effectively prohibit certain non-stormwater discharges, reduce pollution to the maximum extent practicable, attain WLAs where the compliance date has not passed or where no compliance date is specified, and comply with other BMP-based requirements. The adaptive management process is driven by a set of permit provisions in section III.A. that require the Permittees to establish objective performance metrics that provide feedback on the performance of their BMPs and make improvements. See also **Iterative Process**

Annual Progress Report – A report summarizing information required to be submitted annually to the Santa Ana Water Board on or before November 15th.

Authorized Non-Stormwater Discharges – Non-stormwater discharges that are allowed to enter the MS4 because they are specifically identified in this Permit as allowable or conditionally exempt and are not determined to be a significant source of pollutants.

Basin Plan – The Water Quality Control Plan for the Santa Ana River Basin, as amended or revised.

Beneficial Uses – The uses of water necessary for the survival or well-being of man, plants, and wildlife. These uses of water serve to promote tangible and intangible economic, social, and environmental goals. "Beneficial Uses" that may be protected include, but are not limited to, domestic, municipal, agricultural, and industrial supply;

power generation; recreation; aesthetic enjoyment; navigation; and preservation and enhancement of fish, wildlife, and other aquatic resources or preserves. Existing beneficial uses are uses that were attained in the surface or groundwater on or after November 28, 1975; and potential beneficial uses are those that would probably develop in future years through the implementation of various control measures. “Beneficial Uses” are equivalent to “Designated Uses” under federal law. Water Code section 13050(f) Beneficial Uses for the receiving waters are identified in the Basin Plan.

Best Management Practices (BMPs) –A subset of stormwater control measures that are non-structural. BMPs include schedules of activities, prohibitions of practices, maintenance procedures, policies and other management practices that are effective 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).

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

Biological Integrity – A condition that supports 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. (Karr J.R. and D.R. Dudley. 1981. *Ecological perspective on water quality goals*. Environmental Management 5:55-68.)

Biotreatment Control Measure – A subcategory of treatment control measures that employ filtration, biological uptake, transformation, and/or degradation of pollutants as their mechanism(s) of pollutant removal. Although a significant portion of the design capture volume or flow will incidentally infiltrate, evaporate, or evapotranspire where conditions allow, the principal of operation involves the discharge of the treated stormwater after detention in a vegetated basin or after passing through porous, biologically active medium, vegetation, or both.

California Toxics Rule (CTR) – 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 part 131.

Commercial Site – Any site that is used for the sale of retail items, food or beverages to the general public, for the sale of wholesale items, and for the sale or dispensing of services, including professional, trade, contracting, banking, property management and other services. Section XIII.D.1 b of Order No. R8-2026-0034 provides a non-exhaustive list of commercial sites. Commercial sites include mobile businesses, including but not

limited to those that perform mobile carpet, drape, or furniture cleaning and mobile automobile or other vehicle washing.

Construction Site – Any site where building or grading permits are applicable, the project duration is anticipated to exceed two weeks, and where activities at the site include the following: (1) soil movement; (2) uncovered storage of materials or wastes, such as construction materials, dirt, sand, fertilizer, or landscaping materials; or exterior mixing of cementitious products (i.e., concrete, mortar, or stucco). Construction sites include but are not limited to those with projects requiring coverage under the Construction General Permit.

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 waters of the State (inclusive of waters of the U.S.) are affected or not. (Wat. Code, §13050(k))

Control Measure – The broadest term to describe all measures that control pollution of stormwater. Control measures are either structural or non-structural (i.e. BMPs). See definitions for structural control measures and BMPs.

Criteria – Elements of water quality standards, expressed as constituent concentrations, levels, or narrative statements, representing a quality of water that supports a particular use. When criteria are met, water quality will generally protect the designated use. (40 CFR §131.3) “Criteria” are equivalent to “water quality objectives” under state law. (See Wat. Code, §13050(h))

Critical Milestones – An action or event marking a significant stage in the process of Watershed Management Plan (WMP) development and implementation. A Critical Milestone is chosen by a Permittee or designated by the Executive Officer and is subject to enforcement if the milestone is not met. Non-Critical Milestones are not subject to enforcement but must be reported. The distinction between types of milestones is intended to facilitate transparent and more detailed disclosure of the progress of WMP development and implementation and allow early detection of deviations in a schedule that could lead to violations.

Debris – The remains of anything destroyed or broken or accumulated loose fragments of rock.

Design Capture Flow – (See Permit, section VIII.D.3)

The calculated flow rate of stormwater runoff, typically expressed as cubic feet per second (cfs), must be treated in one or more treatment control measures according to the requirements of this Order.

Design Capture Volume – (See Permit, section VIII.D.2)

The calculated volume of stormwater runoff, typically expressed in gallons or cubic feet, that must be treated in one or more treatment control measures according to the requirements of this Order.

Designated Land Uses – Specific land uses or locations (e.g. parks, stadia, or roads) that generate substantial amounts of Trash and are subsequently identified by the Santa Ana Water Board's Executive Officer as a land use that needs to be subject to the Trash Control Program of this Order.

Development Projects – New development or redevelopment with land disturbing activities; structural development, including construction or installation of a building or structure, the creation of impervious surfaces, and land subdivision.

Discretionary Project – A project which requires the exercise of judgment or deliberation when the public agency or body decides to approve or disapprove a particular activity, as distinguished from situations where the public agency or body merely determines whether there has been conformity with applicable statutes, ordinances, or regulations (Cal. Code Regs., tit. 14, § 15357). Any project that is not ministerial (Cal. Code Regs., tit. 14, § 15369) is a Discretionary Project, even if the project is exempt from CEQA.

Effective – For planned actions, Effective means capable of achieving the stated purpose and all enumerated requirements. Once implemented, assessment of the effectiveness of a Permittee's practices is based on whether they serve the stated purpose and meet applicable requirements, including prohibitions, WQBELs and receiving water limitations.

Effluent Limit/Limitations – 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, including but not limited to fires or other events, 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.

Environmentally Sensitive Areas (ESAs) – 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 (Pub. Res. Code, § 30107.5). These areas include, but are not limited to: waterbodies 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; Marine Protected Areas designated as such pursuant to the Marine Life Protection Act; a waterbody 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.

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

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.

Feasible - means capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors.

Fixed Facility – A stationary facility that is owned or controlled by a Permittee. A fixed facility includes, but is not limited to, corporate yards, public parks, cemeteries, or airfields, libraries, fire and police stations, and public power generation, sewer, or water utilities. section XIV.B.1 of Order No. R8-2026-0034 provides a non-exhaustive list of fixed facilities.

Full Capture System – A treatment control, or series of treatment control measures, that traps all particles that are 5 mm or greater, and has a design treatment capacity that is either:

1. Not less than the peak flow rate resulting from a one-year, one-hour, storm in the drainage area, or

2. Appropriately sized to and designed to carry at least the same flows as the corresponding storm drain.

Prior to installation, full capture systems must be certified by the Executive Director, or designee of the State Water Board. Uncertified full capture systems will not satisfy the requirements of the Trash Amendments to the Ocean Plan and the ISWEBE Plan.

Full Capture System Equivalency – The trash load that would be reduced if full capture

systems were installed, operated, and maintained for all storm drains that capture runoff from Priority Land Use areas. The full capture system equivalency is a trash load reduction target that the Permittee quantifies by using an approach, and technically acceptable and defensible assumptions and methods for applying the approach, subject to the approval of permitting authority.

General Utility Vaults Permit – State Water Board Order No. 2014-0174-DWQ, NPDES No. CAG990002.

Geometric Mean – A type of mean or average that indicates the central tendency or typical value of a set of numbers by using the product of their values (as opposed to the arithmetic mean which uses their sum). The geometric mean is defined as the nth root of the product of n numbers. The formula is expressed as follows, where x_n is the sample value and n is the number of samples collected.

$$Geometric\ Mean = \sqrt[n]{(x_1)(x_2)(x_3)\dots(x_n)}$$

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

Harvest and Use Low-Impact Development Treatment Control Measures (Harvest and Use LID Treatment Control measure) – A subcategory of treatment control measures that harvests and uses 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 designated under 40 CFR part 116 pursuant to section 311(b)(2) of the Clean Water Act (40 CFR § 122.2).

Hazardous Waste – Defined as set forth in California Code of Regulations, title 22, section 66261.3.

Hydrologic Condition of Concern (HCOC) – A condition of a stream or channel, or some reach thereof, or a condition of some other waterbody (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, chemical, or biological integrity of the waterbody.

Hydromodification – The alteration of the hydrologic characteristics of coastal and non-coastal waters, which in turn could cause degradation of water resources (Modeling the Impacts of Hydromodification on Water Quantity and Quality, USEPA 2009).

Illicit Connection – Any connection to the MS4 that is prohibited under local, state, or federal statutes, ordinances, codes, or regulations.

Illicit Discharge – Any discharge to the MS4 that is not composed entirely of stormwater, except for discharges that are expressly authorized and therefore not illicit. Authorized

discharges include discharges pursuant to an NPDES permit and discharges that are identified in section IV of Order No. R8-2026-0034. (See 40 CFR § 122.26(b)(2))

Impervious Surface – Any land surface with highly-limited capacity for retention of stormwater including, but not limited to, concrete or asphalt pavement, sidewalks, parking areas, patios, driveways, rooftops, and any other continuous watertight pavement or covering. Landscaped soil and pervious pavement, including pavers with pervious openings and seams, underlain with pervious soil or pervious storage material, such as a gravel or other conventional aggregate layer sufficient to hold the specified volume of rainfall runoff that have not been stabilized, compacted, or otherwise constructed to function as an impervious surface are considered pervious surfaces.

Implementation Agreement – The Implementation Agreement establishes the responsibilities of each Permittee and a procedure for funding the shared costs.

Industrial Site - Any site where industrial infrastructure and ancillary works are located and zoned by the city for industrial use rather than residential or commercial needs. This includes but is not limited to sites requiring coverage under the Industrial General Permit.

Industrial General Permit – State Water Board Order No. 2014-0057-DWQ (NPDES No. CAS000001) or the most recent General Permit for Stormwater Discharges Associated with Industrial Activities issued by the State Water Board subsequent to this Order.

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

Infiltration Low-Impact Development Treatment Control Measure (Infiltration LID Treatment Control measures) – A type of LID treatment control measure that employs infiltration as 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.

Iterative Process - A term that describes a form of adaptive management to comply with requirements in Receiving Water Limitations in section VI of this Order to modify pollution controls in response to conditions of nuisance or exceedances of water quality standards. In general terms, an iterative process is the practice of building, refining, and improving a project, product, or initiative. The purpose of an iterative process is to continually improve to comply with Receiving Water Limitations; however, engaging in the iterative process does not constitute compliance with Receiving Water Limitations. An iterative process is typically applied in circumstances where there is great uncertainty; where costs of errors are high; or where a full commitment of resources to achieve a risky outcome is undesirable. See also **Adaptive Management**

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.

LID Treatment Control Measure – A subcategory of treatment control measures. They are further sub-classified into retention LID treatment control measures that employ harvest and use, evaporation/ transpiration, infiltration, or any combination thereof, and biotreatment control measures that employ biological uptake, transformation, or degradation of pollutants and incidental infiltration and/or evapotranspiration.

Load Allocation (LA) – The portion of a receiving waterbody's loading capacity that is attributed either to one of its existing or future nonpoint sources of pollution or to natural background sources in a TMDL. Load allocations are best estimates of the loading, which may range from reasonably accurate estimates to gross allotments, depending on the availability of data and appropriate techniques for predicting the loading. Wherever possible, natural and nonpoint source loads are distinguished. (40 CFR § 130.2(g))

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

Maximum Extent Practicable (MEP) - A technology-based discharge standard for MS4s established by CWA section 402(p). MEP refers to the requirement that municipal stormwater dischargers reduce pollutants in stormwater runoff to the maximum extent practicable. This includes management practices, control techniques and system, design, and engineering methods for the control of pollutants while considering factors such as pollutant removal effectiveness, regulatory compliance, severity of the water quality issue, public acceptance, social and environmental benefits, cost, and technological feasibility.

Municipal Separate Storm Sewer System (MS4) – A conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains): (i) Owned or operated by a State, city town, borough, county, parish, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, stormwater, or other wastes; (ii) Designated or used for collecting of conveying stormwater; (iii) Which is not a combined sewer; (iv) Which is not part of the Publicly Owned Treatment Works (POTW) as defined at 40 CFR section 122.2 (40 CFR § 122.26(b)(8))

National Pollutant Discharge Elimination System (NPDES) Permit – A permit issued under section 402 of the Clean Water Act for regulation of discharges of pollutants from point sources to waters of the United States.

New Development – The categories of development identified in section VIII of this Order. New development does not include routine maintenance to maintain original line and grade, hydraulic capacity, or original purpose of a facility, repairs to return a facility

to its original condition, nor does it include emergency new development required to protect public health and safety. Dischargers should confirm with Santa Ana Water Board staff whether a particular routine maintenance or repair activity is subject to this Order.

Non-Critical Milestone – An action or event marking a significant stage in the process of WMP development and implementation. Unlike Critical Milestones, Non-Critical Milestones are not subject to enforcement but must be reported. The distinction between types of milestones is intended to facilitate transparent and more detailed disclosure of the progress of WMP development and implementation and allow early detection of deviations in a schedule that could lead to violations.

Non-point Source – Non-point sources are any source of discharge of pollutants that does not meet the definition of a point source under CWA section 502(14).

Non-stormwater Runoff – All discharges to and from an MS4 that do not originate from precipitation events (i.e., all discharges to an MS4 other than stormwater). Non-stormwater runoff includes illicit discharges, non-prohibited discharges, and NPDES permitted discharges.

Nuisance – Anything which meets all 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 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 results from, the treatment or disposal of wastes (Wat. Code, § 13050(m))

Open Space – Any parcel or area of land or water that is essentially unimproved or devoted to an open-space use for the purposes of (1) the preservation of natural resources, (2) the managed production of resources, (3) outdoor recreation, or (4) public health and safety (Riverside County General Plan adopted October 7, 2003. Technical Appendix A, Glossary).

Outfall – A point source as defined by 40 CFR section 122.2, at the point where a 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))

Program Effectiveness Assessment (PEA) – Evaluations conducted by Permittees to track progress, assess BMP effectiveness, assess reductions in pollutant loads to receiving waters, and support Adaptive Management of stormwater programs. PEAs help identify successful or ineffective practices, guide resource allocation, and inform program improvements. Performance metrics developed for PEAs are not enforceable but must be reviewed and updated annually

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 Santa Ana Region boundaries as well as Water Code section 13200(e). The Permit Area is identified on Attachment B.

Permittees – The Cities and County Agencies listed in Table 1 of this Order (Order No. R8-2026-0034). However, the Cities of Claremont and Pomona are only Permittees for purposes of and as explicitly stated in Appendix 11 of Order R8-2026-0034.

Point Source – Any discernible, confined, and discrete conveyance, including, but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, 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 stormwater runoff. (40 CFR § 122.2; see also 33 USC § 1362(14))

Pollutant – As defined in section 502(6) of the CWA, any 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. (33 USC § 1362(6))

Pollution – The alteration of the quality of the waters of the State 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. (Wat. Code, §13050(l))

Post-Construction Control Measures – A subset of control measures including source and treatment control measures which detain, retain, filter, or educate to prevent the release of pollutants to surface waters during the final functional life of development.

Principal Permittee – The County of Orange for Orange County; Riverside County Flood Control and Water Conservation District (RCFC&WCD) for Riverside County; and San Bernardino County Flood Control District (SBCFCD) for San Bernardino County.

Priority Land Uses – Those developed sites, facilities, or land uses (i.e., not simply zoned land uses) within the MS4 Permittee's jurisdiction as follows:

1. High-density residential: all land uses with at least ten (10) developed dwelling units/acre.

2. Industrial: land uses where the primary activities on the developed parcels involve product manufacture, storage, or distribution (e.g., manufacturing businesses, warehouses, equipment storage lots, junkyards, wholesale businesses, distribution centers, or building material sales yards).

3. Commercial: land uses where the primary activities on the developed parcels involve the sale or transfer of goods or services to consumers (e.g., business or professional buildings, shops, restaurants, theaters, vehicle repair shops, etc.).

4. Mixed urban: land uses where high-density residential, industrial, and/or commercial land uses predominate collectively (i.e., are intermixed).

5. Public transportation stations: facilities or sites where public transit agencies' vehicles load or unload passengers or goods (e.g., bus stations and stops).

Priority Projects – New development and redevelopment project categories listed in section VIII.B of Order No. R8-2026-0034.

Program Monitoring and Reporting Plan (PMRP) – An Executive Officer approved plan that describes how Permittees will implement the monitoring and reporting requirements of this Order and Attachment C. This includes monitoring procedures, locations, frequencies, responsibilities, data evaluation, and applicable compliance determination methods. Monitoring methods must be compatible with applicable California Surface Water Ambient Monitoring Program (SWAMP) quality assurance and field measurement procedures, except as otherwise provided in Attachment C or the approved PMRP.

Receiving Waters – A water of the United States into which waste and/or pollutants are or maybe be discharged.

Receiving Water Limitation – Any applicable numeric or narrative water quality objective or criterion, or limitation or prohibition to implement the applicable water quality objective or criterion, for the receiving waters as contained in the Water Quality Control Plan for the Santa Ana Region (Basin Plan), water quality control plans or policies adopted by the State Water Board, or federal regulations, including but not limited to 40 CFR section 131.38.

Report of Waste Discharge (**ROWD)** – Application for issuance or re-issuance of WDRs under Water Code section 13376 and/or Water Code section 13260.

Retention Low-Impact Development Treatment Control Measures (Retention LID treatment Control Measures) – A subcategory of LID treatment control measures 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).

Routine Maintenance – work performed on a regular, recurring basis that is necessary to delay or prevent the failure of physical properties so that they are serviceable for their original purpose. Routine maintenance applies to the replacement of components that are subject to expected wear during normal use, such as pavement surfaces, structural coatings, roof tiles, shingles, top coats, and aggregate surfaces. Routine maintenance excludes replacement of structures or replacement of a structure's components

specifically when such replacement is not expected until the end of their service life or a catastrophic failure due to earthquake, fire, or similar unexpected event occurs.

Runoff from MS4s – Runoff is defined as all flows in a stormwater conveyance system from urban areas, which include residential, commercial, industrial, and construction areas. Runoff consists of the following components: (1) stormwater runoff and (2) Authorized Non-Stormwater Discharges (see section IV of this Order). Runoff from MS4s does not include runoff from undeveloped open space, feedlots, dairies, farms, and agricultural fields.

Sanitary Sewer Overflow (SSO) – Any overflow, spill, release, discharge, or diversion of untreated or partially treated wastewater from a sanitary sewer system.

Santa Ana Region – Area under the jurisdiction of the Santa Ana Water Board, defined in Water Code section 13200(e) and is shown on Attachment B.

Santa Ana Water Board – California Regional Water Quality Control Board, Santa Ana Region.

Scrap Metal Permit – Santa Ana Water Board Order No. R8-2018-0069 (NPDES No. CAG618001) or the most recent Sector-Specific Scrap Metal Recycler NPDES Stormwater Permit issued by the Santa Ana Water Board subsequent to this Order.

Significant Redevelopment – As defined in section VIII of Order No. 2026-0034.

Source Control Measures – 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 eliminate or minimize the contact between potential pollutants and stormwater or authorized non-stormwater to prevent the transport of pollutants to receiving waters. Some examples include activity schedules, prohibitions of practices, street sweeping, facility maintenance, detection and elimination of IC/IDs, and other source control measures. Facility design examples include providing attached lids to trash containers, canopies for fueling islands, secondary containment, or roof or awning over material and trash storage areas to prevent direct contact between water and pollutants.

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 General Permit.

Stormwater Runoff – Any kind of runoff from a precipitation event, including stormwater runoff, snowmelt runoff, and surface runoff and drainage. (40 CFR § 122.26(b)(13))

Stormwater General Permits – The Industrial General Permit (State Water Board Order No. 2014-0057-DWQ, NPDES No. CAS000001), Construction General Permit (State Water Board Order No. 2009-0009-DWQ, NPDES No. CAS000002), and sector-specific Scrap Metal Permit (Order No. R8- 2018-0069) as amended or revised.

Stormwater Ordinance – The Stormwater Runoff Management and Discharge Control Ordinances and ordinances addressing grading and erosion control adopted by the Permittees.

Stormwater Pollution Prevention Plan (SWPPP) – A plan developed to minimize and control the discharge of pollutants from the industrial and construction sites to stormwater conveyance systems. The plan must identify pollutant sources, control measures for each pollutant source, good housekeeping practices, and employee training programs.

Structural Control Measures – A subset of control measures that are structural (i.e. tangible). Structural control measures are either treatment control measures or source control measures.

Substantial Evidence – Enough relevant information and reasonable inferences from this information that a fair argument can be made to support a conclusion. This includes facts, reasonable assumptions predicated on facts, or expert opinion supported by facts, but does not include argument, speculation, unsubstantiated opinion or narrative, or evidence which is clearly erroneous or inaccurate. (See Pub. Res. Code, § 21080(e)(2))

Technology-Based Effluent Limitation (TBEL) — An effluent limitation for a pollutant that is based on the capability of a treatment method to reduce the pollutant to a certain concentration or mass loading level.

TMDL Implementation Plan – The 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).

Total Maximum Daily Load (TMDL) – Numerical calculations of the maximum amount of a pollutant that can be discharged into a waterbody from all contributing loads (point source, non-point source, background contribution, margin of safety) and still maintain water quality standards. Under Clean Water Act section 303(d), TMDLs must be developed for all waterbodies that do not meet water quality standards after application of technology-based controls.

Toxic Pollutant – A pollutant that can cause toxicity, as listed under section 307(a) of the CWA.

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

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

natural materials. Trash is not considered to be leaf litter or plant material.

Treatment Control Measures - Any system designed and constructed to reduce or 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, treatment control measures are a subset of structural control measures that treat the design capture volume or flow or a portion thereof according to published and generally accepted engineering criteria. Structural treatment control measures are further sub-classified into LID treatment control measures and non-LID treatment control measures. LID control measures are further sub-classified into Retention LID treatment control measures and Biotreatment Control Measures. All of these classes of treatment control measures are subject to general and specific requirements in this Order. Examples include secondary containment, treatment measures, (e.g. first flush diversion, detention/retention basins, and oil/grease separators), run-off controls (e.g., grass swales, infiltration trenches/basins, etc.), and engineering and design modification of existing structures.

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. (Wat. Code, §13050(d))

Waste Discharge Requirements (WDRs) – As defined in Water Code section 13374, the term “Waste Discharge Requirements” is the equivalent of the term "permits" as used in the federal CWA, as amended. The Santa Ana Water Board usually uses the term “permit” to refer to WDRs for discharges to waters of the U.S.

Waste Load Allocation (WLA) – The portion of a receiving waterbody's loading capacity that is allocated to one of its existing or future point sources of pollution in a TMDL (40 CFR § 130.2(h)).

Water Quality Management Plan (WQMP) – A WQMP documents mitigation of stormwater pollutants and hydrological impacts of a priority project that is subject to a Permittee’s discretionary approval. A WQMP contains information related to site characteristics, expected pollutants, hydrology impacts, feasibility assessment, incorporated structural and source control measures, Low Impact Development (LID) design features, operation and maintenance, and public education and training. The collective information is intended to describe how the project will minimize water quality impacts to downstream waterbodies. The expected contents of WQMPs may differ depending on the category of project. Non-traditional projects such as road improvements, public works projects, and small projects may require different WQMP contents to demonstrate that the project will minimize water quality impacts to downstream water bodies. The required WQMP content for each project category will be defined in the Permittees’ Uniform Technical Guidance Documents. WQMPs have been required for priority projects in MS4 permits issued in the Santa Ana Region starting in 2002.

Water Quality Objective – A numeric or narrative limit established for the reasonable protection of beneficial uses of water or the prevention of nuisance within a specific area (Wat. Code, § 13050(h)). "Water quality objectives" are equivalent to "criteria" under federal law. (See 40 CFR §131.3)

Water Quality Standards – Consist of beneficial uses, water quality objectives/criteria to protect those beneficial uses, and the state and federal antidegradation policies. Water quality standards are found in regional and statewide water quality control plans. The USEPA has also adopted water quality criteria for California in the National Toxics Rule and California Toxics Rule.

Water Quality-Based Effluent Limitation (WQBEL) – An effluent limitation determined by selecting the most stringent of the effluent limitations calculated using all applicable water quality criteria (e.g., aquatic life, human health, wildlife, translation of narrative criteria) for a specific point source to a specific receiving waterbody. Any restriction imposed on quantities, discharge rates, and concentrations of pollutants, which are discharged from point sources to waters of the U.S. necessary to achieve a water quality standard. (See 40 CFR § 122.2.) WQBELs can be numeric or narrative.

Waterbody/Pollutant Combination - Each pollutant causing a waterbody to be impaired or threatened is referred to as a waterbody/pollutant combination. Typically, a TMDL is developed for each waterbody/pollutant combination placed on Clean Water Act section 303(d) list of impaired waters.

Waters of the State – Any surface water or groundwater, including saline waters, within the boundaries of the State (Wat. Code, § 13050(e)). Waters of the State include waters of the United States.

Waters of the United States – "Navigable waters" under the CWA (33 U.S.C. § 1362(7)) as defined in 40 CFR section 122.2, which as of the date of issuance of this Order incorporates the definition in 40 CFR section 120.2 and shall include any revised definitions upon their effective dates.

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).

Watershed Management Plan (WMP) – A voluntary, alternative compliance pathway to comply with receiving water limitations and water quality-based effluent limitations that meets the requirements of section XII of Order No. R8-2026-0034. Under a WMP, a Permittee or group of Permittees develops a comprehensive program on a watershed scale through customized strategies, control measures, and BMPs.

Attachment B

Figures

(Provided for Illustration Purposes Only)

Figure B.1: Santa Ana Water Board Watershed Managements Areas

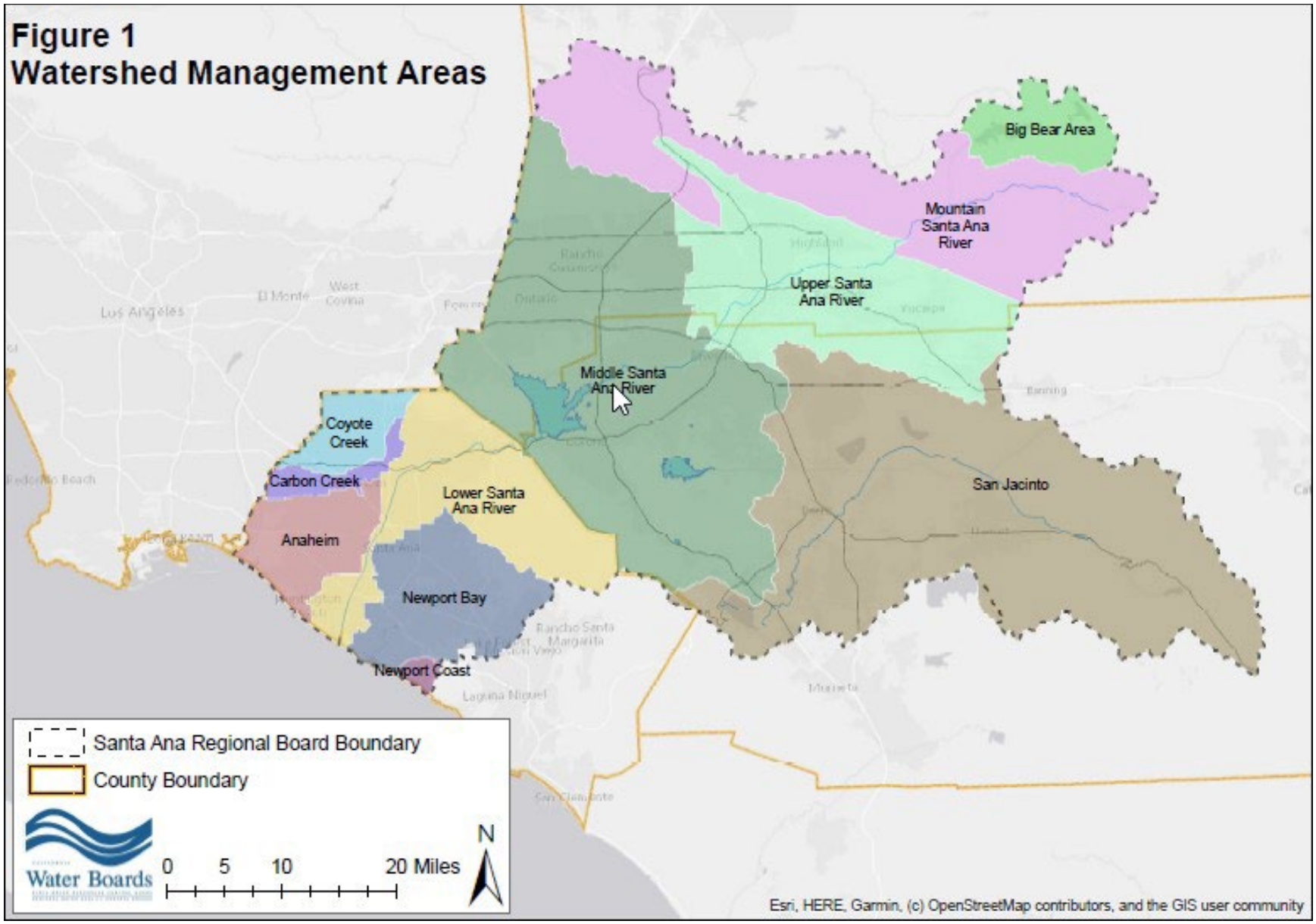


Figure 1
Watershed Management Areas
Big Bear Area
Mountain Santa Ana River
Upper Santa Ana River
Middle Santa Ana River
Coyote Creek
Carbon Creek
Lower Santa Ana River
Anaheim
Newport Bay
Newport Coast
San Jacinto
Santa Ana Regional Board Boundary
County Boundary
Water Boards
0 5 10 20 Miles
N
Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community

Figure B.2: Orange County Permittees

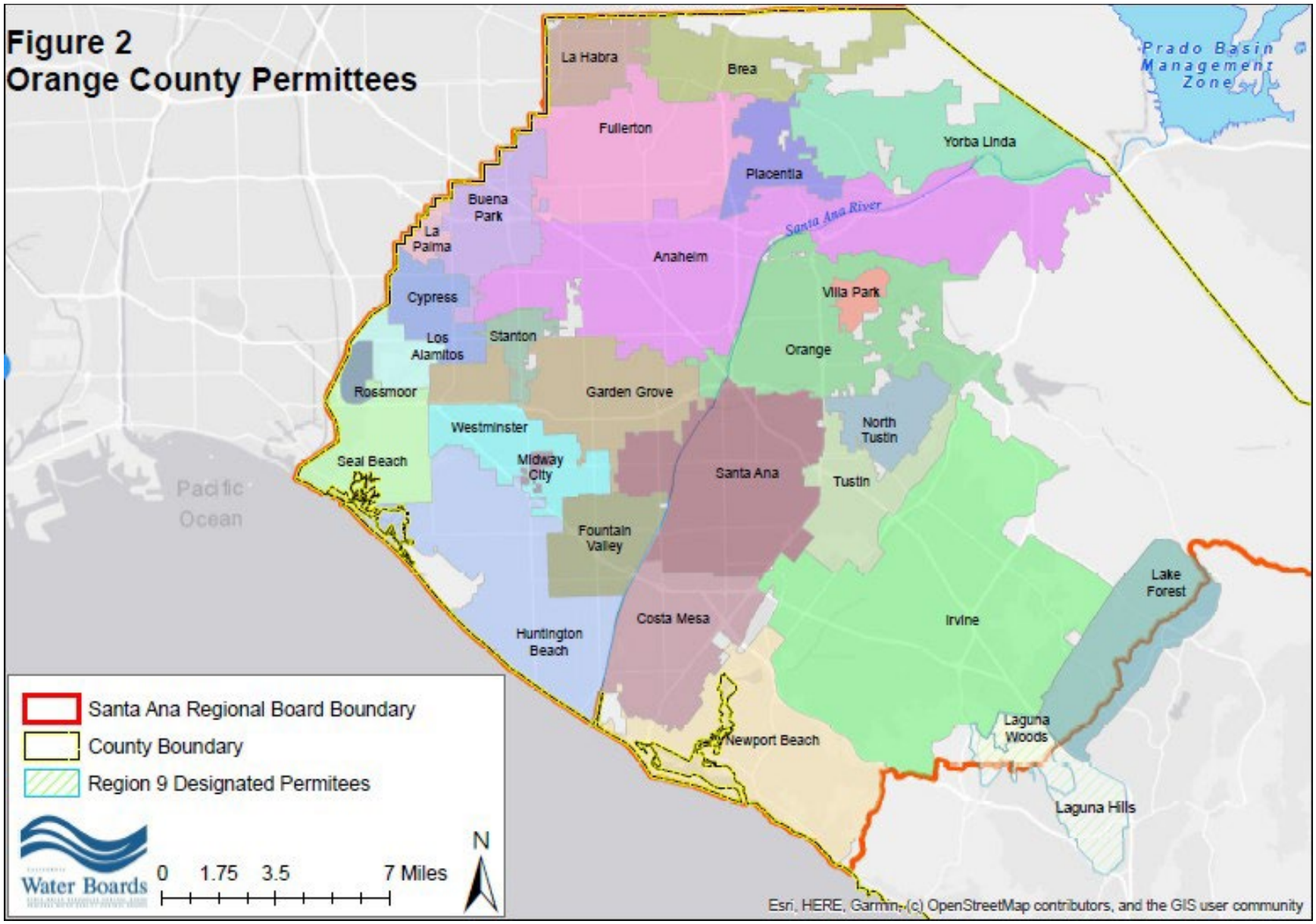


Figure 2
Orange County Permittees
La Habra
Brea
Prado Basin Management Zone
Fullerton
Yorba Linda
Placentia
Buena Park
La Palma
Santa Ana River
Anaheim
Cypress
Villa Park
Los Alamitos
Stanton
Orange
Rossmoor
Garden Grove
Westminster
North Tustin
Seal Beach
Midway City
Santa Ana
Tustin
Pacific Ocean
Fountain Valley
Lake Forest
Costa Mesa
Irvine
Huntington Beach
Laguna Woods
Newport Beach
Laguna Hills
Santa Ana Regional Board Boundary
County Boundary
Region 9 Designated Permitees
Water Boards
0 1.75 3.5 7 Miles
N
Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community

Figure B.3: Riverside County Permittees

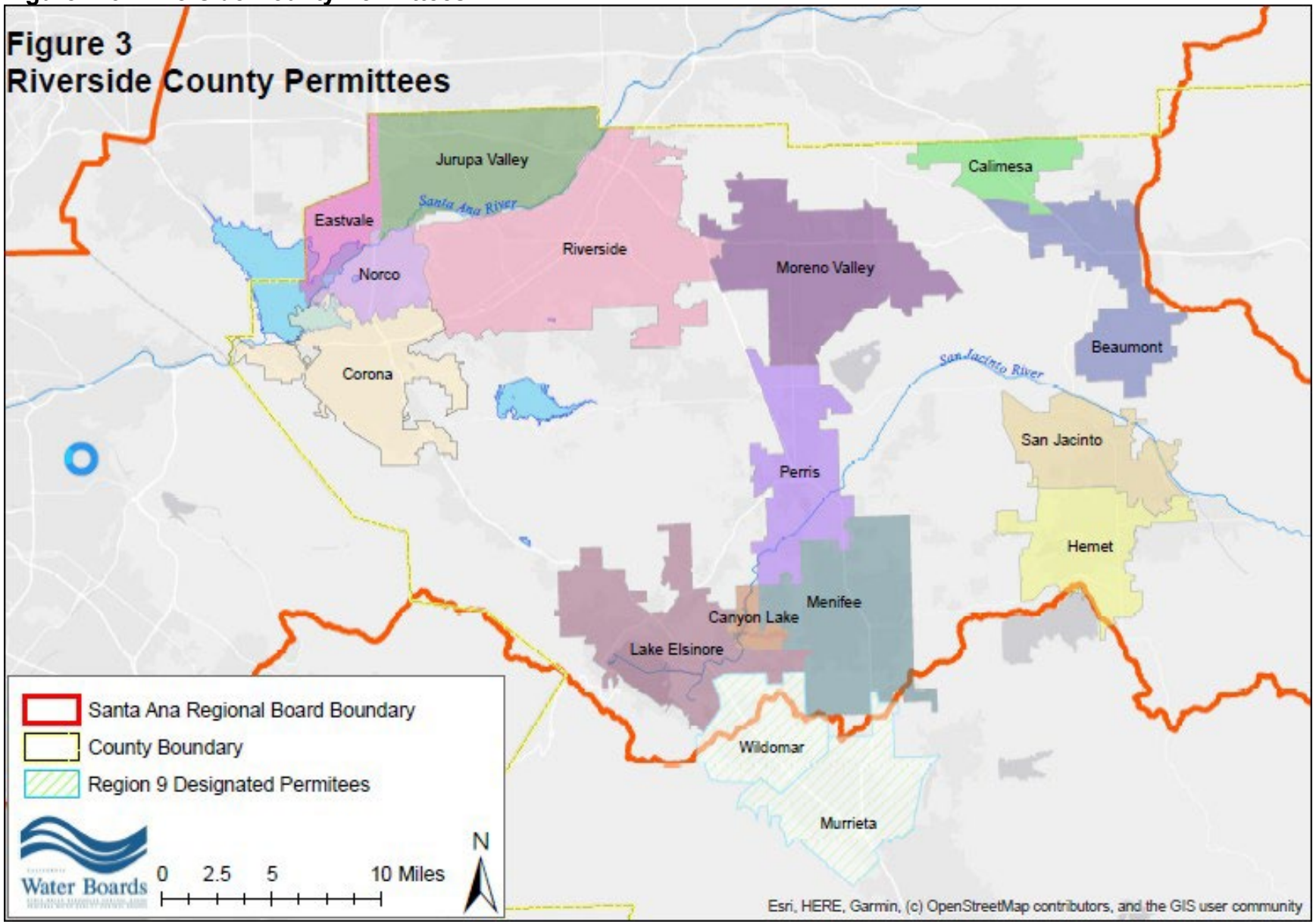


Figure B.4: San Bernardino County Permittees

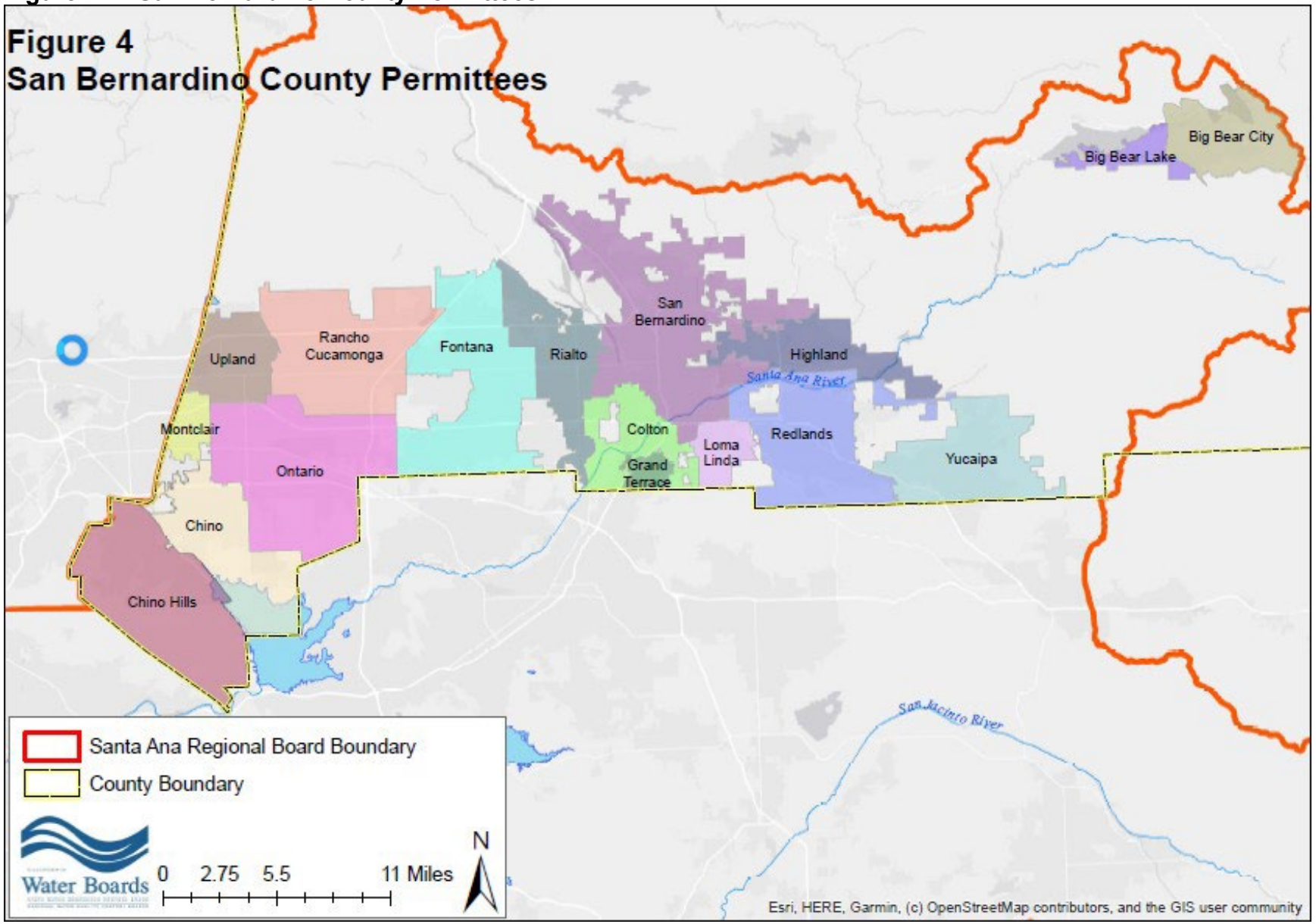
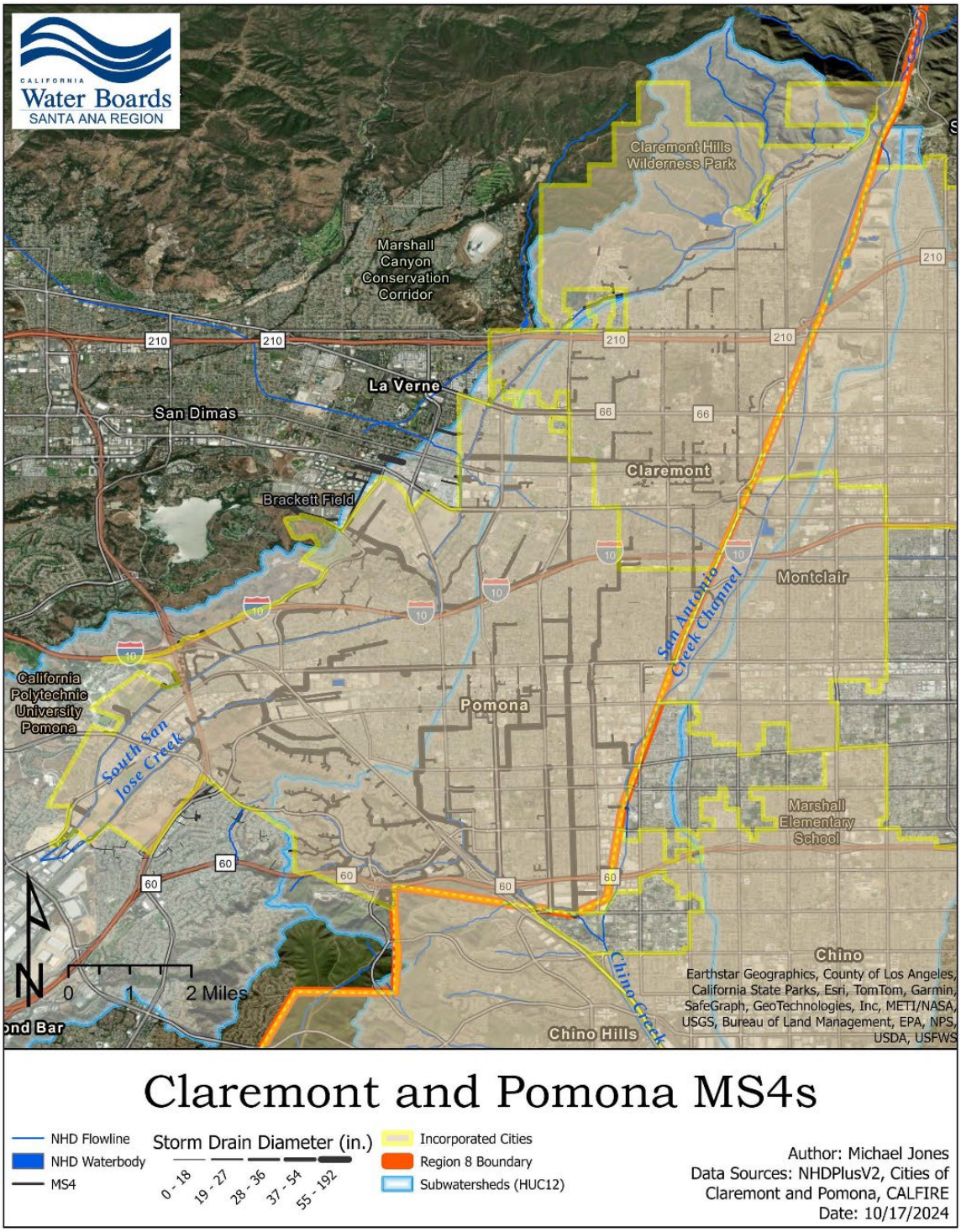


Figure B.5: Los Angeles County Permittees



Attachment C

Monitoring & Reporting Program

Attachment C

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 R8-2026-0034

FOR

ORDER R8-2026-0034
NPDES PERMIT NO. CAS618000

Revision No.	Date Requested	Approval Date

I. General

A. Section 308 of the federal Clean Water Act (CWA) and 40 Code of Federal Regulations (CFR) sections 122.41(h), (j)-(l), 122.44(i), and 122.48 require that all NPDES permits specify monitoring and reporting requirements. Federal regulations applicable to large and medium MS4s also specify additional monitoring and reporting requirements. (40 CFR § 122.26(d)(2)(i)(F) & (d)(2)(iii)(D), 122.42(c).) Water Code section 13383 also authorizes the Santa Ana Water Board to establish monitoring, inspection, entry, reporting, and recordkeeping requirements. This Monitoring and Reporting Program (MRP) establishes monitoring, reporting, and recordkeeping requirements that implement the federal and California laws and/or regulations.

B. The requirements of this MRP may be satisfied in whole or in part through the Permittees' collaborative efforts and participation in national, state-wide, regional, or local monitoring programs, subject to the discretion of the Executive Officer. The Permittees shall continue to cooperate with other MS4 Permittees and other public or private organizations in the watershed to develop coordinated surface water quality monitoring programs, databases, and special studies, as appropriate. The Permittees may use coordinated, regional monitoring programs conducted by the TMDL Task Forces to address, in whole or in part, as appropriate, the requirements of this MRP. These external monitoring programs must be expressly incorporated into the Program Monitoring and Reporting Plan (PMRP) in section IV below, to satisfy the requirements of this MRP.

C. The Executive Officer is authorized to add monitoring requirements to the MRP as relevant to the watershed. The Executive Officer will provide a minimum of 30 days for public review prior to approving any proposed changes.

D. To avoid duplication of effort, monitoring work performed by parties other than the Permittees, or work carried out by the Permittees in support of other programs, may be substituted for work required by the MRP. Substitutions are allowed provided that they meet the requirements of the MRP, Order R8-2026-0034, and are approved by the Executive Officer pursuant to Order R8-2026-0034.

E. The Permittees may supplement monitoring data that is required to be collected as part of this MRP and subsequent amendments with other data sources. Supplemental data must be used for the purpose of improving any related analysis and is subject to the approval of the Executive Officer.

F. The Santa Ana Water Board has approved various monitoring programs as part of TMDLs (see the description in the Fact Sheet). Where there is a conflict between

those monitoring programs and this MRP, with respect to the Permittees, this MRP shall prevail.

G. Each Permittee is responsible for the accuracy and completeness of the monitoring program(s) and related products for the watershed(s) to which the Permittee charges. However, the Principal Permittees may develop and implement those programs and submit related work products on behalf of the Permittees within their jurisdiction.

H. Unless otherwise specified, the Permittees shall upload all ambient water quality monitoring data and associated field, station, and quality assurance data into the California Environmental Data Exchange Network (CEDEN), or its successor, not less than annually, unless otherwise directed by the Executive Officer. Information adequate to verify the success of the upload shall be included in the Annual Progress Report.

I. The CWA provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this Order shall, upon conviction, be punished by a fine of not more than $10,000, or by imprisonment for not more than two years, or both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than $20,000 per day of violation, or by imprisonment of not more than four years, or both. (40 CFR § 122.41(j)(5))

J. Permittees must submit all information and materials necessary to comply with the requirements of Order R8-2026-0034 to the Principal Permittees in a timely manner.

K. All reports submitted to the Santa Ana Water Board pursuant to the requirements of Order R8-2026-0034 must include a statement identifying the provision(s) with which the report is intended to comply.

II. Water Quality Monitoring Requirements

A. Goals

The Permittees must carry out water quality monitoring that is adequate to achieve the following goals:

1. Characterize the water quality condition with respect to water quality standards; identify trends; identify pollutants found in runoff that may cause or contribute to impairments or exceedances of water quality standards.

2. Determine if WLAs assigned to the Permittees are being exceeded.

3. Demonstrate attainment of WLAs using methods that have been approved by the Executive Officer. Such methods may include TMDL targets, combined WLAs and load allocations, or other alternative indicators.

4. Demonstrate compliance with section VI (Receiving Water Limitations) and, if applicable, section XII (Watershed Management Plans) of the Order.

5. Identify and quantify other sources of pollutants (e.g., atmospheric deposition, legacy pollutants, etc.) that may adversely affect the beneficial uses of receiving waters.

6. Identify those receiving waters which, without additional action to control pollution from runoff, cannot reasonably be expected to attain or maintain applicable water quality standards. Demonstrate the effectiveness of the Permittees' hydromodification controls to preserve the physical, chemical, and biological integrity of vulnerable channels (See section VIII.L.2.b)

B. General Water Quality Monitoring Requirements

1. All sample collection, handling, storage, and analysis must be completed in conformance with 40 CFR 136; unless another test procedure is required under 40 CFR subchapter N or another method is specified in this MRP. If analytical methods are not identified in 40 CFR part 136 or specified in this MRP, then the Executive Officer may approve the use of alternative analytical methods for compliance purposes. These alternative analytical methods shall be validated using methods published by consensus standards bodies (USEPA, Standard Methods for the Examination of Water and Wastewater [Standard Methods], American Society of Testing Materials [ASTM], or Association of Official Analytical Chemists [AOAC]) or a method that is validated based upon the protocols described in USEPA's Guide to Methods Flexibility and Approval of EPA Water Method (USEPA, 1996).

2. Laboratories used to analyze monitoring samples must be certified by the State Water Resources Control Board's Division of Drinking Water, Environmental Laboratory Accreditation Program (ELAP), and must include quality assurance/ quality control (QA/QC) data with their reports.

3. Calculations must be performed using published and generally accepted methods.

4. The sampling method, practice, and analysis must minimize bias.

5. Field instruments used to test water quality parameters must be calibrated according to the manufacturer's instructions.

6. Water quality parameters that are tested using valid field instruments are not required to be analyzed by a laboratory.

7. Wet weather monitoring events must be separated by a minimum of 72 hours of dry weather (no precipitation) in accordance with 40 CFR section 122.21(g)(7)(ii).

8. Permittees must employ sample collection methods that are compatible with California's Surface Water Ambient Monitoring Program (SWAMP) Quality Assurance Program Plan (QAPP) and with SWAMP's *Procedures for Conducting Routine Field Measurement* unless otherwise specified in the PMRP.

9. Data transmittals on the results of water quality monitoring must be in a standard format for all data transfers, according to section I.H above, and should allow data to be universally shared and evaluated as part of various programs.

10. For each monitoring location and event, the Permittees must record observed conditions or circumstances that may influence monitoring results or affect conclusions made from the monitoring data.

11. Locations and frequencies of monitoring that is performed to demonstrate compliance with the WQBELs in Appendices 2 through 14 of Order No. R8-2026-0034 must be consistent with the locations and frequencies specified in the relevant TMDL and, as appropriate, any approved TMDL monitoring plans.

12. Permittees must test for the Constituents shown in Table C.1.

Table C.1 – List of Constituents within Watersheds

Constituents	**Watersheds within Santa Ana Region**					
	Upper Santa Ana River	Middle Santa Ana River	Lower Santa Ana River	San Jacinto	Newport Bay	Big Bear
Nutrients						
Nitrate plus nitrite				x	x	
Total ammonia				x	x	
Organic nitrogen				x	x	
Total Nitrogen				x	x	

Constituents	Watersheds within Santa Ana Region					
	Upper Santa Ana River	Middle Santa Ana River	Lower Santa Ana River	San Jacinto	Newport Bay	Big Bear
Total Phosphorus	x			x	x	x
General Parameters						
Total suspended solids	x	x	x	x	x	
Chloride	x	x	x	x	x	
Sulfate	x	x	x	x		
Sulfides	x	x	x	x	x	
Turbidity	x	x	x	x	x	
pH	x	x	x	x	x	
Oil and grease	x	x	x	x	x	
Temperature	x	x	x	x	x	
Dissolved oxygen	x	x	x	x	x	
Electrical conductivity	x	x	x	x	x	
Hardness	x	x	x	x	x	
Sediment					x	
Heavy Metals						
Cadmium					x	
Chromium					x	
Copper					x	
Lead					x	
Mercury					x	
Selenium					x	
Zinc					x	

Constituents	**Watersheds within Santa Ana Region**					
	Upper Santa Ana River	Middle Santa Ana River	Lower Santa Ana River	San Jacinto	Newport Bay	Big Bear
Pesticides						
Chlorpyrifos					x	
Diazinon					x	
Chlordane					x	
DDT					x	
Dieldrin					x	
PCBs					x	
Toxaphene					x	
Bacterial Indicators						
Fecal coliform*					x	
Escherichia coli		x			x	
*Enterococci**					x	

*- Salt Water

13. Permittees must test for additional pollutants in discharges that are known or suspected of contributing to the exceedance of water quality standards or other impairment of the beneficial uses of the receiving waters at the direction of the Executive Officer according to section I.C above.

14. Permittees must test for additional parameters that may provide information on the distribution and abundance of pollutants and their sources.

C. Outfall Monitoring Requirements

1. Permittees must perform monitoring of runoff during wet and dry conditions at representative outfall locations that have been approved by the Executive Officer.

2. Permittees must document the date and duration of the storm events sampled, estimates of the volume of rainfall from the storm event which generated the sampled discharge, the duration between the storm events sampled, and the end of the previous measurable storm event.

D. Toxicity Testing

1. Except for discharges to ocean waters, Permittees must perform acute and chronic aquatic toxicity testing. Testing must be performed according to the State Policy for Water Quality Control: Toxicity Provisions (adopted December 1, 2020, revised October 5, 2021).

   a. Chronic and acute aquatic toxicity tests shall be conducted using one or more of the test species identified in Table 1 of the Toxicity Provisions. Permittees must select test species as described in section III.B.2 of the Toxicity Provisions.

   b. Chronic aquatic toxicity testing methods are identified in 40 CFR, part 136, or other U.S. EPA-approved methods, or included in the following U.S. EPA method manuals: Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, Fourth Edition (EPA-821-R-02-013); Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms, Third Edition (EPA-821-R-02-014); and Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to West Coast Marine and Estuarine Organisms, First Edition (EPA-600-R-95-136).

   c. Acute aquatic toxicity testing methods shall follow methods identified in 40 CFR, part 136, or other U.S. EPA-approved methods, or included in Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms, Fifth Edition (EPA-821-R-02-012).

   d. Toxicity testing shall be evaluated and reported using the statistical approach and Percent Effect as outlined in sections III.B.3 through 5 of the Toxicity Provisions.

   2. Toxicity testing for any discharges from MS4s to ocean waters shall comply with the Ocean Plan, Appendix III, sections 7.2 and 11.

E. Illicit Discharge Detection and Elimination

   1. The Permittees must monitor to effectively detect and prohibit illicit connections and illicit discharges.

2. The Permittees must use odor, color, clarity, unusual wildlife morbidity or mortality, sheen, staining, corrosion, unnatural deposits, and other subjective indicators to identify suspected illicit connections or illicit discharges.

F. Receiving Waters Monitoring Requirements

1. Permittees must perform representative monitoring of the receiving waters to which outfalls in section II.C discharge. Representative, for the purposes of section II.F, means monitoring conducted at locations and under conditions that characterize the influence of MS4 discharges on receiving waters, this may include upstream or reference locations, as appropriate, to characterize background conditions and support evaluation of MS4 contributions.

2. Receiving waters monitoring in enclosed bays and estuaries must include, at a minimum, all parameters enumerated for sediment monitoring in the Sediment Quality Provisions of the Water Quality Control Plan for Enclosed Bays and Estuaries of California.

G. Bioassessment Monitoring Requirements

1. Each Principal Permittee must conduct or cause bioassessments to occur within their counties to identify stressors of biological conditions and to enable the identification of specific actions to be taken to meet the goals identified in section II.A.

2. In lieu of developing an independent bioassessment program, the Permittees may participate (through a memorandum of understanding and cooperative agreements) with other organizations in conducting bioassessment on a regional basis.

3. Bioassessment monitoring must be conducted in conformance with the Surface Water Ambient Monitoring Program's (SWAMP) Quality Assurance Program, including the QAPrP and applicable QAPPs and standard operating procedures (SOPs).

4. Stressors must be identified using USEPA Stressor Identification Guidance Document (2000), the web-based Causal Analysis/Diagnosis Decision Information System (CADDIS), or a published and generally accepted method as noted in the PMRP, acceptable to the Executive Officer.

5. In lieu of developing an independent bioassessment, Permittees may satisfy this requirement through participation in a regional monitoring program (e.g. the Stormwater Monitoring Coalition (SMC).) Bioassessment monitoring conducted in coordination with the regional program must be

completed at the monitoring locations specified by the most recent guidance(e.g. the SMC Workplan.) The monitoring locations and parameters may be adjusted during the monitoring year according to recommendations from the regional program so that they are consistent with the guidance.

6. Each Principal Permittee must complete a minimum of one causal assessment during the term of Order No. R8-2026-0034 to identify the likely causes of degraded biological conditions at one or more of the selected monitoring locations. Causal assessments must be conducted according to guidance acceptable to the Executive Officer or, where appropriate, the USEPA's Causal Analysis/Diagnosis Decision Information System (CADDIS), or the Tier Two (Detailed Causal Assessment) or Tier Three (Confirmatory Causal Assessment) according to Instructions for Application of the Rapid Screening Causal Assessment (RSCA) Tools v 2.0 in California Streams (SCCWRP Technical Report 1310, 2023) and as subsequently updated.

III. Special Studies

A. The Permittees should consider having a strategy for carrying out special studies, although it is not required. Special studies include projects intended to contribute to stormwater science or to support continual improvement of the Permittees' stormwater program. Special studies do not include projects intended to reach conclusions on compliance with receiving water limitations or WLAs; such projects may be subject to the requirements of this MRP. This strategy should include:

1. Identified research priorities.

2. Specific management questions to be informed by the results of the special study and which, when answered, will affect decisions in the program.

3. Funding strategies which may include partnerships with other agencies, grants, etc.

4. An annual workplan for carrying out special study projects.

IV. Data Analyses

A. All sample collection, handling, storage, and analysis must be completed in conformance with 40 CFR 136, unless another test procedure is required under 40 CFR subchapter N, or another method is specified in this MRP. If analytical methods are not identified in 40 CFR part 136 or specified in this MRP, then the

Executive Officer may approve the use of alternative analytical methods for compliance purposes. These alternative analytical methods shall be validated methods published by consensus standards bodies (USEPA, Standard Methods for the Examination of Water and Wastewater [Standard Methods], American Society of Testing Materials [ASTM], or Association of Official Analytical Chemists [AOAC]) or a performance-based method that is validated based upon the protocols described in USEPA's Guide to Methods Flexibility and Approval of EPA Water Method (USEPA, 1996). Performance-based method validation packages shall be approved by the Executive Officer.

B. Permittees shall use sufficiently sensitive analytical test methods that are consistent with 40 CFR Parts 122 and 136, and 40 CFR chapter I, subchapter N.

C. If the analysis of monitoring results is inconclusive or reveals opportunities for improvements to the monitoring program, the Permittees must include recommendations to improve the effectiveness of the monitoring program in the Annual Progress Report.

D. All analyses must include an assessment of the reliability of its methods and conclusions. The assessment must be performed by or under the direction of qualified persons.

E. The Permittees must disclose areas of uncertainty in the analysis of monitoring data and related conclusions. The disclosure must be adequate to allow a reasonable independent assessment of the validity of the methods and conclusions. Areas of uncertainty include but are not limited to variance in sample or population data; error in measurements, calculations, or estimates; levels of confidence in the accuracy of values; and factors that are unmeasured or unmeasurable.

F. Analyses of monitoring results must explicitly evaluate compliance with receiving water limitations and WQBELs, using methods consistent with applicable TMDL monitoring requirements where they exist.

V. Program Monitoring Requirements

A. Goals

Program monitoring consists of actions taken to track and control projects and programs carried out to comply with the requirements of Order R8-2026-0034. Each Permittee must implement program monitoring that is adequate to achieve the following goals:

1. To collect data that is adequate to evaluate the effectiveness of individual or systems of source control and treatment control measures and best

management practices (BMPs) used to control pollution based on the application of objective performance metrics.

2. To detect deviations from the intended scope, schedule, and levels of effort for project and program activities.

3. To detect changes in strategies and tactics used in project and program activities.

4. To document the conditions of projects and programs under which receiving water limitations and WLAs are attained and, if feasible, establish causal relationships.

B. Program Effectiveness Assessments

1. Each Permittee must perform assessments of the effectiveness of their program(s) to control Trash and comply with WQBELs and receiving water limitations according to the requirements of Order R8-2026-0034. Assessments must be performed annually or according to a schedule approved by the Executive Officer as part of the PMRP. The schedules will identify the timing of the assessments; the performance metrics that will be applied; and describe the methods of measuring effectiveness. Reported outcomes must be expressly compared to:

   a. The performance metrics prescribed by Order R8-2026-0034, and

   b. The performance metrics developed by the Permittees.

VI. Program Monitoring and Reporting Plan (PMRP)

A. The Permittees must implement monitoring and reporting that is required by this MRP according to a PMRP that has been approved by the Executive Officer pursuant to Order R8-2026-0034. A PMRP must satisfy the goals, requirements, and specifications described in this MRP and Order R8-2026-0034. The Permittees may develop a new PMRP or revise existing monitoring plans.

1. The PMRP must be written in an instructive manner for the benefit of persons responsible for its implementation, including sufficient detail to describe monitoring procedures, roles and responsibilities, and actions required to carry out the program.

2. The PMRP must specify requirements concerning the proper use, maintenance, and installation of monitoring equipment or methods sufficient to ensure reliable and representative data, including biological monitoring methods when appropriate. (40 CFR § 122.48(a).)

3. The PMRP must comply with applicable plans and policies, including the Basin Plan, Ocean Plan, Enclosed Bays and Estuaries Plan, ISWEBE; and must yield all data required by 40 CFR sections 122.26(d)(2)(iii) and 40 CFR 122.42(c).

4. The PMRP must specify all required monitoring including type, intervals, and frequency sufficient to yield data which are representative of the monitored activity including, when appropriate, continuous monitoring. (40 CFR § 122.48(b).)

5. The initial draft or revised PMRP must be submitted for approval to the Executive Officer within 18 months of the effective date of Order R8-2026-0034.

6. The responsible Permittees shall provide any information that is missing, or requested in writing by the Executive Officer, by the date identified in the request.

B. A PMRP must include the following:

1. The water quality monitoring objectives that will be assessed; descriptions of the locations and schedules for the receiving waters, outfall, and sediment monitoring; the parameters to be analyzed; sampling and analytical methods; minimum number of replicates for toxicity testing; reporting limits; and required reporting units.

2. The measurement quality objectives; standard operating procedures for sample collection, sample analysis, data review and verification; and other topics as needed.

3. A decision tree for data use and qualifying data used when measurement quality objectives are not achieved. Data that does not meet the measurement quality objectives established in the PMRP shall be qualified with standardized data quality flags (e.g., CEDEN QA codes).

4. All the elements of a Quality Assurance Project Plan (QAPP) as outlined in section 6.1.4 of the Water Quality Control Policy for Developing California's Clean Water Act section 303(d) List. The elements must ensure that data of known quality and quantity are collected to satisfy the goals, requirements and specifications described in this MRP and Order R8-2026-0034. The Quality Assurance Project Plan (QAPP) or monitoring plan documents for any joint monitoring programs shall be consistent with the QAPP elements of the PMRP.

5. A Data Management section that provides at a minimum:

a. Details of the data lifecycle from sample collection to data submission.

b. The Santa Ana Water Board's information management systems (i.e. SMARTS and/or CEDEN or their successors) to which the data will be submitted, and information needed to query and retrieve data from the systems.

c. A data submission schedule.

6. Descriptions of the methods proposed to be used to demonstrate compliance with the WQBELs in Appendices 2 through 14 of Order R8-2026-0034, as revised or amended and with Receiving Water Limitations, as applicable. Where compliance is demonstrated through receiving water monitoring or where discharges may affect receiving water quality, the description shall also include the processes to identify and report exceedances of applicable water quality standards in receiving waters. Analyses shall be sufficient to demonstrate whether discharges are causing or contributing to any identified exceedances. Compliance demonstrations may rely on multiple lines of evidence, including monitoring data, source-tracking data, flow data, field observations, GIS information, land-use information, special studies, or other relevant technical analyses approved through this PMRP. The descriptions of the methods must be sufficiently detailed to allow other stakeholders the ability to repeat them. The descriptions must include:

   a. 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.

   b. The methods for interpreting the outcomes of the analyses.

7. A schedule of data collection, analyses, and reporting cycles to demonstrate compliance with the WQBELs in Appendices 2 through 14 and receiving water limitations.

   a. The rationale for the schedule must be provided.

   b. Cycles of monitoring, analysis, and reporting for each of the WQBELs and for receiving water limitations shall conform to the following:

      i. A complete cycle must be as short as practicable to support continual improvements to the Permittees' projects and programs to attain WQBELs or receiving water limitations; conform to applicable TMDL deadlines and assessment periods found in the Basin Plan and incorporated into Appendices 2 through 14; and must not exceed 5 years.

ii. A complete cycle should consider the availability of data and a reasonable period after which source control and treatment control measures and BMPs may affect water quality.

C. Until the draft PMRP is approved, the Permittees must continue their existing monitoring and reporting program as described in the most recent Annual Progress Report. Changes to this monitoring are prohibited except with the approval of the Executive Officer.

D. The Executive Officer may approve parts of the draft PMRP separately. Permittees may implement approved sections, provided they adhere to requirements outlined in the MRP and Order R8-2026-0034. Sections requiring further review or modification must be resubmitted for approval.

E. The Executive Officer is authorized to direct changes to the existing monitoring and reporting program and, following its approval, to the PMRP, through a written notice. Changes may include a reduction or increase in the number of parameters to be monitored, the frequency of monitoring, or monitoring locations, or the number of samples collected, and changes to the methods of demonstrating compliance with WLAs or Receiving Water Limitations.

F. Permittees must complete the directed changes by the deadline provided in the Executive Officer's notice.

G. The Permittees must evaluate the effectiveness of the PMRP in meeting the requirements of this MRP and propose changes annually. The proposed changes to the PMRP must be approved by the Executive Officer before becoming effective.

H. A PMRP may be amended by the Permittees only with the approval of the Executive Officer except for the following:

1. Corrections for inconsequential grammatical, typographical, or technical errors

2. Corrections or updates to cross-references.

3. Updates to Permittee roles or contact information.

I. The Permittees must fully implement the approved PMRP and any subsequent changes approved or directed by the Executive Officer. The Executive Officer is authorized to approve the PMRP and may set conditions for approval.

J. The Executive Officer will allow a minimum of 30 days for public review and comment before approving the PMRP or approving or directing subsequent changes.

K. During the 30-day public review period, stakeholders may request that the Santa Ana Water Board hold a hearing prior to approval by the Executive Officer.

L. The Executive Officer shall approve, conditionally approve, reject, or provide written notice identifying revisions necessary for approval of PMRP. Permittees may begin implementing a PMRP, including any revisions identified by the Executive Officer, if the PMRP has not been approved, conditionally approved, or rejected within 60 days following the close of the public comment period. The Executive Officer may extend the 60-day review period by notifying the Permittees and known interested persons of the extension before the end of the 60-day period. The Santa Ana Water Board or Executive Officer may require changes to the PMRP following the 60-day period, but such changes will apply prospectively only.

M. The Principal Permittees must post notice of the availability of the approved PMRP on each County's public website or using other media acceptable to the Executive Officer.

VII. Annual Progress Report Requirements

The Permittees must submit an Annual Progress Report to the Executive Officer of the Santa Ana Water Board no later than November 15th of each year. The reporting period is from July 1 to June 30, preceding each annual deadline. The Executive Officer may grant an extension of up to 60 days with cause upon the receipt of a written request from the Permittees prior to the November 15th deadline. The fifth reporting period Annual Progress Report may be submitted as part of a Report of Waste Discharge, provided that the Report of Waste Discharge satisfies all applicable requirements of this section. The Annual Progress Report must include the following:

A. Water Quality Monitoring Results, Analyses, and Conclusions

1. The status of monitoring and analyses that were scheduled for the reporting period in the approved PMRP.

2. The results and conclusions from analyses of the water quality monitoring data, performed according to the schedule in the approved PMRP.

3. The results of water quality monitoring that Permittees may have performed beyond the requirements of Order R8-2026-0034.

4. The results of the causal assessment performed pursuant to section II.F above.

5. Any related conclusions reached by the Permittees regarding achievement of the goals in section II.A above.

6. Information adequate to verify the successful submittal and acceptance of the data to the CEDEN or its successor (e.g. a confirmation email or other documentation generated by the system.)

7. Identification of water quality improvements or degradation.

B. Program Monitoring Reporting

1. A statement certifying that the stormwater program was implemented consistent with the requirements of Order R8-2026-0034.

2. A summary of changes made to the PMRP at the discretion of the Permittees.

3. A summary of changes to the PMRP that are proposed and changes that were approved by the Executive Officer during each reporting period. If no changes are proposed, the Executive Officer must be notified in the Annual Progress Report.

4. The results of each Permittees' program effectiveness assessment. These results must be submitted by each Permittee to the Principal Permittee to allow for overall analyses of the programs' effectiveness. The assessment results must include:

    a. The management questions and performance metric(s) used to evaluate each individual or system of source and treatment control measures and BMPs.

    b. The source and treatment control measures and BMP(s) that each performance metric assesses.

    c. The method(s) of measurement.

    d. Measured outcomes.

    e. A qualitative assessment of the reliability of the methods of assessment, including disclosure of sources of uncertainty.

    f. A summary of changes that have been proposed and changes that were approved by the Executive Officer during each reporting period.

5. The results of the Principal Permittee's overall evaluation of the results of the program effectiveness assessments which are of mutual interest to the Permittees..

6. Records of training provided to Permittees' staff and others performing work on their behalf that are adequate to demonstrate compliance with Order R8-2026-0034.

7. The unified fiscal analysis (See section III.F of Order R8-2026-0034).

8. The maps of Permittees' respective MS4s (see section IX.A.2.e of Order R8-2026-0034)

9. A report on the status of special studies under section III above. The report must include a schedule of proposed actions, a description of work products to be completed, and the achievement of milestones along with any changes or updates for any special studies being carried out.

10. A report on any challenges to the legal authority of any Permittee that resulted in an adverse judgment to a Permittee in a court of law (See section III.D of Order No. R8-2026-0034).

11. A report on the results of biennial reviews of mechanisms to provide efficiency and consistency in the Permittees' WQMP-approval process (See section VIII.D of Order R8-2026-0034).

12. A report on the implementation and performance of any credit trading program pursuant to section VIII.H of Order R8-2026-0034.

13. A report on the outcomes of efforts to detect and mitigate SSOs pursuant to section IX.B of Order R8-2026-0034.

14. A summary describing the public education and outreach programs (See section X of Order R8-2026-0034).

15. A summary describing the number and nature of inspections and enforcement outcomes (See section XII.A of Order R8-2026-0034).,

16. A report on conformance with the MS4 cleanout schedule and program accomplishments (See section XIV.B of Order R8-2026-0034).

17. Each Permittees' inventory of fixed facilities and their prioritization category pursuant to section XIV.B of Order R8-2026-0034.

C. Trash Program Reporting

1. Each Permittee shall report their status towards compliance with section V of Order R8-2026-0034 in their Annual Progress Report, based on the Track that they selected, as indicated below:

a. Track 1. Permittees that chose Track 1 as a method to comply must include the following information in their Annual Progress Report.

   i. The type and location of all Full Capture Systems installed for the control of Trash within their jurisdiction.

   ii. A summary of all inspections and maintenance activities related to Full Capture Systems, including the results of any investigations due to third party complaints.

   iii. A quantitative assessment of progress towards interim and final compliance milestones.

   iv. Submit a Geographic Information System (GIS) map that includes the following information:

      (a) Priority Land Uses.

      (b) Designated Land Uses (if any).

      (c) Equivalent Alternative Land Uses (if any).

      (d) Total area and percentage area served by full capture systems.

      (e) Type and location of all existing and proposed full capture systems.

b. Track 2. Permittees that chose Track 2 as a method to comply must include the following information in their Annual Progress Report.

   i. The type, nature, and level of effort of source control and treatment control measures, BMPs, and multi-benefit projects have been used and the —GIS-mapped locations where they were applied and the drainage area(s) served.

   ii. The number of Full Capture Systems installed (if any), their locations, and the individual and cumulative area served by them.

   iii. A quantitative assessment of progress towards interim and final compliance milestones.

   iv. A summary of all inspection and maintenance activities for Full Capture Systems, including the results of any investigations due to third party complaints.

v. Updated jurisdictional map, if applicable, shall include the following information. This may be combined with the map required in section VII.C.b.i. above.:

a. Priority Land Uses.

b. Designated land uses (if any).

c. Equivalent alternative land uses (if any).

d. GIS-mapped total area and percentage area served by full capture systems, multi-benefit projects, other treatment controls and institutional controls installed or utilized by the Permittee.

e. Type and GIS-mapped location of all proposed full capture systems, multi-benefit projects, other treatment controls and institutional controls to be installed or utilized by the Permittee.

vi. In developing the monitoring reports, the Permittee shall consider the following:

a. The effectiveness of the total combination of treatment controls, institutional controls, and multi-benefit projects that have been implemented.

b. If the amount of trash discharged from the MS4 has decreased from the previous year, including how much has decreased or why there was not a decrease.

c. If the amount of trash in the MS4's receiving water has decreased from the previous year, including how much has decreased or why there was not a decrease.

D. Watershed Management Plan Reporting

1. The status of achievement of Critical and Non-Critical Milestones and final deadlines described in Notices to prepare Watershed Management Plans and in final approved Watershed Management Plans according to section XII of Order R8-2026-0034.

2. Where a Watershed Management Plan has been approved, the responsible Permittees must also report:

a. The status of completion of proposed treatment control measures.

b. The status of implementation of source control measures and BMPs.

c. The results of any monitoring undertaken to evaluate the impact of implementation of the Watershed Management Plan on receiving waters quality.

3. A summary of changes made to the WMP at the discretion of the Permittees.

4. A summary of changes to the WMP that are proposed and changes that were approved by the Executive Officer during the reporting period. If no changes are proposed, the Executive Officer must be notified in the Annual Progress Report.

E. Annual Progress Report Format Standards

1. Annual Progress Reports shall be submitted in an electronic format subject to the approval of the Executive Officer. Electronic documents must be searchable and viewable using widely available software.

2. The Principal Permittees shall submit a plan for transmitting the contents of the Annual Progress Report information within 12 months of the effective date of Order R8-2026-0034. The plan will propose the process and method for normalizing Annual Progress Report data into the water boards' information management systems (i.e., database normalization). The purpose of this plan is to align the permittees' information management systems with the water boards' systems, to facilitate conformance with USEPA's Cross-Media Electronic Reporting Rule (CROMERR) and promote efficiency.

3. The Executive Officer may direct the Permittees to update the database normalization plan to improve efficiency, to comply with CROMERR, or in response to changes in technology.

VIII. Summary of Key Tasks and Deliverables

Table C.2, below, summarizes the schedule of key tasks and deliverables required by Order R8-2026-0034 and this MRP. Items are in the order of appearance in the Order. Table C.2 is provided for the convenience of the reader and should not be used as a substitute for reviewing the contents of the Order or this MRP. In the event of a conflict between the provisions and Table C.2, the provisions shall prevail.

Table C.2: Summary of Key Tasks and Deliverables

Task or Deliverable	Source Provision(s)	Deadline
Report of Waste Discharge	section I, Table 2, and section II.D	180 days before expiration of this Order
Initial imminent threat notice	section III.E.1. a	24 hours after the Permittee's discovery.
Imminent threat report	section III.E.1. b	5 business days after initial imminent threat notice.
Semi-annual report on non-compliant facilities	section III.E.2	January 31 and July 31 of each calendar year.
Achieve Full Trash Capture	section V.D.2	By December 2, 2030.
Submit updated Technical Guidance Documents	section VIII.C.4	Within 24 months of the effective date of this Order
Create a WQMP database	section VIII.C.16	18 months from Order effective date.
Treatment control measure waiver notice	section VIII.H.e	30 -days prior to Permittee's issuance of the waiver.
General audience survey	section X.F	60 months from the date of adoption.
Submit notice of intent to develop Watershed Management Plan	section XII.C	Within 90 days of the effective date of this Order or within 90 days of receiving notice of violation of receiving water limitations.
Program Monitoring and Reporting Plan	Attachment C, section VI.A.5	18 months the effective date of this Order
Annual Progress Report	section XV and Att. C XII.B	November 15th of each year
Plan for transmitting Annual Progress Report information	Attachment C, section VII.E	Within 12 months of the effective date of this Order.

Attachment D

Fact Sheet

Attachment D

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

FACT SHEET

FOR

ORDER R8-2026-0034
NPDES NO. CAS618000

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT AND WASTE DISCHARGE REQUIREMENTS FOR DISCHARGES OF POLLUTANTS IN RUNOFF FROM THE MUNICIPAL STORM SEWER SYSTEMS IN THE COUNTIES OF ORANGE, RIVERSIDE, AND SAN BERNARDINO WITHIN THE SANTA ANA REGION

SANTA ANA REGIONAL MS4 PERMIT

September 11, 2026

I. PURPOSE 228
II. PERMIT INFORMATION 229
A. Permittees 229
B. Permittee Designation of Board 231
C. Permitted Discharges 232
D. Permit Scope 233
E. Rationale for Regional Permit 234
III. WATERSHED DESCRIPTION 235
A. Overview of the Hydrology of the Santa Ana Region 235
B. Description of Receiving Waters and Watershed Management Areas 238
C. Description of the Permittees' MS4s 241
D. Description of the Flood Control District Permittees 242
IV. APPLICABLE STATUTES, REGULATIONS, PLANS, AND POLICIES 243
A. Municipal Separate Storm Sewer System Requirements 243
B. Federal and California Endangered Species Acts 244
C. California Environmental Quality Act 244
D. Water Quality Control Plans 244
E. National Toxics Rule (NTR) and California Toxics Rule 247
F. Clean Water Act Section 303(d) List 247
G. Antidegradation Policy 248
H. Anti-backsliding Requirements 266
I. Plain Language 280
J. Other Regulations, Plans, and Policies 280
K. Human Right to Water 281
L. Assembly Bill 2108 281
V. RATIONALE FOR PERMITTEE RESPONSIBILITIES 281
A. Permittee Responsibilities 281
B. Implementation Agreement 282
C. Legal Authority/Enforcement 282
D. Notification Requirements 283
E. Fiscal Analysis 283
F. Special Studies 284
VI. RATIONALE FOR DISCHARGE PROHIBITIONS 284
A. Non-Stormwater Discharge Prohibitions 284
B. Trash Discharge Prohibition 289
VII. RATIONALE FOR TRASH CONTROL PROVISIONS 289
VIII. RATIONALE FOR RECEIVING WATER LIMITATIONS 290

IX. RATIONALE FOR EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS 292
A. Technology-Based Effluent Limitations (TBELs) 292
B. Water Quality-Based Effluent Limitations 294
X. RATIONALE FOR NEW DEVELOPMENT (INCLUDING SIGNIFICANT REDEVELOPMENT) PROVISIONS 310
A. Hierarchy for Treatment Control Measures 315
B. Integration of Project WQMPs into the Development Application Process 318
C. Non-Priority Projects 319
D. Treatment Control Measures Related to New Development and Significant Redevelopment Versus Other Treatment Control Measures 320
E. Regional and Subregional Treatment Control Measures 321
F. Alternatives and *In Lieu* Programs 322
G. Credit trading 323
XI. RATIONALE FOR ILLICIT DISCHARGE DETECTION AND ELIMINATION PROGRAM 324
XII. RATIONALE FOR PUBLIC EDUCATION AND OUTREACH PROVISIONS 326
XIII. RATIONALE FOR TRAINING PROGRAMS 327
XIV. RATIONALE FOR WATERSHED MANAGEMENT PLANS 328
A. Purpose of Watershed Management Plans 328
B. Watershed Management Plan Development and Contents 331
C. Implementation and Termination of a Watershed Management Plan 333
XV. RATIONALE FOR MUNICIPAL INSPECTIONS OF CONSTRUCTION, INDUSTRIAL, AND COMMERCIAL SITES 334
XVI. RATIONALE FOR MUNICIPAL FACILITIES/ACTIVITIES PROVISIONS 335
XVII. RATIONALE FOR PROGRAM EFFECTIVENESS ASSESSMENTS PROVISIONS 336
XVIII. RATIONALE FOR MONITORING AND REPORTING PROGRAM 339
XIX. RATIONALE FOR STANDARD PROVISIONS 340
XX. RATIONALE FOR REOPENER AND PERMIT MODIFICATION 340
XXI. WATER CODE SECTION 13241 341
A. Past, Present, and Probable Future Beneficial Uses of Water 343
B. Environmental Characteristics of the Hydrographic Unit Under Consideration, Including the Quality of Water Available Thereto 344
C. Water Quality Conditions that Could Reasonably be Achieved Through the Coordinated Control of All Factors Which Affect Water Quality in the Area 344
D. Economic Considerations 346
E. The Need for Developing Housing Within the Region 358
F. The Need to Develop and Use Recycled Water 359
XXII. STATE MANDATES 360
A. Permittees Have Authority to Fund Permit Compliance Costs Through Service Charges, Fees, or Assessments. 361

B. New or Modified Permit Requirements Do Not Mandate New Programs or Higher Levels of Service. 362
C. The Permit Requirements Are Non-Reimbursable Federal Mandates. 364
XXIII. PUBLIC PARTICPATION AND NOTIFICATION 368
A. Overview of Regional MS4 Permit Outreach Efforts 368
B. Outreach and AB 2108 370
C. Written Comment Period and Public Hearing 374

I. PURPOSE

As described in section II.C.2 of Order R8-2026-0034 (Order), the Santa Ana Water Board incorporates this Fact Sheet as findings of the Santa Ana Water Board supporting the issuance of the Order. The purpose of this Fact Sheet is to describe the principal facts, the methodology, and the significant factual, legal, policy, and technical matters considered by Santa Ana Water Board in preparing the Order. This Fact Sheet also serves as a technical report and contains the information described in 40 CFR sections 124.8 and 124.56.

CONTACT INFORMATION

The Order and other related documents are available at the Santa Ana Water Board's website at:

http://www.waterboards.ca.gov/santaana/water_issues/programs/stormwater/

The documents referenced in this Fact Sheet and in the Order are also available for public review at the Santa Ana Water Board office at the address below. These and other public records are available for inspection during regular business hours from 8:00 am to 5:00 pm Monday through Friday, except for State Holidays. The Santa Ana Water Board office address is:

3737 Main Street, Suite 500
Riverside, CA 92501-3348

Persons interested in reviewing or obtaining copies of public records are encouraged to do so by appointment. An appointment can be made by e-mail, facsimile, telephone, or in person. Requests by mail should be made to the attention of "File Review Request" at the Santa Ana Water Board office address shown above. Contact information for other means of communication is as follows:

Phone: (951) 782-4130
Facsimile: (951) 781-6288
E-mail: FileReview8@waterboards.ca.gov

Appointments are not mandatory, but they will help Santa Ana Water Board staff fulfill requests efficiently and prevent delays while records are being located, retrieved, and reviewed, if necessary.

The Order includes numerous references to webpages to save paper and simplify the presentation of the permit and related documents. In an electronic format, the permit and related documents may contain live links to websites. These links and website addresses may become broken or outdated during the term of the Order. Consequently, these references have been provided for the convenience of the reader. Santa Ana Water Board staff will make every effort to update broken or outdated internet references in electronic versions of this Order posted at the

Santa Ana Water Board's website. Readers who become aware of broken or outdated reference or links are asked to contact Santa Ana Water Board staff in the Contact Information (section II) above to assist in this effort.

The following Santa Ana Water Board staff were involved in the development of the Order:

Hero Alexander Water Resource Control Engineer Hero.Alexander@waterboards.ca.gov (951) 782-4419	Adam Fischer Senior Environmental Scientist Supervisor, Municipal Stormwater Unit Adam.Fischer@waterboards.ca.gov (951) 320-6363

II. PERMIT INFORMATION

A. Permittees

Consistent with the designation agreements outlined in section II.B below, Table 1 presents the list of permitted entities whose discharges of pollutants in runoff to waters of the US are authorized by this Order. The entities identified in Table 1 are collectively referred to as Permittees, which include the Principal Permittees. All Permittees are owners and/or operators of municipal separate storm sewer systems (MS4s).

Table D.1: Permittees

Orange County Principal Permittee	County of Orange	
Orange County Permittees	Orange County Flood Control District	City of Lake Forest
	City of Anaheim	City of Los Alamitos
	City of Brea	City of Newport Beach
	City of Buena Park	City of Orange
	City of Costa Mesa	City of Placentia
	City of Cypress	City of Santa Ana
	City of Fountain Valley	City of Seal Beach

	City of Fullerton	City of Stanton
	City of Garden Grove	City of Tustin
	City of Huntington Beach	City of Villa Park
	City of Irvine	City of Westminster
	City of La Habra	City of Yorba Linda
	City of La Palma	
Riverside County Principal Permittee	Riverside County Flood Control and Water Conservation District	
Riverside County Permittees	County of Riverside	City of Lake Elsinore
	City of Beaumont	City of Menifee
	City of Calimesa	City of Moreno Valley
	City of Canyon Lake	City of Norco
	City of Corona	City of Perris
	City of Eastvale	City of Riverside
	City of Hemet	City of San Jacinto
	City of Jurupa Valley	
San Bernardino County Principal Permittee	San Bernardino County Flood Control District	
San Bernardino County Permittees	San Bernardino County	City of Montclair
	City of Big Bear Lake	City of Ontario
	City of Chino	City of Rancho Cucamonga
	City of Chino Hills	City of Redlands
	City of Colton	City of Rialto
	City of Fontana	City of San Bernardino

	City of Grand Terrace	City of Upland
	City of Highland	City of Yucaipa
	City of Loma Linda	

Prior to issuance of this Order, the Santa Ana Water Board administered three separate MS4 Permits issued to permittees in the counties of Orange (R8-2009-0030), Riverside (R8-2010-0033), and San Bernardino (R8-2010-0036). These three MS4 Permits expired prior to the issuance of this Order but were administratively extended pursuant to 40 CFR section 122.6(d).

In accordance with the previous term MS4 Permits for Orange, Riverside, and San Bernardino counties, ROWD were submitted by each county on behalf of their incorporated cities on October 3, 2013, July 29, 2014, and August 1, 2014, respectively.

B. Permittee Designation of Board

Regional Water Board boundaries are largely defined by watershed boundaries that may cross political or jurisdictional boundaries. Water Code section 13228 authorizes the Executive Officer of a Regional Water Board to grant a written request, made by an entity that is subject to regulation by more than one Regional Water Board, that one Regional Water Board be designated to regulate the matter. Several cities in Orange County, Riverside County, and Los Angeles County have requested such designation for regulation of pollutants in runoff from their MS4s.

In Orange County, written requests for designation were received during the last permit term from the cities of Laguna Hills (March 12, 2014), Laguna Woods (September 8, 2014), and Lake Forest (April 4, 2014). The cities of Laguna Hills and Laguna Woods requested designation to the San Diego Regional Water Quality Control Board for regulation of pollutants in runoff from their MS4s. The City of Lake Forest requested designation to the Santa Ana Water Board. The Santa Ana and San Diego Water Boards entered into an agreement consistent with these requests on February 10, 2015, contingent on the Santa Ana Water Board issuing draft Order R8-2015-0001, NPDES No. CAS618030, as amended or reissued. These requests for designation were renewed by the cities of Laguna Hills (August 4, 2022), Laguna Woods (July 11, 2022), and Lake Forest (December 15, 2022). Discharges from the Cities of Laguna Woods' and Laguna Hills' MS4s will be regulated through the San Diego Water Board's regional MS4 permit. Under the San Diego Water Board's regional MS4 permit, those cities must comply with all applicable requirements of Santa Ana Water Board TMDLs. This includes meeting WQBELs, receiving water limitations and/or BMP requirements implementing the TMDLs' WLAs for urban (MS4) discharges. The City of Lake Forest will continue to be covered

as a permittee under this Order for discharges within the Santa Ana Region and under the San Diego Water Board's regional MS4 permit for discharges within the San Diego Region.

In Riverside County, written requests for designation were received during the last permit term from the cities of Menifee (June 25, 2015), Murrieta (June 22, 2015) and Wildomar (June 23, 2015). The cities of Murrieta and Wildomar requested designation to the San Diego Regional Water Quality Control Board for regulation of pollutants in runoff from their MS4s. The City of Menifee requested designation to the Santa Ana Water Board. The requests for designation were granted by the respective Executive Officers of the Santa Ana Water Board and San Diego Regional Water Quality Control Board in a designation agreement dated October 26, 2015, subject to the conditions in that agreement. The requests for designation were renewed by the cities of Menifee (July 12, 2022), Murrieta (July 25, 2022), and Wildomar (November 15, 2022). This Permit continues the previous designations from the last permit term.

In Los Angeles County, written requests for designation were received from the cities of Claremont (September 19, 2012) and Pomona (September 20, 2012). The cities of Claremont and Pomona requested designation to the Santa Ana Water Board for regulation of discharges of bacteria in runoff to the Middle Santa Ana River Watershed. This request for designation was granted by the respective Executive Officers of the Santa Ana Water Board and Los Angeles Regional Water Quality Control Board in a designation agreement dated May 31, 2013. The cities of Pomona and Claremont were covered under a separate NPDES Permit issued by the Santa Ana Water Board (Order No. R8-2013-0043). The cities of Pomona and Claremont have been included as Permittees under this Order R8-2026-0034, which only regulates discharges containing bacteria into the MSAR watershed waterbodies from MS4s owned or operated by the Cities of Claremont and Pomona. Discharges of all other pollutants are regulated through NPDES Permit No. CAS004004, Order R4-2021-0105, as subsequently amended. For the Cities of Claremont and Pomona, monitoring and reporting requirements under this Order are limited to those necessary to demonstrate compliance with Appendix 11. Monitoring and reporting for all other pollutants and receiving waters continue to be governed by Order R4-2021-0105, as subsequently amended.

The Santa Ana Water Board reserves the right to terminate or modify the designation agreements or take enforcement actions for violations of the applicable MS4 permit pursuant to Water Code section 13228(b).

C. Permitted Discharges

Stormwater and non-stormwater discharges consist of surface runoff generated from various land uses, which is conveyed via the MS4 and ultimately discharge to surface waters throughout the region. Discharges of

stormwater and non-stormwater through the MS4s within the Santa Ana Region convey pollutants to surface waters. The discharge of pollutants from MS4s may cause or contribute to exceedances of applicable water quality standards in receiving waters. See the findings in section II.B.1 through II.B.4 of the Order for additional detail. This Permit authorizes the discharge of pollutants in runoff from MS4s that are owned or operated by the Permittees listed in Table 1 above, subject to the receiving water limitations and effluent limitations in this Order. This Permit does not authorize the discharge of non-stormwater other than discharges authorized under section IV of the Order.

Attachment B of the Order provides a map depicting each major Watershed Management Area in the Santa Ana Region and the major receiving waters therein to which the MS4 discharges.

D. Permit Scope

In 1987, the CWA was amended to include section 402(p), which established a framework for regulating municipal and industrial stormwater discharges under the NPDES. On November 16, 1990, the USEPA amended its NPDES permit regulations to include requirements for stormwater discharges. These regulations are codified in 40 CFR parts 122, 123, and 124. According to the regulations, discharges of pollutants in runoff from MS4s are required to be regulated under NPDES permits.

The Order regulates discharges of stormwater and authorized non-stormwater from the Permittees' MS4s. 40 CFR section 122.26(b)(8) defines an MS4 as "a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, manmade channels, or storm drains): (i) [o]wned or operated by a State, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, storm water, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under section 208 of the CWA that discharges to waters of the United States; (ii) [d]esigned or used for collecting or conveying storm water; (iii) [w]hich is not a combined sewer; and (iv) [w]hich is not part of a Publicly Owned Treatment Works (POTW) as defined at 40 CFR [section] 122.2."

Stormwater discharges consist of those discharges that originate from precipitation events. Federal regulations define "storm water" as "storm water runoff, snow melt runoff, and surface runoff and drainage." (40 CFR § 122.26(b)(13).) While "surface runoff and drainage" is not specifically defined in federal law, USEPA's preamble to its final stormwater regulations demonstrates that the term is related to precipitation events such as rain and/or snowmelt. (55 Fed. Reg. 47990, 47995-96 (Nov. 16, 1990).)

Non-stormwater discharges consist of all discharges through an MS4 that do not originate from precipitation events. Permittees must effectively prohibit non-stormwater discharges through an MS4 unless authorized under a separate permit; authorized pursuant to sections 104(a) or 104(b) of CERCLA; composed of natural flows; the result of emergency firefighting activities; or otherwise identified as exempt or conditionally exempt in section IV of the Order.

A permit issued to more than one Permittee for MS4 discharges may contain separate stormwater management programs for particular Permittees or groups of Permittees. (40 CFR § 122.26(d)(2)(iv).) For example, the Trash Control Provisions in section V of the Order only apply to Permittees with regulatory authority over Priority Land Uses, Designated Land Uses, and/or Equivalent Alternate Land Uses.

E. Rationale for Regional Permit

The Santa Ana Water Board retains the discretion as the permitting authority to determine whether to issue permits for discharges from MS4s on a system-wide or jurisdiction-wide basis. CWA section 402(p)(3)(B)(i) and implementing regulations at 40 CFR section 122.26, subdivisions (a)(1)(v), (a)(3)(ii), and (a)(3)(iv) allow the permitting authority to issue permits for MS4 discharges on a system-wide or jurisdiction-wide basis taking into consideration a variety of factors. Such factors include the location of the discharge with respect to waters of the United States, the size of the discharge, the quantity and nature of the pollutants discharged to waters of the United States, and other relevant factors. Federal regulations at 40 CFR section 122.26(a)(3)(ii) identify a variety of possible permitting structures, including one system-wide permit covering all MS4 discharges or distinct permits for appropriate categories of MS4 discharges including, but not limited to, all discharges owned or operated by the same municipality, located within the same jurisdiction, all discharges within a system that discharge to the same watershed, discharges within a MS4 that are similar in nature, or for individual discharges from MS4s.

Consistent with CWA 402(p)(3)(B)(i), the Santa Ana Water Board is issuing the Order for the entire Santa Ana Region. The issuance of a region-wide MS4 Permit is also consistent with USEPA's January 7, 2003 memorandum to transmit the final "Watershed-Based NPDES Permitting Policy Statement," as this reflects the agency's support for developing and issuing NPDES permits on a watershed basis. The Santa Ana Water Board is also issuing the Order to implement the State Water Board's guiding principles for MS4 permit development by all regional water boards, which is provided in Order WQ 2015-0075. Specifically, the State Water Board stated: *"Phase I MS4 permits should (1) continue to require compliance with water quality standards in accordance with our Order WQ 99-05; (2) allow compliance with TMDL requirements to constitute compliance with receiving water limitations; (3) provide for a compliance alternative that allows permittees to achieve compliance with*

receiving water limitations over a period of time as described above; (4) encourage watershed based approaches, address multiple contaminants, and incorporate TMDL requirements; (5) encourage the use of green infrastructure and the adoption of low impact development principles; (6) encourage the use of multi-benefit regional projects that capture, infiltrate, and reuse storm water; and (7) require rigor, accountability, and transparency in identification and prioritization of issues in the watershed, in proposal and implementation of control measures, in monitoring of water quality, and in adaptive management of the program."

The application of these principles on a regionwide basis results in improved consistency and uniformity, where warranted, in Phase I MS4 permit requirements, with the goal of providing Permittees the flexibility to tailor their implementation through watershed management plans that take into consideration unique watershed, socio-economic, land use, and geographic characteristics. This holistic approach provides a framework for addressing more stressors within a management area rather than focusing on individual sources within a city or other smaller area. The intent of this regionwide permit is to provide the Permittees with a shared set of objectives, encourage them to share resources towards a common set of goals, and reduce the likelihood that programs will work at cross-purposes.

During the adoption proceedings for the previous term MS4 permits issued to Riverside, Orange, and San Bernardino Counties, Santa Ana Water Board staff invested considerable time and resources drafting MS4 permits for each county that were substantially similar and consistent with statewide requirements. The issuance of a regionwide MS4 permit allows for more efficient use of limited Santa Ana Water Board resources and time.

Where there are performance metrics that differ for each county's program, the regionwide MS4 permit assigns individual requirements for each county. As with prior permits, each Permittee is responsible for implementing the requirements of the regionwide MS4 permit within its jurisdiction. The regionwide MS4 permit does not require counties to form a joint powers authority or use other formal forms of cooperation; they may continue working autonomously if desired. However, Permittees are encouraged to participate in area-wide or regional efforts to develop consistent procedures and approaches where such participation would be more efficient. A regionwide permit generally provides the Permittees with a consistent set of shared objectives which facilitate further cooperative use of their resources.

III. WATERSHED DESCRIPTION

A. Overview of the Hydrology of the Santa Ana Region

In very broad terms, the Santa Ana Region is a group of connected inland subbasins and open coastal subbasins drained by surface streams flowing generally southwestward to the Pacific Ocean. The outer boundaries of the

region are mostly made up of the mountain peaks of the San Gabriel and San Bernardino Mountains to the north and the San Jacinto Mountains to the southeast. The inland subbasins are separated from the coastal subbasins by the Chino Hills and Santa Ana Mountains. The county line between Los Angeles and Orange County is the only political boundary that defines the Santa Ana Region. Between the San Gabriel Mountains and the Chino Hills is an urban flatland area where the Cities of Claremont and Pomona are located. The hydrologic boundary here does not coincide with the boundary between the Los Angeles and Santa Ana regional water boards. Instead, the boundary between the regional water boards is the county line and the hydrologic boundary is located west of that. This allows for the Cities of Claremont and Pomona to be in Los Angeles County but have a portion of their jurisdictions drain into the Santa Ana Region in the Middle Santa Ana River watershed.

The hydrology of the Santa Ana Region is highly variable and is influenced by urbanization and concerted water supply management efforts. The lower valleys experience average annual rainfall that ranges from approximately 10.6 inches in the Perris Valley area, 15 inches in the Chino Basin area, and 11 inches along the coast[14, 15, 16]. In the higher elevations, average annual precipitation is substantially higher, with up to 30 inches at the western edge of Big Bear Valley[17].

Precipitation is not sufficient to meet water demand in the Santa Ana Region. In the Orange County Water District, aerial recharge from precipitation/irrigation accounts for 66,000 acre-feet of the groundwater basins' in-flow while total water demand for the 2013-14 water year was 449,000 acre-feet[18] . In the Inland Empire Utilities Agency's service area, local surface water and groundwater, a portion of which is infiltrated stormwater runoff, comprise approximately 45 percent of the annual average regional water supplies[19].

The general strategy to meet water demand is indirect reuse of recycled water for potable uses and direct reuse of recycled water for non-potable uses such as irrigation. The Santa Ana Region has substantial groundwater basins that store recycled and imported water and infiltrated stormwater runoff. Various spreading grounds, infiltration basins, and other recharge facilities are operated by flood control districts and water suppliers. Many facilities in the San

[14] Inland Empire Utilities Agency. 2020 Urban Water Management Plan, Kennedy Jenks, June 29, 2021
[15] City of Newport Beach. Average Temperature & Rainfall, Average Temperature & Rainfall | City of Newport Beach (newportbeachca.gov), accessed October 29, 2021
[16] Eastern Municipal Water District. Urban Water Management Plan 2020, July 1, 2021
[17] United States Geologic Service. Geohydrology of the Big Bear Valley. Geohydrology of the Big Bear Valley (usgs.gov), accessed October 29, 2021
[18] OCWD, 2015. OCWD Groundwater Management Plan 2015 Update, Orange County Water District, June 17, 2015
[19] IEUA 2020. Inland Empire Utilities Agency Regional Drought Contingency Plan, IEUA, April 2020

Bernardino Valley area, such as the Mill Creek Spreading Grounds have been in operation since the 1930s[20] .

Because of the variability in precipitation, recycled water is regarded as a more reliable resource than stormwater runoff. Recycled water is one of the most reliable supply types[7]. Where available, recycled and imported water is infiltrated when a facility is not being used for flood control or stormwater infiltration. Hydraulic gradients are controlled at various groundwater basins to protect lower quality water from intruding into higher quality ground and surface water. Hydraulic gradient control is also used to contain groundwater contamination plumes. The previous orders prioritized the use of stormwater retention facilities for new development and significant redevelopment. This resulted in the installation of stormwater recharge facilities, such as dry wells and retention basins on private property as early as 2011. These private facilities supplement local water resources, but they are not large, centralized facilities run by institutional operators. The previous orders also included conditions where a retention facility would not be used if it would conflict with the need for hydraulic control to protect groundwater quality or with groundwater cleanup efforts. The Order continues those same requirements but also removes some barriers that discouraged regional facilities that would serve multiple projects. Consequently, the Order is better aligned with statewide efforts to increase water supplies.

Since the early 1900's, urbanization has exposed urban areas to flood risks. Flood events, such as the one in 1938, prompted flood control improvement projects that were initially carried out by agricultural cooperatives[13]. Later projects were carried out by the US Army Corps of Engineers and flood control districts. These projects included constructing channels to drain wetlands, constraining and straightening channels, and constructing dams and detention facilities. The urbanization of watersheds has led to an increase in the amount of impervious land. Impervious land produces substantially more runoff volumes to receiving waters, necessitating detention facilities and channel modifications that armor the bed and banks of streams and prevent flooding. The development of water resources for agriculture and, later, for urban landscape irrigation resulted in nuisance flow that altered habitats in receiving waters. The combined effects of these efforts have resulted in degradation of the physical and biological integrity of most urban waters. These efforts continue today and will be necessary to meet regional housing needs.

The previous orders included new limitations on discharges from new development and significant redevelopment that have the potential to degrade

[20] Orange County Water District. A History of Orange County Water District. Available at: https://www.ocwd.com/media/1606/a-history-of-orange-county-water-district.pdf. Accessed January 4, 2022

the physical integrity of the receiving waterbody. This impact is known as hydromodification.

These limitations resulted in stormwater retention facilities that both removed pollutants in the discharge and controlled the runoff flows that may cause hydromodification. Mostly, these facilities are small-scale and privately owned. These facilities are not designed to meet flood control needs in the receiving waters, but they do help to incrementally reduce the highest design storm flow (100-year, 24-hour event). The Order continues limitations to address hydromodification.

B. Description of Receiving Waters and Watershed Management Areas

Stormwater and non-stormwater discharges from the MS4 enter receiving waters in the major Watershed Management Areas of Big Bear Area, Mountain Santa Ana River, Upper Santa Ana River, Middle Santa Ana River, Lower Santa Ana River, San Jacinto, Coyote Creek, Carbon Creek, Anaheim, Newport Bay, and Newport Coast. The locations of the different Watershed Management Areas are depicted in Attachment B of the Order.

The major surface waters that receive discharges of pollutants from MS4s include the Santa Ana River, Big Bear Lake, the San Jacinto River, Canyon Lake, Lake Elsinore, Newport Bay, and the Pacific Ocean. All these waterbodies have received discharges of pollutants from MS4s and other point and non-point sources since at least 1968, although the relative contribution of the different pollutants from each source category has varied due to changes in land use, evolving environmental conditions, and other factors.

Many trend analyses have been performed in the Santa Ana Region for different waterbodies and pollutants. These analyses were performed at different levels of detail regarding the pollutant sources, and some of these pollutants are ones for which TMDLs were developed. None of the analyses were found to cover a period that extends back to 1968, the baseline year for evaluating water quality for purposes of the State Antidegradation Policy (State Water Board Resolution No. 68-16).

Trend analyses performed for the Newport Bay watershed for nutrients, algal biomass, and fecal indicator bacteria show improved or consistent water quality[21]. The USGS performed trend analyses for pollutants in wastewater treatment plant effluent, atmospheric deposition, and manure and fertilizer application in the Santa Ana Basin between 1975 and 2004[22]. Nitrogen and

[21] Schiff, K.C., A.E. Fetscher, M.M. Hanken. 2014. Newport Bay Watershed Monitoring Evaluation. Technical Report 815. Southern California Coastal Water Research Project. Costa Mesa, CA.

[22] Kratzer, C.R. & Kent, Robert & Saleh, Dina & Knifong, D.L. & Dileanis, P.D. & Orlando, James. (2011). Trends in Nutrient Concentrations, Loads, and Yields in Streams in the Sacramento, San Joaquin, and Santa Ana

phosphorous in manure generally remained steady until about 1997 before beginning a decline. Nitrogen in manure production decreased by 34 percent during 1982-2002 and phosphorous declined by 36 percent during 1987-2002[23]. Nitrogen and phosphorous in fertilizer also remained steady until about 1997 before beginning to slightly increase. From 1975 to 2004, total nitrogen loads from wastewater treatment plants increased by 14 percent and, from 1985 to 2004, decreased by 25 percent[24]. Exceptions to this trend was found in the Santa Ana River near San Bernardino and near Mentone and Warm Creek near San Bernardino, where the flow-adjusted concentration trend was increasing for nitrate, total nitrogen, and phosphorous. From 1975 to 2004, total phosphorous loads from wastewater treatment plants decreased by 60 percent[25].

An apparent downward trend has been reported for *Escherichia coliform* in Prado Park Lake and Mill-Cucamonga Creek between 2007 and 2015[26]. Geometric mean densities of Escherichia coliform in the Middle Santa Ana River and Chino Creek appear steady during the same period[27]. Local studies indicate that in-stream sources, such as biofilms and sediments, are a significant contributor of Escherichia coliform during both dry and wet weather[28].

Trend analyses for 24 organic constituents at monitoring stations in Orange County over 10 years generally show decreasing concentrations of pesticides with exceptions for mevinphos, glyphosate, and ethyl parathion (OC MS4 monitoring program, mass emissions, 2020). Phosphorous and nitrogen concentrations have generally increased (OC MS4 monitoring program, mass emissions, 2020). For metals, arsenic, chromium, iron, mercury, lead, and zinc were mostly increasing; silver, cadmium, copper, nickel, and selenium were mostly decreasing (OC MS4 monitoring program, mass emissions, 2020). Average fecal coliform concentrations in Newport Bay have decreased substantially since 2001 and reductions in sediment, total phosphorous and total nitrogen have been observed since 1999[29]. The percent of samples of dry weather flow in Orange County that contain detectable concentrations of organophosphate pesticides has generally decreased since 2006. For pesticides such as chlorphyrofos and fensulfothion, measured increases in the

Basins, California, 1975-2004. US Geological Survey, National Water-Quality Assessment Program. Sacramento, CA.

[23] *Ibid.*

[24] *Ibid.*

[25] *Ibid.*

[26] CDM Smith. 2021. Santa Ana River Regional Bacteria Monitoring Program Annual Report: 2020-2021. Prepared for the Santa Ana Water Project Authority. June 2021.

[27] *Ibid.*

[28] GEI and CDM Smith. 2023. Middle Santa Ana River Bacterial Indicator TMDLs: 2023 Triennial Report, February 11, 2023.

[29] Orange County Unified Annual Progress Report, Santa Ana Region, 2020-2021 Reporting Period. November 15, 2021.

rate of detectable concentrations are likely attributed to improvements in the method detection limits[30]. Discharges of nitrate from San Diego Creek into Newport Bay have shown a decreasing trend since 2006[31].

The weighted average of total phosphorous concentrations in Big Bear Lake have more than doubled from approximately 40 µg/L in 2009 to almost 100 µg/L in 2020[32].

Wet weather concentrations of turbidity, lead and copper in the Santa Ana River have decreased from 2010 and 2014; no statistically significant changes have been detected for phosphorous and total nitrogen[33]. At the Hemet Channel outfall, total nitrogen was found to be increasing over the same period. In the Perris Valley Channel, concentrations of total inorganic nitrogen, ammonia, nitrate, and orthophosphate were decreasing from 2010 and 2014[34]. In Salt Creek, San Jacinto River, and Canyon Lake spillway, bioavailable forms of nitrogen were found decreasing in wet weather over the same period. Total phosphorous and orthophosphorous concentrations in wet weather were increasing in Salt Creek and at the Canyon Lake spillway and a decreasing trend was observed for orthophosphorous in the San Jacinto River over the same period[35].

Significant reductions in total phosphorus and total nitrogen have been achieved at watershed monitoring stations in the San Jacinto watershed over the 10-year period from 2013 to 2023. The San Jacinto River at Goetz monitoring station showed 15 percent and 27 percent reductions in total phosphorus and nitrogen respectively, the Salt Creek at Murietta monitoring station showed 31 percent and 15 percent reductions respectively, and the San Jacinto River near Elsinore monitoring station showed 68 percent and 20 percent reductions respectively[36].

Permittees performed trend analyses for Sunnymead Channel, Hemet Channel, the Corona Storm Drain, Magnolia Center Storm Drain, University Wash, Norco Channel, Perris Line J, and Perris Valley Channel, spanning between 9 and 29 years. Generally, concentrations of copper, lead, selenium, and zinc demonstrated decreasing trends, while densities of fecal indicators

[30] *Ibid*.
[31] Orange County Unified Annual Progress Report, Santa Ana Region, 2018-2019 Reporting Period. November 15, 2019.
[32] San Bernardino County Areawide Municipal Stormwater Program. 2020. Big Bear Lake - Nutrient TMDL Annual Water Quality Report 2019, February 15, 2020
[33] Riverside County Report of Waste Discharge, July 29, 2014.
[34] *Ibid.*
[35] *Ibid*.
[36] Appendix H – FY 2022-2023 Santa Ana Region Annual Compliance Report: CNRP Implementation Summary.

and concentrations of total nitrogen, total organic nitrogen, total Kjeldahl nitrogen, ammonia and orthophosphorous show mostly increasing trends.

C. Description of the Permittees' MS4s

The Permittees' MS4s are based on regional floodwater management systems that use both natural and altered waterbodies to achieve flood management goals. Most Permittees' MS4s comprise a large interconnected system used by multiple municipalities. The system is generally made up of larger channels, pipes, and other conveyances that are owned or operated by flood control districts.

MS4s that are owned or operated by the other Permittees typically drain to flood control district facilities or directly to receiving waters. Private storm drain systems, operated by commercial facilities, gated communities, and other private entities, discharge to the Permittees' MS4 through underground lateral pipes or through surface conveyances such as gutters. Many portions of MS4s consist of underground pipes that are located underneath transportation rights of way. These pipes may be relatively small round pipes or larger round, oval, or rectangular pipes ten or more feet in width. Generally, the underground drainage capacity is supplemented by the capacity of the roadway's curb and gutter system. The combined underground and surface conveyance capacity is generally for a storm event with a 100-year return interval. Additional flood protection is provided by elevating adjacent structures above the top of the roadway's curb. Older communities or areas with less developed drainage infrastructure may not have all these features. In most cases, older or less developed areas may have roadside ditches or gutters but lack underground conveyances. This extensive system conveys commingled stormwater and non-stormwater from many land use types across municipal boundaries where it is then discharged to receiving waterbodies.

Non-stormwater discharges are the result of many routine and non-routine activities in the urban environment. Residential activities that may produce non-stormwater discharges include overirrigation of landscaping, private vehicle washing, chlorinated and saltwater pool drainage, illicit discharges from clothes washing machines, backwash from swimming pool filters, and other domestic activities, and sanitary sewer overflows from private sewer laterals or septic systems. Commercial activities that may produce non-stormwater discharges include overirrigation of landscaping; commercial vehicle washing; wastewater from washing equipment, waste areas (e.g. trash enclosures), and production areas; leaks from cooling and refrigeration equipment; and accidental releases. Non-stormwater discharges may also include water transfers between water purveyors through the MS4, rising groundwater, exfiltration of sewage into the storm drain from nearby sewer lines, and others. The MS4s will also convey pollutants deposited on surfaces in urban areas. These include pesticides; fertilizers; trash; leaf litter and clippings from ornamental landscaping; domestic animal waste; leaked or spilled automotive fluids; particles from automobile

brakes, tire wear and road surfaces, atmospherically deposited combustion byproducts and industrial processes; and other pollutants.

Stormwater and non-stormwater are conveyed through the MS4s and ultimately discharge into receiving waters of the Santa Ana Region. MS4s subject to the Order receive stormwater and non-stormwater flows from various sources, including conveyances owned by the Permittees covered by the Order and other public agencies, NPDES permitted discharges, discharges authorized by USEPA (including discharges subject to a decision document approved pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), rising ground water, and natural flows.

The Santa Ana Region comprises all basins draining into the Pacific Ocean between the southeasterly boundary of the Los Angeles region and a line which follows the drainage divide between Muddy and Moro Canyons from the ocean to the summit of San Joaquin Hills; thence along the divide between lands draining into Newport Bay and into Laguna Canyon to Niguel Road; thence along Niguel Road and Los Aliso Avenue to the divide between Newport Bay and Aliso Creek drainages; thence along that divide and the southeasterly boundary of the Santa Ana River drainage to the divide between Baldwin Lake and Mojave Desert drainages; thence along that divide to the divide between Pacific Ocean and Mojave Desert drainages. (Wat. Code, § 13200(e).)

Maps depicting the major drainage infrastructure within the area covered under the Order are included in Attachment B. Rough estimates based on information from Permittees indicate that the Santa Ana Region has an over 2,000-mile network of MS4 infrastructure (including main storm drain lines, lateral lines, and culverts). This does not include roadways' curb and gutters, roadside ditches, and similar surface drainage.

D. Description of the Flood Control District Permittees

The Riverside County Flood Control and Water Conservation District (RCFC&WCD) was created on July 7, 1945, by Act 6642 of the California State Legislature for the purpose of flood and stormwater control including the flood and storm waters of streams that have their source outside of the district, but which flow into the district. (Stats. 1945, ch. 1122; Water Code App., Ch. 48). The RCFC&WCD is the regional flood management authority for the area of Riverside County described in Water Code Appendix sections 48-1 – 48-8.4.

Orange County Flood Control District (OCFCD) was created by the Orange County Flood Control Act (Stats. 1927, ch. 723) (Water Code App., Ch. 36) (Act) for the purpose of flood and stormwater control including the flood and storm waters of streams that have their source outside of the district, but which flow into the district. (Ca. Water Code App. §§ 36-1, 36- 2, 36-2.4).

The San Bernardino County Flood Control District (SBCFCD), was created by the San Bernardino County Flood Control Act (Senate Bill 1231, Stats. 1939, ch. 73) (SBCFCD Act) on March 13, 1939 (Water Code App. ch. 43), to provide for the control and conservation of flood and storm waters within San Bernardino County, including the flood and storm waters of streams that have their source outside of the district, but which flow into the district.

Unlike other Permittees, the Flood Control Districts do not own or operate any municipal sanitary sewer systems, public streets, roads, or highways. Further, the Flood Control Districts do not have planning, zoning, development permitting or other land use authority, including over industrial or commercial facilities, or new developments or re-development projects located in any incorporated or unincorporated areas within their respective service areas. Nonetheless, as owners and operators of an MS4, the Flood Control District Permittees are required by federal law to control pollutant discharges into and from their MS4s, including but not limited to the ability to control through interagency agreements among Permittees and other owners of MS4s the contribution of pollutants from one portion of the MS4 to another portion of the MS4.

IV. APPLICABLE STATUTES, REGULATIONS, PLANS, AND POLICIES

A. Municipal Separate Storm Sewer System Requirements

Clean Water Act section 402(p) requires the USEPA, or authorized states, to issue NPDES permits for discharges of pollution in stormwater runoff from Municipal Separate Storm Sewer Systems (MS4s) to waters of the United States. Clean Water Act section 402(p)(3)(B) allows such NPDES permits to be issued on a system-wide or jurisdiction-wide basis. Section 402(p)(3)(B)(ii) requires that these NPDES permits "effectively prohibit non-stormwater discharges" into the MS4s. Section 402(p)(3)(B)(iii) requires these NPDES permits to "require 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 such other provisions as the Administrator or the State determines appropriate for the control of such pollutants."

The Porter-Cologne Water Quality Control Act (Wat. Code, § 13000 et seq.) established the State Water Board and the nine Regional Water Quality Control Boards. The Water Boards are the principal state agencies with primary responsibility for the coordination and control of water quality in California. The Santa Ana Water Board has primary responsibility for the coordination and control of water quality in the Santa Ana Region.

The Water Boards implement the Clean Water Act through chapter 5.5 of the Water Code, commencing with section 13370. Section 13377, in part, gives the

Water Boards the authority to issue waste discharge requirements (WDRs) to ensure compliance with all applicable provisions of the Clean Water Act.

The Order is issued pursuant to Clean Water Act section 402 and implementing regulations adopted by the USEPA, and pursuant to chapter 5.5, division 7 of the Water Code (commencing with section 13370).

B. Federal and California Endangered Species Acts

The 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 & Game Code, §§ 2050-2116) or the federal Endangered Species Act (16 USC §§ 1531-1544). The requirements of the Order are designed to maintain water quality and prevent a condition of pollution, contamination, or nuisance in waters of the United States. The Permittees are independently responsible for meeting all requirements of the federal and state Endangered Species Acts.

C. California Environmental Quality Act

The adoption of this NPDES Permit for the discharge of pollutants in runoff from MS4s to waters of the United States is exempt from the provisions of chapter 3 of the California Environmental Quality Act (CEQA) (Pub. Res. Code, § 21100 et seq.) pursuant to Water Code section 13389. (*County of Los Angeles v. Cal. Water Boards* (2006) 143 Cal. App. 4th 985.)

D. Water Quality Control Plans

The Clean Water Act requires the Santa Ana Water Board to establish water quality standards for each waterbody in its region. The requirements of the Order are designed to attain and maintain water quality standards. Water quality standards are composed of beneficial uses, water quality objectives (WQOs) or criteria established at levels to protect those beneficial uses, and the State and federal antidegradation policies.

1. Water Quality Control Plan for the Santa Ana River Basin

On January 24, 1995, the Santa Ana Water Board adopted the Water Quality Control Plan for the Santa Ana River Basin (Basin Plan). The Santa Ana Water Board has amended the Basin Plan on multiple occasions since 1995. The Basin Plan designates beneficial uses, establishes WQOs, and contains programs and policies to achieve those objectives for all waters in the Santa Ana Region. The requirements of the Order implement the Basin Plan.

The Basin Plan identifies the following existing and potential beneficial uses for surface waters in the Santa Ana Region, which receive

discharges from the Permittees' MS4s: 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).

2. Water Quality Control Plan for Ocean Waters of California

The State Water Board adopted the Water Quality Control Plan for Ocean Waters of California (Ocean Plan) in 1972. The Ocean Plan has been amended several times, including in 1978, 1983, 1988, 1990, 1997, 2000, 2005, 2009, 2012, 2015, 2017 and 2018. The Ocean Plan is applicable, in its entirety, to point source discharges to the ocean.

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.

The Ocean Plan prohibits the discharge of waste to designated Areas of Special Biological Significance (ASBS) unless an exception to Ocean Plan requirements is issued by the State Water Board. On March 20, 2012, the State Water Board approved Resolution No. 2012-0012, which includes exceptions to the Ocean Plan prohibition for specific discharges to various ASBS for certain nonpoint source discharges and NPDES-permitted municipal stormwater discharges. 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 rainwater 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. Resolution No. 2012-0012 includes exceptions for discharges from the City of Newport Beach MS4 to Newport Coast and Crystal Cove and from The Irvine Company, the California Department of Parks and Recreation and the California Department of Transportation to Crystal Cove. The Special Protections contained in Attachment B of Resolution No. 2012-0012, as applied to discharges to ASBS, are incorporated into the Order.

In recent years, the State Water Boad has adopted several important amendments to the Ocean Plan. Effective January 12, 2016, the Ocean Plan was amended with trash provisions, which established among other things a narrative water quality objective for trash and a prohibition on the discharge of trash along with implementation and monitoring requirements. This amendment was through the adoption of Resolution No. 2015-0019. The State Water Board also adopted an amendment to the Ocean Plan on August 7, 2018 to incorporate bacteria provisions and a water quality standards variance policy.

3. **Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries (ISWEBE)**

The State Water Board has adopted various provisions, which make up, collectively, the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries (ISWEBE) of California.

On September 16, 2008, the State Water Board adopted the Water Quality Control Plan for Enclosed Bays and Estuaries – Sediment Quality Provisions (Sediment Quality Provisions). The Sediment Quality Provisions became effective on August 25, 2009. The Sediment Quality Provisions establish: 1) narrative sediment quality objectives to protect benthic communities 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. The requirements of this Order implement the Sediment Quality Provisions. Amendments to the Sediment Quality Provisions were adopted on June 5, 2018 by Resolution No. 2018-0028.

On April 7, 2015, the ISWEBE Plan was amended with Part 1: Trash Provisions. This amendment was through the adoption of Resolution No. 2015-0019, which became effective on January 12, 2016.

On May 2, 2017, the ISWEBE Plan was amended with Part 2: Tribal Subsistence Beneficial Uses and Mercury Provisions. This amendment was adopted through Resolution No. 2017-0027, which became effective on June 28, 2017.

On August 7, 2018, the ISWEBE Plan was amended with Part 3: Bacteria Provisions and Variance Policy. This amendment was through the adoption of Resolution No. 2018-0038, which became effective on February 4, 2019.

On April 2, 2019, the ISWEBE Plan was amended by Resolution No. 2019-0015, State Policy for Water Quality Control: State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State. The amendment became effective on May 28, 2020.

E. National Toxics Rule (NTR) 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 40 CFR section 131.38 (Water Quality Standards; Establishment of Numeric Criteria for Priority Toxic Pollutants for the State of California), also known as the California Toxics Rule (CTR). The CTR promulgated new toxics criteria for California and incorporated the previously adopted NTR criteria that were applicable in the state. The CTR was amended by USEPA on February 13, 2001. The CTR and NTR contain water quality criteria for priority pollutants in surface water. The requirements of the Order are consistent with the NTR (40 CFR section 131.36) and CTR (40 CFR section 131.38).

The State Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California, also known as the State Implementation Policy (SIP), implements the CTR. However, the SIP states that the policy does not apply to regulation of stormwater discharges.

F. Clean Water Act Section 303(d) List

Clean Water Act section 303(d)(1) requires each state to identify specific waterbodies within its boundaries where water quality standards are not being met or are not expected to be met after technology-based effluent limitations on point sources of pollutants have been complied with. Waterbodies that do not meet water quality standards are considered impaired and are placed on the state's "303(d) List". For each listed waterbody, the state or USEPA is required to establish a Total Maximum Daily Load (TMDL) for each pollutant that is impairing the water quality standards in that waterbody.

A TMDL is the sum of the allowable pollutant loads of a single pollutant from all contributing point sources (WLAs), non-point sources (load allocations), the contribution from background sources, and a margin of safety. (40 CFR § 130.2(i).) MS4 discharges are considered point source discharges and are assigned WLAs. A TMDL is a tool for implementing water quality standards and is based on the relationship between pollution sources and receiving water quality. The TMDL establishes the allowable pollutant loads from various sources to a waterbody and thereby provides the basis to establish water quality-based controls or effluent limitations. By implementing the water quality-based effluent limitations (WQBELs) in Appendices 2 through 14, the Permittees should provide the pollutant load reduction needed for a waterbody to meet water quality standards.

On December 12, 2024, the USEPA partially approved and partially disapproved the State of California's 2024 303(d) List of impaired waterbodies. The partial disapproval proposed to add five pollutant/waterbody combinations in the Santa Ana Region that demonstrate beneficial use impairment based on

benthic community effects data. USEPA has not acted on the five additional listings. The 2024 303(d) List includes certain receiving waters in the Santa Ana Region. Since 1998, USEPA and the Santa Ana Water Board have established TMDLs to address water quality impairments for some listed waterbodies. These TMDLs establish WLAs for discharges from MS4s, and the Order includes WQBELs and other provisions to implement the TMDL WLAs for discharges from MS4s.

G. Antidegradation Policy

Federal regulations at 40 CFR section 131.12 require that state water quality standards include an antidegradation policy. The State Water Board established California's antidegradation policy in State Water Board Resolution No. 68-16, "Statement of Policy with Respect to Maintaining High Quality of Waters in California". Where the federal antidegradation policy is applicable, the State Water Board has interpreted Resolution No. 68-16 to incorporate the federal antidegradation policy[37]. The Santa Ana Water Board's Basin Plan incorporates by reference both the State and federal antidegradation policies. Resolution No. 68-16 and 40 CFR section 131.12 require that high quality waters be maintained unless degradation is justified based on specific findings. At a minimum, any degradation may not lower the quality of the water below water quality standards. The Santa Ana Water Board finds that the permitted discharges authorized by this Order are consistent with the antidegradation provisions of 40 CFR section 131.12 and State Water Board Resolution No. 68-16, as set forth below.

Federal regulations at 40 CFR section 131.12(a)(1) require that the Santa Ana Water Board ensure *"existing instream uses and the level of water quality necessary to protect the existing uses"* are maintained and protected. Administrative Procedures Update 90-004 (APU 90-004) interprets this provision to mean that, *"[i]f baseline water quality is equal to or less than the quality as defined by the water quality objective, water quality shall be maintained or improved to a level that achieves the objectives."* If the baseline quality of a waterbody for a given constituent "exceeds levels necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water", then 40 CFR section 131.12(a)(2) provides that quality shall be maintained and protected unless the Santa Ana Water Board:

(1) finds that any lowering of the water quality is *"necessary to accommodate important economic or social development in the area in which the waters are located"*;

[37] State Water Board Order WQ 2015-0075, p. 23, citing WQ 86-17 (*Fay*).

(2) assures *"water quality adequate to protect existing uses fully"*; and

(3) assures that *"the highest statutory and regulatory requirements for all new and existing point sources and all cost-effective and reasonable best management practices for nonpoint source control"* are achieved.

The Santa Ana Water Board must conduct an analysis of alternatives that evaluates practicable alternatives that would prevent or lessen the degradation associated with the discharges permitted. In the context of 40 CFR section 131.12(a)(2)(ii), practicable means *"technologically possible, able to be put into practice, and economically viable"* according to 40 CFR section 131.3(n).

Resolution No. 68-16 generally prohibits the Santa Ana Water Board from authorizing discharges that will result in the degradation of high quality waters, unless it is demonstrated that any change in water quality will (a) be consistent with maximum benefit to the people of the State, (b) not unreasonably affect beneficial uses, and (c) not result in water quality less than that prescribed in State and regional policies (e.g., the violation of one or more WQOs). Further, any activities that result in discharges to such high quality waters are required to use the best practicable treatment or control (BPTC) of the discharge necessary to avoid a pollution or nuisance and to maintain the highest water quality consistent with the maximum benefit to the people of the State.

Resolution No. 68-16 does not define "best practicable treatment or control"; however, the State Water Board has evaluated what level of treatment or control is technically achievable using best efforts. (See State Water Board Orders WQ 81-5 (*City of Lompoc*), WQ 82-5 (*Chino Basin Municipal Water District*), WQ 90-6 (*Environmental Resources Protection Council*).) To evaluate the best practicable treatment or control method, the discharger should compare the proposed method to existing proven technology; evaluate performance data; compare alternative methods of treatment or control; and/or consider the method currently used by the discharger or similarly situated dischargers. The costs of the treatment or control should also be considered in this evaluation. (Questions and Answers, Resolution No. 68-16, State Water Board (Feb. 16, 1995), pp. 5-6.)

High quality waters are surface waters or areas of groundwater that have a baseline water quality better than required by water quality control plans and policies. The baseline for this determination is the available water quality data from 1968, the date of adoption of Resolution 68-16. Alternatively, a lower level may be applied if that lower level was allowed through a permitting or other regulatory action, such as establishing a water quality objective, which was consistent with the federal and State antidegradation policies.

The Board Is Not Required to Make Antidegradation Findings for Specific Waterbodies or Pollutants:

The Santa Ana Water Board is not required to conduct a waterbody by waterbody and pollutant by pollutant antidegradation analysis for this Order. The wide geographic area covered by the Order makes a waterbody by waterbody and pollutant by pollutant determination of the quality as of the baseline of 1968 impractical, and a "complete" antidegradation analysis is not required under the Administrative Procedures Update, Antidegradation Policy Implementation for NPDES Permitting, 90-004 (APU 90-004).

APU 90-004 is a guidance document establishing methods for implementing the federal and State antidegradation policies in NPDES Permits. APU 90-004 suggests that an antidegradation analysis requires a pollutant by pollutant and waterbody by waterbody analysis in certain contexts, specifically where the discharge at issue is a discrete discharge from a singular facility. However, the State Water Board has explained that APU 90-004 has limited value when considering antidegradation in the context of MS4 discharges from diffuse sources, conveyed through multiple outfalls, with multiple pollutants impacting multiple waterbodies over a wide geographic area. (Order WQ 2015-0075, p. 27; see also WQ 2018-0002, p. 77 [reaching the same conclusion for agricultural discharges].) This reasoning was recently affirmed in the context of agricultural discharges by *Environmental Law Foundation v. State Water Resources Control Bd.* (2023) 89 Cal.App.5th 451, 499-500, in which the court upheld the State Water Board's finding that the Regional Water Board needed only to "conduct [a] general assessment of the existing water quality data that is reasonably available" rather than undertake the "impossible" task of "establish[ing] an accurate numeric baseline for potentially hundreds of waterbodies and dozens of waste constituents in an area covered by a general order."

This interpretation of APU 90-004 is sensible for this Order for several reasons. First, an assessment of every waterbody-pollutant combination would not be reasonable. Excluding many tributaries, the Santa Ana Water Board's Basin Plan identifies approximately 253 discrete surface waterbodies and stream segments. There are 53 numeric and narrative WQOs that apply to categories of these waters. There are approximately 8,775 combinations of waterbodies and applicable WQOs. This excludes WQOs in statewide water quality control plans.

If assessments were performed for every waterbody-pollutant combination, qualitative assessments would be performed for narrative objectives. Quantitative assessments would be performed where adequate data was available. Where adequate data is unavailable, assessments would be based

on a combination of qualitative and semi-quantitative analyses. Many of the waterbodies do not receive discharges from urban sources. Even excluding these waters would leave hundreds to thousands of assessments that would need to be completed. It is unreasonable to believe that APU 90-004 envisions this approach.

Second, at the regional scale, the affected waterbodies and pollutants share common characteristics related to water quality condition, pollutants, and transport mechanisms. There are few waterbody-pollutant combinations that are unique in these respects. Further, there is no comprehensive set of water quality data that allows an evaluation of baseline water quality in 1968 for all waters that receive discharges from MS4s. This means that nearly all assessments would have to be based, in part, on qualitative assessments. In most cases, individual assessments of each waterbody-pollutant combination would result in conclusions that would be substantially identical. Considering the lack of detailed data and the existence of shared characteristics, categorized assessments of waterbody-pollutant combinations based on shared characteristics are appropriate for the purposes of this Order. An assessment of individual waterbody-pollutant combinations is unnecessary and would not be productive. Even if detailed data was available to support a quantitative assessment, they would not necessarily result in conclusions that differ from a qualitative assessment.

The Santa Ana Water Board additionally finds that APU 90-004 requires at most a "simple" antidegradation analysis. APU 90-004 contemplates that a "simple" antidegradation analysis is appropriate under specified circumstances. APU 90-004 states that a simple antidegradation analysis is allowed when a *"Regional Board determines the reduction in water quality is temporally limited and will not result in any long-term deleterious effects on water quality"* or where a *"Regional Board determines the proposed action will produce minor effects which will not result in a significant reduction of water quality."* (APU 90-004, p. 2.)[38]

Here, the Order continues the requirements of the previous orders and imposes equivalent or more protective requirements such that the water quality established under the prior orders is expected to be maintained and improved. Generally, the prior orders instituted controls such as a prohibition on non-stormwater discharges that are a source of pollutants through the MS4s, receiving water limitations, WQBELs based on TMDLs, and monitoring programs to help ensure that water quality will be maintained at the level it is

[38] In an unpublished decision, the Second District Court of Appeal affirmed that a simple antidegradation analysis applied to the 2012 Los Angeles County MS4 permit. (*Natural Resources Defense Council v. State Water Resources Control Board* (2018) 2018 WL 6735201, at *6.)

now, or improve it. The Order institutes further controls such as additional TMDL-based WQBELs. Any degradation permitted while controls are continuing to be developed will be temporally limited and will not result in any long-term deleterious effects on water quality. Such a finding would not be appropriate if, for example, the Order declined to require long-term compliance with WQOs, but that is not the case here.

The Santa Ana Water Board Makes the Following Antidegradation Findings:

The Santa Ana Water Board determines that the findings made below meet the requirements of a simple or general antidegradation analysis, as appropriate for the Order. With these findings, based on the information available to it and using its best professional judgment, the Santa Ana Water Board concludes that the discharges permitted in the Order are consistent with the antidegradation provisions of 40 CFR section 131.12 and Resolution No. 68-16. The Santa Ana Water Board's conclusion that the terms and conditions of the Order are consistent with the federal and State antidegradation policies is based on the following analysis.

1. **Waterbodies that do not meet WQOs (waterbodies that are not high quality):**

   Most of the receiving waters within the area covered by the Order are not meeting WQOs for at least one pollutant associated with MS4s, meaning that they are not attaining WQOs necessary to protect beneficial uses. This is evidenced by the fact that all waterbodies in the region that receive discharges from MS4s are impaired for at least one waterbody-pollutant combination according to Clean Water Act section 303(d) or are tributary to impaired waterbodies. Either the Santa Ana Water Board or the USEPA has established numerous TMDLs to address many of these impairments. The source assessments for these TMDLs identify MS4 discharges as a source of the impairments.

   Under both federal and State antidegradation policies, receiving waters with TMDLs are not "high quality" waters for the regulated pollutants. Although the contribution of pollutants from urban sources relative to other sources has changed since 1968, urban sources have been present and only intensified since then. For purposes of this analysis, waters with TMDLs are not considered high quality waters.

   For receiving waters that are not high quality waters, the federal antidegradation policy requires that regulatory actions ensure that existing instream uses and the level of water quality necessary to protect the existing

uses is maintained and protected. (40 CFR § 131.12(a)(1).) The Order ensures that existing instream (beneficial) uses and the level of water quality necessary to protect the existing uses is maintained and protected through receiving water limitations. Receiving water limitations do not allow permittees to cause or contribute to exceedances of WQOs in the receiving waters. Existing in-stream beneficial uses and the necessary water quality are also protected by WQBELs implementing WLAs designed to restore impaired waterbodies with TMDLs. The Order also ensures that discharges will not unreasonably affect present and anticipated beneficial uses and will not result in water quality less than WQOs, as required by Resolution No. 68-16. This is achieved through the following provisions:

a. The Order requires compliance with receiving water limitations to meet water quality standards in the receiving waters by demonstrating compliance pursuant to section VI of the Order or by developing and implementing an approved Watershed Management Plan (WMP) pursuant to section XII of the Order. WMPs must specify treatment and source control measures that are demonstrated to have a reasonable assurance of achieving compliance with receiving water limitations and must be implemented according to a schedule approved by the Executive Officer. The reasonable assurance analysis (RAA) must show that the system of pollution controls proposed in the WMP will achieve applicable WQBELs according to regulatory deadlines and that discharges will not cause or contribute to exceedances of receiving water limitations. The analysis used in the RAA must have its predictive performance quantified and validated using generally accepted methods, including models that have been subject to public and peer review. The purpose of the RAA is to provide transparency and a full evaluation of the likelihood of selected control measures to successfully achieve receiving water limitations and/or final WQBELs. The WMP must also include a qualitative assessment of non-technical risks such as funding, constructability of treatment control measures, community acceptance, and others. Additionally, the Order requires a comprehensive evaluation and update, through the required adaptive management process, of the WMP during the permit term to ensure progress toward achieving WQBELs and receiving water limitations.

b. The Order requires Permittees to comply with WQBELs and/or receiving water limitations consistent with the assumptions and requirements of WLAs assigned to MS4 discharges established in 13 TMDLs applicable to waterbodies in the Santa Ana Region. The TMDLs are intended to restore water quality to protect the beneficial uses of the impaired waterbodies.

c. The Order requires Permittees to implement a portfolio of projects and programs or system of controls, which includes major program elements or Minimum Control Measures (MCMs) in 40 CFR section 122.26(d)(2)(iv), and to effectively prohibit non-stormwater discharges that are a source of pollutants through the MS4 to receiving waters.

d. The Order includes requirements for extensive monitoring and reporting designed to identify changes in water quality at representative outfalls and in receiving waters.

e. This Order requires the execution of a regimented or step-by-step adaptive management process for the continual improvement of projects and programs, Watershed Management Plans, and the Monitoring and Reporting Program during the permit term to effectively prohibit non-stormwater discharges, reduce pollution to the maximum extent practicable, and to achieve compliance with WLAs whose compliance dates have not passed or where a compliance date was not established. Continual improvement is an ongoing effort to make changes to individual or system of control measures or BMPs. The regimented adaptive management process is driven by a set of permit provisions in section III.A. of the Order that require the Permittees to establish objective performance metrics that provide feedback on the performance of their control measures and BMPs and make improvements. The iterative process is a form of adaptive management required in section VI.A of the Order. A Watershed Management Plan, coupled with a regimented adaptive management process for continual improvement, serves as a method for Permittees to identify an optimal suite of BMPs that constitute best practicable treatment or control of the discharge. Execution of a regimented, adaptive management does not excuse or substitute for compliance with final compliance dates to meet TMDL WLAs.

These provisions are collectively designed to halt any further degradation of impaired waterbodies and improve the quality of such waters to a level that is protective of existing uses over a time schedule that is as short as possible. The antidegradation policies do not explicitly or implicitly override the authority and discretion granted to the Santa Ana Water Board by the Clean Water Act and the Water Code as to how it structures a permit to ensure water quality necessary to protect beneficial uses. The law does not require immediate restoration of impaired waterbodies, nor does it require an immediate prohibition of discharges that contribute to an exceedance in the waterbody. Rather, federal regulations at 40 CFR section 122.47 allow NPDES permits, including MS4 permits, to have compliance schedules.

Similarly, Water Code section 13263, subdivision (c) authorizes the Santa Ana Water Board to include a time schedule for achieving WQOs in waste discharge requirements. Where a TMDL has been established, Water Code section 13242 states that the TMDL implementation plan, as incorporated into the water quality control plan, shall include a time schedule for actions to be taken. When issuing waste discharge requirements, Water Code section 13263 requires Regional Water Boards to implement any relevant water quality control plans that have been adopted. WQOs must be achieved; but the law recognizes and allows for the fact that it can take time to restore or achieve the objectives. While MS4 permits must include a technology-based standard of effectively prohibiting non-storm water discharges through the MS4 and reducing pollutants in the discharge to the maximum extent practicable, requiring strict compliance with water quality standards is at the discretion of the permitting agency[39].

In this regard, some impaired waterbodies may remain the same or continue to degrade before showing improvement. This period may be multiple years. This is not contrary to the authorities for compliance schedules stated above and is not contrary to the antidegradation policies. The antidegradation policies do not require socioeconomic findings justifying any continued degradation of waterbodies that are not high quality that may occur while the Permittees implement requirements according to a compliance schedule. If socioeconomic findings are required, the Santa Ana Water Board finds that this potential, limited, and temporary further lowering of water quality is justified for the same reasons articulated in section IV.G.2.b of this Fact Sheet, below.

2. High quality waterbodies:

The term “high quality waters” applies to waterbodies that may be high quality regarding some pollutants but not all. Some of the waterbodies within the area covered by the Order may be high quality waters with regard to some pollutants. Some of these waterbodies may be currently high quality compared to current objectives. Others of these waterbodies may be currently impaired but may be classified as high quality waters because they were historically high quality for certain pollutants. Discharges of stormwater and non-stormwater from MS4s into such waterbodies may have lowered the quality of the waterbodies since 1968 for certain pollutants. For all these high quality waterbodies, the Santa Ana Water Board finds as follows:

[39] 33 U.S.C. § 1342(p)(3)(B); *Defenders of Wildlife v. Browner* (9th Cir. 1999) 191 F.3d 1159, 1166-67.

a. Practicable Alternatives: The Santa Ana Water Board has evaluated a range of practicable alternatives that would prevent or lessen any degradation associated with permitted MS4 discharges to high quality waters. These alternatives are described below based on their major differences.

i. **Alternative 1 – Complete prohibition on some or all pollutants in non-stormwater discharges to high quality waters:** This alternative would prohibit MS4 discharges of some or all pollutants in non-stormwater to receiving waters. By eliminating non-stormwater discharges, pollutants from non-stormwater discharges would not reach high quality receiving waters during dry weather and thus not cause any degradation. In high quality watersheds, this alternative could require the Permittees to either divert all non-stormwater to a facility for treatment, or retain all non-stormwater through retention basins, infiltration galleries, and other controls that would prevent non-stormwater from reaching surface waters. Alternatively, Permittees could install specific pollutant control measures that prevent specific pollutants from being discharged through the MS4.

ii. **Alternative 2 – Complete prohibition on some or all pollutants in stormwater discharges to high quality waters:** This alternative would prohibit MS4 discharges of some or all pollutants in stormwater to high quality receiving waters. By eliminating these discharges, pollutants from stormwater would not reach high quality receiving waters during wet weather and not cause any degradation. As wet weather will always occur, this alternative could require the Permittees to either divert all stormwater in the MS4 to a facility for treatment, or retain through retention basins, infiltration galleries, and other controls. Permittees could also install pollutant control measures that prevent specific pollutants from being discharged through the MS4.

iii. **Alternative 3 – Watershed Management Plan alternative compliance option <u>without</u> deemed compliance with receiving water limitations for any high quality waters:** This alternative would allow the Permittees to implement approved WMPs with customized control measures to comply with receiving water limitations, attain WQBELs, and meet other requirements. Under this alternative, the Santa Ana Board would <u>not</u> deem a Permittee in compliance with receiving water limitations for high quality waters while they are fully implementing an approved WMP. This alternative

includes a new, enforceable, regimented adaptive management process to continually improve the Permittees' systems of controls.

iv. **Alternative 4 – Watershed Management Plan alternative compliance option <u>with</u> deemed compliance with receiving water limitations for high quality waters:** This alternative would allow the Permittees to implement approved WMPs with customized control measures to comply with receiving water limitations, attain WQBELs, and meet other requirements in the same way as Alternative 3. Alternative 4 would also include an enforceable regimented adaptive management process. Unlike Alternative 3, the Santa Ana Board would conditionally deem a Permittee in compliance with receiving water limitations for current or historically high quality waters while they are developing and implementing an approved WMP.

b. Economic and Social Development Considerations and Consistency with Maximum Benefit to the People of the State: The Santa Ana Water Board incorporated Alternative 4 and aspects of Alternatives 1 and 2 into the Order. These alternatives may allow limited degradation of high quality waterbodies by MS4 discharges, but these alternatives ultimately require MS4 discharges to meet and not fall below water quality standards. Such degradation of high quality waters is necessary to accommodate important economic or social development in the area and is consistent with the maximum benefit to the people of the State for the following reasons:

i. Alternatives 1 and 2, if implemented as full prohibitions, would hamper important social and economic development.

(a) Discharges of stormwater and non-stormwater to MS4s, in certain circumstances, are to the maximum benefit to the people of the State. The discharges may be necessary for flood control, public safety, and the availability of water supplies. MS4s include storm drainage facilities that are used to prevent flooding. Much of the flood control infrastructure is designed to mitigate the flood effects of urban development. The infrastructure is not always adequate to both control flooding and retain non-stormwater runoff and both functions are not compatible for all facilities. Storm drainage facilities may be used to facilitate water transfers between water purveyors and support domestic water supply. These temporary, non-stormwater discharges can mobilize pollutants, such as pathogens and nutrients, which may be present in the MS4. Requiring MS4 owners and operators to

retain these discharges or to remove pollutants prior to discharge could interfere with a vital public service. Complying with complete prohibitions in Alternatives 1 and 2 would not be practicable at all times and in all parts of the MS4.

(b) The majority of Permittees are cities and counties that provide essential and valuable public services. These services include police and emergency services, refuse collection, public transportation, nuisance abatement, parks and recreation, and the operation and maintenance of roads, drainage, and other infrastructure. In some cases, Permittees operate municipal airports and sewer and energy utilities. Funding sources for these services are varied and not always mutually interchangeable. For example, functional revenue from a municipal electric utility may not be diverted to fund unrelated pollution controls (Understanding the Basics of Municipal Revenues in California: Cities, Counties, and Special Districts, Institute for Local Government, 2016 Update). Controlling stormwater discharges so there is no potential degradation of potential high quality waters through Alternatives 2 and 3 would require a rapid increase in appropriate revenue sources to fund various infrastructure and programs. A Permittee would have to make significant tradeoffs in the services that it provides its residents and businesses to comply with while additional funding is sought. This may manifest itself in the reduction of some public services or prevent other public services from being provided[40]. Examples of levels of services that could be reduced include reduced maintenance that results in lower quality roads, parks and other public facilities; reduced hours at libraries, community centers, pools and other facilities; delayed or limited equipment replacement or upgrades for police, fire, and emergency services; and higher response times for service calls for code violations such as property damage, noise complaints, and other non-life-threatening situations. San Bernardino County has pointed out potential tradeoffs, warning that increased costs will leave "its cities unable to fund the basic services their residents depend on."[41] Reductions in service levels could harm the

[40] For a detailed discussion on social trade offs and social welfare, see Winter, Harold, 2013. Trade-offs: an introduction to economic reasoning and social issues. University of Chicago Press, February 25, 2013.

[41] (San Bernardino County, 2026. Updated analysis shows proposed stormwater mandates will cost San Bernardino County and cities $11 billion, https://main.sbcounty.gov/2026/07/16/updated-analysis-shows-proposed-stormwater-mandates-will-cost-san-bernardino-county-and-cities-11-billion/. Accessed July 16, 2026.)

quality of life of residents and affect the efficiency of business' economic activity. Reductions in service levels could disproportionately affect disadvantaged communities.

(c) The relationship between cost and levels of pollution reduction are typically non-linear. In many cases, the costs increase exponentially as dischargers employ more controls that achieve zero discharge of a pollutant.[42] Assimilative capacity plays an important part in allowing some pollution without affecting beneficial uses by avoiding the exponentially increasing cost of achieving zero discharge. Such costs could be unnecessary if assimilative capacity is available so that the complete elimination of a pollutant in the discharge is not needed to protect beneficial uses. Efforts to comply with a complete prohibition are likely to experience diminishing returns. This is because costs typically increase exponentially relative to the benefits as permittees approach elimination of the pollutant load[43]. In cases where the incremental pollutant load falls within the receiving waterbody's assimilative capacity, the related incremental cost of complying and eliminating that incremental load may have no benefit to the protection of beneficial uses. A complete prohibition may be a costly over-correction for some waterbody-pollutant combinations.

(d) The effectiveness of Alternatives 2 and 3 should be considered in the context of the suite of regulatory actions to control pollutants from all contributors. A complete prohibition in this Order would conflict with other NPDES permits, such as State Water Board's Construction General Permit and Industrial General Permits. There are also other NPDES permits that authorize the discharge of waste to high quality waters based, in part, on assimilative capacity. These discharges often commingle with runoff from MS4s and would complicate efforts to monitor compliance. A complete prohibition also conflicts with many of the region's TMDLs, which assign WLAs that allow MS4 discharges of pollutants that have been calculated to achieve WQOs in the receiving waterbody.

[42] (USEPA, 2010. Guidelines for Preparing Economic Analysis, Chapter 4, EPA 240-R-10-001, December 17, 2010, updated May 2014.)

[43] (USEPA 2010. Guidelines for Preparing Economic Analysis, Chapter 4, EPA 240-R-10-001, December 17, 2010, updated May 2014).)

(e) For some waterbody-pollutant combinations, such as nitrogen in Lake Elsinore and phosphorous in Big Bear Lake, the dominant causes of degradation are pollutants that have accumulated from past discharges, legacy pollutants such as DDT in sediment, or non-point sources. In these cases, a complete prohibition of pollutants in runoff would not affect the dominant causes of degradation. A complete prohibition would not restore the high quality waterbody and could come at a high cost (and at the expense of other needed public services). For these waters, a complete prohibition may be unnecessary or socially inefficient because the most effective and least costly strategies, such as offsets or pollution trading among different sources in a watershed, were not considered. Dischargers would be preoccupied with eliminating their own discharges within the constraints of their own abilities instead of working to affect more cost-effective, collaborative strategies with one another in a watershed. Essentially, dischargers would narrowly frame the water quality problem, resulting in inefficient or ineffective solutions.

ii. Certain aspects of Alternatives 1 and 2 are practicable and have been incorporated into the Order. As more fully described in sections VI.B and VII. of this Fact Sheet, the Order generally implements a prohibition on trash discharges through the installation of full capture systems or a system of controls to achieve full capture equivalency. These provisions are required by the State Water Board's *Amendment to the Water Quality Control Plan for Ocean Waters of California to Control Trash and Part 1 Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (Trash Provisions), which became effective January 12, 2016. As more fully described in section VI.A of this Fact Sheet, the Order also largely prohibits the discharge of non-stormwater into the MS4 to receiving waters pursuant to Clean Water Act section 402(p)(3)(B)(ii). There are limited exceptions where the non-stormwater discharge is expected not to be a source of pollutants. The Order also prioritizes treatment control measures that maximize the capture of stormwater through retention basins, infiltration galleries, and other controls.

iii. Alternatives 3 and 4 would implement the Order with the use of Watershed Management Plans (WMPs). Alternative 3 differs from Alternative 4 in that, while developing and implementing WMPs, Permittees would not be deemed in compliance with WQBELs and

receiving water limitations for the waterbody-pollutant combination(s) covered by the WMP. Both Alternatives 3 and 4, if implemented, could result in limited degradation of high quality waterbodies, particularly because WMPs allow the Permittees the flexibility to sequence tackling water quality priorities over time and on a watershed scale through customized strategies, control measures, and BMPs. However, the Permittees must ultimately attain WQBELs and meet receiving water limitations by the specified compliance dates and must include control measures that provide reasonable assurance those limitations will be attained. Such controls necessarily take time to design and construct. But it is to the maximum benefit of the people of the State that such controls be designed and implemented properly to be protective of water quality in the long run. These measures that control impacts from stormwater and non-stormwater discharges in the Order are typically effective across multiple pollutants. The alternatives would concurrently address other constituents of concern that may not be causing impairment but may still be leading to degradation, resulting in improvements in levels of many pollutants, including pollutants for which the receiving water may be high quality.

(a) Alternatives 3 and 4 avoid the high economic and social costs associated with decreased public services analyzed above in section IV.G.2.b.i of this antidegradation analysis. At the same time, Alternatives 3 and 4 provide additional economic and social benefits to the people of the State by incentivizing and incorporating projects that include multiple benefits beyond water quality protection. These additional benefits may support local community goals such as recreation, promotion of walkable communities and non-motorized transportation, increased water supplies, improved wildlife habitat, and flood control.

(b) Multi-benefit projects – that is, projects that fund stormwater capture that provide multiple benefits like those emphasized in WMPs – are actively encouraged by the State of California. Programs such as those funded by the Water Quality, Supply, and Infrastructure Improvement grants (Proposition 1) and Integrated Regional Water Management Grants (Proposition 84) promote collaborative efforts by stakeholders with sometimes competing goals and objectives. This collaborative approach helps stakeholders maximize the projects' benefits as compared to projects with a single purpose or limited purposes in mind. One example of this is the Mill Creek Wetlands project in the City of

Ontario. In addition to water quality benefits, the Wetlands incorporated design features that provide recreational and educational amenities that supported the goals of the City, the Corps of Engineers, and other stakeholders in the watershed.

(c) The Permittees have a long tradition of collaboration involving sharing resources and coordination for compliance with MS4 permits and supporting TMDL development. Collaboration has occurred at both the county and watershed scales. WMPs align with this tradition and support the collaborative approach. The reasonable assurance analysis required by WMPs is likely to indicate a need for increased investment in treatment and source control measures. However, the predictive modeling effort in WMPs is likely to offset some of the higher earlier costs by avoiding inefficiencies. Consequently, with WMPs, the benefits of compliance would be realized sooner.

iv. Alternative 3 is nevertheless not to the maximum benefit of the people of the State, because it is less likely than Alternative 4 to result in the anticipated economic and social development described in section IV.G.2.b.iii above. WMPs with the broader deemed compliance option (Alternative 4) better incentivize building and investing in long-term structural and non-structural controls that will improve water quality in the long run for multiple constituents and with multiple benefits. One reason is that deeming Permittees in compliance with receiving water limitations/WQBELs while they are building and investing in multi-benefit projects is necessary to accommodate the planning and design process, the public bidding process (which many municipalities must go through to initiate construction) and the construction process, which can take approximately 5-7 years. Deeming Permittees in compliance while they are implementing their WMP projects allows Permittees to focus on constructing multi-benefit projects and long-term water sustainability planning, instead of focusing immediately (and spending funds) on addressing violations or defending litigation related to those violations that might occur before their projects are completed. Having determined that water quality is most effectively protected by requiring Permittees to take a thoughtful, proactive watershed management approach to discharges, which also encourages water supply augmentation and has environmental benefits, the Santa Ana Water Board finds that fairness and good public policy also advises against requiring them to comply with all effluent and receiving water limitations immediately (and potentially

penalizing them for not doing so). Without the deemed compliance approach, Permittees are expected to shift at least some of their limited resources budgeted for planned, comprehensive, long-term, multi-benefit projects, to measures that are reactive, short-term, and ultimately less effective or protective of water quality in the long run.

v. Alternative 4 is necessary to accommodate important economic and social development and to the maximum benefit of the people of the State, because coupling the WMP framework with deemed compliance status also incentivizes collaboration to implement the most cost-effective controls. The kinds of projects built under the WMP framework with deemed in compliance status should facilitate investment and construction of multi-benefit projects that include parks, infiltration, and low impact development (among other practices) in communities that might not have otherwise seen that investment. In the Los Angeles Region, which has implemented WMPs since 2012, there was ample testimony to this effect at the Los Angeles Water Board Meeting held on July 16, 2021. In sum, Alternative 4 has the greatest chance of success, within the shortest time frame, and furthers the goal of maintaining and achieving water quality standards.

vi. As detailed above, trend analyses have not been completed for each waterbody-pollutant combination in the Santa Ana Region. There is a possibility that water quality has degraded or will degrade during the term of this Order for some of the over 8,000 waterbody-pollutant combinations. This is possible for all alternatives considered above. Moreover, no alternative results in a situation where an optimized system of controls manifests shortly after the effective date of this Order. A more realistic goal is to compel Permittees to implement that system as soon as possible. If a compliance date is established for a pollutant, as with WLAs, then that system should be effective as soon as possible but no later than the final compliance date. Alternative 4 is most likely to achieve these goals in the most efficient manner. Therefore, degradation that may occur while that system of controls is being developed is to the maximum benefit of the people of the State.

vii. Alternative 4 may result in limited degradation of high quality waters that are currently impaired waters that may nevertheless be considered high quality waters based on the historic baseline. The federal antidegradation policy does not require consideration of economic and social costs associated with degradation; it only requires findings that “allowing lower water quality is necessary to

accommodate important economic or social development in the area in which the waters are located." The State antidegradation policy does not define the exact factors that must be considered in determining "maximum benefit to the people of the state." APU 90-004 states that factors to be considered in a complete antidegradation analysis include economic and social costs of the discharge compared to its benefits, but this Order is subject only to a simple antidegradation analysis. The Santa Ana Water Board has nevertheless considered the costs associated with water quality degradation that may occur under Alternative 4 but has done so at a generalized level. Specifically, in choosing Alternative 4 over Alternative 3, the Santa Ana Water Board finds as follows:

1. There are significant environmental, public health, and economic costs associated with exceedances of WQOs. Southern California's local economy thrives on a healthy environment, as does the health of its population. By way of example, the failure to control stormwater runoff (which would result in exceedances of WQOs) would, among other things, negatively impact ocean water quality, which would negatively impact the coastal economy, including tourism and the fishing industry. Similarly, the failure to meet WQOs in ocean waters would negatively impact recreation and public health of beachgoers.

2. Where Alternative 4 may allow a currently high quality waterbody to degrade below WQOs, or where it will allow a currently impaired, but historically high quality waterbody to stagnate or worsen in quality, even for multiple years, this allowance is for a finite period of time, defined by the compliance schedule specified in the Order and the approved WMP. The Santa Ana Water Board finds that the temporary degradation is justified based on the social and economic benefits discussed in section VII of this Fact Sheet, which is associated with Alternative 4, notwithstanding the potential costs of degradation. In particular, the Santa Ana Water Board anticipates that the system of controls that are designed and implemented over a longer timeframe are more likely to lead to water quality improvements. Any such degradation over a limited period is also consistent with federal regulations and state law allowing for implementation schedules and compliance periods.

3. Alternative 4 could potentially avoid some of the costs discussed in section VII of the Fact Sheet, because some Permittees may correct some exceedances earlier if required to comply

immediately with receiving water limitations. From a practical perspective, however, the Santa Ana Water Board finds that immediate compliance, particularly for those waters that may have been high quality historically but are not high quality currently, is unrealistic even if required, given the technical and financial constraints faced by Permittees. Since Permittees will not be able to afford to immediately comply, any costs avoided would be minimal.

viii. For all of the reasons set forth above, the Santa Ana Water Board finds that any lowering of high quality waters under this Order's structure, which is consistent with Alternative 4 and components of Alternatives 1 and 2, is necessary to accommodate important economic or social development in the Santa Ana Region and is to the maximum benefit of the people of the State.

c. Requirement for Highest Statutory and Regulatory Requirements and Best Practicable Treatment or Control: The Order requires the highest statutory and regulatory requirements and requires that the Permittees meet best practicable treatment or control:

i. The Order prohibits all non-stormwater discharges, with a few enumerated exceptions, through the MS4 to all receiving waters.

ii. As required by 40 CFR section 122.44(a), Permittees must comply with the "maximum extent practicable" technology-based standard set forth in CWA section 402(p)(3)(B)(iii) and implement the minimum control measures required of a stormwater management program by 40 CFR section 122.26(d)(2)(iv).

iii. As required by CWA section 402(p)(3)(B)(iii) and 40 CFR section 122.44(d)(1)(vii)(B), Permittees must comply with applicable WQBELs based on TMDL WLAs established for waters in the Santa Ana Region.

iv. The Order also contains provisions to encourage, wherever feasible, retention of stormwater from the 85th percentile, 24-hour storm event, consistent with State Water Board Order WQ 2015-0075. The option is excluded for Appendix 9 and Appendix 12 as these TMDLs include detailed compliance determination options that don't include full capture.

v. The measures that control impacts from stormwater and non-stormwater discharges in the Order are typically effective across

multiple pollutants. For example, retention basins, low-impact development controls, and low flow diversions avert stormwater and non-stormwater from reaching the receiving water at all—preventing degradation to the receiving water from multiple types of constituents. The WMP provisions contained in the Order are designed to achieve water quality standards for those constituents that are impairing the receiving water, as well as to address other constituents of concern that may not be causing impairment as defined in CWA section 303(d) and State policy. The WMPs developed pursuant to these provisions will likely result in improvements in levels of all pollutants, including those for which the receiving water may be high quality.

As a final backstop against degradation, the Order includes an extensive monitoring and reporting program, including monitoring of MS4 discharges at representative outfalls and in receiving waters for pollutants of concern in receiving waterbodies; monitoring during both wet weather and dry weather conditions; and analysis of toxicity in receiving waters. Monitoring data must be submitted annually, and the Order also includes reopener provisions to allow modification of the Order as necessary to add preventative provisions if a threat of degradation is suspected. The monitoring and reporting requirements are sufficient to identify and address changes in water quality.

H. Anti-backsliding Requirements

Clean Water Act sections 402(o) and 303(d)(4) and 40 CFR 122.44(l) generally prohibit backsliding in NPDES permits. These anti-backsliding provisions require effluent limitations in a reissued permit to be at least as stringent as comparable limitations in previous permits, with some exceptions where effluent limitations may be relaxed.

1. Summary of Effluent Limitation Changes

In general, the effluent limitations in the Order are at least as stringent as the effluent limitations in the prior permits, Order Nos. R8-2009-0030, R8-2010-0033, and R8-2010-0036. However, certain of the effluent limitations in the Order are not identical to the effluent limitations in the previous MS4 permits because the Order implements revisions to TMDLs that occurred after these permits were adopted. A summary of changes to the effluent limitations from Order Nos. R8-2009-0030, R8-2010-0033, and R8-2010-0036 are summarized in Tables D.2 to D.4 below.[44] While not all of the

[44] Tables D.2 to D.4 are for the convenience of the reader only. The Tables do not substitute for a reading of or supersede provisions in the Order.

changes to these effluent limitations constitute backsliding, the rationale for each change is discussed below.

In some cases, the Order includes numeric effluent limitations to implement wasteload allocations that the prior permits implemented through narrative (BMP-based) WQBELs. Some waste load allocations were implemented as numeric effluent limitations with compliance dates that had not yet passed. The following table compares the new limitation in this Order with the limitation from the previous Order (Existing Limitation). Numeric and narrative effluent limitations are not "comparable" for purposes of section 402(o). Even if they were, numeric WQBELs are not less stringent than the provisions in the prior permits that are based on the same numeric WLAs – both are designed to have the same effect. Therefore, they will not result in a lower level of water quality protection. In addition, the Order retains planning and BMP requirements such as CNRPs and CBRPs.

Table D.2 - Summary of Changes to Effluent Limitations in Order R8-2009-0030

TMDL	Constituent	Waterbody	Existing Limitation	New Limitation
Nutrients in the Newport Bay/San Diego Creek	Total Nitrogen	Newport Bay	55,442 lbs/ Winter season (Oct-Mar)	No Change
			16,628 lbs/ Summer season (Apr-Sept)	No Change
		San Diego Creek	5.5 lbs/day	No Change
	Total Phosphorus	Newport Bay	2,960 lbs/yr	No Change
Fecal Coliform in Newport Bay	Fecal Coliform for REC1	Newport Bay	5-Sample/30-days Geometric Mean less than 200 Organisms/100 mL, and not more than 10 percent of the samples exceed 400 Organisms/ 100 mL for any 30-day period	No Change
	Fecal Coliform for SHEL	Newport Bay	Monthly Median less than 14 MPN/100 mL, and not more than 10 percent of the samples exceed 43 MPN/100 mL	No Change. Compliance date extended to December 31, 2030, in accordance with R8-2022-0017
Sediment in the Newport	Sediment	Newport Bay	2,500 tons/yr	No Change
		San Diego Creek and its Tributaries	2,500 tons/year	Substituted with BMP-based requirements
Organochlorine	Total DDT	San Diego	128.3 g/yr	No Change

TMDL	Constituent	Waterbody	Existing Limitation	New Limitation
		Creek and Tributaries		
		Upper Newport Bay	51.8 g/yr	No Change
		Lower Newport Bay	19.1 g/yr	No Change
		Rhine Channel	0.7 g/yr	No Change
	Chlordane	Upper Newport Bay	30.1 g/yr	No Change
		Lower Newport Bay	11.0 g/yr	No Change
		Rhine Channel	0.1 g/yr	No Change
	Total PCBs	Upper Newport Bay	29.8 g/yr	No Change
		Lower Newport Bay	78.1 g/yr	No Change
		Rhine Channel	4.1 g/yr	No Change
	Dieldrin	San Diego Creek and Tributaries	183.4 g/yr	No Change
		Lower Newport Bay	4.45 g/yr	No Change
		Rhine Channel	0.13 g/yr	No Change
	Toxaphene	San Diego Creek and Tributaries	1.9 g/yr	No Change
Diazinon & Chlorpyrifos in San Diego	Chlorpyrifos	Upper Newport Bay	18 ng/L Acute	No Change
			8.1 ng/L Chronic	No Change
		San Diego Creek	18 ng/L Acute	No Change
			12.6 ng/L Chronic	No Change
	Diazinon	San Diego Creek	72 ng/L Acute	No Change
			45 ng/L Chronic	No Change
Toxic Pollutants (Metals) in San Diego Creek and	Cadmium	Upper Newport Bay	9,589 lbs/yr	No Change
			42 µg/L Acute	No Change
			9.3 µg/L Chronic	No Change
		San Diego Creek	Acute 42 (µg/L) Chronic 9.3 (µg/L)	No Change
	Chromium	Rhine Channel	5.66 kg/yr	No Change

TMDL	Constituent	Waterbody	Existing Limitation	New Limitation
	Copper	Newport Bay	3,043 lbs/yr	No change, until superseded upon the effective date of the Copper TMDLs for Newport Bay adopted through Resolution R8-2022-0012
			4.8 µg/L Acute	No change
			3.1 µg/L Chronic	No change
		San Diego Creek	See Appendix 7, Table 7.2	No Change
	Lead	Newport Bay	17,638 lbs/yr	No Change
			210 µg/L Acute	No Change
			8.1µg/L Chronic	No Change
		San Diego Creek	See Appendix 7, Table 7.3	No Change
	Mercury	Rhine Channel	0.0171 kg/yr	No Change
	Zinc	Newport Bay	174,057 lbs/yr	No Change
			90 µg/L Acute	No Change
			81 µg/L Chronic	No Change
		San Diego Creek	See Appendix 7, Table 7.4	No Change
Metals in San Gabriel River and Impaired tributaries	Copper	Coyote Creek	0.941 kg/day Dry Weather	No Change
			9.41 kg/day Wet Weather	Daily Mass Load Formula (Previous designation assumed flow was equal to 156 cfs)
	Lead	Coyote Creek	36.9 kg/day Wet Weather	Daily Mass Load Formula (Previous designation assumed flow was equal to 156 cfs)
	Zinc	Coyote Creek	55 kg/day Wet Weather	Daily Mass Load Formula (Previous designation assumed flow was equal to 156 cfs)
Freshwater, Newport Bay Watershed	Selenium Tissue-based Water Column	San Diego Creek	0.4 lbs/yr (<20cfs), 1.0 lbs/yr (21-814 cfs), 5,3 lbs/yr (>814 cfs) (from USEPA's Toxic Pollutants [Metals] in San Diego Creek and Newport Bay TMDL	10 µg/L in accordance with R8-2017-0014

TMDL	Constituent	Waterbody	Existing Limitation	New Limitation
		Santa Ana-Delhi Channel	None	11 µg/L in accordance with R8-2017-0014
		Big Canyon Wash	None	1 µg/L in accordance with R8-2017-0014
	Selenium CTR-based Water Column (at Costa Mesa Channel)		None	5 µg/L in accordance with R8-2017-0014
Copper in Upper and Lower Newport Bay	Dissolved Copper	Newport Bay	3,043 lbs/yr (from USEPA's Toxic Pollutants [Metals] in San Diego Creek and Newport Bay TMDL)	2,501 lbs/yr (upon effective date of Copper TMDLs)
			4.8 µg/L acute (from USEPA's Toxic Pollutants TMDL)	No Change
			3.1 µg/L chronic (from USEPA's Toxic Pollutants TMDL)	No Change
Indicator Bacteria in San Gabriel River, Estuary and Tributaries	Indicator Bacteria	Coyote Creek	None	Expressed in Appendix 14 as the number of daily or weekly sample days that may exceed the single sample numeric targets.

Table D.3 - Summary of Changes to Effluent Limitations in Order R8-2010-0033

TMDL	Constituent	Waterbody	Existing Limitation	New Limitation
Middle Santa Ana River Watershed	Fecal Coliform Dry Season	Santa Ana River	180 organisms/ 100 ml w/ 10 percent not > 360 organisms/ 100 ml	Not included, as superseded per the terms of the MSAR Bacteria TMDL
	Fecal Coliform Wet Season		180 organisms/ 100 ml w/ 10 percent not > 360 organisms/ 100 ml	Not included, as superseded per the terms of the MSAR Bacteria TMDL
	E. Coli Dry Season		113 organisms/ 100 ml w/ 10 percent not > 212 organisms/ 100 ml Comprehensive Bacterial Reduction Plan	No Change
	E. Coli Wet Season		113 organisms/ 100 ml w/ 10 percent not > 212 organisms/ 100 ml Comprehensive Bacterial Reduction Plan	No change, but high flow suspension added in accordance with R8-2012-0001
Lake Elsinore/ Canyon Lake TMDL	Nutrients	Canyon Lake	Total Phosphorus 306 kg/yr CNRP	Total Phosphorus 3,939 kg/yr (no later than 20 years from the effective date of the 2025 Revised TMDLs) and 1,970 kg/yr (no later than 30 years from the effective date of the 2025 Revised TMDLs)

			Total Nitrogen 3,974 kg/yr CNRP	Total Nitrogen 11,326 kg/yr (no later than 20 years from the effective date of the 2025 Revised TMDLs) and 8,371 kg/yr (no later than 30 years from the effective date of the 2025 Revised TMDLs)
		Lake Elsinore	Total Phosphorus 124 kg/yr CNRP	Total Phosphorus 1,876 kg/yr above Mystic Lake and 548 kg/yr downstream of Canyon Lake (no later than 20 years from the effective date of the 2025 Revised TMDLs) and 938 kg/yr above Mystic Lake and 274 kg/yr downstream of Canyon Lake (no later than 30 years from the effective date of the 2025 Revised TMDLs)
			Total Nitrogen 349 kg/yr CNRP	Total Nitrogen 5,395 kg/yr above Mystic Lake and 1,575 kg/yr downstream of Canyon Lake (no later than 20 years from the effective date of the 2025 Revised TMDLs) and 3,987 kg/yr above Mystic Lake and 1,164 kg/yr downstream of Canyon Lake (no later than 30 years from the effective date of the 2025 Revised TMDLs)

Table D.4 - Summary of Changes to Effluent Limitations in Order R8-2010-0036

TMDL	Constituent	Waterbody	Existing Limitation	New Limitation
Big Bear Lake Dry Hydrological Conditions	Total Phosphorus	Big Bear Lake	Total Phosphorus 475 lbs/yr	No Change

2. General Principles of Law Governing Anti-Backsliding Analysis for Effluent Limitations Established Pursuant to TMDLs

There are both statutory anti-backsliding provisions in CWA section 402(o) and regulatory anti-backsliding provisions in 40 CFR section 122.44(l). The CWA's statutory prohibition against backsliding applies under a narrow set of criteria specified in section 402(o). (See State Water Board Order WQ 2015-0075 at pp. 19-23; NPDES Permit Writers' Handbook at § 7.2.1.1 (USEPA 2010).)

Section 402(o)(1) prohibits relaxing technology-based effluent limitations originally established based on best professional judgment (BPJ), when there is a newly revised effluent limitation guideline. This section is inapplicable here since none of the WQBELs in the Order are technology based effluent limitations (TBELs) based on BPJ.

Section 402(o)(1) also prohibits relaxing of WQBELs imposed pursuant to CWA sections 301(b)(1)(C) or 303(d) or (e). CWA section 301(b)(1)(C), which does not apply to this Order, requires the permitting authority to include effluent limitations "necessary to meet water quality standards, treatment standards, or schedules of compliance" established by federal or state laws and regulations. Clean Water Act section 303(d)-(e) requires inclusion of effluent limitations for those pollutants for which TMDLs have been established. However, backsliding may be allowed for these categories of WQBELs pursuant to one of six exceptions in CWA section 402(o)(2). Exceptions include when:

- There have been material and substantial alterations or additions to the permitted facility that justify the relaxation;
- New information (other than revised regulations, guidance, or test methods) is available that was not available at the time of permit issuance and that would have justified a less stringent effluent limitation.

If the effluent limitation was based on water quality standards, any changes must result in a decrease in pollutants discharged;

- Technical mistakes or mistaken interpretations of the law were made in issuing the permit under CWA section 402(a)(1)(b);

- Good cause exists because of events beyond the permittee's control (e.g., natural disasters) and for which there is no reasonably available remedy;

- The permit has been modified under CWA sections 301(c), 301(g), 301(h), 310(i), 301(k), 301(n), or 316(a);

- The permittee has installed and properly operated and maintained required treatment facilities but still has been unable to meet the effluent limitations (relaxation may be allowed only to the treatment levels actually achieved).

Relaxation of WQBELs may also be allowed if such backsliding is consistent with the provisions in CWA section 303(d)(4). CWA section 303(d)(4) speaks to backsliding under two different circumstances: for non-attainment and attainment receiving waters. First, when the receiving waterbody has been identified as not meeting applicable water quality standards (i.e., a nonattainment water), CWA section 303(d)(4)(A) allows the establishment of a less stringent effluent limitation if two conditions are met: (a) the existing effluent limitation was based on a TMDL or other WLA established under CWA section 303, and (b) the attainment of water quality standards will be assured or the designated use not being attained is removed in accordance with the water quality standards regulations.[45] (NPDES Permit Writers' Manual, § 7.2.1.3 (USEPA 2010); 33 USC § 1313(d)(4)(A).) Second, when the receiving waters quality equals or exceeds levels necessary to protect beneficial uses or otherwise meets applicable water quality standards (i.e., an attainment water), CWA section 303(d)(4)(B) provides that an effluent limitation based on a TMDL, WLA, other water quality standard, or any other permitting standard, may only be relaxed where the action is consistent with state's antidegradation policy. (NPDES Permit Writers' Manual, § 7.2.1.3 (USEPA 2010); 33 USC § 1313(d)(4)(B).)

In the Order, all WQBELs are imposed pursuant to CWA section 303(d) based on TMDL WLAs, as enumerated in Appendices 2 through 14. For purposes of the following analysis, both sections 303(d)(4) and the exceptions in section 402(o)(2) are relevant. "[US]EPA has consistently

[45] This subsection does not provide an exception for establishing less stringent limitations where the original limitation was based on state permitting standards (e.g., state treatment standards) and was not based on a TMDL or WLA.

interpreted CWA section 402(o)(1) to allow relaxation of WQBELs and effluent limitations based on state standards if the relaxation is consistent with the provisions of CWA section 303(d)(4) or if the exceptions in CWA section 402(o)(2) apply. The two provisions [303(d)(4) and 402(o)(2)] constitute independent exceptions to the prohibition against relaxation of effluent limitations. If either is met, relaxation is permissible." (NPDES Permit Writers' Manual, § 7.2.1.3 (USEPA 2010).) As set forth below, the changes to numeric WQBELs in the Order either do not constitute backsliding or satisfy one or more of the foregoing exceptions to anti-backsliding as described below.

3. WQBEL Revisions That Do Not Constitute Backsliding

(a) Bacterial Indicators in Newport Bay for the SHEL Beneficial Use (Appendix 2)

The 2009 Orange County MS4 Permit incorporates WQBELs consistent with the assumptions and requirements of the Fecal Coliform TMDLs for Newport Bay to protect the REC-1 and SHEL beneficial uses. However, since the adoption of that permit, the TMDLs have been amended twice to extend the attainment date for meeting the SHEL WQOs and WLAs. The Santa Ana Water Board approved the first amendment on June 16, 2017 through Resolution No. R8-2017-0019, which was subsequently approved by the State Water Board and Office of Administrative Law. The amendment extended the attainment date from December 30, 2019 to December 31, 2022. The Santa Ana Water Board approved a second amendment on June 3, 2022 through Resolution No. R8-2022-0017, which was subsequently approved by the State Water Board on November 15, 2022 and the Office of Administrative Law on June 15, 2023. The amendment extended the attainment date from December 31, 2022 to December 31, 2030.

The Order updates the WQBEL in Appendix 2 with the new compliance date for SHEL consistent with the assumptions and requirements of the 2017 and 2022 revisions to the Fecal Coliform TMDLs for Newport Bay. The numeric density limitation remains unchanged from the last permit and is based on the same water quality objective; accordingly, the WQBEL for SHEL is just as stringent as in the prior permit, only with a longer compliance timeframe.

Even if the change described above is subject to the CWA's anti-backsliding provisions, the revision complies with CWA section 304(d)(4)(A). Section 303(d)(4)(A) of the CWA allows relaxation of effluent limits in non-attainment waters if "the cumulative effect of all such revised effluent limitations based on such total maximum daily load or waste load allocation will assure the attainment of such water quality standard, or (ii) the designated use which is not being attained is removed in accordance with regulations" established under the CWA. Here, the compliance date was

adjusted, as reflected in the revised TMDL. Compliance with the WQBEL will therefore continue to assure the attainment of the WQOs for SHEL in Newport Bay within a reasonable time frame set forth in the revised implementation schedule.

(b) Toxic Pollutants (Metals) in San Diego Creek and Newport Bay (Appendix 7) and Copper in Upper and Lower Newport Bay (Appendix 10)

The WQBELs for dissolved copper discharges from MS4s to Newport Bay contained in Appendix 7 are consistent with the assumptions and requirements of the Toxic Pollutants (Metals) in San Diego Creek and Newport Bay TMDL (Toxics TMDLs) adopted by USEPA. These WQBELs remain unchanged from the 2009 Orange County MS4 Permit, except that they will be superseded by the WQBELs for dissolved copper contained in Appendix 10 upon the effective date of the TMDLs for Copper in Upper and Lower Newport Bay (Copper TMDLs), adopted through Santa Ana Water Board Resolution No. R8-2022-0012. The Copper TMDLs will not become effective unless and until approved by the State Water Board and USEPA. The WQBELs for all other metals and the WQBELs for copper discharges to San Diego Creek in Appendix 7 remain effective and unchanged by adoption of the Copper TMDLs.

The Copper TMDLs retain as WQBELs the concentration-based loading capacity values based on the CTR saltwater criteria for dissolved copper (4.8 µg/L acute and 3.1 µg/L chronic) from USEPA's Toxics TMDLs. However, the Copper TMDLs would revise the mass-based WLA for MS4 discharges to Newport Bay based on updated data. In USEPA's Toxics TMDLs, mass-based loads for dissolved metals are based on available data from prior to 2002 and used a 20 percent margin of safety. The WQBEL for mass-based discharges of dissolved copper from MS4s to Newport Bay is 3,043 lbs/yr in Appendix 7. The revised mass-based WLA from the Copper TMDLs uses data obtained from after 2002 and a 10 percent margin of safety. Appendix 10 would implement a WQBEL for mass-based discharges of dissolved copper from MS4s to Newport Bay of 2,501 lbs/yr. Since the WQBELs for dissolved copper discharges to Newport Bay from MS4s in Appendix 10 are either at least as stringent or more stringent than the WQBELs in Appendix 7, there will be no backsliding once the WQBELs in Appendix 10 take effect.

(c) Metals in San Gabriel River and Impaired Tributaries (Appendix 8)

The 2009 Orange County MS4 Permit incorporates WQBELs consistent with the assumptions and requirements of the San Gabriel River and Impaired Tributaries TMDL for Metals, which was adopted by USEPA on March 26, 2007. The mass-based WQBELs for wet weather discharges of Copper, Lead and Zinc from MS4s to Coyote Creek were set at 9.41

kg/day, 36.9 kg/day, 55 kg/day, respectively. These values were calculated using the load capacity formula specified in the TMDL assuming a flow equal to 156 cfs. Given the variable amount of flow during wet weather in Orange County, the Order removes the assumption concerning flow during wet weather and instead directs the Permittees to calculate the maximum daily mass loads based on the formulas specified in the TMDL. The mass-based WQBELs for wet weather in Appendix 8 are therefore not any less stringent than those included in the prior order and not subject to the CWA's anti-backsliding provisions.

(d) Sediment in the Newport Bay/San Diego Creek Watershed (Appendix 4)

The 2009 Orange County MS4 Permit and its predecessor incorporated the Load Allocations for sediment from urban sources as WQBELs. Load Allocations are used for nonpoint sources, however the Permit applies to point sources. In addition, pollutants that enter into and are discharged from MS4s are considered point sources regardless of the nature of the original source. The reason for the TMDL regarding urban sources as nonpoint sources is unknown. To address this conflict, the Load Allocation for urban sources has been excluded from this Order. It has been replaced by targets from Phase I of the TMDL. These include minimum depths or capacities for sediment basins in the watershed and in Upper Newport Bay, maintenance of specific distributions of habitat types, and corresponding monitoring and reporting requirements.

Sediment is generally transported in water in two ways, suspended in the water column (suspended load) or moved along a channel bottom (bed load). The TMDL applies to all sediment and requires it be evaluated in two ways that account for both methods of transport. The TMDL requires that suspended sediment loads be calculated and that sediment captured in sedimentation basins be removed and quantified. The latter method would account for larger sediment particles that are more likely transported as bed load and readily settle in basins. The TMDL requires that the sediment load in the Newport Bay watershed be reduced by 50%, or 125,000 tons per year, based on a 10-year running average. This allows for a load of 125,000 tons per year. This target is split evenly between suspended load and bed load so that suspended sediment must be limited to 62,500 tons per year and bed load must be reduced by 62,500 tons per year. According to the *2023-24 Sediment TMDL Annual Report,* both of these targets are being met by implementing the targets from the TMDL. Including the targets in this Order is likely able to provide a higher level of water quality protection than relying on the urban Load Allocation alone. The revised WQBEL is therefore not less stringent than in the 2009 Orange County MS4 Permit.

Even if the change described above is subject to the CWA's anti-backsliding provisions, the revision complies with CWA section 304(d)(4)(A). Section 303(d)(4)(A) of the CWA allows relaxation of effluent limits in non-attainment waters if "the cumulative effect of all such revised effluent limitations based on such total maximum daily load or waste load allocation will assure the attainment of such water quality standard, or (ii) the designated use which is not being attained is removed in accordance with regulations" established under the CWA. In this case, using the targets from the TMDL will ensure that the water quality standards for the Newport Bay watershed will be attained. In the *2023-24 Sediment TMDL Annual Report*, dated February 27, 2025, the stakeholders report that they removed a total of 47,757 cubic yards of sediment from retarding basins in the watershed. This amounts to 64,400 tons of sediment removed, assuming a soil density of 1,600 kg/cubic meter. The stakeholders also report that the ten-year average of suspended sediment loading to Newport Bay, measured at Campus Drive is 21,215 tons per year. As stated above, the TMDL targets are being met.

(e) Nutrients in Lake Elsinore and Canyon Lake (Appendix 12)

The Order updates the WQBELs in Appendix 12 with the new compliance date that is consistent with the assumptions and requirements of the 2025 revisions to the Nutrients TMDLs for Lake Elsinore and Canyon Lake. The final WQBELs under the 2025 Revisions are not less stringent than the final WQBELs in the 2010 permit and section VIII of Appendix 12. The final WQBELs that implement the 2025 TMDL revisions are not less stringent than prior requirements. While a direct comparison to the 2004 TMDL may suggest higher allocations for certain categories, this reflects a structural change in how loads are apportioned rather than a relaxation of standards. The 2004 TMDL grouped sources into broader land use categories, whereas the revised TMDL disaggregates those categories into more specific sources, resulting in different allocations at the category level. When evaluated on a total watershed basis, as shown in Table 6-9 of the *Revised TMDL Technical Report*, the overall allocations remain consistent with or more stringent than prior limits. Additionally, the narrative limits in the 2010 permit and the numeric limits in the 2025 revised TMDL are not comparable for purposes of section 402(o) and therefore there is no backsliding. (District of Columbia MS4 Permit, Final Responsiveness Summary (EPA, Sept. 30, 2011), p.84, citing *Communities for a Better Environment v. State Water Resources Control Bd.* (2005) 132 Cal. App. 4th 1313).) Backsliding is authorized by section 303(d)(4)(A).

4. WQBEL Revisions that Fall Within an Exception to Backsliding

(a) Bacterial Indicators in Middle Santa Ana River Bacteria (Appendix 11)

The 2010 San Bernardino and Riverside County MS4 Permits incorporated WQBELs consistent with the assumptions and requirements of the Bacterial Indicator TMDLs for Middle Santa Ana River Watershed (MSAR Bacteria TMDL). The Order in Appendix 11 removes the WQBELs for fecal coliform for both Dry Summer Conditions and Wet Winter Conditions included in the prior permit, as well as adds a provision for high flow suspension during Wet Winter Conditions for Santa Ana River Reach 3.

The removal of WQBELs for fecal coliform under Dry Summer and Wet Winter Conditions from Appendix 11 is based on Footnote C of Table 6-1x of the MSAR Bacteria TMDL and the State Water Board's approval of Part 3: Bacteria Provisions and Variance Policy of the ISWEBE. While Table 6-1x of the MSAR Bacteria TMDL includes fecal coliform WLAs for both Dry Summer and Wet Winter Conditions, Footnote C to the table provides: "The fecal coliform TMDLs, WLAs and LAs become ineffective upon the replacement of the REC1 fecal coliform objectives in the Basin Plan by approved REC1 objectives based on E. coli." In 2018, the State Water Board adopted statewide WQOs for REC-1 with *E. coli* as the sole freshwater bacterial indicator. These objectives became effective on February 4, 2019 and supersede the bacteria WQOs for REC-1 in the Santa Ana Water Board's Basin Plan.

The addition of a high flow suspension provision to the Wet Winter Conditions WQBELs in Appendix 11 for Santa Ana River Reach 3 is pursuant to the Basin Plan amendment adopted through Resolution No. R8-2012-0001, which became effective April 8, 2015. The suspension is premised on the fact that recreational use of the receiving waters at issue is precluded under certain flow conditions that make recreational activities unsafe. Because the REC-1 beneficial use is not attained during periods of high flow, the high flow suspension provision was added to remove this beneficial use under those conditions. This update to the Basin Plan is reflected in the revised WQBELs in Appendix 11.

These revisions comply with the exception to backsliding found in CWA section 304(d)(4)(A). Section 303(d)(4)(A) of the CWA allows relaxation of effluent limits in non-attainment waters if "the cumulative effect of all such revised effluent limitations based on such total maximum daily load or waste load allocation will assure the attainment of such water quality standard, or (ii) the designated use

which is not being attained is removed in accordance with regulations" established under the CWA. Here, *E. coli* continues to serve as a bacteria indicator to assure the attainment of the WQOs for REC-1 pursuant to the express terms of the MSAR Bacteria TMDL. Additionally, because the REC-1 beneficial use is not attained during periods of high flow, and the high flow suspension provision was added pursuant to the regulatory process through a Basin Plan amendment, the addition of the high flow suspension provision to the Wet Winter Conditions WQBELs falls within the CWA section 303(d)(4)(A) exception to backsliding.

I. Plain Language

Government Code section 6219(a) states that "Each department, commission, office, or other administrative agency of state government shall write each document that it produces in plain, straightforward language, avoiding technical terms as much as possible, and using a coherent and easily readable style." This requirement is more commonly known as the State's "plain language requirement." The Order and this Fact Sheet have been prepared with careful consideration of the plain language requirement.

There are a variety of indicators for measuring the "readability" of a document. These indicators include the Flesch Kincaid Reading Ease, Flesch Kincaid Grade Level, and the Gunning Fog Score. These first two indicators are widely available in common word-processing software and were applied to the Order and Fact Sheet. The results indicate that a person that has achieved a college junior level of education should be able to readily understand these documents. Given the technical and legal subject matter, the readability of the Order and this Fact Sheet is appropriate and satisfies the State plain language requirement.

J. Other Regulations, Plans, and Policies

The Order implements all other applicable federal regulations and state regulations, plans, and policies.

The Order is consistent with numerous State Water Board decisions, including Order WQ-2000-11 (*Cities of Bellflower, et al., the City of Arcadia, and Western States Petroleum Association*), Order WQ 2001-15 (*Building Industry Association of San Diego County and Western States Petroleum Association*), Order WQO 2002-0014 (*City of Aliso Viejo, City of Mission Veijo, Golden Rain Foundation of Laguna Woods [aka Leisure World*]), Order WQ 2015-0075 (*Waste Discharge Requirements for Municipal Separate Storm Sewer System [MS4] Discharges within the Coastal Watersheds of Los Angeles County, Except those Discharges Originating from the City of Long Beach MS4*), and Order WQ 2020-0038 (*Approval of Watershed Management Programs and an*

Enhanced Watershed Management Program submitted pursuant to Los Angeles Water Quality Control Board Order R4-2012-0175).

K. Human Right to Water

The Order is consistent with the State Water Board Resolution's No. 2016-0010, which adopts the human right to water as a core value and directs its implementation in programs and activities. Resolution No. R8-2019-0078 affirms the Santa Ana Water Board's commitment to implementing the human right to water in its programs and activities, including permitting activities. The Order is expected to positively impact the human right to water through positively impacting water quality in the Santa Ana Region, including waters designated for municipal or domestic supply (MUN). Even waterbodies within the region not designated as MUN may nevertheless be used for drinking, cooking or sanitation purposes. Consequently, while this Order does not require Permittees to attain criteria intended to protect MUN in waterbodies without that designation, any positive impact to water quality also supports the human right to water.

L. Assembly Bill 2108

The Order is consistent with Assembly Bill 2108. Section XXIII.B of this Fact Sheet describes the Bill and actions taken to comply in detail.

V. RATIONALE FOR PERMITTEE RESPONSIBILITIES

A. Permittee Responsibilities

Sections III.A and III.B of the Order establish the basic responsibilities of all the Permittees, including the Principal Permittees. These sections are designed to require implementation of an adaptive management process This process includes planning and documentation of program activities, execution, tracking of outcomes, and evaluation through comparison with performance metrics. The goal is continual improvement of the Permittees' control measures, projects, and programs to effectively prohibit non-stormwater discharges (section IV), reduce pollution to the maximum extent practicable, and attain effluent limitations (section VII).These requirements are included in this Order pursuant to CWA section 402(p)(3)(B)(iii) which, in part, requires controls to reduce the discharge of pollutants to the maximum extent practicable and allows the state to include such other provisions determined appropriate for the control of pollutants.

Terms such as 'continual improvement' are used in this Order and Fact Sheet to describe the overall goals and adaptive management framework of the permit. These terms do not establish independent compliance obligations. Compliance is determined based on adherence to the specific requirements,

performance metrics, and deadlines set forth in the Order. All permit compliance actions must be capable of achieving the applicable requirements and stated water quality objectives. For actions that have already been implemented, the Permittees must demonstrate that those actions have either achieved the intended outcome or, where they have not, have triggered evaluation and modification through the adaptive management process as necessary to achieve compliance with applicable requirements.

These sections also describe the basic responsibilities for internal and external coordination within and among the Permittees respectively according to 40 CFR sections 122.26(d)(2)(i)(D) and (d)(2)(iv). These sections require maintenance of records and the submission of reports that are adequate to determine compliance.

Section III.A includes requirements for the electronic submittal of records. These requirements are to facilitate conformance with USEPA's Cross-Media Electronic Reporting Rule (CROMERR) and promote efficiency. The current electronic information system does not support the functionality to allow the Permittees to comply with the requirements. Consequently, these requirements do not go into effect until the Permittees are directed to comply with them through a written notice from the Executive Officer. This notice will not be issued until the functionality is available to allow the Permittees to comply.

B. Implementation Agreement

Section III.C of the Order requires that the Permittees have inter-agency and inter-Permittee agreements that are necessary to satisfy the requirements of the Order. Various such agreements have been reported to exist to carry out certain programs, such as the Sanitary Sewer Overflow Program. Some agreements may need to be reviewed and updated to comply with the Order. Section III.C is supported by 40 CFR section 122.26(d)(2)(i), which recognizes that a "series of contracts" may be necessary to comply with an MS4 permit; and by 40 CFR section 122.26(d)(2)(i)(D), which requires "interagency agreements among co-applicants" for MS4 permit coverage.

C. Legal Authority/Enforcement

Section III.D. of the Order largely continues requirements that the Permittees secure and maintain the legal authority to control the discharge of pollutants according to the requirements of the Order. In short, 40 CFR section 122.26(d)(2)(i) requires applicants for MS4 discharge permits to demonstrate adequate legal authority that enables them to: control the contribution of pollutants from industrial activity; prohibit illicit discharges; control spills, dumping, or disposal of materials other than stormwater; control the contribution of pollutants between MS4s through interagency agreements; require compliance with ordinances, permits, contracts, or orders; and carry out inspection, surveillance, and monitoring procedures necessary to determine

compliance. Section III.D is intended to support the requirements of 40 CFR section 122.26(d)(2)(i).

The Order describes requirements but does not grant the Permittees any legal authorities that may be necessary to comply. The Permittees typically secure this authority through their municipal ordinances. All the Permittees have reported adopting water quality ordinances to comply with prior orders. These water quality ordinances include measures to enforce compliance through inspections and sanctions if necessary.

The Order requires the Permittees to impose a series of effective, progressive actions to compel compliance with regulatory requirements related to the control of discharges of pollutants to their MS4s. The Order adds new requirements for the Permittees to track and evaluate challenges to their authority. Where a challenge results in an adverse judgment in a court of law, the Permittees must report it along with a plan to make their authority adequate.

D. Notification Requirements

Requirements to report a release or threatened release of pollutants to an MS4 within the Permittees' jurisdiction that poses an imminent threat to human health or the environment are consistent with requirements in Water Code section 13271 and Health and Safety Code section 5411.5. These are carried over from prior permits.

The Order also includes requirements to report bi-annually facilities known to not have authorization to discharge waste under an NPDES stormwater permit, as well as facilities with known releases of pollutants subject to stormwater permits such as the Industrial General Permit, Construction General Permit, and Scrap Metal Permit. These requirements are necessary to determine compliance with the requirement to prohibit illicit discharges and are part of progressive enforcement that is expected from the Permittees. (See sections III.D.4. and III.E) Progressive enforcement includes procedures to coordinate enforcement between the Santa Ana Water Board and Permittees, particularly where violations identified by Permittees fall under the Santa Ana Water Board's regulatory authority or require escalation beyond local jurisdiction. These requirements are consistent with Business and Professions Code sections 16000.3 and 16100.3. The biannual reports would include business licensees who fail to demonstrate stormwater coverage pursuant to these sections as well as non-enrollees the Permittees discover through their inspection programs.

E. Fiscal Analysis

40 CFR section 122.26(d)(2)(vi) requires, for each fiscal year to be covered by the permit, a fiscal analysis of the necessary capital and operation and maintenance expenditures necessary to accomplish the activities of the

stormwater management program, including the monitoring program. The analysis is to include a description of the source(s) of funds that are proposed to meet the necessary expenditures, including legal restrictions on the use of such funds. Additionally, 40 CFR section 122.42(c)(5) requires that annual reports for MS4 permits include annual expenditures and budget for the year following each Annual Progress Report. The inclusion of the requirement to perform a fiscal analysis annually in the Order was carried over from the previous permits. A requirement has been added so that fiscal reports conform to USEPA or State reporting guidance, when such guidance becomes available.

F. Special Studies

It is encouraged that Permittees consider conducting special studies. Special studies are not required. The requirement for special studies to have workplans derives from the Santa Ana Water Board's authority to include monitoring, reporting, and investigative provisions in permits. Water Code section 13385 establishes the enforcement framework applicable to such provisions once incorporated into a permit. The results of these studies may support future Basin Plan amendments to revise TMDLs and/or water quality standards. Special studies include projects intended to contribute to stormwater science or to support continual improvement of the Permittees' stormwater program. Special studies do not include projects intended to assess compliance with receiving water limitations or water quality-based effluent limitations, as conclusions made regarding compliance with the Tentative Order should be made under close regulatory oversight.

VI. RATIONALE FOR DISCHARGE PROHIBITIONS

A. Non-Stormwater Discharge Prohibitions

Consistent with federal law, section IV of the Order requires the effective prohibition of non-stormwater discharges to the MS4, where such discharges are not authorized by a separate permit or otherwise authorized or conditionally exempt. CWA section 402(p)(3)(B)(ii) forms the basis of this requirement, which provides that MS4 permits "shall include a requirement to effectively prohibit non-stormwater discharges into the storm sewers." (CWA § 402(p)(3)(B)(ii-iii); see also 40 CFR § 122.26(d)(2)(i)(B).)

USEPA adopted implementing regulations for the effective prohibition on non-stormwater discharges to the MS4 found at 40 CFR section 122.26. In its 1990 preamble to these regulations, USEPA noted that it was "clarifying that section 402(p)(3)(B) of the CWA (which requires permits for municipal separate storm sewers to 'effectively' prohibit non-storm water discharges) does not require permits for municipalities to prohibit certain discharges or flows of non-storm water to waters of the United States through municipal separate storm sewers *in all cases*." (55 FR 47990-01, 48037 [emphasis added].) Accordingly, federal

regulations at 40 CFR section 122.26(d)(2)(iv)(B)(1) state that the following non-stormwater discharges may be allowed if they are not determined to be a significant source of pollutants to the MS4: water line flushing, landscape irrigation, diverted stream flows, rising ground waters, uncontaminated groundwater infiltration, uncontaminated pumped groundwater, discharges potable water sources, foundation drains, air conditioning condensation, irrigation water, springs, water from crawl space pumps, footing drains, lawn watering, individual residential car washing, flows from riparian habitats and wetlands, dechlorinated swimming pool discharges, street wash water, and firefighting flows. If, however, these discharges are determined to be a significant source of pollution then they must be prohibited. Additionally, the MS4 permit may include permit conditions that require municipalities "otherwise control any of these types of discharges where appropriate." (55 FR 47990-01, 48037.) Non-stormwater discharges are not authorized or conditionally exempt unless those discharges satisfy all conditions of the applicable NPDES permit or other exemption conditions in section IV.A.2 of the Order. Like other illicit discharges through an MS4, such discharges must either be removed from the system or become subject to an NPDES permit (other than this Order) if they fail to meet applicable conditions. (55 Fed. Reg. 47990, 47995.)

Section IV.A.2 of the Order largely carries over provisions from previous permits by exempting a limited number of authorized and conditionally exempt non-stormwater discharges from the non-stormwater discharge prohibition. Table 3 contains a list of authorized categories of non-stormwater discharges that are presumed not to be a significant source of pollutants, which is primarily comprised of the categories listed in 40 CFR section 122.26(d)(2)(iv)(B)(1). Three conditional exemptions for non-stormwater discharges have been added to the Order. Additionally, the Order removes certain fee exemptions contained in prior permits. These changes are described in greater detail below.

1. Conditional Exemption for CERCLA Authorized Discharges

The Order adds a conditional discharge authorization for temporary non-stormwater discharges authorized pursuant to sections 104(a) or 104(b) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). These discharges typically consist of short-term, high-volume discharges from groundwater extraction well development or redevelopment or from state-required testing of potable water treatment plants and occur as part of USEPA-authorized groundwater remediation action under CERCLA. Such discharges must either: (i) comply with water quality standards as applicable or relevant and appropriate requirements ("ARARs") under section 121(d)(2) of CERCLA; or (ii) be subject to either (a) a written waiver of ARARs pursuant to section 121(d)(4) of CERCLA or (b) a written determination that compliance with ARARs is not practicable considering the exigencies of the situation pursuant to 40 CFR section 300.415(j). Because ARARs implement state water quality standards when a permitting action is superseded by

federal law under CERCLA, a conditional discharge authorization is appropriate in the Order.

2. Conditional Exemption for Non-Emergency Firefighting Flows

The Order also adds a conditional exemption for discharges from essential non-emergency firefighting activities, provided appropriate BMPs are implemented to reduce pollutants. The BMPs must be based on the California Department of Forestry and Fire Protection, Office of the State Fire Marshal's Water-Based Fire Protection Systems Discharge Best Management Practices Manual (September 2011) for water-based fire protection system discharges, or equivalent BMP manual for fire training activities and post-emergency firefighting activities. Firefighting activities are listed in 40 CFR section 122.26(d)(2)(iv)(B)(1) for exclusion from the non-stormwater discharge prohibition and similarly excluded from the definition of "illicit discharge" in 40 CFR section 122.26(b)(2). USEPA has noted in its preamble to the federal regulations that BMPs can be appropriate requirements for firefighting discharges: "In the case of firefighting it is not the intention of these rules to prohibit in any circumstances the protection of life and public or private property through the use of water or other fire retardants that flow into separate storm sewers. However, there may be instances where specified management practices are appropriate where these flows do occur (controlled blazes are one example)." (55 FR 47990-01, 48037.) Accordingly, the Santa Ana Water Board finds that the requirement to implement BMPs during non-essential firefighting activities is appropriate in the Order.

3. Conditional Exemption for Landscape Irrigation Water

The Santa Ana Water Board has placed conditions on the discharge of irrigation water. Discharge is only allowed if runoff due to potable landscape irrigation is minimized through the implementation of an ordinance specifying water efficient landscaping standards, as well as an outreach and education program focusing on water conservation and landscape water use efficiency. BMPs must be implemented to minimize runoff and prevent introduction of pollutants to the MS4 and receiving water, including landscape water use efficiency requirements for existing landscaping, use of drought tolerant, native vegetation, and the use of less toxic options for pest control and landscape management.

Irrigation water may transport pollutants, such as nutrients, pathogens, and pesticides to receiving waters. Reducing irrigation runoff will reduce wastes discharged to receiving waters. In addition, practices to reduce irrigation runoff may reduce concentrations of some wastes in dry weather runoff[46]. Irrigation has also been identified as playing a key role in mobilizing pollutants

[46] Irvine Ranch Water District and Municipal Water District of Orange County, "The Residential Runoff Reduction Study", July 2004.

such as pesticides[47]. Reducing residential irrigation runoff will reduce wastes discharging to receiving waters.

The requirement for water conservation BMPs to minimize any non-stormwater discharge of irrigation water and related public outreach is consistent with statewide efforts to reduce wasteful water uses. In 2021, Governor Newsom proclaimed a drought state of emergency for all counties in California, urging Californians to step up their water conservation efforts and encouraging the State Water Board to prohibit certain wasteful water uses. The State Water Board found that an emergency exists due to drought conditions and prohibited wasteful water uses (like refilling fountains without recirculating pumps, overwatering landscapes, watering grass within 48 hours of rainfall, etc.) in emergency regulations. The requirements in the Order are consistent with these statewide water conservation efforts.

4. Effective Prohibition of Street Wash Water

Street wash water is listed in 40 CFR 122.26(d)(2)(iv)(B)(1) among those discharges that are exempt from the requirement to be effectively prohibited unless found to be a significant source of pollutants.

In 1997, the City of Los Angeles submitted a report to the Los Angeles Water Board entitled, *A Study of Pollutants Entering Storm Drains from Street and Sidewalk Washing Operations in Los Angeles, California*. The City reported that street washing occurred in conjunction with general street and alleyway cleaning operations. These operations involve manual trash and debris removal and street sweeping as well as washing with a disinfecting solution. The operations are “essential to maintain public health and control nuisance odors caused by deposition of human waste” related to homeless encampments. The operation objectives are “to remove trash, disinfect, and deodorize targeted streets, alleys, and sidewalks.”

The City of Los Angeles documented that street wash water contained fecal indicator bacteria at levels that were comparable to raw sewage. In some locations, the biological chemical demand of the wash water was up to 6 times higher than raw sewage. The wash solution was also found to be highly toxic, and that the toxicity decreased with time or distance after the solution was applied to the street.

The wash water also contained highly varied concentrations of metals. Many metals were found in trace amounts. But others, such as zinc, were found in concentrations that averaged 6,478 µg/L, with a maximum of 18,700 µg/L. For comparison, the USEPA benchmark value for zinc is 100 µg/L. A benchmark

[47] Haver, Darren L. and Fox, Angelia, March 2008. Mitigating Pesticide Runoff in Urbanized Environments, Final Report, SWRCB Agreement No. 04-013-558-0.

value is a value above which the pollutant presents a level that could potentially impair water quality.

The findings in the 1997 report indicate that street wash water is a source of pollutants to waters of the U.S. Subsequent to the 1997 report, authorizations of the MS4 permits in the Santa Ana Region did not include street wash water on a list of allowable non-stormwater discharge types. This Order continues the exclusion from prior orders.

This exclusion should not be interpreted as a prohibition on street washing, but rather on any discharge to the MS4 from that action. This exclusion means that, if a Permittee performs street washing, controls must be in place to prevent the wastewater from discharging into the MS4. Generally, sweeping should be used as an alternate control whenever possible and swept material should be disposed of in the trash. All trash, debris, and free-standing oil/grease spills/leaks (use absorbent material if necessary) should be removed from the area before washing. Whenever practicable, Permittees should collect and divert street and alley wash water from the Permittees' streets. Sidewalk cleaning activities should be diverted to the sanitary sewer or to landscaped areas for infiltration.

5. De Minimis/Drinking Water System Discharges and Construction General Permit Discharges

Past permits authorized certain non-stormwater discharges from *de minimis* waste streams and potable water systems subject to the limitations and prohibitions of Order No. R8-2020-0006, NPDES Permit No. CAG998001 (*de minimis* permit) and State Water Board Order WQ 2014-0194-DWQ, NPDES No. CAG140001. This had the effect of exempting the Permittees from enrolling in and paying the fees associated with these permits. The Order removes these fee exemptions and requires the Permittees to follow the normal permitting process to obtain coverage for these types of discharges under the appropriate NPDES permits. However, the MS4 Permittees can request coverage under "Various Locations". This enrollment feature could allow a Permittee to only submit for coverage once for multiple project discharges from various locations in their jurisdiction.

Similarly, past MS4 permits authorized the Permittees to discharge wastes in runoff from capital improvement projects subject to the limitations and prohibitions of the Construction General Permit without enrolling in and submitting the fees associated with that permit. This practice conflicts with the approach used by every other Regional Water Board in the State. The Order removes this fee exemption. Permittees are required to follow the normal permitting process for their capital improvement projects to obtain coverage under the Construction General Permit.

Under earlier permits, the notification process for municipalities was different than all other types of construction dischargers. Permittees were not motivated by annual fees to submit Notices of Termination (NOTs) for their projects. This has made it challenging to monitor the installation of post-construction controls and site stabilization after construction for Permittee construction projects. Requiring Permittees to undergo the same processes as other construction projects will improve compliance monitoring.

B. Trash Discharge Prohibition

Section IV.B of the Order prohibits the discharge of trash to surface waters of the State and the deposition of trash where it may be discharged into surface waters of the State. This prohibition is added to the Order in compliance with the *Amendment to the Water Quality Control Plan for Ocean Waters of California to Control Trash and Part 1 Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (Trash Provisions), which became effective January 12, 2016. The Trash Provisions establish a water quality objective, a prohibition on the discharge of trash, and implementation requirements to control trash that must be included in MS4 permits. The prohibition is further consistent with federal regulations specifying that Permittees must include in their management program maintenance activities and a maintenance schedule for structural controls to reduce pollutants, specifically including “floatables,” in discharges from MS4s. (See 40 CFR § 122.26(d)(2)(iv)(A)(1).)

VII. RATIONALE FOR TRASH CONTROL PROVISIONS

Section V of the Order implements the prohibition on discharges of trash specified in section IV.B of the Order and the Trash Provisions adopted on April 7, 2015, by the State Water Board through Resolution No. 2015-0019.

Section V provides that each Permittee with regulatory authority over priority land uses, designated land uses, and/or Equivalent Alternate Land Uses must implement an effective program to reduce or eliminate the discharge of trash to ocean waters, inland surface waters, enclosed bays, estuaries, and along shorelines or adjacent areas in amounts that adversely affect beneficial uses or cause nuisance. Permittees shall comply with this requirement following one of two “tracks”.

Under Track 1, a Permittee must install, operate, and maintain full capture systems for storm drains that capture runoff from priority land uses in their respective jurisdictions. Under Track 2, a Permittee must install, operate, and maintain any combination of full capture systems, multi-benefit projects, treatment control measures and/or institutional control measures (i.e., the systems must achieve “full capture equivalency”).

Both compliance tracks focus trash control efforts on priority land use areas, which have been shown to generate a significant amount of trash and include high density residential, industrial, commercial, mixed urban, and public transportation stations. A focus on priority land use areas allows MS4s to allocate trash control resources to the areas where controls will have the greatest effect.

In some cases, however, non-priority land use areas may generate a substantial amount of trash. Permittees may get approval from the Santa Ana Water Board to substitute one or more of the priority land use areas with an alternate land use area that generates trash at equivalent or greater rates. The Santa Ana Water Board may also determine that a non-priority land use or location generates a substantial amount of trash. Where this determination is made, the Santa Ana Water Board may require Permittees to adopt Track 1 or Track 2 control measures over these areas. The Order refers to these areas as “designated land use areas.”

Prior to the issuance of the Order, and as contemplated by the Trash Provisions, the Santa Ana Water Board issued Water Code section 13383 Orders to the Permittees on June 2, 2017. The 13383 Orders directed Permittees to select a compliance pathway consistent with either Track 1 or Track 2. All Permittees have replied to the Order, providing notice of which compliance pathway they have elected. Permittees that selected Track 2 submitted an accompanying implementation plan. The Order includes a similar requirement that Permittees elect to follow either Track 1 or Track 2 and provides that the information previously submitted in response to the 13383 Orders may be used in whole or in part to satisfy the requirements of section V of the Order. A Permittee that selects Track 2 must submit an implementation plan that must be approved by the Executive Officer. No designated land use areas for trash have been identified as of the issuance of the Order.

The Trash Provisions require that NPDES permits for MS4 contain provisions prohibiting the discharge of trash within ten years of the effective date of the first implementing permit, or no later than fifteen years from the effective date of the Trash Provisions (December 2, 2030). Consistent with the Trash Provisions, the Order also includes an implementation schedule that requires final compliance with Track 1 or Track 2 to be achieved by December 2, 2030. Additionally, as an interim milestone, the Permittees must install, operate, and maintain Full Capture Systems (Track 1) or equivalent measures (Track 2) for 50 percent or more of the Priority Land Use areas and Equivalent Alternate Land Use areas within 4 years of the effective date of the Order. Permittees with a designated land use area must attain full compliance within 10 years from the determination by the Santa Ana Water Board to designate a land use or location as a designated land use.

VIII. RATIONALE FOR RECEIVING WATER LIMITATIONS

Consistent with State Water Board Orders WQ 99-05 and WQ 2015-0075, section VI of the Order requires compliance with water quality standards in receiving waters. (See State Water Board Order WQ 2015-0075, p. 51.) The receiving water

limitations contained in the Order are imposed under CWA section 402(p)(3)(B)(iii), which requires MS4 permits to include "such other provisions as the Administrator or the State determines appropriate for the control of pollutants." USEPA interprets this provision to mandate "controls to reduce the discharge of pollutants to the maximum extent practicable, and *where necessary water quality-based controls*." (Phase I Stormwater Regulations, Final Rule, 55 Fed. Reg. 47990, 47994 (Nov. 16, 1990) [emphasis added]; see also *Building Industry Ass'n of San Diego County v. State Water Resources Control Bd.* (2004) 124 Cal.App.4th 866, 882-887).) Water Code section 13377 also requires that NPDES permits include limitations necessary to implement water quality control plans. In Order WQ 2015-0075, the State Water Board reiterated that provisions requiring compliance with receiving water limitations are appropriate for the control of pollutants in MS4 permits and are consistent with the State's authority under the CWA. (Order WQ 2015-0075, pp. 14, 51.)

The inclusion of receiving water limitations is also consistent with the Ninth Circuit Court of Appeal's ruling in *Defenders of Wildlife v. Browner* (191 F.3d 1159, 1166 (1999)). This ruling shows that the permitting authority has discretion regarding the nature and timing of requirements that it includes as MS4 permit conditions to attain water quality standards. The Ninth Circuit Court of Appeals explained that "[w]ater quality standards are used as a supplementary basis for effluent limitations [guidelines] so that numerous dischargers, despite their individual compliance with technology based effluent limitations, can be regulated to prevent water quality from falling below acceptable levels" (*NRDC v. County of Los Angeles* (2011) 673 F.3d 880, 886). Receiving water limitations are necessary to protect the beneficial uses of the receiving waters and are included in this Order to ensure that individual and collective discharges from the MS4 do not cause or contribute to exceedances of water quality standards.

The receiving water limitations in the Order consist of all applicable numeric or narrative WQOs or criteria, or limitations to implement the applicable WQOs or criteria, for receiving waters contained in Chapters 3 and 4 of the Basin Plan, or in water quality control plans or policies adopted by the State Water Board, or in federal regulations, including but not limited to 40 CFR section 131.12 and 131.38. The WQOs in the Basin Plan and other State Water Board plans and policies have been approved by USEPA. Combined with the designated beneficial uses and the State's antidegradation policy, the WQOs constitute the water quality standards required under federal law.

The receiving water limitations provisions in the Order are largely carried over from the previous permits and are based on precedential State Water Board Orders WQ 98-01, WQ 99-05, and WQ 2015-0075.

Section VI.A of the Order includes a provision that states that Permittees must comply with receiving water limitations "through timely, iterative implementation of control measures/BMPs and other actions to reduce pollutants in discharges according to the conditions and provisions of this Order." This outlines the "iterative

process" whereby certain actions are required when exceedances of receiving water limitations occur and discharges from the MS4 are implicated. However, as the State Water Board noted in Order WQ 2015-0075, compliance with the "iterative process" is not a "safe harbor" and MS4 discharges that are causing or contributing to an exceedance of water quality standards are in violation of the permit. (Order WQ 2015-0075, p. 12.)

Section IV.E is a new addition to the Order that spells out the pathways for demonstrating compliance with receiving water limitations. One important option is through voluntary development and implementation of an approved Watershed Management Plan, consistent with the actions and schedules therein, to address the applicable waterbody-pollutant combination pursuant to section XII of the Order. Additionally, for waterbody-pollutant combination subject to an adopted TMDL, the Permittee may demonstrate compliance with the applicable water quality-based effluent limitation (WQBEL) for that waterbody-pollutant combination pursuant to section VII of the Order.

IX. RATIONALE FOR EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

Clean Water Act section 402(p)(3)(B)(iii) requires MS4 permits to include "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 control of pollutants discharged is established through effluent limitations and other requirements in NPDES permits. The Clean Water Act generally requires NPDES permits to include technology-based effluent limitations and any more stringent water quality-based effluent limitations necessary to meet water quality standards. Both types of limitations are in the Order in section VII and are discussed below.

A. Technology-Based Effluent Limitations (TBELs)

Section 301(b)(1)(A) of the CWA and 40 CFR section 122.44(a) require that NPDES permits include technology-based effluent limitations and standards. A technology-based effluent limitation is based on the capability of a model treatment method to reduce a pollutant to a certain concentration. In 1987, the CWA was amended to require that municipal stormwater discharges "reduce the discharge of pollutants to the maximum extent practicable." (CWA § 402(p)(3)(B)(iii).) The "maximum extent practicable" (MEP) standard is the applicable federal technology-based standard that MS4 owners and operators must attain to comply, in part, with their NPDES permits.

Federal regulations at 40 CFR section 122.26(d)(2)(iv) further detail the MEP standard, which requires that MS4 owners and operators implement comprehensive pollutant control measures in a stormwater management program including management practices, control techniques and system,

design and engineering methods, and such other provisions which are appropriate. Permit requirements to implement the MEP standard are generally referred to, collectively, as pollution controls or BMPs. Examples include street sweeping, requiring erosion controls at construction sites (e.g., straw wattles, silt fences), and catch basin cleanouts. In addition to regulations, USEPA has issued guidance documents that discuss the type of pollution controls and BMPs that should be included in MS4 permits in order to reduce the discharge of pollutants in stormwater to the MEP. (See, e.g., USEPA, MS4 Permit Improvement Guide (2010).)

The requirement that MS4 permittees reduce pollutants in stormwater discharges to the MEP remains a cornerstone of the mandate imposed by the federal Clean Water Act and implementing NPDES regulations. Meeting the MEP standard is generally a result of implementing robust pollution prevention and control through various programs and structural measures. These pollution prevention and control methods require Permittees to take actions that will lessen the incidence of pollutants entering the storm drains by regulating the behavior and practices of the Permittees, their residents, and their businesses and controlling the discharge of pollutants through structural measures and treatment methods.

Neither Congress nor USEPA has specifically defined the term “maximum extent practicable.” Rather, the MEP standard is an ever evolving, flexible and advancing concept, which considers technical and economic feasibility. As knowledge and technology regarding controlling stormwater runoff continue to evolve, so must the actions that are taken to comply with the standard. Congress established this flexible MEP standard so that administrative bodies would have “the tools to meet the fundamental goals of the Clean Water Act in the context of storm water pollution.”(*Building Industry Ass’n of San Diego County v. State Water Resources Control Board* (2004) 124 Cal.App.4th 866, 884.) This standard was designed to allow permit writers flexibility to tailor permits to the site-specific nature of MS4s and to use a combination of pollution controls that may be different in different permits. (*In re City of Irving, Texas, Municipal Storm Sewer System* (July 16, 2001) 10 E.A.D. 111 (E.P.A.), *6.)

The MEP standard is also expected to evolve in light of programmatic improvements, new source control initiatives, and technological advances that serve to improve the overall effectiveness of stormwater management programs in reducing pollutant loading to receiving waters. USEPA’s clear intent is for stormwater management programs to evolve based on changing conditions from program development and implementation and corresponding improvements in water quality. (See, 55 Fed. Reg. 47990, 48052 [“EPA anticipates that storm water management programs will evolve and mature over time.”]; 64 Fed. Reg. 68722, 68754; Dec. 8, 1999 [“EPA envisions application of the MEP standard as an iterative process.”]; Interim Permitting Approach for Water Quality-Based Effluent Limitations in Stormwater Permits (Sept. 1, 1996) [“The interim permitting approach uses BMPs in first round

storm water permits, and expanded or better-tailored BMPs in subsequent permits, where necessary, to provide for the attainment of water quality standards."]; Revisions to the November 22, 2002 Memorandum "Establishing Total Maximum Daily Load (TMDL) Waste Load Allocations (WLAs) for Storm Water Sources and NPDES Permit Requirements Based on WLAs" (Nov. 26, 2014) ["In subsequent stormwater permit terms, if the BMPs used during prior years were shown to be inadequate to meet the requirements of the Clean Water Act (CWA), including attainment of applicable water quality standards, the permit would need to contain more specific conditions or limitations."].) USEPA recognizes that BMPs may be "implemented during the permit term to reflect reasonable further progress towards meeting the applicable water quality standard (WQS)." (Nov. 24, 2014 EPA Memo at p. 3.)

To provide clarification to the Regional Water Boards, the State Water Board's Office of Chief Counsel issued a memorandum dated February 11, 1993 regarding the "Definition of 'Maximum Extent Practicable'." In the memorandum, the State Water Board interpreted the MEP standard to entail "a serious attempt to comply," and that under the MEP standard, "practical solutions may not be lightly rejected." The memorandum states, "[i]n selecting BMPs which will achieve MEP, it is important to remember that municipalities will be responsible to reduce the discharge of pollutants in storm water to the maximum extent practicable. This means choosing effective BMPs, and rejecting applicable BMPs only where other effective BMPs will serve the same purpose, the BMPs would not be technically feasible, or the cost would be prohibitive." The memorandum suggests several factors to be considered when choosing BMPs, including effectiveness, regulatory compliance, public acceptance, cost, and technical feasibility. While BMP selection cannot be based solely on cost, the memorandum explains "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." The memorandum further states that, "[a]fter selecting a menu of BMPs, it is of course the responsibility of the discharger to ensure that all BMPs are implemented."

The Order includes programmatic requirements in six areas pursuant to 40 CFR section 122.26(d)(2)(iv), including numeric design standards for stormwater runoff from new development and significant redevelopment consistent with the federal MEP standard (see State Water Board Order WQ 2000-11, the "LA SUSMP Order"). The Order also includes requirements for a program effectiveness assessment, which includes periodically evaluating and modifying or adding control measures, consistent with the concept that MEP is an evolving and flexible standard.

B. Water Quality-Based Effluent Limitations

1. Basis for Water Quality-Based Effluent Limitations

In addition to requiring that MS4 permits include technology-based requirements consistent with the MEP standard, section 402(p)(3)(B)(iii) of the CWA requires that MS4 permits include "such other provisions as the Administrator or the State determines appropriate for the control of pollutants." USEPA interprets this provision to mandate "controls to reduce the discharge of pollutants to the maximum extent practicable, *and where necessary water quality-based controls*." (55 Fed. Reg. 47990, 47994 (Nov. 16, 1990) [emphasis added].)

USEPA has reiterated that MS4 "permit conditions must provide for attainment of applicable water quality standards (including designated uses), allocations of pollutant loads established by a TMDL, and timing requirements for implementation of a TMDL." (64 Fed. Reg. 68722, 68737.) USEPA Region IX has also affirmed the Water Boards' position that MS4 discharges must meet water quality standards in a series of comment letters on MS4 permits issued by various California regional water boards. (See, e.g., letter from Alexis Strauss, Acting Director, Water Division, U.S. EPA Region IX, to Walt Pettit, Executive Director, State Water Board, re: SWRCB/OCC File A-1041 for Orange County, dated January 21, 1998.) Likewise, the State Water Board has affirmed that MS4 permits must include requirements necessary to achieve compliance with the applicable technology-based standard of MEP and to achieve water quality standards. (See, e.g., State Water Board Orders WQ 99-05, WQ 2001-15, and WQ 2015-0075.) The permitting agency must therefore include provisions in addition to those based on the MEP standard when it finds it is appropriate to do so and to exercise its discretion to determine what permit conditions are necessary to control pollutants in a specific geographic area.

Generally, discharge requirements designed to achieve water quality standards are referred to as water quality-based effluent limitations (WQBELs). A WQBEL is a restriction on the quantity or concentration of a pollutant that may be discharged from a point source into a receiving water that is necessary to achieve an applicable water quality standard in the receiving water. (See 40 CFR § 122.2; NPDES Permit Writer's Manual, Appendix A.) As discussed more fully below, WQBELs may be expressed narratively or numerically.

Federal NPDES regulations require the permitting agency to include WQBELs for point source discharges that cause, have the reasonable potential to cause, or contribute to an excursion above water quality standards. (40 CFR § 122.44(d)(1)(i), (iii).)

In the Order, WQBELs are included that are consistent with the assumptions and requirements of TMDL-based WLAs. (See 40 CFR § 122.44(d)(1)(vii)(B).) Where a point source is assigned a waste load

allocation[48] (WLA) in a TMDL, the analysis conducted in the development of the TMDL provides the basis for the Santa Ana Water Board or USEPA's determination that the discharge has the reasonable potential to cause or contribute to an exceedance of water quality standards in the receiving water. This approach is affirmed in USEPA's Permit Writer's Manual, which states, "[w]here there is a pollutant with a WLA from a TMDL, a permit writer must develop WQBELs." (NPDES Permit Writers' Manual, p. 6-30; *see also,* Order WQ 2015-0075, p. 59.)

The Santa Ana Water Board and USEPA have each established TMDLs to address water quality impairments in the Santa Ana Region. Through the process of developing these TMDLs and assigning WLAs to MS4 discharges in the Santa Ana Region, the Santa Ana Water Board and USEPA have established that MS4 discharges cause or contribute to exceedances of water quality standards. Given the number of Santa Ana Water Board and USEPA established TMDLs for impaired waters in the Santa Ana Region, there is ample evidence that some MS4 discharges are likely to be a continuing and significant source of pollutants to the impaired receiving waters notwithstanding implementation of stormwater management programs driven by the MEP standard for the last three decades.

Where a TMDL has been established for a particular waterbody, USEPA's NPDES regulations further require that, "when developing water quality-based effluent limits…the permitting authority shall ensure that effluent limits … are consistent with the assumptions and requirements of any available wasteload allocation for the discharge…" (40 CFR § 122.44(d)(1)(vii)(B).) In its 2014 memorandum, *Establishing Total Maximum Daily Load (TMDL) Wasteload Allocations (WLAs) for Storm Water Sources and NPDES Permit Requirements Based on Those WLAs*, USEPA reaffirmed its 2002 interpretation that this regulation requires that "where a State or EPA has established a TMDL, NPDES permits *must* contain effluent limits and conditions consistent with the assumptions and requirements of the WLAs in the TMDL." (USEPA Memorandum (Nov. 26, 2014), p. 6 [emphasis added]; see also USEPA Memorandum (Nov. 22, 2002), *"Establishing Total Maximum Daily Load Wasteload Allocations (WLAs) for Storm Water Sources and NPDES Permit Requirements Based on Those WLAs"*.) This requirement that WQBELs must be consistent with the assumptions and requirements of the WLAs means that the permit must include either an equivalent numeric effluent limit or "a measurable, objective BMP-based limit that is projected to achieve the WLA." (*Ibid.*) When a narrative WQBEL in the form of a BMP-based limit is relied upon, "the permit's administrative record needs to provide adequate demonstration that … the BMPs … will be sufficient to implement applicable WLAs. … Improved knowledge of BMP effectiveness … should be

[48] "Wasteload allocation" is defined as "[t]he portion of a receiving water's loading capacity that is allocated to one if its existing or future point sources of pollution. WLAs constitute a type of water quality-based effluent limitation." (40 CFR § 130.2(h).)

reflected in the demonstration and supporting rationale that implementation of the BMPs will attain water quality standards and be consistent with WLAs." (*Ibid.*)

Further, Water Code section 13377 requires that NPDES permits include effluent limitations necessary to implement water quality control plans, including TMDL requirements that have been incorporated into the water quality control plans.

The Santa Ana Water Board has therefore included WQBELs in the Order for nearly all pollutants for which a TMDL WLA is assigned to the MS4 discharges in relevant water quality control plans. The WQBELs are consistent with the assumptions and requirements of available TMDL WLAs applicable to the Permittees. The WQBELs include WLAs established in the Los Angeles Regional Water Quality Control Board's Water Quality Control Plan for water bodies that the permittees discharge pollutants to. As such, these WLAs are applicable to the Permittees. These WLAs includes bacterial indicators for the San Gabriel River Estuary (Appendix 14) and metals to the San Gabriel Rivers and its tributaries (Appendix 8). The Order excludes WLAs for "informational TMDLs" because the Basin Plan states that these "have no regulatory effect" (p. 6-36).

The Order includes some WLAs that were developed by the USEPA as part of its TMDL established on June 14, 2002 (a.k.a. Newport Bay Toxics TMDLs or Newport Bay and San Diego Creek TMDLs for Toxic Pollutants). The WLAs for chlordane, PCBs, toxaphene and DDT for Upper and Lower Newport Bay and San Diego Creek were superseded by the Organochlorine Compounds TMDLs that were adopted by the Santa Ana Water Board under Resolution R8-2011-0037. The suite of pollutants that were assigned WLAs under the Resolution excluded dieldrin, which was included in USEPA's Newport Bay Toxics TMDLs (see Table NB-OCs-2 of the Basin Plan). The reason is that the Santa Ana Water Board staff found no impairment of the water bodies by these pollutants. Since the Santa Ana Water Board's Organochlorine Compounds TMDLs did not address Rhine Channel and did not include TMDLs for dieldrin, EPA's TMDLs for these waterbody-pollutant combinations are still in effect. (See Resolution R8-2011-0037, ¶18 and directive 7; Regional Board Staff Response to Comments [on Organochlorine Compounds TMDLs], USEPA Letter signed by Janet Hashimoto, Region 9, Dated July 8, 2011.)

The USEPA and Santa Ana Water Board WLAs were included as WQBELs in the Orange County MS4 Permit adopted in 2009 (Order R8-2009-0010, Tables 2A/B/C/D and 4). WLAs that are incorporated into permits as WQBELs are subject to anti-backsliding requirements under Clean Water Act section 402(o). In short, WQBELs in a permit cannot be relaxed or removed in subsequent renewals of the permit unless certain requirements are met under section 303(d)(4) or 402(o)(2). In some cases, the WQBELs for

organochlorine compounds were already updated based on the Santa Ana Water Board TMDLs (see Order R8-2009-0010, Table 4). The removal of the WQBELs for chlordane and total PCBs for San Diego Creek was consistent with Clean Water Act section 303(d)(4)(A). The other updated WBQELs in Table 4 were more stringent than in Tables 2 A/B/C and were not subject to anti-backsliding. The WQBELs in this Order for the updated constituents (Table 4), Rhine Channel (Table 2 D) and dieldrin (Tables 2 A/C) are the same as in Order R8-2009-0010. Antibacksliding requirements therefore are not implicated.

Table 4 of Order R8-2009-0030 was contingent upon EPA approval of the organochlorine TMDLs. Table 4, which the board adopted three and one-half years before EPA approved the TMDLs, does not include WQBELs for dieldrin for Upper or Lower Newport Bay. However, the dieldrin TMDLs in Tables 2 A/C/D remained in effect since USEPA did not approve revised dieldrin TMDLs or withdraw its own TMDLs. In addition, the Santa Ana Water Board TMDLs did not address the Rhine Channel, so all USEPA Organochlorine Compounds TMDLs for the Rhine Channel are still in effect. This Order includes WQBELs for those constituents based on USEPA's TMDLs. The WQBELs are not less stringent than in Order R8-2009-0030.

2. Expression of Water Quality-Based Effluent Limitations

While federal law requires the Santa Ana Water Board to include TMDL-based WQBELs in the Order, it does not specify how those WQBELs are to be expressed in MS4 permits. Rather, federal law requires the permitting authority to make that determination as appropriate and necessary for the control of the discharge. In MS4 permits, WQBELs may be expressed either in narrative form (e.g., as requirements to implement specified BMPs) or in numeric form (i.e., as numeric effluent limitations). Both types of expression of the WQBELs are allowed and neither one is more stringent than the other because an equivalent level of implementation of BMPs or other control measures is necessary to comply in either expression of the WQBELs.

In USEPA's 2014 Memorandum, *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,"* USEPA explained that:

> *Where the TMDL includes WLAs for stormwater sources that provide numeric pollutant loads, the WLA should, where feasible, be translated into effective, measurable WQBELs that will achieve this objective. This could take the form of a numeric limit, or of a measurable, objective BMP based limit that is projected to achieve the WLA….The permitting authority's decision as to how to express the WQBEL(s), either as numeric effluent limitations*

or as BMPs, with clear, specific, and measurable elements, should be based on an analysis of the specific facts and circumstances surrounding the permit, and/or the underlying WLA, including the nature of the stormwater discharge, available data, modeling results, and other relevant information.

(2014 USEPA Memorandum, p. 6.) Where a BMP-based approach to permit limitations is selected, the 2014 USEPA Memorandum notes that the permit's administrative record needs to provide an adequate demonstration that implementation of the BMPs required in the permit will attain water quality standards and be consistent with the WLAs. (*Ibid.*)

The Santa Ana Water Board has expressed WQBELs in the Order as numeric effluent limitations to be complied with by the respective compliance dates from the Basin Plan as the default method. If the compliance date has not yet passed, the Permit allows Permittees the option to demonstrate compliance narratively by implementing pollution controls and best management practices according to the Permit's requirements (also referred to as a BMP-based approach). Permittees may also comply either by demonstrating compliance with the numeric WQBELs through monitoring or by implementing an approved Watershed Management Plan. Additionally, the development and implementation of an approved Watershed Management Plan allows the Permittees to be deemed in compliance with Receiving Water Limitations. After the compliance date has passed, the Permittees may demonstrate compliance using monitoring data or another method approved pursuant to the Monitoring and Reporting Program.

Therefore, in essence, the Permit includes both numeric and narrative WQBELs. The Order contains both approaches to protect water quality and provide compliance flexibility for Permittees, while also following USEPA guidance. Compliance with numeric WQBELs through monitoring and analysis of water samples collected from select representative MS4 discharge points is the default compliance standard. Alternatively, Permittees may develop and implement an approved Watershed Management Plan whereby they propose and implement certain approved BMPs that a reasonable assurance analysis (RAA) indicates will meet the applicable numeric WQBELs by specified compliance dates.

In determining how to express the WQBELs, the Santa Ana Water Board has analyzed the specific facts and circumstances surrounding the Order and the underlying TMDL WLAs, including the nature of MS4 discharges in the Santa Ana Region, available data, modeling results, and other relevant information. In doing so, the Santa Ana Water Board concludes that WQBELs expressed numerically are appropriate and necessary in the Order to achieve the WLAs after the date to comply has passed or where no compliance date was established. MS4 discharges constitute a

continuing and significant source of pollutants resulting in exceedances of water quality standards in the Santa Ana Region, as evidenced by the number of TMDLs established for impaired waters in the region and identification of MS4 discharges as a source of that impairment. To date, sole reliance on BMP-based requirements has been insufficient to resolve these exceedances. The circumstances of each of the pollutant-water body combinations under the TMDLs can be described by one of six situations.

The first includes pathogens and total phosphorous in Newport Bay and pathogens in the Middle Santa Ana River watershed. In these situations, the WLAs are not being met.

The second situation includes total nitrogen in Newport Bay. In this situation, the WLAs are being met but how they are met is uncertain. The Permittees have developed programs of pollution controls but the programs do not include specific schedules or levels of effort that can be correlated to the level of pollution control that has been achieved. This prevents a clear linkage between implemented BMPs and the level of pollutant reduction achieved, limiting the ability to demonstrate that the current approach will maintain or improve water quality. This Order addresses this problem by requiring that Permittees report on performance metrics that will provide this correlation.

The third situation includes diazinon in San Diego Creek, chlorpyrifos in San Diego Creek and Newport Bay, and organochlorines in Newport Bay. These pollutants were not assessed for compliance with their WLAs in the Permittees' 2022-2023 Unified Annual Progress Report.

The fourth situation includes metals discharged into Newport Bay and its tributaries. Compliance was not assessed in 2022-2023 directly with the WLAs in Order R8-2009-0030. But monitoring results are compared with the closely related California Toxics Rule (CTR) criteria. The results indicate that exceedances of the CTR criteria occur with some metals at limited locations. This Order requires the Permittees to make direct comparisons of monitoring results with the WLAs as WQBELs.

The fifth situation is sediment in the Newport Bay watershed. In this case, the TMDL assigned load allocations to urban sources and assigned certain "targets" or tasks to the Permittees. These targets or tasks include maintaining sediment basins in the watershed and in upper Newport Bay, numeric goals for controlling sediment, and monitoring and reporting. The Permittees have reported that they have attained the targets in their 2023-24 Sediment TMDL Annual Report. The load allocations were used as WQBELs in the previous Orders, but the "targets" were not. In this Order, the "targets" are used as WQBELs instead of the load allocations. It is unknown why load allocations were assigned to urban sources. If conveyed through MS4s, they are considered point sources subject to waste load

allocations instead. But since load allocations apply to nonpoint sources, they have been removed and not applied as numeric WQBELs to MS4 point sources.

The final situation includes the Phosphorus TMDL in Big Bear Lake and the nutrient TMDL in Lake Elsinore and Canyon Lake. Permittees have been able to attain compliance with the WLAs through a combination of pollution controls and offsets using in-lake treatments. When pollution controls are unable to meet the waste load allocation, Permittees purchase credits generated by existing in-lake treatments that include alum additions and the Lake Elsinore Aeration and Mixing System (LEAMS). However, LEAMS is nearing the end of its service life and its ability to continue to produce the needed offsets during the term of this Order is uncertain. This Order incorporates Resolution R8-2025-0014, upon its effective date, which includes a 10-year rolling average for assessing compliance, providing flexibility in meeting allocations over time. The updated TMDL and required updates to the Comprehensive Nutrient Reduction Plan (CNRP) anticipate continued refinement of implementation strategies through adaptive management, particularly as regulatory approvals are finalized and implementation timelines progress.

As such, the Santa Ana Water Board finds that WQBELs expressed numerically are necessary to address the historic and persistent exceedances of water quality standards in the Santa Ana Region.

Further, the Santa Ana Water Board concludes that numeric WQBELs are feasible. In the last 20 years, the Santa Ana Water Board and USEPA have established 12 TMDLs for waterbodies in the Santa Ana Region in which WLAs are assigned to Phase I MS4 discharges. A significant part of developing each TMDL entailed analyzing pollutant sources and allocating loads to those sources using empirical relationships, quantitative modeling, and other relevant information. Following the work already conducted to develop the TMDLs, the Santa Ana Water Board concludes that it is feasible to develop numeric WQBELs for MS4 discharges, and that the numeric WQBELs are consistent with the TMDL WLAs. There is ample evidence that BMPs and other control measures can be designed proactively (through modeling) to divert, capture, and/or treat MS4 discharges such that it is possible for any such discharges to ultimately meet the numeric WQBELs according to established compliance schedules. Further, given the variability in implementation of stormwater management programs across Permittees, numeric WQBELs create a measurable, objective, and accountable means of controlling MS4 discharges, while providing significant flexibility for Permittees to comply with the numeric WQBELs in any lawful manner, including by working with other Permittees as well as other government agencies and entities to implement cost-effective pollution controls.

While the Santa Ana Water Board finds that inclusion of numeric WQBELs in the Order is appropriate and necessary to achieve compliance with the TMDLs WLAs as required by federal law, at the same time, the Santa Ana Water Board also finds it appropriate to allow permittees to, alternatively and voluntarily, comply with the numeric WQBELs by developing and implementing an approved Watershed Management Plans comprised of a suite of BMP-based control measures. Watershed Management Plans must be accompanied by demonstrations, via the reasonable assurance analysis (RAA), that the BMPs will meet the numeric WQBELs. This alternative, BMP-based compliance option satisfies USEPA's guidance that MS4 permits include "effective, measurable WQBELs…that is projected to achieve the WLA." (2014 USEPA Memorandum, p. 6.)

3. Development of Water Quality Based Effluent Limitations for TMDLs

As required, WQBELs included in the Order and Appendices 2 through 14 are consistent with the assumptions and requirements of the available WLAs assigned to MS4 discharges in the Santa Ana Region, which have been established in numerous TMDLs. The WQBELs are located in the Appendices for each TMDL.

A TMDL is the sum of the allowable pollutant loads of a single pollutant from all contributing point sources (WLAs), non-point sources (load allocations), the contribution from background sources, and a margin of safety. (40 CFR § 130.2(i).) MS4 discharges are considered point source discharges and are assigned WLAs (WLAs). A TMDL is a tool for implementing water quality standards and is based on the relationship between pollution sources and receiving water quality. The TMDL establishes the allowable pollutant loads from various sources to a waterbody and thereby provides the basis to establish water quality-based controls or effluent limitations. TMDLs may also include compliance date for attainment of WLAs and specify actions needed as part of an implementation plan.

The WLAs, TMDL targets, and other requirements are established in the Basin Plan as part of a TMDL. The WQBELs in Appendices 2 through 14 are based on the WLAs, dates to attain the WLA if specified in the TMDL, and other requirements in the Basin Plan. The targets are not incorporated into the Order as WQBELs. However, attainment of TMDL targets may be used to demonstrate attainment of WLAs. The total combined load allocations and WLAs for other sources in the TMDLs watershed are also not used as WQBELs in the Order. The attainment of the total load allocations for all sources to a receiving waterbody may also be used to demonstrate attainment of the WQBEL. Allowing the Permittees to use targets and total load allocations allows the different dischargers in a watershed to integrate their controls through cooperative efforts. This may occur through pollution offsets, pollution trading, or other means.

Some TMDLs have final compliance dates that are expected to fall within the term of the Order. For these, the Appendices allow an alternative, BMP-based approach through the development and implementation of an approved Watershed Management Plan (WMP) to comply with the applicable WQBEL up until the final compliance date.

TMDLs are subject to changes through amendments to the Basin Plan. If a TMDL is changed, the Order may need to be updated so that the WQBELs implement relevant changes. Changes that could occur to the TMDLs include the use of alternative indicators for pathogens, extensions of compliance dates, allowances of BMP-based compliance approaches after the compliance date, and changes to the waste load allocation values and measured parameters. Until these changes are made through the Basin Plan amendment process, this Order implements the Basin Plan as it is. The WQBELs for each TMDL in the Order are organized into the Appendices to simplify editing of the Order following its initial adoption if relevant changes are made to any TMDL. If a TMDL is adopted for a new pollutant-water body combination, a new Appendix may be added to the Order.

Monitoring to demonstrate attainment of WQBELs is controlled by the requirements of Monitoring and Reporting Program R8-2026-0034. The monitoring, analysis, and reporting must be adequate to reach conclusions about compliance with the WQBELs. Determinations regarding compliance with WQBELs will be made based on methods that have been approved by the Executive Officer following public notice.

Table D.10, below, provides the applicable TMDLs' regulatory approval and compliance dates as well as a summary of each Appendix. Each TMDL implements the applicable WLAs as numeric WQBELS. Where the compliance date has not passed or none is specified (for USEPA-adopted TMDLs), the related Appendix allows compliance with a BMP-based WQBEL through implementation of an approved WMP that uses the WLA as a performance metric.

Table D.10: TMDL Approval Dates and Compliance Dates

TMDL	Adoption Date	State Approval Date	OAL Approval	USEPA Approval	Compliance Date(s)
Big Bear Lake Watershed					
Nutrients (Dry Hydrologic Condition)	4/21/2006	4/3/2007	8/21/2008	9/25/2007	12/31/2015
Middle Santa Ana Watershed					

Bacterial Indicator	8/26/2005	5/15/2006	9/1/2006	5/16/2007	12/31/2015 (dry) 12/31/2025 (wet)
San Jacinto Watershed (Lake Elsinore and Canyon Lake)					
Nutrients	12/20/2004	5/19/2005	7/26/2005	9/30/2005	12/31/2020
Newport Bay/San Diego Creek Watershed					
Copper	12/2/2022	8/5/2025	4/28/2026	-	USEPA approval + 12 years
Selenium	8/4/2017	9/20/2018	4/19/2019	6/20/2019	6/20/2049
Toxics (Metals)				6/14/2002	
Diazinon & Chlorpyrifos	4/4/2003	10/15/2003	1/5/2004	2/13/2004	12/1/2007 (Delisted 4/6/2018)
Organochlorine Compounds	7/15/2011	10/16/2012	7/26/2013	11/12/2013	12/31/2020
Sediment	10/9/1998	11/19/1998	2/2/1999	4/16/1999	4/16/2009
Fecal Coliform	4/9/1999	7/5/1999	12/24/1999	2/28/2000	12/31/2014 (REC1) & 12/31/2030 (SHEL)
Nutrients	10/9/1998	11/19/1998	2/10/1999	4/16/1999	12/31/2012
Coyote Creek (based on San Gabriel River TMDL)					
Metals				3/26/2007	09/30/2023 (dry) 09/30/2026 (wet)
Bacterial Indicator	6/10/2015	11/17/2015	4/14/2016	6/14/2016	6/14/2026 (dry) 6/14/2036 (wet and geomean)

The following provides a brief summary of the Appendices:

a. Appendix 1 – This Appendix shows the list of Permittees subject to the requirements of the Order.

b. Appendix 2 – This Appendix includes WQBELs that are consistent with the assumptions and requirements specified in the Nutrient TMDL for Newport

Bay/San Diego Creek Watershed. The Nutrient TMDL was approved by the Santa Ana Water Board, the State Water Board, the Office of Administrative Law (OAL), and the USEPA. The Nutrient TMDL was adopted by the Santa Ana Water Board through Resolution No. 98-9 and amended by Resolution No. 98-100. The WLAs from the Nutrient TMDL are expressed as numeric WQBELs that are effective on the effective date of the Order. The compliance date of December 31, 2012 has passed. A BMP-based compliance option through the development and implementation of an approved Watershed Management Plan is therefore unavailable to demonstrate compliance with the WQBELs for Nutrients.

c. Appendix 3 – This Appendix includes WQBELs that are consistent with the assumptions and requirements specified in the Fecal Coliform TMDLs for Newport Bay. The WQBELs apply to the discharge of indicator bacteria from runoff from MS4s into the Newport Bay affecting both water-contact recreation (REC1) and shellfish harvesting beneficial (SHEL) uses. The Fecal Coliform TMDL was first adopted by the Santa Ana Water Board in Resolution No. 99-10 and later approved by OAL on December 24, 1999 and by USEPA on February 28, 2000. The compliance date of December 30, 2014, for the REC1 beneficial use specified in the Basin Plan has passed. However, the compliance date of December 31, 2030, for the SHEL beneficial use has not passed. As of the date of issuance of this permit, a Time Schedule Order (TSO) (R8-2019-0050), as amended by TSO R8-2023-0062, has been issued and that provides a time schedule to attain the REC1 WQBELs by December 6, 2024. The WLAs from the Fecal Coliform TMDLs are expressed as numeric WQBELs that are effective on the effective date of the Order. A BMP-based compliance option through the development and implementation of an approved Watershed Management Plan is only available to demonstrate compliance with the WQBEL for SHEL, as the compliance date for the REC1 WQBEL has passed.

   The Santa Ana Water Board is planning to revise the existing fecal coliform TMDL and will replace the fecal coliform targets and allocations with *Enterococci* targets and allocations. This change is consistent with the Statewide Bacteria Provisions promulgated by the State Water Board in August 2018. Pending such revisions and to ensure compliance with the *Enterococci* objective the USEPA established for the marine and coastal estuarine waters of California, this order authorizes the Permittees to demonstrate compliance with WQBELs based on the alternative pathogen indicator bacteria (*Enterococci*) or by demonstrating that risk to human health is less than 32 excess gastrointestinal illnesses per 1000 recreators.

d. Appendix 4 – This Appendix includes WQBELs that are consistent with the assumptions and requirements specified in the Sediment TMDL for the Newport Bay/San Diego Creek Watershed. The Sediment TMDL in the Basin Plan includes quantifiable targets and “Load Allocations” for

discharges of sediment to tributaries of Newport Bay and San Diego Creek and tributaries. These should have been described as “waste load allocations” because MS4 discharges are point sources rather than non-point sources. The Sediment TMDL was first adopted by the Santa Ana Water Board in Resolution No. 98-101 and subsequently approved by OAL on February 2, 1999, and by USEPA on April 16, 1999. The requirements implementing the Sediment TMDL are expressed as BMP-based WQBELs and are effective on the effective date of the Order. The BMPs are based on tasks that are assigned to the Permittees in the TMDL’s implementation plan. The BMP-based approach is appropriate for this TMDL since actions by Permittees and other stakeholders have resulted in attainment of the TMDLs, presumably through nonpoint source controls, land use changes and climate change-driven reductions in sediment loading. On November 19, 1999, the Monitoring and Reporting Program No. 99-74- Implementation of the Monitoring and Reporting Requirements for the TMDL for Sediment in the Newport Bay Watershed was adopted. This plan had subsequent amendments approved by the Executive Officer on February 14, 2014, on June 6, 2019, and on August 24, 2020.

e. Appendix 5 – This Appendix includes WQBELs that are consistent with the assumptions and requirements specified in the Organochlorine Compounds TMDL for Newport Bay and San Diego Creek. The Organochlorines TMDL was first adopted by the Santa Ana Water Board in Resolution No. R8-2011-0037and subsequently approved by OAL on July 26, 2013, and by USEPA on November 12, 2013. Organochlorine compounds are mainly associated with sediment from historical agricultural lands and former military installations. Many of these areas are now within the Permittees’ jurisdiction. Organochlorine compounds are carried in the Permittees’ MS4s by fine sediment into receiving waters. The Permittees report that levels of these compounds have been steadily decreasing in the watershed since the use of organochlorine pesticides has been banned. The Permittees report that dry weather flows discharged from MS4 outfalls contain no detectable levels of organochlorine compounds. The WLAs from Organochlorines TMDL are expressed as numeric WQBELs that are effective on the effective date of the Order. The compliance date for the Organochlorines TMDL of December 31, 2020 has passed. A BMP-based compliance option through the development and implementation of an approved Watershed Management Plan is therefore unavailable to demonstrate compliance with the WQBELs for Organochlorine Compounds.

f. Appendix 6 – This Appendix includes WQBELs that are consistent with the assumptions and requirements specified in the Diazinon & Chlorpyrifos TMDLs for Upper Newport Bay and San Diego Creek. The Diazinon & Chlorpyrifos TMDLs were first adopted by the Santa Ana Water Board in Resolution No. R8-2003-0039 and subsequently approved by OAL on January 5, 2004, and by USEPA on February 13, 2004. The WLAs from the

Diazinon & Chlorpyrifos TMDL are expressed as numeric WQBELs that are effective on the effective date of the Order. The compliance date of December 1, 2007 has passed. A BMP-based compliance option through the development and implementation of an approved Watershed Management Plan is therefore unavailable to demonstrate compliance with the WQBELs for Diazinon and Chlorpyrifos.

g. Appendix 7 – This Appendix includes WQBELs that are consistent with the assumptions and requirements specified in TMDLs for Toxic Pollutants (Metals) in San Diego Creek and Newport Bay, promulgated by USEPA on June 17, 2002. These TMDLs were all effective upon promulgation by USEPA. The WLAs are incorporated into the Order as WQBELS that are numeric WQBELs. However, Permittees may alternatively comply with the WQBELs by developing and implementing an approved Watershed Management Plan that employs BMPs that are subject to an iterative improvement process. The WQBELs for copper discharges to Newport Bay will be superseded by the WQBELs in Appendix 10 upon the effective date of the Copper TMDLs for Newport Bay. The WQBELs in Appendix 10 were adopted through Santa Ana Water Board Resolution R8-2022-0012. The WQBELs for all other metals and the WQBEL for copper discharges to San Diego Creek remain effective and unchanged by the adoption of the Copper TMDLs.

h. Appendix 8 – This Appendix includes wet weather WQBELs that are consistent with the assumptions and requirements specified in the TMDLs for Metals in Coyote Creek (located within the jurisdiction of the Los Angeles Water Board). This TMDL was promulgated by the USEPA on March 26, 2007. The Los Angeles Water Board adopted an implementation plan for the TMDLs through Resolution R13-004. The implementation plan establishes compliance dates of September 30, 2023 for dry weather discharges and September 30, 2026 for wet weather discharges. The WLAs from the Metals TMDLs are expressed as numeric WQBELs that are effective on the effective date of the Order. A BMP-based compliance option through the development and implementation of an approved Watershed Management Plan is only available to demonstrate compliance with the WQBELs for wet weather discharges, as the compliance date for dry weather discharges has passed. The City of Yorba Linda, and applicable upstream jurisdictions, drain partially towards the Coyote Creek watershed. Orange County Water District staff have reported that this flow is diverted away from the Coyote Creek watershed and to the Santa Ana River by a gate located in the forebay to Miller Retarding Basin. The Basin is located at the southwest corner of the intersection of East Orangethorpe Avenue and North Miller Street. When open, the gate allows flows to continue down Carbon Creek where it may enter Coyote Creek. As such, the City of Yorba Linda and applicable upstream jurisdictions are only subject to the Coyote

Creek Metals TMDL requirements if flows are allowed to enter Coyote Creek.

i. Appendix 9 – This Appendix includes WQBELs that are consistent with the assumptions and requirements specified in the Selenium TMDL for Freshwater in Newport Bay Watershed. The Selenium TMDL was first approved by the Santa Ana Water Board on August 4, 2017 in Resolution No. R8-2017-0014 and subsequently approved by OAL on April 19, 2019, and by USEPA on June 20, 2019. The compliance date of June 20, 2049 for the WQBELs has not yet passed. The selenium TMDLs are established and implemented as phased TMDLs based upon a three-part structure: Phase 1 – completed as soon as possible, but no later than 6 years from the effective date of the TMDLs; TMDL Reconsideration - completed as soon as possible, but no later than 8 years from the effective date of the TMDLs; Phase II - completed as soon as possible, but no later than 30 years from the effective date of the reconsidered TMDLs. The WLAs from the Selenium TMDLs are expressed as numeric WQBELs that are effective on the effective date of the Order. However, the terms of the TMDL allow for compliance with a BMP Strategic Plan designed to attain the CTR-based water column WQBEL. The WLAs are used in the BMP Strategic Plan as performance metrics to iteratively evaluate and improve the effectiveness of the Permittees' projects and programs for the attainment of the WQBELs. Unless it is approved as a Watershed Management Plan, the BMP Strategic Plan will not serve as an alternative method of complying with Receiving Water Limitations.

j. Appendix 10 – This Appendix includes WQBELs that are consistent with the assumptions and requirements specified in the Copper TMDL for Upper and Lower Newport Bay. The Copper TMDL was adopted by the Santa Ana Water Board on December 2, 2022 in Resolution R8-2022-0012 and has been approved by the State Water Board. As of the date of issuance of the Order, the Copper TMDLs have not yet been approved by USEPA and will not become effective unless and until approved by USEPA. The WLAs from the Copper TMDLs are expressed as numeric WQBELs that will be on the effective date upon USEPA approval. The compliance date is 12 years after the date of USEPA approval of the Copper TMDL. The Permittees may therefore alternatively comply with the WQBELs by developing and implementing an approved Watershed Management Plan that employs BMPs that are subject to an iterative improvement process.

k. Appendix 11 – This Appendix includes WQBELs that are consistent with the assumptions and requirements specified in the Bacterial Indicator TMDLs for the Middle Santa Ana Region Watershed (MSAR). The Bacteria TMDLs were adopted by the Santa Ana Water Board on August 26, 2005, and subsequently approved by the State Water Board on May 15, 2006, by OAL on September 1, 2006, and by USEPA on May 16, 2007. The Cities of

Claremont and Pomona also discharge to the MSAR. The WLAs from the Bacteria TMDLs are expressed as numeric WQBELs that will be effective upon the effective date of the Order. The compliance date for Dry Summer Conditions specified in the Basin Plan passed on December 31, 2015. The compliance date for wet weather conditions is December 31, 2025; however, upon the effective date of the Basin Plan amendment set forth in Resolution R8-2026-0014, the compliance date for wet weather WQBELs is extended to December 31, 2035.. The Permittees may therefore alternatively comply with the WQBELs for wet weather conditions only by developing and implementing an approved Watershed Management Plan that employs BMPs that are subject to an iterative improvement process. The Appendix requires that the Comprehensive Bacterial Reduction Plan (CBRP) be revised. The CBRP may function as a WMP if it meets the requirements of section XII and is approved by the Executive Officer as a WMP. However, the CBRP may not serve as an alternative means of compliance with the WQBEL for Dry Summer Conditions, as that compliance date has passed.

l. Appendix 12 – This Appendix includes WQBELs that are consistent with the assumptions and requirements specified in the Lake Elsinore and Canyon Lake Nutrient TMDLs. The Nutrient TMDLs were first adopted by the Santa Ana Water Board on December 20, 2004, and approved by the State Water Board on May 19, 2005, OAL on July 26, 2005, and the USEPA on September 30, 2005. The Nutrient TMDLs were revised by the Santa Ana Water Board in Resolution R8-2025-0014. As of the date of issuance of the Order, the revised Nutrient TMDLs have not yet been approved by USEPA and will not become effective unless and until approved by USEPA. (See Resolution R8-2025-0014, ¶ 22 [final USEPA approval is the effective date for both state and federal law purposes].) The 2004 Nutrient TMDLs remain in effect until the revised Nutrient TMDLs are approved by USEPA. The 2025 TMDLs establish extended compliance schedules and implement a phased TMDL and adaptive management approach. Phase I refers to implementation of the 2004 TMDLs from 2005 to 2020. Phase II occurs from the effective date of the revised Nutrient TMDLs through twenty years from the effective date and Phase III occurs after Phase II until thirty years after the effective date. The 2025 WLAs are incorporated into the Order as WQBELS that are numeric WQBELs that must be achieved as soon as possible but no later than thirty years from the effective date. Permittees may alternatively comply with the WQBELs by developing and implementing the approved CNRP (or equivalent Watershed Management Plan) that includes participating in pollution offset strategies and employing BMPs that are subject to an iterative improvement process.

m. Appendix 13 – This Appendix includes WQBELs that are consistent with the assumptions and requirements specified in the Nutrients TMDLs for Dry Hydrological Conditions in Big Bear Lake. The Nutrients TMDLs were

adopted by the Santa Ana Water Board in Resolution R8-2006-0023 on April 21, 2006 and subsequently approved by the State Water Board on April 3, 2007, OAL on August 21, 2007, and USEPA on September 25, 2007. The compliance date of December 31, 2015 for dry weather conditions has passed. The TMDL currently does not apply to wet weather conditions. The dry weather WLAs are expressed as numeric WQBELs that will be effective upon the effective date of the Order. A BMP-based compliance option through the development and implementation of an approved Watershed Management Plan is therefore unavailable to demonstrate compliance with the WQBELs for Nutrients.

n. Appendix 14 – This Appendix includes WQBELs that are consistent with the assumptions and requirements specified in the TMDL for Bacteria in Coyote Creek (located within the jurisdiction of the Los Angeles Water Board). The Los Angeles Water Board adopted the TMDL on June 10, 2015, and it became effective on June 14, 2016. The TMDL establishes compliance dates of June 14, 2026, for dry weather, single sample WLAs and June 14, 2036, for wet weather, single sample WLAs and geometric mean WLAs. The WLAs are expressed in the TMDL as the number of daily or weekly sample days that may exceed the single sample numeric targets in the TMDL. These WLAs are expressed in Appendix 14 as numeric WQBELs that are effective on the effective date of the Order. Since the compliance date has not yet passed, the Permittees may therefore alternatively comply with the WQBELs by developing and implementing an approved Watershed Management Plan that employs BMPs that are subject to an iterative improvement process. The City of Yorba Linda, and applicable upstream jurisdictions, drain partially towards the Coyote Creek watershed. Orange County Water District staff have reported that this flow is diverted away from the Coyote Creek watershed and to the Santa Ana River by a gate located in the forebay to Miller Retarding Basin. The Basin is located at the southwest corner of the intersection of East Orangethorpe Avenue and North Miller Street. When open, the gate allows flows to continue down Carbon Creek where it may enter Coyote Creek. As such, the City of Yorba Linda and applicable upstream jurisdictions are only subject to the Coyote Creek Bacteria TMDL requirements if flows are allowed to enter Coyote Creek.

X. RATIONALE FOR NEW DEVELOPMENT (INCLUDING SIGNIFICANT REDEVELOPMENT) PROVISIONS

The requirements of section VIII of the Order are based on 40 CFR section 122.26(d)(2)(iv)(A)(2). The requirements are designed to reduce the discharge of pollutants from areas of new development and significant redevelopment. 40 CFR section 122.26(d)(2)(iv)(A) requires, in part, that applicants for MS4 permits provide both “structural and source control measures to reduce pollutants from runoff from commercial and residential areas”.

Section VIII. of the Order also includes a requirement whose purpose is to advance work to retrofit existing flood control facilities to remove pollutants as required by 40 CFR section 122.26(d)(2)(iv)(A)(4). Section VIII authorizes Uniform Technical Guidance for public drainage projects to implement the evaluation procedures described in 40 CFR section 122.26(d)(2)(iv)(A)(4). This guidance may establish standardized methods for evaluating retrofit opportunities, assessing feasibility, and implementing BMPs. In the absence of such guidance, standard WQMP requirements apply. Section VIII includes requirements regarding the sizing of treatment control measures, a selection process that prioritizes LID treatment control measures, and controls for Hydrologic Conditions of Concern. Section VIII also classifies "priority projects", which require project Water Quality Management Plans (WQMPs) and subsequently, source controls and treatment controls, if they are subject to discretionary action by the Permittee. A priority project that is subject to ministerial action by the Permittee does not need a WQMP if the project meets requirements for source control measures through standardized requirements or other methods.

The Permittees have broad authority to regulate activities within their communities. The Permittees' authority may not apply to all projects that occur within the physical boundaries of each municipality. For example, Permittees may lack the jurisdiction to require WQMPs for projects carried out by federal agencies, special districts, or other entities. It is not practical to fully describe the limits of the Permittees' jurisdiction in this Order. The Permittees are expected to fully exercise their authority to reduce the discharge of pollutants from new development and significant redevelopment according to 40 CFR section 122.26(d)(2)(iv)(A)(2) and the MEP standard.

Projects are generally approved by Permittees as either "discretionary" or "ministerial" projects. A "ministerial" project involves a decision applying "only the use of fixed standards or objective measurements" that the permitting authority previously adopted, with little or no "subjective judgement in deciding whether or how the project should be carried out" (Cal. Code Regs., tit. 14, § 15369). A "discretionary" project requires the exercise of judgement or deliberation when a project decision is made (Cal. Code Regs., tit. 14, § 15357). Whether a project is discretionary or ministerial depends on the specific ordinances that authorize the decision. This can vary from Permittee to Permittee. The requirements in section VIII.B provide for the even application of pollution controls for priority projects regardless of whether the project is subject to discretionary or ministerial action. Nevertheless, in recognition of the need for more streamlined permitting of projects that do not otherwise need project-level CEQA review, only discretionary projects are subject to section VIII.C. For purposes of this section, discretionary projects include those that require discretionary approval regardless of whether they are statutorily or categorically exempt from CEQA.

The Order establishes that "priority projects" are defined by the categories in section VIII.B.5. Priority projects that are subject to the Permittee's discretionary approval must have a combination of source control and treatment control

measures. These controls must be documented in a project-specific Water Quality Management Plan.

If it is approved through a ministerial action, a priority project is required to have source control measures, such as permeable pavements or enclosures or diversions that prevent pollutants from being mobilized in stormwater. These controls must be enforced either through ordinances, building standards, or similar standardized requirements or a project Water Quality Management Plan.

The previous permits required that Permittees develop project WQMPs based on processes described in model WQMPs. The previous permits required that the design of the project's pollution controls conform to technical criteria in a Technical Guidance Document. The Permittees in each county developed their own set of documents. Both the model WQMPs and Technical Guidance Documents were incorporated by reference and enforceable under the previous permits.

In this Order, the requirements pertaining to project WQMPs are based on the model WQMPs and Technical Guidance Documents for each county. The processes and requirements of the documents are expressed as requirements directly in the Order. There are usually differences in the language of the documents for each county for the same processes. To reconcile the differences in the counties' documents, this Order focuses on the underlying common purposes and makes those the requirements of the Order. This approach generally allows the Permittees to continue to use their processes provided they serve the purposes indicated in the Order. The Order does require the Permittees to update their documents and submit them for approval, so they integrate the changes discussed below.

In other cases, during program audits, Santa Ana Water Board staff found project WQMPs that resulted in problematic outcomes related to the quality, serviceability, and safety of treatment control measures. These outcomes did not necessarily affect the treatment performance of the treatment control measures in the short term, but they have the potential to negatively affect the ability of the operator to service the facility and the safety of the surrounding community. Santa Ana Water Board staff found that some Permittees lacked a comprehensive set of standards to apply during the development of WQMPs that would prevent these problems. The Order adds new requirements for Permittees to have standards and guidelines for these purposes.

Section VIII also includes the following new features and changes over previous permits:

1. Section VIII.B makes clear that Permittees must consider the whole of the project in classifying a project as a priority or non-priority project. This is not intended to cause the Permittees to require WQMPs for projects for which there is insufficient detail to meaningfully develop those plans (e.g., simple lot

line adjustments without further development details). The intent is to cause as early consideration of pollution controls as practicable and to prevent projects from being parsed out to avoid preparing a WQMP or source controls and treatment controls.

2. Projects consisting solely of the replacement, upgrade, or installation of dry utilities, sanitary sewer, petroleum pipelines, or water supply distribution lines in existing rights of way have been excluded from "redevelopment projects" that are priority projects. New development projects do not include public drainage improvement projects that do not involve new sources of pollutants. The reason for this exclusion is because the scope of such projects is too narrow to afford opportunities to include treatment control measures. Additionally, the post-construction water quality impacts may not be related to the work completed underground. This exclusion does not apply to other related improvements that may be a source of urban pollution, but which would not be a priority project in themselves.

3. The language of section VIII.B allows a Permittee to authorize the continued use of treatment control measures that were installed earlier as part of a previously approved WQMP. This allowance does not apply if the old WQMP was not properly approved or implemented, regardless of whether any enforcement action was taken by the Water Board.

4. Section VIII allows for the development of Uniform Technical Guidance Documents that are based on USEPA's guidance, "Managing Wet Weather with Green Infrastructure: Green Streets". However, these documents will be subject to approval by the Executive Officer. The guidance contains few enforceable standards for selecting structural treatment controls for priority projects that involved improvements to existing transportation rights of way. Transportation rights of way can make up 10 percent to 25 percent of an urban area and are a source of pollutants from tire and break wear, aerial deposition of combustion by-products, automotive fluid, littering, collision debris, and landscape maintenance[49,50,51]. The level of effort for analyzing the feasibility of structural treatment controls, or their use at all, was largely left to each Permittee's discretion. Audits and inspections by Santa Ana Water Board staff have shown that some Permittees used that discretion to exclude structural treatment controls with no meaningful analysis in conflict with their obligation to reduce the discharge of pollutants to the maximum extent practicable.

[49] Sources vary depending on if measurements include sidewalks and greenspace. Statistica, 2023 Urban area allocated to streets in selected cities 2019 | Statista, accessed October 20, 2023.

[50] Nixon, H. and Saphores, JD, 2007. *Impacts of motor vehicle operation on water quality in the US – Cleanup costs and policies.* Transportation Research Part D: Transport and Environment, vol. 12, issue 8, December 2007.

[51] UNHabitat, 2013. *Streets as public spaces and drivers of urban prosperity*, United Nations Human Settlements Programme, Nairobi, Kenya, 2013.

5. Section VIII.C.5 allows for the submittal of Uniform Technical Guidance Documents specific to categories of projects. It allows the Uniform Technical Guidance Documents to define procedures and documentation requirements specific to these projects, including adaptation of other requirements within Section VIII.C such that barriers to the use of simplified, category specific WQMPs can be removed. The purpose of this allowance is to improve efficiency, consistency, and transparency for categories of projects that have particular requirements and opportunities such as transportation projects, public drainage improvement projects, and small residential projects. These documents will be subject to approval by the Executive Officer.

This Order requires expansion of the Permittees' existing electronic databases for tracking sites affected by an approved WQMP in section VIII.C.11. Treatment control measures that were installed prior to the previous term MS4 Permits were not required to be tracked in an electronic database. However, treatment controls measures were being installed under the MS4 permits adopted almost two decades ago. The performance of these older facilities is also of interest to the stormwater program and may provide practical insights to the Permittees and the Santa Ana Water Board. Consequently, section VIII.C.16 statess that these older facilities should be tracked as they are discovered in the course of the Permittees' normal inspection programs or with other opportunities. The inventory of legacy sites is for the benefit of Permittees and the Santa Ana Water Board in watershed planning. The identification of a legacy facility through the inventory process does not, by itself, trigger an obligation to inspect, upgrade, rehabilitate, retrofit, or redesign the facility to current standards. Standards and conditions applicable at the time of WQMP approval would apply to legacy facilities.

The project WQMP is intended to accomplish several purposes. First, the project WQMP documents the rationale behind the selection of treatment control measures. Second, the WQMP functions as an enforcement mechanism to provide for the proper construction, operation, and maintenance of treatment control measures for both the project proponent and their successors and assigns over the life of the project. Last, for some larger projects, the project WQMP can serve as a planning document for the design, construction, and funding of regional and sub-regional treatment control measures. As such, it is important that subsequent WQMPs and non-priority project plans be consistent with the larger project WQMP. It is also important that project WQMPs be protected against loss or damage in a manner that is commensurate with the expected duration of the project as required by section VIII.C.25. The loss of project WQMPs and the presence of internal inconsistencies risks undermining the Permittees' authority to enforce implementation of those plans.

This Order requires the Permittees to establish a program for the improvement of project WQMPs. The Permittees must have written technical guidance for the preparation of project WQMPs. The Model WQMPs and their accompanying Technical Guidance Documents are generally expected to serve this purpose. These documents may require some modifications to comply with the Order,

subject to approval by the Executive Officer. Resulting project WQMP process improvements may be made with input from stakeholders. However, the changes must not conflict with the requirements of the Order and are subject to approval.

A. Hierarchy for Treatment Control Measures

This Order maintains the hierarchy for the selection of treatment control measures for priority projects that was prescribed in the previous permits with some modifications. USEPA has urged the Santa Ana Water Board to allow certain project proponents to offset untreated design capture volumes by retrofitting off-site in existing developments. This option appears in the hierarchy so that a project cannot be eligible for a waiver until the offset option and all other options are determined to not be Feasible.

To communicate the hierarchy clearly, the Order establishes terminology for categories and subcategories of treatment control measures. This terminology is defined in the Glossary of the Order and is explained below.

In summary, the hierarchy places greatest preference on retention LID BMPs, second preference is for bio-treatment control measures, and third preference for non-LID treatment control measures. A fourth preference has been added for off-site retrofits of existing development to accommodate USEPA's request.

Retention LID treatment control measures and bio-treatment control measures are subcategories of LID treatment control measures. LID treatment control measures also include certain source control measures that attempt to mimic the site's predevelopment hydrology by using techniques that retain runoff close to its source. Although this Order does not require that LID treatment control measures be located on site, LID source control measures should be on site consistent with LID principles.

The effectiveness of LID treatment control measures has been demonstrated in various studies. Dr. Richard Horner demonstrated that LID control measures achieved significant reductions in pollutant loading and runoff volume and enhanced recharge rates compared to developments with no BMPs and those with basic treatment control measures (Horner, 2006)[52]. Consequently, the Order emphasizes the use of LID treatment control measures. Retention LID treatment control measures generally employ infiltration or some other loss of the design capture volume and as such, are generally a more reliable way of preventing the discharge of pollutants in stormwater. Consequently, retention LID treatment control measures are given the greatest degree of preference in the hierarchy.

[52] Horner, Richard R. Investigation of the Feasibility and Benefits of Low-Impact Site Design Practices (LID) for San Diego, University of Washington, 2006.

Retention LID treatment control measures are a subcategory of LID treatment control measures where the design capture volume is either infiltrated into the ground; used for irrigation, process water, or other purposes; or is subject to evaporation or evapotranspiration. Permittees are responsible for demonstrating in the project WQMP that retention LID treatment control measures, located either on or off-site, are given priority consideration according to the Order's requirements, before considering any of the subsequent categories of treatment control measures in the hierarchy.

The second category of treatment control measures that must be considered are biotreatment control measures. As indicated by the name, biotreatment control measures are a subcategory of LID treatment control measures that principally remove pollutants through a combination of infiltration, evapotranspiration, biological uptake or transformations, or degradation. While a significant portion of the design capture volume is typically infiltrated or subject to evapotranspiration, this is incidental, and no portion of the design capture volume must be treated in either manner. After passing through a biotreatment control measure and partly evaporated and infiltrated, the remaining portion of the design capture volume is typically discharged from the site. Where retention LID control measures are not Feasible, biotreatment control measures must be used where feasible.

The last category of treatment control measures in this Order's hierarchy are non-LID treatment control measures. Treatment control measures principally use filter media such as perlite, zeolite, sand, or some proprietary or non-proprietary media to physically remove pollutants in stormwater. The media may develop microbial communities in biofilms that coat portions of the media. Biofilms can incidentally assist in removing pollutants through biological uptake and transformation. Biofilms may adversely affect the hydraulic performance of the facility and produce potential pollutants in the effluent.

The Order does not require that a single treatment control measure be used to treat the design capture volume for a drainage area on a priority project site. A series of treatment control measures may be used if necessary. The selection and sizing of controls must follow the Order's hierarchy. For example, if a retention LID measure cannot treat the entire design capture volume, the remaining portion may be treated in a biotreatment control measure. If it is not Feasible for both the retention LID and biotreatment control measure to treat the entire design capture volume, then a non-LID treatment control measure may be employed to treat the remaining portion. Under extremely limited circumstances should a site treat the design capture volume or any portion thereof using a non-LID control measure without having demonstrated in the WQMP that the

volume could not have been treated using a BMP higher up on the hierarchy.

Section VIII.H of the Order establishes a specific protocol for selecting non-LID treatment control measures. This protocol largely carries over from previous permits. It requires that the Permittees categorize non-LID control measures by type and then assign a performance rating of “high”, “medium”, and “low” to each category relevant to a variety of expected pollutants. As the result of Santa Ana Water Board staff observations during audits of mis-categorizations, the Order requires that BMP categories 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. The rating must be based on the best available, objective evidence. The evidence must include field performance test data that is specific to the BMP and that has been collected according to published and recognized protocols.

The non-LID BMP selection protocol also requires that project types be related to various pollutants which can be reasonably expected to be found in runoff from those project types. Permittees must select non-LID control measures that provide either a “medium” or “high” level of treatment for those projects. Numeric performance thresholds must be used to distinguish the levels of treatment. The performance ratings for non-LID control measures must be reviewed biennially so that they are supported by the best available information.

Like other infrastructure, treatment control measures may pose environmental hazards such as flooding, providing habitat for disease vectors, creating nuisances such as odors or midges, adversely affecting groundwater or soil remediation efforts, or presenting physical hazards to people, nearby structures, or traffic. The Order establishes an obligation on the Permittees to mitigate these potential environmental hazards.

The Order also requires that treatment control measures substantially conform to published and generally accepted engineering design criteria or have had their expected performance substantiated in field tests using published and recognized protocols. These requirements are related to hazard mitigation because, in many cases, engineering design criteria have been established to address potential environmental hazards.

Permittees may use protocols established by authoritative third parties, such as the Washington State Department of Ecology’s Technology Assessment Protocol – Ecology (TAPE) and the New Jersey Comprehensive Assessment Tool (NJCAT) to establish the expected performance of controls. Similarly, Permittees may use published and generally accepted engineering design criteria established by third parties.

Minor deviations from published design criteria are generally acceptable and may be done to accommodate LID treatment control measures at a project site. However, major deviations are not acceptable.

B. Integration of Project WQMPs into the Development Application Process

The Order establishes a procedure for the integration of project WQMPs into the development application process. This procedure is based on the Model WQMPs developed by the Permittees according to earlier permits. The procedure furthers efforts to "develop, implement, and enforce controls to reduce the discharge of pollutants from [MS4s] which receive discharges from areas of new development and significant redevelopment" down to the project-level according to 40 CFR section 122.26(d)(2)(iv)(A)(2).

The Order requires that project WQMPs be developed in two phases. In the first phase, a preliminary project WQMP must be prepared prior to a project's development application being regarded as complete. The preliminary project WQMP must be approved before the project is approved by the Permittees' decision-making body.

The purpose of preparing a preliminary project WQMP prior to the development application being complete is to promote consideration of treatment control measures as early in the development approval process as possible. Treatment control measures often compete for space with other structural elements of a project such as building footprints, utilities, and landscaping. As such, they should be given equal consideration so that they can be integrated into a site in the most economical manner possible. The preliminary project WQMP should be sufficiently detailed to demonstrate that adequate consideration has been given to the sizing, location, type of treatment control measures, and the related BMP hierarchy, such that those measures can be reasonably expected to be constructible, serviceable, and operate as intended.

Once the development application is complete, a project is typically approved after environmental review occurs under CEQA. It is important that treatment control measures be described in the circulated CEQA document. This circulation helps to educate the public on how the Permittee addresses the potential water quality impacts of the project and how the potential environmental hazards of treatment control measures are addressed. For this purpose, the Permittees are encouraged to also describe their related inspection and enforcement programs. Where applicable, the circulated document is a useful compliance monitoring tool for the Santa Ana Water Board and other interested agencies such as the California Coastal Commission and the Department of Fish and Wildlife.

The second phase of WQMP development begins after project approval. During this phase, additional project details are developed, including details on source-control, site-design, treatment control measures, and hydromodification.

Hydromodification is generally defined as changes in channel form associated with alterations in flow and sediment due to past or proposed future land use alterations. The State Water Board's Construction General Permit, Order No. 2009-0009-DWQ as amended by Order Nos. 2010-0014-DWQ and 2012-0006-DWQ, defines hydromodification as the alteration of the hydrologic characteristics of coastal and non-coastal waters, which in turn could cause degradation of water resources. Hydromodification can cause excessive erosion and/or sedimentation rates, resulting in excessive turbidity, channel aggradation, and/or degradation.

Hydromodification activities change a waterbody's physical, biological, or chemical structure as well as its natural function. These changes can cause problems such as changes in flow, increased sedimentation, higher water temperature, lower dissolved oxygen, degradation of aquatic habitat structure, loss of fish and other aquatic populations, and decreased water quality. In addition, runoff reaches the stream channel much more efficiently, so that the peak discharge rates for floods are higher for an equivalent rainfall than they were prior to development.

Correcting the root causes of hydromodification is most effective if based on an integrated watershed-scale. Most jurisdictions in California are now required to address the effects of hydromodification through either a municipal stormwater permit or the statewide Construction General Permit. The Order provides the Permittees with opportunities to address the impacts of hydromodification through watershed management.

Because multiple departments can be working on developing separate aspects of a project, there is potential for inconsistencies to develop between different project plans and the preliminary project WQMP. This has the potential to affect BMP selection, the likelihood that a treatment control measure will be built, or the likelihood that it will function as intended. At the end of the second phase, a final project WQMP is approved, and the project is approved to initiate construction.

C. Non-Priority Projects

Previous permits required source controls for non-priority projects regardless of the risk of stormwater pollution. Due to the broad range of projects subject to the Permittees' approval, this inclusive approach encompassed projects that would occur entirely indoors or whose scope was too narrow to offer opportunities to incorporate the required control

measure in a practicable way. As part of the preparation of the Model WQMPs and Technical Guidance Documents, the Permittees narrowed down the scope of non-priority projects requiring a plan by re-defining a non-priority project. Santa Ana Water Board staff did not object to this narrowing because they recognized that the term "non-priority" project was exceptionally inclusive.

The Order discontinues efforts to apply source control measures for non-priority projects. The effort was overly inclusive and Santa Ana Water Board staff found no indication that it was effective.

D. Treatment Control Measures Related to New Development and Significant Redevelopment Versus Other Treatment Control Measures

The requirements for treatment control measures apply only to those control measures constructed as part of priority projects. Priority projects generally involve changes to the environment that create opportunities to install reliable, quality treatment control measures as part of new development and significant redevelopment with relatively few constraints.
There may be other opportunities to install treatment control measures as standalone projects (i.e., not as part of a priority project). These may include in-stream projects that improve the physical or biological integrity of waters or increase the natural pollutant attenuation function of water. They may also include retrofitting an MS4 facility, such as a flood control basin or channel, to promote infiltration, filtration, or other mechanisms to remove pollutants. These projects are more likely to face constraints that conflict with published design standards. They are also likely to treat runoff from existing development that may be causing or contributing to existing exceedances of WQOs. To promote their construction, the Santa Ana Water Board does not require that these BMPs meet the same standards as those for treatment control measures built for new development and significant redevelopment.

The requirements of the Order are designed to remove unnecessary constraints on the use of regional and subregional treatment control measures. Due to their larger tributary areas, regional and subregional treatment control measures may contain developed and undeveloped areas. Proponents of new development and significant redevelopment projects may be funding partners for regional and subregional treatment control measures. Various funding mechanisms may be used to facilitate these partnerships. The term “credit,” as used in the Order is intended to be interpreted broadly to refer to various funding mechanisms to build and operate regional and subregional treatment control measures.

The Order is not intended to put unnecessary constraints on funding mechanisms. But it is intended to enforce appropriate quality standards for BMPs constructed to serve new development and significant redevelopment. This is accomplished by limiting credits allowed for new development and significant redevelopment to treatment volumes or flows that can meet the Order's treatment requirements.

The Santa Ana Water Board recognizes that in some cases, MS4 facilities are used to convey runoff to sub-regional or regional treatment control measures or may incorporate regional BMPs directly. The Santa Ana Water Board recognizes this as an appropriate strategy to remove pollutants from discharges in runoff from existing and new development, provided waters of the U.S. are not used to convey pollutants that have not been reduced to the MEP.

E. Regional and Subregional Treatment Control Measures

The provisions of the Order take a neutral position with respect to the use of on-site or off-site treatment control measures. An off-site facility generally will serve more than one project or property owner and will generally be a regional or sub-regional facility. Instead, preference is given in the Order to LID treatment control measures, with less regard to their location. This represents a significant shift from prior permits, which required a demonstration that on-site treatment facilities were not Feasible before allowing the use of an off-site facility.

This shift regarding the location of treatment control measures considers the benefits of centralizing these BMPs. In comparison with de-centralized treatment control measures, centralized facilities consolidate the responsibility for their operation and maintenance into a single entity, such as a property owner's or homeowner's association, a community facilities district, or public agency. This allows for the facility to be professionally managed and maintained, which may allow the facility to perform more reliably with less risk of premature failure. Centralized facilities also consolidate the costs of construction, operation, and maintenance and may result in efficiency of scale. Centralized facilities are more likely to collect runoff from roadways and other public rights of way whose runoff might be treated using less effective BMPs. Centralized facilities may also be on a scale that they provide other community benefits, such as open space.

In sum, the Order changes the requirements for new development so that there is no preference to the use of treatment control measures either on or off-site. The Order makes it easier for a project proponent to use an off-site treatment control measures where they are available. This is accomplished principally by not requiring that on-site treatment control measures be demonstrated to not be Feasible before allowing the use of an off-site facility.

F. Alternatives and *In Lieu* Programs

Previous permits allowed the Permittees to organize runoff funds to pay for urban water quality improvement projects within the same watershed. These would be funded by contributions from developers who were granted waivers. No MS4 runoff fund was ever reported to be established for "urban water quality improvement projects" and no waivers are known to have been issued during the previous permits' terms. If a waiver was issued under the previous permits, Permittees were not required to develop funds and collect monies. Because obtaining a waiver poses little relative cost versus a contribution to a fund, it is not surprising that the Permittees chose not to impose the financial burden of a runoff fund on the development community. Nonetheless, at the urging of USEPA, the Order continues to allow the Permittees to exact funds from projects which are granted waivers.

The previous permits also allowed the Permittees to establish a water quality credit system for alternatives to infiltration, harvesting and reuse, evapotranspiration, and other LID treatment control measures and hydromodification requirements. However, the projects listed as eligible for credits are generally regarded as low-impact development, such as transit-oriented development, urban in-fill projects, and high-density developments over 7 dwelling units per acre. This suggests that the purpose of the credit system was to encourage these types of development.

To be effective, the discounts on the design capture volume would have to influence a project proponent to change a non-LID project to a LID project or to essentially propose a project that otherwise would not have been proposed in the face of constraining factors. To do so, the savings realized from the discount on the design capture volume would have to exceed the costs of overcoming any of the factors that limit LID. In some cases, this may be costly, involve changing zoning; overcoming local opposition to certain forms of development; mitigating infrastructure impacts such as traffic, sewer, and water; or providing funding for more police and fire services.

The Permittees have not reported, and Santa Ana Water Board staff is unaware of any evidence that those discounts have been effective at motivating the Permittees or the development community to alter development patterns or to produce more LID projects than would have been produced without the discounts. Because of this, the discounts have been an unnecessary compromise on the protection of water quality. Therefore, the Order no longer allows the Permittees to provide discounts on the design capture volume. The Order does not require the Permittees to take back any discounts granted before the effective date of the Order.

G. Credit trading

The Order authorizes the Permittees to establish a water quality credit system but in a different form than previous permits. The Order essentially allows an entity to construct a LID treatment control measure that treats runoff from a drainage area that is independent of a priority project or that is part of a priority project. The entity that constructs the LID treatment control measure is then allowed to trade the eligible treatment capacity with other priority projects that discharge in the same drainage area of the same watershed, as defined by an approved credit program, subject to certain conditions. The capacity eligible for trading depends on whether the facility is constructed independently of, or in association with, a priority project. Where the LID treatment control measure is constructed in association with a priority project, only the portion of the design capture volume or flow attributable to areas outside the project boundary may be made available for trading. The “excess” capacity is the design capture volume or flow that the LID treatment control measure treats minus the volume or flow generated by a related priority project, if any, where a related priority project is a priority project for which the LID treatment control measure is constructed or operated to satisfy applicable requirements under this Order.. This excess capacity is a “credit” that serves as a unit of trade between projects. This market-based feature of the permit is designed to encourage early investments in LID BMP infrastructure for large or multi-property property owners. The Order does not regulate the manner of the transaction between projects, but the treatment control measure employed to produce the credit must be a LID BMP.

Permittees are allowed to trade credits between projects, but the projects must discharge in the same watershed, as defined by an approved credit program. This is a limitation on the size of the trading market. It is necessary that the size of the market be stable to promote trading. Specifically defining the trading market on the receiving water. may create instability due to changing definitions of what constitutes such waters. To address this risk, the size of the market will be subject to the approval of the Executive Officer, based on the principle of protecting the beneficial uses of the nearest receiving water.

Because credit trading is tied closely to redevelopment investment, and redevelopment does not tend to be evenly distributed among communities, there is a risk that credit trading at larger-than-watershed scales would concentrate the benefits and risks across different communities. This could result in pollution hotspots that disproportionately affect disadvantaged communities. While a single watershed may include communities with differing socioeconomic characteristics, limiting trading to projects that discharge to the same watershed of the nearest receiving water constrains trading to hydrologically connected areas. However, credit trading at smaller scales may also have unintended consequences for

disadvantaged communities, by limiting access to funding and opportunities for beneficial credit-generating projects within those communities. Larger trading areas may increase market demand and reduce credit costs by allowing more credit generators and connect redevelopment funding with beneficial projects. The appropriate scale depends on the circumstances of the individual program. The Order therefore allows the credit program to define a trading area that is required to be approved by the Executive Officer. . The scale of trading programs may be justified where supported by sufficient data, modeling, and regulatory coordination. Accordingly, the Order allows for approval of the trading area where the Executive Officer determines that an adequate system of safeguards, data, and administrative capacity are in place to ensure compliance and that credit trading does not result in inequitable outcomes. To protect disadvantaged communities a provision has been added to require funds from credit purchases in disadvantaged communities to be used towards the implementation of LID treatment control measures located within disadvantaged communities or demonstrate that an alternative approach will provide equivalent or greater water quality benefits to the affected disadvantaged community. The Department of Water Resources DAC Mapping Tool located at: https://gis.water.ca.gov/app/dacs/ should be referred to for identifying DAC locations.

XI. RATIONALE FOR ILLICIT DISCHARGE DETECTION AND ELIMINATION PROGRAM

Section IX of the Order includes requirements intended to cause the Permittees to effectively prohibit illicit discharges and illicit connections and to detect and remove improper disposal to MS4s in accordance with 40 CFR section 122.26(d)(2)(iv)(B). Discharges that are authorized under an NPDES permit or are otherwise authorized or conditionally exempt under section IV.A are not considered illicit discharges.

In its 1990 rulemaking, USEPA explained that the illicit discharge detection and elimination (IDDE) program requirement was intended to begin to implement the CWA's provision requiring permits to "effectively prohibit non-stormwater discharges." (55 Fed. Reg. 47990, 47995.) Federal regulations at 40 CFR section 122.26(d)(2)(iv)(B) require that the stormwater management program shall be based on "a description of a program, including a schedule, to detect and remove (or require the discharger to the municipal storm sewer to obtain a separate NPDES permit for) illicit discharges and improper disposal into the storm sewer." The proposed management program shall include "[a] description of a program, including inspections, to implement and enforce an ordinance, orders or similar means to prevent illicit discharges to the municipal storm sewer system," per subsection (1) of the above federal regulation.

Federal regulations at 40 CFR section 122.26(d)(2)(iv)(B)(1) through (7) provide the IDDE program requirements including 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," field screening, investigation procedures, spill prevention, public reporting, educational activities, and a description of controls to limit infiltration of seepage from municipal sanitary sewers.

Section IX of the Order describes requirements for programs to address illicit discharges and illicit connections. The programs must include procedures for investigating the source of illicit connections and illicit discharges. The Permittee must continue to implement their IDDE program, maintain it in written form, and update it, as necessary. The requirements in the IDDE program are retained from previous permits for Santa Ana Region and have been reworded for improved clarity.

The Order adds a timeline of three business days to initiate source investigations of illicit connections and illicit discharges. USEPA encourages permit writers to include clear, specific, measurable requirements in permits, as is evident through the Phase II remand rule and guidance documents. (See USEPA. 2016. National Pollutant Discharge Elimination System [NPDES] Municipal Separate Storm Sewer System General Permit Remand Rule, 81 Federal Register, p 89326; USEPA. 2010. MS4 Permit Improvement Guide. April 2010. p.5.)

This Order also clarifies that Sanitary Sewer Overflows (SSOs) are a sub-class of illicit discharges consistent with 40 CFR section 122.26(d)(2)(iv)(B)(4) and (7). Federal regulations at 40 CFR section 122.26(d)(2)(vi)(B)(7) require that the IDDE program include "[a] description of controls to limit infiltration of seepage from municipal sanitary sewers to municipal separate storm sewer systems where necessary." Federal regulations at 40 CFR section 122.26(d)(2)(iv)(B)(4) also require a "description of procedures to prevent, contain, and respond to spills that may discharge into the municipal separate storm sewer."

Except for general requirements for IDDE, this Order does not create new SSO requirements for Permittees already subject to Order No. 2022-0103-DWQ. This Order includes requirements that provide an incentive for Permittees to cooperate in efforts to eliminate SSOs. SSOs are prohibited by Order No. 2022-0103-DWQ (Provision C.1.) and are a form of illicit discharge which the Permittees must effectively prohibit. This Order does not require that Permittees, who do not operate wastewater collection systems, take on any responsibilities of system operators. The exact nature of the cooperative relationship between wastewater collection system operators and non-operator Permittees is left to the Permittees' discretion but it must be consistent with a genuine effort to effectively prohibit SSOs.

Federal regulations at 40 CFR section 122.26(d)(2)(iv)(B)(5) require the Permittees to develop a description of a program "to promote, publicize, and

facilitate public reporting of the presence of illicit discharges or water quality impacts associated with discharges from municipal separate storm sewer." The Permittees need to promote the program to help in the identification and termination of illicit discharges. The Order establishes requirements for the Permittees, individually or as a group, for public reporting of illicit discharges. Permittees must provide the public with at least one way of reporting illicit discharges, spills, and observed water quality impacts associated with the MS4.

Permittees must track all suspected sources of non-stormwater discharges, including sources suspected of being sanitary sewage. Tracking requirements have been added to the Order. Documenting and tracking of illicit discharges will help to ensure that all illicit discharges are investigated and addressed, and water quality is protected. This is consistent with USEPA's MS4 Permit Improvement Guide, which provides an example requirement to "track all investigations to document at a minimum the date(s) the illicit discharge was observed; the results of the investigation; any follow-up of the investigation; and the date the investigation was closed." (USEPA. 2010. MS4 Permit Improvement Guide. April 2010. p. 33.) Other USEPA-issued permits, such as for the Boise Area (NPDES permit IDS-027561), include similar approaches to IDDE, which require Permittees to maintain a record documenting all complaints or reports of illicit discharges and responses taken by Permittees.

XII. RATIONALE FOR PUBLIC EDUCATION AND OUTREACH PROVISIONS

Section X of the Order requires that the Permittees implement a public education program. The requirements of section X are based on 40 CFR section 122.26(d)(2)(iv)(A)(6), (B)(6), and (D)(4). The public education program, as currently implemented under prior permits, has been a core element of the Permittees' stormwater program for over a decade.

Federal regulations at 40 CFR section 122.26(d)(2)(iv) require as part of a stormwater management program "a comprehensive planning process which involves public participation and where necessary intergovernmental coordination, to reduce the discharge of pollutants to the maximum extent practicable using management practices, control techniques and system, design and engineering methods, and such other provisions which are appropriate."

Federal regulations at 40 CFR section 122.26(d)(2)(iv)(A)(6) provide that the proposed management program include "[a] description of a program to reduce to the maximum extent practicable, pollutants in discharges from MS4s associated with the application of pesticides, herbicides, and fertilizer which will include, as appropriate, controls such as educational activities, permits, certifications, and other measures for commercial applicators and distributors, and controls for application in public right-of-way's and at municipal facilities."

Federal regulations at 40 CFR section 122.26(d)(2)(iv)(B)(6) provide that the proposed management program includes "[a] description of education activities,

public information activities, and other appropriate activities to facilitate the proper management and disposal of used oil and toxic materials."

Federal regulations at 40 CFR section 122.42(c) require the owner or operator of an MS4 to submit an annual report that includes in part "(1) The status of implementing the components of the storm water management program that are established as permit conditions; (2) Proposed changes to the storm water management programs that are established as permit condition. Such proposed changes shall be consistent with §122.26(d)(2)(iii) of this part…" and "(6) A summary describing the number and nature of enforcement actions, inspections, and public education programs; …

The purpose of section X of the Order is to raise the public's awareness of pollution in runoff from MS4s and to cause the public to take action to reduce that pollution. The changes to the requirements in this Order have been largely influenced by USEPA's document, *Getting in Step: A Guide for Conducting Watershed Outreach Campaigns*. Changes were also made to generally support the effective execution of public education campaigns.

The Order now requires that the Permittees initiate a public education campaigns that address high priority pollution goals during the term of the permit. The Order does not dictate when a campaign must end. A campaign may carry over into another permit term. Other than initiating a campaign, the Order does not specify any specific milestones or other performance metrics for those campaigns. Instead, the Permittees must identify goals and performance metrics and evaluate the program's effectiveness and pursue continual improvement according to the requirements of the Order.

The Permittees have the discretion to select the pollution goals and objectives of the public education campaign. The Permittees' rationale for their selection must consider water quality data, public surveys, specific local conditions, social science research, and other objective information. The Permittees must permit public input on the overall program, including the goals and performance metrics.

Permittees who elect to develop and implement a WMP shall identify how public education and outreach will be implemented to address the high priority pollution issues. The Permittees have the flexibility to optimize water quality improvements by shifting resources and taking different approaches to achieving desired outcomes.

XIII. RATIONALE FOR TRAINING PROGRAMS

Section XI of the Order continues the requirements of the previous permits with some modifications. The requirements of section XI are based in part on 40 CFR section 122.26(d)(2)(iv) which requires, in part, that applicants for MS4 permits describe staff available to implement their stormwater program and on certain

required training and education programs in 40 CFR section 122.26(d)(2)(iv)(A)(6), (B)(6), and (D)(4).

For Permittees to be effective in implementing the stormwater programs, staff need to be aware of their employer's obligation to reduce the discharge of pollutants and their duties to help fulfill that obligation, and have the knowledge, skills, and abilities to perform those duties. These requirements are in accordance with CWA section 402(p)(3)(B)(iii) and 40 CFR section 122.26(d)(2)(iv) which, in part, establishes the MEP standard and allows the state to include provisions appropriate for the control of pollutants.

Section XI of the Order describes categories of personnel that must receive training and a minimum training curriculum for each category. Refresher training for Permittees' staff must be given once every two years instead of once each year; initial training for new employees must still be given within 6 months of hire. Refresher training frequencies have been reduced because existing employees have accumulated training and experience during the past few permit terms. A significant body of institutional knowledge has likely been developed to informally reinforce the stormwater programs and to justify reducing the intensity of the training program.

The scope of personnel requiring training has been expanded to include staff, contractors, and vendors whose duties or responsibilities directly or indirectly affect the Permittees' capacity to satisfy the requirements of this Order. For some Permittees, this may mean that additional personnel will require training. It does not mean that Permittees are responsible for providing training to contractors and vendors. But it does mean that contractors and vendors must have the requisite knowledge, skills, and abilities to perform their duties without conflicts with the requirements of this Order. The purpose of this expansion is to better harmonize the Permittees' internal departments and increase participation in the effort to reduce or eliminate pollution.

Section XI of the Order also now requires that the Permittees employ objective methods to evaluate trained personnel. It also now requires that training records be maintained for a minimum of three years. A registry or similar mechanism is also encouraged to facilitate tracking and reporting for the Principal Permittees and to permit training records to follow staff that change employment between different Permittees. The training program must be reviewed and updated once every two years.The Permittees may implement a single training program, individual programs, or some hybrid of the two. Therefore, the review and update may occur collectively, coordinated by the Principal Permittee, or be performed individually by each Permittee according to how the training program is implemented.

XIV. RATIONALE FOR WATERSHED MANAGEMENT PLANS

A. Purpose of Watershed Management Plans

Section XII of the Order allows the Permittees to develop and implement Watershed Management Plans (WMPs). Participation in a WMP is a voluntary, alternative compliance option for Permittees that gives them the flexibility to implement the requirements of the Order on a watershed scale through customized strategies, control measures, and BMPs. Specifically, the development and implementation of, and the Permittees' compliance with, WMPs serves as an alternate method to comply with receiving water limitations in section VI (Receiving Water Limitations) and/or with WLAs that are expressed as WQBELs in section VII (Effluent Limitations and Discharge Specifications). Watershed Management Plans may only be used to determine compliance with these requirements when final compliance dates have not yet passed or where no final compliance date is specified. The WMPs must be approved by the Executive Officer, subject to public review.

WMPs are new to the Order and were not included in prior permits. They were initially described in the Los Angeles Water Board's Order R4-2012-0175. The State Water Board affirmed the use of WMPs as an alternative compliance path in Order WQ 2015-0075. In Order WQ 2015-0075, the State Water Board found that WMPs are "an appropriate alternative to immediate compliance with receiving water limitations". (Order WQ 2015-0075, p.76.) The use of WMPs as an alternative path to compliance with Receiving Water Limitations and WLAs is limited. WMPs may only be used as a path for Receiving Water Limitations and for WLAs when the final compliance dates have not yet passed or where no final compliance date is specified. In cases where the final compliance date has passed, the only option appropriately available to a Permittee unable to meet compliance dates in a TMDL and incorporated into the Order is to request a time schedule order. (Id. at p. 36) In fact, the State Water Board directed all Regional Water Boards to consider WMPs for inclusion in their MS4 permits moving forward. (*Id.* at p. 51.) The incorporation of WMPs into the Order is therefore consistent with precedent set by the State Water Board in Order WQ 2015-0075.

The inclusion of WMPs is also consistent with federal regulations that support the development of permit conditions, as well as the implementation of stormwater management programs, at a watershed scale. (See 40 CFR §§ 122.26(a)(3)(ii), 122.26(a)(3)(v), and 122.26(d)(2)(iv).) USEPA has issued a *Watershed-Based NPDES Permitting Policy Statement* (USEPA, 2003) that defines watershed-based permitting as an approach that produces NPDES permits that are issued to point sources on a geographic or watershed basis. In this policy statement, USEPA explains that "[t]he utility of this tool relies heavily on a detailed, integrated, and inclusive watershed planning process." USEPA identifies a number of important benefits of watershed permitting, including more environmentally effective results; the ability to emphasize measuring the effectiveness of targeted actions on improvements in water quality; reduced cost of improving the quality of the nation's waters; and more effective implementation of watershed plans, including TMDLs, among others.

Additionally, Public Law 115-436, the Water Infrastructure Improvement Act (January 14, 2019), enacted section 402(s) of the CWA authorizing integrated plans that address both municipal wastewater and stormwater management as a potential compliance path that may be incorporated into an NPDES permit. Integrated planning is designed to help municipalities identify efficiencies in implementing requirements that arise from distinct permitting programs, particularly how best to make capital investments (Integrated Municipal Stormwater and Wastewater Planning Approach Framework, EPA, June 5, 2012). Under this law, an integrated plan can be used to implement any requirements relating to "a combined sewer overflow," "a capacity, management, operation, and maintenance program for sanitary sewer collection systems," "a municipal stormwater discharge," "a municipal wastewater discharge," and a "water quality-based effluent limitation to implement an applicable wasteload allocation in a total maximum daily load." The integrated plan can include "a schedule of compliance, under which actions taken to meet any applicable water quality based effluent limitation may be implemented" and "the implementation of projects, including innovative projects, to reclaim, recycle, or reuse water; and green infrastructure." (33 USC § 1342(s).) The integrated planning approach does not relax or change regulatory permitting standards, but rather recognizes existing flexibilities in the CWA to sequence and schedule projects that may be relevant to multiple permitting programs. (*Id.* at subd. (s)(5).) While the WMPs authorized in the Order are not "integrated plans" as defined in CWA section 402(s), these watershed level plans share many of the same underlying principles and advance the same goals that prompted the Santa Ana Water Board to adopt a watershed-based permitting approach for the Order.

A watershed-based permitting approach is also supported by a number of state and nationwide studies regarding MS4 pollution (Little Hoover Commission, Clearer Structure, Cleaner Water: Improving Performance and Outcomes at the State Water Boards (January 22, 2009).) In 2008, the National Research Council published a report stating: "The course of action most likely to check and reverse degradation of the nation's aquatic resources would be to base all storm water and other wastewater discharge permits on watershed boundaries instead of political boundaries." (National Research Council, Urban Stormwater Management in the U.S. (October 15, 2008).) The report acknowledged the challenges of such an approach would include "the inevitable limits of an urban municipality's authority within a larger watershed" but said the approach would be "essential" even though it would likely take years to implement.

This Order allows the Permittees to voluntarily develop and implement WMPs, either individually or collaboratively, to implement Order requirements on a watershed scale. Permittees may do so through customized strategies, activities, and milestones. This approach allows the Permittees to address crucial differences in the circumstances of the impairments for the different

waterbody-pollutant combinations. If Permittees do not comply with the requirements of section XII, Permittees must comply with receiving water limitations in section VI and the WQBELs in WQBELs in section VII of the Order.

B. Watershed Management Plan Development and Contents

Timelines to submit a WMP to the Santa Ana Water Board for approval are indicated in section XII.A of the Order. The schedule for development of the WMP must be as short as practicable. Permittees that prepare WMPs proactively at the start of the permit term will be deemed in compliance with the applicable receiving water limitation and/or WQBEL for that waterbody-pollutant combination for a period of no longer than 24 months. Such a limited time "safe harbor" during WMP preparation was sanctioned by the State Water Board in Order WQ 2015-0075. (See pp. 49-50.) To encourage community and stakeholder involvement in the development of the WMPs, the Order requires that draft WMPs are made available for public review prior to approval by the Santa Ana Water Board or Executive Officer on behalf of the Santa Ana Water Board.

The goal of WMPs is to facilitate cooperative implementation of strategies, control measures, and BMPs among Permittees and, potentially, other partners within a watershed to control discharges of pollutants from the MS4 to levels that attain WQBELs and do not cause or contribute to exceedances of receiving water limitations, and which also implement the MEP standard for stormwater discharges and the requirement to effectively prohibit non-stormwater discharges through the MS4 to receiving waters. Each WMP must:

- Prioritize water quality issues resulting from stormwater and non-stormwater discharges through the MS4 to receiving waters within each watershed covered,
- Identify and implement strategies, control measures, and BMPs to achieve applicable WQBELs and/or receiving water limitations, consistent with applicable compliance schedules in the Order,
- Execute an integrated monitoring and assessment program to determine progress towards achieving applicable limitations, and
- Modify strategies, control measures, and BMPs as necessary based on analysis of monitoring data collected pursuant to the MRP to ensure that applicable WQBELs and receiving water limitations and other milestones set forth in the WMP will be achieved.

The WMP must include an evaluation of existing water quality conditions, including characterization of stormwater and non-stormwater discharges from the MS4 and receiving water quality, consistent with 40 CFR sections 122.26(d)(1)(iv) and 122.26(d)(2)(iii). This effort is to support identification, prioritization, and sequencing of management actions.

Permittees must identify the water quality priorities within each watershed that will be addressed by the WMP consistent with 40 CFR section 122.26(d)(2)(iv) and Section XII.B of the Order. At a minimum, these priorities must include achieving some or all applicable WQBELs and/or receiving water limitations established pursuant to TMDLs and included in the Order. Highest priority must be given to waterbody-pollutant combinations for which a WQBEL is in place with interim and/or final compliance dates that occur within the permit term.

Permittees must identify strategies, control measures, and BMPs to implement through their jurisdictional stormwater management programs, or collectively on a watershed scale, with the goal of creating an efficient program to focus individual and collective resources on watershed priorities, particularly achieving WQBELs and receiving water limitations addressed by the WMP.

As part of the WMP, Permittees must conduct a Reasonable Assurance Analysis (RAA) for drainage areas not addressed by retaining the runoff volume of the 85th percentile, 24-hour storm event. The RAA includes an assessment (through quantitative analysis or modeling) to demonstrate that the activities (i.e., BMPs) and combination of non-structural and structural control measures identified as watershed control measures will achieve applicable WQBELs and/or receiving water limitations with compliance dates during the permit term. The analysis shall use modeling where available, quantitative analysis based on scientific literature and supported by evidence, or other technically supported methods appropriate to the proposed control measures. The objective of the RAA is to demonstrate the ability of the WMP to assure that Permittees' MS4 discharges achieve WQBELs by the applicable compliance dates and do not cause or contribute to exceedances of receiving water limitations.

Consistent with 40 CFR section 122.47(a), schedules must be developed for both the strategies, control measures and BMPs to be implemented by each individual Permittee within its jurisdiction and for those that will be implemented by multiple Permittees on a watershed scale. The schedule is to be made up of a minimum of three Critical Milestones, an unspecified number of Non-Critical Milestones, and a final compliance date. The final compliance date must be as short as possible and must not exceed the date for attainment of the TMDL WLA for that pollutant-waterbody combination found in the Basin Plan. Permittees are subject to potential enforcement action if they fail to meet Critical Milestones and the final date, but not for Non-Critical Milestones. The Executive Officer is authorized to assign Critical Milestones as part of conditions of approval for a WMP. This will help motivate meaningful progress in implementing the WMP.

Together, Critical, and Non-Critical Milestones must be sufficiently detailed to allow early detection of deviations in the schedule. Allowing certain

milestones to not be subject to enforcement allows Permittees to disclose complex steps in the implementation process without creating undue enforcement liability. Section XII includes other requirements for disclosure of risks to the successful attainment of receiving water limitations and WQBELs. Along with other reporting requirements, this is intended to promote clear and timely communication of the Permittees' progress.

Where compliance schedules are not available (e.g., final TMDL dates have passed), Permittees may request a Time Schedule Order (TSO) as discussed in section XII.E. Permittees may propose a schedule in the WMP that is longer than the compliance schedule set by the TMDL if a TSO has been approved by the Santa Ana Water Board for a waterbody-pollutant combination in that TMDL.

C. Implementation and Termination of a Watershed Management Plan

Each Permittee must implement the WMP immediately after a determination by the Santa Ana Water Board that the WMP meets the requirements of the Order and is approved.

The approval of a WMP by the Santa Ana Water Board means that the responsible Permittees will be deemed in compliance with section VI (Receiving Water Limitations) and section VII (Effluent Limitations and Discharge Specifications) for those pollutant-waterbody combinations to which that approval applies, provided that the WMP is implemented and that the final compliance dates specified in the Basin Plan has not passed. Given the significant time and effort required to develop and implement a WMP, the Order allows Permittees to be deemed in compliance with WQBEL(s) and/or receiving water limitation(s), irrespective of actual attainment of the applicable limitation. Permittees are only deemed in compliance with these limitations up until the final dates for the achievement of the relevant WQBEL(s) and/or receiving water limitation(s) in the WMP has passed.

WMPs may not include final TMDL compliance dates later than the dates specified in the Basin Plan unless a TSO has been approved by the Santa Ana Water Board for a waterbody-pollutant combination in that TMDL, or unless the Permittee is retaining all non-stormwater runoff and the volume of stormwater runoff from the 85th percentile 24- hour storm, and the Permittee is continuing to engage in monitoring and adaptive management through an approved WMP. The exception made for the 85th percentile, 24-hour storm retention was sanctioned by the State Water Board in Order WQ 2015-0075. Order WQ 2015-0075 found that this stormwater retention approach would achieve compliance if implemented along with "continued planning, monitoring, and adaptive management." (*Id.* at pp. 46.) Order WQ-2015-0075 supports the stormwater retention approach as a means of compliance with RWLs and/or WQBELs because "public projects requiring investment of this magnitude are unlikely to be carried out without a commitment from the water boards that Permittees will be considered in compliance even if the

resulting improvement in water quality does not rise all the way to complete achievement of the final WQBELs and other TMDL specific limitations." (*Id.* at pp. 44-45.)

Permittees must implement an adaptive management process for each approved WMP. After a final WMP is approved, responsible Permittees must reevaluate the conclusions of Reasonable Assurance Analyses biennially based on new information, information that was previously unknown, and the degree of progress in implementing the WMP. Based on the results of the adaptive management process, the Permittee(s) must propose WMP modifications necessary to improve the effectiveness of the WMP, including but not limited to new compliance dates and interim requirements (except for those final compliance dates established in a TMDL) and new or substitute watershed control measures.

The Order includes a process for terminating a WMP and consequently requiring Permittees to comply with WQBELs and receiving water limitations for that waterbody-pollutant combination. If the Executive Officer determines that a Permittee has failed to comply with any of the provisions in this section related to developing a WMP, or to meet the Critical Milestones in a final WMP, the Executive Officer may provide written Notice of Violation (NOV) to the responsible Permittees. The Executive Officer may determine that the responsible Permittee has constructively abandoned a WMP if the deficiencies identified in the NOV are not addressed within 90 days. Upon concluding that the WMP has been constructively abandoned, the Executive Officer will provide written notice to the responsible Permittee(s) that the WMP is terminated and inform the Permittee(s) of their responsibility to immediately comply with the applicable receiving water limitations and WQBELs.

XV. RATIONALE FOR MUNICIPAL INSPECTIONS OF CONSTRUCTION, INDUSTRIAL, AND COMMERCIAL SITES

Section XIII of the Order continues previous permits' requirements for inspections of construction, commercial, and industrial sites within each Permittees' jurisdiction with some modifications. The requirements are supported by 40 CFR section 122.26(d)(2)(iv)(A)-(C), which generally require programs to implement control measures for pollutants in runoff from construction, commercial, and industrial sites.

The scope of what constitutes a construction site has not changed. However, Permittees are now only required to inspect construction sites where the actual or expected duration exceeds two weeks. This modification has been made recognizing that many construction projects may begin and conclude without being subject to a rain event and before Permittees' staff can inspect them. This modification is intended to allow Permittees to prioritize projects that have a longer duration. The Permittees must necessarily track all construction sites to identify projects whose duration exceeds two weeks and consequently require inspection.

Mobile businesses have been excluded from the industrial and commercial business inventories. Mobile businesses include food trucks and similar eating and drinking establishments. Instead, these businesses are addressed through the Permittees' IDDE and public education programs. The reason for their exclusion is because it is impractical to impose a regular inspection program on the Permittees for businesses whose times or locations are difficult to predict.

The Order continues requirements for industrial facilities to be classified into three categories: "high priority", "medium priority", and "low priority". For industrial sites, "high priority" sites must be inspected once per year; "medium priority" sites must be inspected once every two years; and "low priority" sites must be inspected once per permit term (5 years).

The Order requires that Permittees distribute their inventory of commercial sites among the priority classes based on a Pareto distribution (80/20 distribution). This results in a minimum of 80 percent of sites being classified as low priority, 15% as medium priority, and 5 percent as high priority. This is similar to the prescribed 70/20/10 distribution in the Orange County MS4 Permit (Order R8-2009-0030). However, the Order allows Permittees to propose an alternative distribution based on their field experiences with their sites. Based on an analysis of the distributions reported by the Permittees in their 2022-2023 Annual Progress Reports, many Permittees will be unaffected by this prescribed distribution because their distributions already meet the requirement. Others may deviate slightly. Many of the smallest cities have a low number of commercial sites and far exceed the requirement. However, this requirement will challenge some Permittees to explain why their distribution deviates from an expected natural distribution.

The Order removes the requirement that restaurants in Orange County be inspected once per year. The annual inspection requirement was imposed in Order R8-2009-0030 section X.9. Permittees in Orange County proposed to align annual inspections conducted by their Health Care Agency with stormwater protection objectives and the requirement was included in their Order accordingly. Although restaurants in San Bernardino and Riverside County are inspected annually by their health care agencies, the Permittees in these counties did not offer to make similar arrangements. Since there is no information that indicates that restaurants or other eating or drinking establishments have a disproportionate impact on water quality compared to other urban sources of pollutants, the annual inspection requirement has been removed.

The Order provides the Permittees substantial discretion to amend their protocol and select the type of inspections and the related level of effort that are suitable to the individual characteristics of a site. This is intended to encourage Permittees to use their experience and observations to evaluate a site's risk to water quality.

XVI. RATIONALE FOR MUNICIPAL FACILITIES/ACTIVITIES PROVISIONS

The requirements in section XIV of the Order for the municipal facilities/activities provisions are supported by 40 CFR sections 122.26(d)(2)(iv)(A)(1), (3), and (6). With some changes, the Order carries over similar provisions from prior orders. The provisions required the Permittees to conduct a systematic program of pollution control measures and BMPs for fixed facilities, field operations and drainage facilities, fertilizer and pesticide use, employee training, storm drain inspection and maintenance activities, and other related planning, inspection and maintenance programs.

The Order adds more specific requirements that each Permittee maintain an inventory of fixed facilities that are owned or controlled by the Permittee, which have the potential to discharge pollutants in runoff. The facilities must be categorized into high priority, medium priority, and low priority sites. The Order also adds a minimum inspection frequency for fixed facilities, but with flexibility for the Executive Officer to approve an alternate schedule. USEPA's 2010 MS4 Permit Improvement Guide recommends an inventory that is similar to the requirements in the Order. (USEPA, MS4 Permit Improvement Guide (April 2010) pp. 67-69.)

Permittees must also implement an effective program to prevent the discharge of pollutants from Permittees' field activities and fixed facilities. This includes documentation of BMPs used to prevent or minimize the discharge of pollutants, written standard operating procedures (SOPs) for Permittees' staff who engage in field activities, and activities at fixed facilities that have the potential to discharge pollutants in runoff, and a training program for such staff. There are also requirements relating to pesticide use.

Each municipal facility will require a set of control measures that depend on the nature of activities and the types of materials that are stored and used. Developing and maintaining a site-specific SOP for each facility will help to ensure that employees responsible for facility operation are aware of the stormwater controls required for the site.

XVII. RATIONALE FOR PROGRAM EFFECTIVENESS ASSESSMENTS PROVISIONS

Section XV of the Order requires that each Permittee have a program in place to objectively assess the effectiveness of control measures/BMPs employed in each of the elements of their stormwater programs and pursue continual improvement. These requirements support a structured, iterative or Adaptive Managementprocess. Each Permittee's program must be documented in writing. The Permittees may develop a model program for effectiveness assessment.

The requirements in the Order and the MRP for effectiveness assessments are consistent with 40 CFR section 122.42(c)(1), which requires reports of the "status of implementing the components of the stormwater management program that are established as permit conditions." This includes use of the Adaptive

Managementprocess as well as other “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” as described in CWA section 402(p)(3)(B)(iii).

These requirements set the expectation that common features of each of the Permittees’ programs will generally be assessed in a similar way, but there is no requirement that a completely uniform set of methods will be applied across each Permittee’s programs. The effectiveness assessment method should identify the program element or activity being assessed, the assessment management questions, the timeframe for the assessments, the expected outcome, the measures/metrics used to assess the outcome, and if any modifications to the effectiveness assessment approach are necessary.

As part of the program effectiveness assessment, the Permittee must have a hypothesis of the pollution process or a conceptual model. The development of conceptual models is the first step in developing more detailed quantitative models and eventually developing solutions. Such models are called explanatory models. Explanatory models establish and communicate a baseline of understanding and form a rational basis for developing and testing hypotheses about a process. They can help identify parts of a process that are not well understood. They can also help identify opportunities where interventions or BMPs may be effective in getting a desired outcome.

A conceptual model or hypothesis may be a graphical representation, but simple models may be expressed as written narratives that express theories on the pollution process. The Permittees have expressed simple models in written narratives in their Annual Progress Reports.

As with the previous permits, Permittees are required to develop an inventory of control measures and BMPs, and where in the pollution process they are applied. This establishes a baseline condition and sets the context for monitoring and reporting results. Placing control measures and BMPs in relation to the pollution process can help identify imbalances and gaps. An imbalance may occur where control measures and BMPs disproportionately focus on prevention or treatment of pollution. A gap may occur where there is a missed opportunity to implement a control measure or BMP in the pollution process.

Permittees must have a system to objectively measure the performance of their control measures and BMPs or systems of measures and practices. This will include using performance metrics prescribed by this Order and measures that will need to be developed by the Permittees. While the performance metrics prescribed by this Order are enforceable if not achieved, performance metrics developed by the Permittees will not be enforceable. However, failure to implement the Adaptive Management process when voluntary performance metrics are not achieved will subject the Permittees to enforcement.

An objective assessment of the performance of a program can be quantitative or qualitative. A quantitative assessment is one where the differences in outcomes are measured. A qualitative assessment is where the differences in outcomes can be perceived but are not or cannot be measured. An outcome can be objectively assessed as being better or worse than others, but the difference is not quantified. Qualitative assessments are sometimes measured using ordinal ranking systems such as “good”, “better”, “best”; A, B, C; “high”, “medium”, “low”; etc. Ranking systems should always be accompanied by objective definitions that make each category mutually exclusive, readily distinguishable, and repeatable among different observers.

An objective performance assessment should use direct measurements of the thing being measured where possible. However, this is not required. In some cases, indirect measurements may be necessary because the thing being measured is intangible (e.g., public confidence) or cannot be observed directly (e.g., public pollution preventing behaviors). Indicators may be used as performance metrics in assessments. For example, public reports on illicit discharges may be used as an indicator of public engagement and awareness of water quality issues. However, indicators may be found faulty later on, for example, if a Permittee finds that complaints don’t come from a representative cross-section of residents. Ultimately, Permittees are required to ensure that their performance metrics are representative.

Permittees must evaluate the validity of the program, which involves considering if the performance metrics are genuinely representative of what they are intended to measure. It also involves evaluating if the method used to measure outcomes is also valid. Permittees are encouraged to develop “S.M.A.R.T.” goals. S.M.A.R.T. goals are performance metrics that are Specific, Measurable, Attainable, Realistic, and Timely.

There are various resources which are widely available that describe how to develop S.M.A.R.T. goals. S.M.A.R.T. goals are known by other names, including, measurable goals, performance metrics, performance standards, targets, and objectives. Performance metrics, the term used most widely in this document, should align with more general goals found in this Order or, otherwise developed by the Permittees to be valid. Valid performance metrics should have certain basic characteristics. The performance metric should:

1. Have a need or purpose.

2. Provide useful information.

3. Focus on a target or objective.

4. Be measurable with reasonable accuracy and verifiable.

5. Reflect the true status of the activity or project.

6. Not be subject to alternative conflicting interpretation.

7. Support proactive and adaptive management.

8. Assist in evaluating the likelihood of success or failure.

9. Be accepted by internal and external stakeholders as a tool for informed decision-making[53].

The purpose of pursuing performance metrics is to help Permittees develop an understanding of what combination of tactics are most effective to meet the Permit goals.

XVIII. RATIONALE FOR MONITORING AND REPORTING PROGRAM

Monitoring and Reporting Program (MRP) No. R8-2026-0034 can be found in Attachment C to the Order. It contains requirements for both water quality monitoring, annual reporting, and for program effectiveness assessments. The requirements of the MRP are incorporated by reference into the Order and are enforceable.

Sections 308(a) and 402(a)(2) of the federal Clean Water Act, and 40 CFR sections 122.41(h), (j)-(l), 122.44(i), and 122.48 require that all NPDES permits specify monitoring and reporting requirements and establish substantive monitoring and reporting requirements for NPDES permits. Federal regulations applicable to large and medium MS4s also specify additional monitoring and reporting requirements. (40 CFR §§ 122.26(d)(2)(i)(F) & (d)(2)(iii)(D), 122.42(c).) Water Code section 13383 further authorizes the Santa Ana Water Board to establish monitoring, inspection, entry, reporting, and recordkeeping requirements.

The MRP contains requirements for both dry weather and wet weather monitoring as part of a Program Monitoring and Reporting Plan (PMRP). The dry weather monitoring requirements are based on the requirements of 40 CFR section 122.26(d)(1)(iv)(D), (d)(1)(v)(B), and (d)(2)(iv)(B). The wet weather monitoring requirements are based on the requirements of 40 CFR section 122.26(d)(2)(iii), (d)(2)(iii)(A) and (d)(2)(iii)(A)(1) through (4); and 40 CFR section 122.21(g)(7)(i) through (ii). Requirements related to monitoring and reporting pollutant loads are consistent with 40 CFR section 122.26(d)(2)(iii)(B) and (d)(2)(v). Requirements for receiving waters monitoring are consistent with federal requirements to report “water quality improvements or degradation” according to 40 CFR section 122.42(c)(7). Annual reporting requirements are consistent with 40 CFR section 122.42(c).

[53] Kerzner, H. (2013). Project management: A systems approach to planning, scheduling, and controlling (11th ed.). Wiley, Hoboken NJ.

The MRP requires monitoring to address illicit discharges/illicit connections, water quality standards attainment or non-attainment, and compliance with WLAs expressed as WQBELs in Appendices 2 through 14.

The Permittees have been implementing water quality monitoring programs for several decades. The programs, in one form or another, have served multiple purposes beyond compliance with MS4 permit requirements. The Order essentially requires re-documentation of the current programs and provides the Permittees with an opportunity to make improvements in the process. The MRP is purposefully written without some of the detail found in the Permittees' previous monitoring program requirements. The purpose is to provide flexibility to the Permittees as they prepare new Program Monitoring and Reporting Plans (PMRPs). The Executive Officer is authorized to amend the PMRP, particularly if important program improvements are hindered by the PMRP and impose conditions of approval. The new monitoring plans will be subject to public review and the Executive Officer's review and approval.

The MRP requirements allow the Permittees to use monitoring work performed by others to substitute for work required by the MRP. The MRP requirements also allow the Permittees to supplement their own monitoring work with work performed by others to improve any related analyses. The substituted or supplemental monitoring work must meet the requirements of the MRP to be valid. The MRP has been written with the intent of encouraging the Permittees' participation in statewide, national, regional, or local monitoring programs. This will help avoid duplication of work, improve related analyses of monitoring results, promote cooperation among other NPDES permittees and other institutions interested in water quality, and generally strengthen the body of scientific and technical knowledge of water quality. In this spirit, Provision XV.2.c. of the Order requires the Permittees to make the results of field and laboratory analyses available to the public.

XIX. RATIONALE FOR STANDARD PROVISIONS

Standard Provisions apply to all NPDES permits in accordance with 40 CFR section 122.41. Standard Provisions and additional conditions applicable to specified categories of permits in accordance with 40 CFR section 122.42, are provided in Attachment F. Dischargers must comply with all Standard Provisions and with those additional conditions that are applicable under section 122.42.

XX. RATIONALE FOR REOPENER AND PERMIT MODIFICATION

The provisions in section XVIII of the Order are based on 40 CFR sections 122.44, 122.62, 122.63, 122.64, 124.5, 125.62, and 125.64, and are also largely carried over from the previous permits. The Santa Ana Water Board may reopen the permit to modify permit conditions and requirements, as well as revoke, reissue, or terminate in accordance with federal regulations.

XXI. WATER CODE SECTION 13241

Water Code section 13241 requires the Santa Ana Water Board to consider the following factors in the adoption of WQOs.

(a) Past, present, and probable future beneficial uses of water.

(b) Environmental characteristics of the hydrographic unit under consideration, including the quality of water available thereto.

(c) Water quality conditions that could reasonably be achieved through the coordinated control of all factors which affect water quality in the area

(d) Economic considerations.

(e) The need for developing housing within the region.

(f) The need to develop and use recycled water.

The Santa Ana Water Board is not establishing WQOs in the Order. However, Water Code section 13263 requires the Santa Ana Water Board to take into consideration the provisions of Water Code section 13241 in adopting waste discharge requirements, when such requirements are more stringent than what federal law requires. (*City of Burbank v. State Water Resources Control Bd.* (2005) 35 Cal. 4th 613.) Consideration of section 13241 factors cannot justify permit conditions that are less stringent than what federal law requires. (*Id.* at 626.) The manner in which the Santa Ana Water Board considers section 13241 factors is within the board's discretion. (City of Duarte v. State Water Resources Control Board (2021) 60 Cal.App.5th 258, 273, *as modified on denial of reh'g (*Feb. 19, 2021)*, review denied* (Apr. 28, 2021), citing *City of Arcadia v. State Water Resources Control Bd.* (2010) 191 Cal.App.4th 156, 177, and *City of Arcadia v. State Water Resources Control Bd.* (2006) 135 Cal.App.4th 1392, 1415.)

The Santa Ana Water Board finds that each of the requirements in the Order are not more stringent than what federal law requires for the control of MS4 discharges of pollutants in the Santa Ana Region. The Santa Ana Water Board makes additional findings with respect to specific program areas throughout the Fact Sheet.

Clean Water Act section 402(p)(3)(B) requires MS4 permits to include requirements to effectively prohibit non-stormwater discharges through the MS4 to receiving waters, as well as "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 permitting agency, be it the Santa Ana Water Board or U.S. EPA, must therefore include provisions when it finds it is appropriate to do

so and to exercise its discretion to determine what permit conditions are necessary to control pollutants in a specific geographic area.

MS4 discharges in the Santa Ana Region are a continuing and significant source of pollutants to receiving waters, many of them impaired. As such, the Santa Ana Water Board finds that inclusion of all of the requirements in the Order are necessary and appropriate to control MS4 discharges in the Santa Ana Region. These requirements include but are not limited to requirements for non-stormwater discharges, technology and water quality-based effluent limitations, TMDLs, receiving water limitations, stormwater management program minimum control measures, and monitoring and reporting to ensure that the requirements of the Order are being met.

To the extent the requirements in the Order may be more specific or detailed than those enumerated in federal regulations under 40 CFR § 122.26 or in U.S. EPA guidance, the requirements have been designed to be consistent with and within the federal statutory mandates described in Clean Water Act section 402(p)(3)(B) and the related federal regulations and guidance. Consistent with federal law, all the requirements in the Order could have been included in a permit adopted by U.S. EPA in the absence of California's delegated authority to issue NPDES permits. (See *Defenders of Wildlife v. Browner* (9th Cir. 1999) 191 F.3d 1159, 1166.) Each of the requirements in the Order, especially when implemented together, constitutes the critical means towards achieving the requirements and goals of the Clean Water Act. The discussion above provides the rationale for each section of the permit, including citations to federal authority.

The inclusion of numeric Water Quality-Based Effluent Limitations (WQBELs) in this Order (e.g., WLAs and related TMDL requirements) does not cause this Order to be more stringent than federal law. This is discussed further in Section IX.B of this Fact Sheet.

Similarly, the Santa Ana Water Board is not required to consider the factors in Water Code section 13241 to adopt permit requirements necessary for the effective prohibition of non-stormwater discharges into the MS4; or for controls necessary to reduce the discharge of pollutants in stormwater to the MEP; or other provisions that the Santa Ana Water Board has determined appropriate. These general requirements are required by federal law.

This Order includes monitoring and reporting requirements that are designed to demonstrate that the Permittees are complying with the municipal stormwater requirements of the CWA. CWA section 308(a) and 40 CFR section 122.41(h), (j) through (l); 122.44(i); and section 122.48 require that NPDES permits specify monitoring and reporting requirements. Monitoring and reporting requirements are also required by 40 CFR sections 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).

Therefore, since the Board determines that each of the requirements in the Order are not more stringent than what federal law requires, there is no legal requirement for the Board to consider the factors of California Water Code section 13241.

Notwithstanding the above, the Santa Ana Water Board has considered the factors set forth in California Water Code section 13241 in issuing the Order. The Board's consideration of each of the factors is provided below. The Board has also considered all the evidence that has been presented to the Board regarding section 13241 factors in issuing the Order. This includes specific costs of compliance information presented to the Board by Permittees and stakeholders.

Having considered the factors in California Water Code section 13241, the Santa Ana Water Board finds that the requirements in the Order are necessary to ensure the reasonable protection of beneficial uses of waterbodies in the Santa Ana Region and the prevention of nuisance. None of the factors of section 13241, including costs of compliance, is sufficient to justify failing to protect those beneficial uses. Nor is it sufficient to justify omitting any requirement in the Order, as the Board finds that doing so would unreasonably affect the designated beneficial uses of the region's waters. Additionally, it would be wholly inconsistent with federal requirements not to include requirements in the Order that the Board has deemed necessary for the control of MS4 discharges in the Santa Ana Region. Where appropriate, the Board has provided Permittees with additional time to implement control measures to achieve final WQBELs and/or receiving water limitations. In addition, the Board has provided significant flexibility for Permittees to choose how to implement the requirements of the Order, including by working with other Permittees to implement cost-effective control measures. The Order allows Permittees the flexibility to address critical water quality priorities, namely discharges to waters subject to TMDLs. The Order aims to do so in a focused and cost-effective manner while maintaining the level of water quality protection mandated by the Clean Water Act.

In addition, the Office of Research, Planning, and Performance (ORPP) is preparing guidance in response to a March 2018 Audit Report of the State Water Board by the Governor's Office. The report suggested that the Water Boards have not adequately considered the cost of implementing pollution control requirements.

A. Past, Present, and Probable Future Beneficial Uses of Water

Chapter 3 of the Basin Plan identifies existing and potential beneficial uses for surface water bodies in the Santa Ana Region, which are the receiving waters for MS4 discharges. The Basin Plan notes that a "potential" beneficial use is the same as a "probable future" beneficial use for purposes of 13241 factors. A potential beneficial use may be established because plans already exist to put the water to that use or because conditions, such as location and demand, make such future use likely. The establishment of a potential beneficial use

protects the quality of that water for potential future use. More information about beneficial uses is available in section IV.D of this Fact Sheet.

Pollutants in discharges from MS4s have damaging effects on both human health and aquatic and riparian ecosystems. Water quality assessments conducted by the Santa Ana Water Board have identified impairment of beneficial uses of water bodies in the Santa Ana Region. Pollutants in MS4 discharges cause or contribute to many of these impairments. As a result, there are beach postings, fish consumption advisories, ecosystem and recreational impacts from pathogens, trash and debris, and toxic conditions for aquatic life, among others. Twelve TMDLs established by the Santa Ana Water Board and U.S. EPA identify MS4 discharges as one of the sources causing or contributing to impairments of beneficial uses in the Santa Ana Region. The requirements of the Order are necessary to protect and restore the past, present, and probable future beneficial uses of surface waters in the region.

B. Environmental Characteristics of the Hydrographic Unit Under Consideration, Including the Quality of Water Available Thereto

The hydrologic unit under consideration is the Santa Ana River Basin, which is broken down into subbasins, watersheds, and subwatersheds. Environmental characteristics of the subbasins and watersheds covered by the Order, including the quality of water available, are discussed in sections III, IV.F, and IV.G of this Fact Sheet. Additional information on impaired waters in the Santa Ana Region can be found in the State's Clean Water Act section 303(d) List of impaired waters: https://www.waterboards.ca.gov/water_issues/programs/water_quality_assessment/.

C. Water Quality Conditions that Could Reasonably be Achieved Through the Coordinated Control of All Factors Which Affect Water Quality in the Area

Subsection (c) of section 13241 provides for the consideration of "[w]ater quality conditions that could reasonably be achieved through the coordinated control of all factors which affect water quality in the area." As discussed below under Need for Developing Housing in the Region and the Need for Recycled Water, the Order takes a coordinated approach to controlling pollutant discharges from MS4s. The coordinated approach is defined by the WMP requirements in the Order. WMPs take into account all factors affecting water quality through the source assessment, as required in Section XII.B.2.

The Santa Ana Water Board considers water quality conditions that could reasonably be achieved through the coordinated control of all factors that affect water quality, when establishing WQOs, TMDLs, and TMDL programs of implementation in its Basin Plan. This Order implements the Basin Plan and other applicable water quality control plans. Therefore, this Order

considers water quality conditions that could reasonably be achieved (i.e. WQOs) by incorporating the WQOs established in those plans.

The Santa Ana Water Board has established and incorporated TMDLs in the Basin Plan. As discussed in section IX.B of this Fact Sheet, the Santa Ana Water Board implements the TMDLs, in part, by incorporating the WLAs and other requirements as WQBELs in the Order to achieve WQOs.

The Santa Ana Water Board finds that water quality conditions necessary to support beneficial uses are reasonably achievable through coordinated control of all factors which affect water quality. Where MS4 discharges are a significant factor, compliance with the requirements of the Order, alongside control of all other controllable factors, is necessary to achieve water quality conditions that support beneficial uses. This coordinated approach has been demonstrated by successful implementation of TMDLs in the Santa Ana Region.

The TMDL for sediment in upper Newport Bay and Reaches 1 and 2 of San Diego Creek provides an example of the achievability of WQOs through coordinated control of all factors affecting water quality. The waterbodies were listed as impaired by sediment loads from agriculture, urbanization, and construction grading activities (Chapter 6 of the Basin Plan). The Santa Ana Water Board adopted a TMDL to control sediment sources in 1998. The TMDL required coordinated control of all sediment discharges to Newport Bay and its tributaries until the water quality standards were met. Stakeholders in the watershed collaborated to develop and implement various measures to reduce sediment transport.

These measures included development and implementation of grading ordinances, erosion/siltation control plans, the adoption and implementation of the construction general permit to control sediment from construction sources, and resource conservation plans for agricultural sources. Further measures included maintenance of in-channel sediment basins in San Diego Creek, maintenance of retarding basins in the upper watershed foothills, periodic scour studies, sediment monitoring, and the Upper Newport Bay Ecosystem Restoration Project. As a result, the 10-year running average of sediment load has decreased steadily since first computed in 2010. In their 2021-22 Annual Report, Permittees reported the 10-year annual average sediment load is well below the established target in the TMDL[54].

The TMDL for Nitrogen and Phosphorus in Newport Bay and San Diego Creek is another example of the achievability of WQOs through coordinated control of all factors affecting water quality. The TMDL was adopted in 1999 following seasonal algal blooms which created aesthetic and recreational

[54] Newport Bay Watershed Sediment TMDL, 2021-22 Annual Report. Orange County Public Works. February 2023

nuisance and may have harmed wildlife (Chapter 6 of the Basin Plan). Agriculture, commercial nurseries, and urban runoff were identified as the main nutrient sources in the watershed. The Santa Ana Water Board adopted individual WDRs for the nurseries, resulting in significant reductions in their nutrient load contributions (Chapter 6 of the Basin Plan). MS4 stakeholders have reduced nutrients loads by implementing:

- Treatment control measures such as constructed wetlands and biofilters
- Volume reduction measures such as infiltration basins
- Source control measures such as public education

In their 2021-22 Annual Report, Permittees reported seven of eight TMDL targets for Nitrogen and Phosphorus were met[55].

D. Economic Considerations

Section 13241(d), when applicable, requires the Santa Ana Water Board to address economic considerations. For waste discharge requirements that serve as NPDES permits, this requirement only applies to those provisions that are more stringent than federal law. (City of Burbank v. State Water Resources Control Bd. (2005) 35 Cal. 4th 613.) The Santa Ana Water Board has nevertheless not limited its discussion of economic considerations to those provisions that are more stringent than what federal law requires.

In considering economics, it is not necessary for the Santa Ana Water Board to perform a cost-benefit analysis or other formal economic analyses. Performing a formal economic analysis is not currently practical. This is principally because of the lack of comprehensive or sufficiently reliable economic data on costs and the inherent difficulty of predicting costs. The Order provides a suite of different compliance options that Permittees could pursue that will affect reliability of cost estimates. For example, section IV.E allows Permittees to demonstrate that their discharge did not cause or contribute to exceedances of receiving water limitations. Some Permittees have already proposed this as part of their approved CBRPs for the Middle Santa Ana River watershed and used it to assert compliance for over a decade. A successful demonstration would dramatically reduce their compliance cost. Work to make a demonstration could also inform changes to TMDLs in the Basin Plan, alter the regulatory environment, and potentially affect costs. In addition, uncertainties such as the costs of borrowing, labor, materials and land, and changes in pollution treatment technology, and improvements in best management practices, complicate predictions.

Calculating the value of benefits is typically more difficult because benefits tend to be intangible. Methods for calculating intangible benefits, such as surveys to estimate the recreational value of a day at the beach or the intrinsic value of

[55]2021-22 Newport Bay Nutrient TMDL Annual Data Report. Orange County Public Works. December 2022

wildlife, are infrequently performed and costly. However, the Santa Ana Water Board will consider what limited economic information is available.

The USEPA, the State Water Board, and the regional water quality control boards have attempted to evaluate the costs and benefits of municipal stormwater programs. None of the studies cited below should be regarded as predictive of future costs. But they are useful in understanding the range of costs that are possible. The resulting studies show a large variability in reported costs and that there is difficulty in obtaining reliable cost information.

In 1999, the USEPA summarized the conclusions of multiple studies performed to determine the cost of stormwater management programs as part of its Phase II expansion of the NPDES stormwater program[56]. The USEPA determined that the range of benefits from its Phase II expansion exceeds the range of regulatory costs. As part of their analysis, the USEPA reported that, based on appropriate cost data provided by 26 MS4 operators subject to Phase I, the average annual program costs were $ 16.30 per household (2022 dollars)[57]. The USEPA also reported that the average annual Phase II program costs were $16.45 per household (2022 dollars), comparable to per household costs of the Phase I program.

In 2003, staff of the Los Angeles Regional Water Quality Control Board performed a study of Phase I MS4 program costs[58]. Self-reported cost data provided in the MS4 operators' annual reports was used. The average annual cost in Los Angeles County was estimated to be $12.50 per household (2002 dollars) which equates to $20.33 in 2022 dollars.

In 2005, the State Water Board commissioned a study by the California State University, Sacramento to assess costs of the Phase I MS4 program throughout the state[59]. The annual cost ranged from $18 to $46 per household (2005 dollars), which equates to $28.01 to $71.59 in 2022 dollars.

For comparison purposes, the per household cost information above have been adjusted for inflation using the United States Bureau of Labor Statistics' Consumer Price Index Calculator. All values were adjusted to 2022 dollars. The results are summarized in Table D.2 below.

Table D.2: Comparison of Estimates of Annual MS4 Program Costs (per household)

[56] Federal Register/Vol. 64 No. 235/Wednesday, December 8, 1999/Rules and Regulations. P. 68791-68792.

[57] USEPA's cost estimates should be regarded as gross indicators of compliance costs, not actual compliance costs. See Government Accountability Office, May 2007. Further Implementation and Better Cost Data Needed to Determine Impact of EPA's Storm Water Program on Communities. GAO-07-479.

[58] Los Angeles Water Quality Control Board, 2003. Review and Analysis of Budget Data Submitted by the Permittees for Fiscal Years 2000-2003. P. 2.

[59] State Water Resources Control Board, 2005. NPDES Stormwater Cost Survey. p. ii.

Study	Reported Value(s)	Inflation-Adjusted Value (2022 dollars)
USEPA, 1999	$9.08 (Phase I) $9.16 (Phase II)	$16.40 (Phase I) $16.55 (Phase II)
Los Angeles Regional Water Quality Control Board, 2003	$12.50	$20.42
State Water Resources Control Board, 2005	$18 to $46	$28.01 to $71.59

An economic analysis of the cost of the Phase I program could involve a comparison of the MS4 operators' costs with and without the Phase I program. The result would be marginal costs. Many of the reported Phase I program costs are not attributed solely to the program. In many cases, program elements such as street sweeping and litter control are services that have been performed by the Permittees long before they were required by any Clean Water Act permit.

Therefore, the actual costs of the Phase I program for a Permittee are a portion of the reported costs. The State Water Board's 2005 study, discussed earlier, estimated that 38 percent of the reported program costs could be fully attributed to the MS4 permits. The remainder was attributed to the costs of pre-existing services provided by the Permittees.[60]

Water Code section 13241 includes the need to consider "economic considerations" under certain circumstances. Economic considerations include both the costs of compliance and the economic benefit of protecting the beneficial uses of the waters of the State. There is some information available to estimate the costs of MS4 permits. However, information is not as available for estimating the benefits of protecting beneficial uses. Some beneficial uses, such as Industrial Process Supply, for example, may have their value more readily monetized because there is a well-established market for the resource.

For other beneficial uses, monetizing their value is much more difficult largely because the benefits are intangible. Certain techniques, such as Willingness to Pay and Travel Cost Analysis, have been employed by the USEPA at a national scale and in local studies in the Santa Ana Region, to value such things as beach recreation (a proxy for Water Contact and Non-Water Contact Recreation beneficial uses). But these techniques are more costly, typically

[60] *Id.,* p. 58.

requiring surveys of users or potential users. As a result, they are infrequently employed. However, two studies are useful in this analysis.

As part of their Phase II expansion of the NPDES program, the USEPA estimated that willingness to pay for improvements in freshwater quality for fishing and boating is approximately $158 to $210 per household (1998 dollars), which equates to $290.19 to $385.69 in 2022 dollars[61]. Another study, conducted by California State University, Sacramento, reported that the annual household willingness to pay for state-wide clean water is approximately $180 per household (2005 dollars), which equates to $280.14 in 2022 dollars[62].

Both above studies represent efforts to estimate the benefits of protecting beneficial uses. Both estimates considerably exceed the annual per household costs of the MS4 programs summarized in Table EC-1 above. This is even more true if the marginal costs are a portion of the reported costs and are adjusted accordingly.

This finding is consistent with a 2024 study by the California Stormwater Quality Association[63]. The study compares the costs associated with four urban stormwater capture projects with their socioeconomic benefits. The study finds the value of the socioeconomic benefits provided by these projects exceeds their cost within the first year after project completion. In other words, each project assessed had a one-year payoff period.

The Santa Ana Water Board also considered the cost of implementing Low-Impact Development (LID) treatment control measures to comply with the requirements of this Order. In a 2013 study, the County of Orange partnered with the Construction Industry Coalition on Water Quality to develop estimates of the costs of incorporating different combinations of LID control measures[64]. The study found that, assuming no technical infeasibility constraints, the least-cost LID treatment control measures are infiltration and biofiltration systems, regardless of the volume managed or project type. Where space is available within a project site (the case studies assumed 3 percent or less of the total site area) to install an infiltration basin or biofiltration system, the cost of installing these two types of LID treatment control measures is under $4 per gallon ($29.92 per cubic foot) and $2 per square foot of Total Impervious Area. In 2022 dollars, the values equate to $5.16 per gallon ($38.56 per cubic feet) and $2.58 per square foot of total impervious area. The analysis shows that infiltration systems are less expensive to install than biofiltration systems. This finding is generally consistent with published literature and reports on LID BMP costs in the US.

[61] *Ibid*. p. 68793

[62] State Water Resources Control Board, 2005. NPDES Storm Water Cost Survey. p. iv.

[63] California Stormwater Quality Association, 2024. The Socioeconomic Value of Urban Stormwater Capture.

[64] Mark Grey et al. 2013, The Cost of LID, www.stormh2O.com, March/April 2013 (accessed February 2022.

Santa Ana Water Board staff found similar information in a 2011 study from the Minnesota Pollution Control Agency[65]. Table D.3, below, presents the cost data on 69 BMP projects. While both the USEPA and Minnesota reports cover a broad range of geographic and climatic conditions, they illustrate a wide variability in costs of different LID treatment control measures. The costs shown have been adjusted to 2022 dollars.

[65] BARR, 2011. Best management practices construction costs, maintenance costs, and land requirements. Prepared for Minnesota Pollution Control Agency, June 2011.

Table D.3: Typical Cost of Stormwater LID Treatment Control Measures in 2022 dollars

Stormwater BMP	Dollars/Cubic Foot (cf) of Runoff
Large Wet Detention Basin	$3.49 (treating more than 100,000 cf)
Small Detention Basin	$259.63 (treating less than 10,000 cf)
Constructed Wetland	$1.79
Infiltration Trench	$19.70
Infiltration Basin	$37.60
Bioretention Basin	$26.87
Biofiltration Basin	$103.86
Underground Infiltration	$14.32
Pervious Pavement	$28.65

In accordance with the Santa Ana Region's previous MS4 Permits, Permittees reported their annual expenditures for compliance with stormwater requirements in their Annual Progress Reports. Table D.4 shows the Permittees' expenditures (updated to December 2022 dollars) for the last 10 years as reported in the Annual Progress Reports. The expenditures are not comparable between counties due to the variability in population and geographic size of the jurisdictions, program elements, and compliance and accounting methods. Table D.4 shows the reported costs incurred by the Permittees during fiscal years 2014-15 through 2024-25[66]. The Riverside County expenditures for fiscal year 2014-2015 did not include expenditures for the cities of Norco and Riverside.

[66] Annual Progress Reports from Counties of Orange, Riverside, and San Bernardino for 2014-15 through 2024-25.

Table D.4: Permittees' Reported Expenditures Based on County Jurisdictions

	Expenditures by County in December 2022 dollars		
Fiscal Year	Riverside County	Orange County	San Bernardino County
2014-15	$20,294,910	$197,859,300	$58,404,250
2015-16	$38,346,340	$202,124,220	$24,831,360
2016-17	$33,501,560	$204,543,730	$204,607,010
2017-18	$43,360,240	$171,653,090	$224,185,160
2018-19	$34,762770	$169,888,210	$233,277,600
2019-2020	$32,758,830	$103,011,200	$179,365,440
2020-2021	$34,412,900	$89,109,960	$177,682,620
2021-2022	$39,463,380	$98,864,290	$200,848,710
2022-2023	$36,639,979.82	$92,463,600	$251,677,946
2023-2024	$36,559,480	$95,543,520	$264,025,570
2024-2025	$43,149,830	$100,741,880	$338,471,140

A study conducted by USC/UCLA assessed the costs and benefits of implementing various approaches for achieving compliance with the MS4 Permits in Los Angeles Region[67]. The study found that source control systems would cost $3.22 billion but provide $6.44 billion in benefits. The study also found that treatment systems would cost $6.56 billion to $8.51 billion, while benefits could reach $20.71 billion. These values have been adjusted to 2022 dollars.

TMDL Compliance Costs

In 2001, USEPA estimated the annual costs of implementing TMDLs for 20,000 waterbodies across the country (EPA 841-D-01-003, August 1, 2001)[68]. The following table shows the estimated annual costs of implementation in 2022 dollars.

[67] LARWQCB, 2004. Alternative Approaches to Stormwater Control

[68] USEPA, 2001. The national costs of the total maximum daily load program (draft report). Office of Water (4503F), Washington DC 20460, EPA 841-D-01-003, August 1, 2001.

Table D.5: Adjusted USEPA Compliance Cost Estimates Per Year

Program Type	Costs (2022 dollars) in Billions
Least Flexible[69]	$ 3.22- $ 7.28
Moderately Cost Effective[70]	$ 1.69 - $ 5.76
Most Cost Effective[71]	$ 0.24 - $ 0.40

In November 2010, USEPA estimated the annual cost of implementing the nutrient numeric TMDL in the State of Florida's lakes and flowing waters to be between $60.5 Million to $108 Million dollars, which equates to annual cost of between $82.87 Million and $147.93 Million in 2022 dollars.

In September 2024, San Bernardino County Permittees presented an economic analysis by Beacon Economics that estimated that the cost of implementing Watershed Management Plans in San Bernardino could cost between $15.72 and $15.94 billion (2019 dollars) over 20 years[72]. These cost estimates are based on extrapolating costs based on land areas of different planning groups in the Los Angeles Regional Water Quality Control Board's basin and calculating a high and low average. The estimates include an outlier, the Marina Del Rey group, which reported costs that, when normalized by land area, were recognized as an outlier value by the authors. To minimize the distorting effects of the outlier, the authors reported a median cost estimate of $8.37 billion (2019 dollars) over 20 years. It is important to note that the implementation of Watershed Management Plans is not mandatory, it is optional. But the additional cost of other permit requirements proposed at the time bring the total estimated cost to nearly $10.8 billion over 20 years. This estimate is subject to substantial uncertainty due to the

[69] This scenario explores what costs to pollutant sources would result if the nation chose to restore the currently impaired waters under a TMDL program in which every source affecting an impaired water would be required to implement further control measures, rather than a more calibrated approach.

[70] This scenario differs from the first scenario in that it assumes the use of a more careful TMDL process, including non-uniform and flexible allocation among sources to achieve cost effective reductions.

[71] This scenario recognizes the possibility of reducing TMDL costs to point source dischargers through either additional "cost-effective wasteload allocations" or through trading, or both.

[72] Beacon Economics, 2024. Cost impact analysis of MS4 tentative order for San Bernardino County, Beacon Economics LLC, September 2024.

analysis' assumptions regarding universal application of controls, inclusion of areas not subject to TMDLs, and reliance on planning approaches that may not be required.[73]

In 2005, the Office of Water Programs (OWP) at Sacramento State, the University of Southern California, the University of California Los Angeles (UCLA), the California State Water Resources Control Board (State Water Board), and the Regional Water Quality Control Boards (Regional Water Boards) surveyed six municipalities to estimate costs for compliance with permit requirements[74]. Currier et al. (2005) reported the survey results and found that communities spent between $25.15–$64.27 (2022 dollars) per household.

In a 2014 study, the Public Policy Institute of California estimated stormwater funding needs in the range of $1.17–$1.75 billion (2022 dollars) across the state[75]. The value was derived based on extrapolating detailed data for a few case study communities. Hanak et al. (2014) estimated costs to be between $638.12–$1,020.99 million (2022 dollars) annually across communities.

USEPA (May 2020) estimated the TMDL costs of compliance In California[76]. Spending by geographic Regions revealed noticeable trends in spending and data availability. The analysis aggregated data for MS4s in a region according to Regional Water Quality Control Board boundaries. The following table shows the regional expenditures:

[73] Santa Ana Water Board staff considered similar analyses by permittees such as the August 31, 2010 memorandum titled "Draft-Analysis of Diversion of Dry Weather Urban Runoff to POTWs for Bacteria Control within the Santa Ana River Watershed Portion of San Bernardino County" prepared for the Santa Ana Stormwater Quality Standards Task Force.

[74] Currier, B.K., et al. 2005. NPDES Stormwater cost survey: final report. Office of Water Programs, California State University, Sacramento, Prepared for the California State Water Resources Control Board, January 2005.

[75] Hanak, Ellen, Brian Gray, Jay Lund, David Mitchell, Caitrin Chappelle, Andrew Fahlund, Katrina Jessoe, et al. 2014. Paying for Water in California. Public Policy Institute of California

[76] Environmental Finance Center at Sacramento State, 2020. Estimating benefits and costs of stormwater management. Part II: Evaluating municipal spending in California. USEPA Region 9 EFC, OWP at Sacramento State, Sacramento, May 2020.

Table D.6: Adjusted USEPA Compliance Cost Estimates per Region

Regions	Expenditures in Millions (2022 dollars)
Region 1 – North Coast	$1.05
Region 2 – San Francisco Bay	$8.27
Region 3 – Central Coast	$5.77
Region 4 – Los Angeles	$376.05
Region 5 – Central Valley	$175.49
Region 6 – Lahontan	Not Reported
Region 7 – Colorado River Basin	$0.19
Region 8 – Santa Ana	$162.96
Region 9 – San Diego	$225.64
Total all Regions	**$965.18**

The Los Angeles Water Board compiled the cost of complying with TMDL WLAs assigned to MS4 discharges in a staff memo titled "2020 Regional MS4 TMDL Compliance Costs," dated July 17, 2020 (TMDL Staff Report Cost Memo). Using costs estimated during the establishment of TMDLs, the TMDL Staff Report Cost Memo estimated the total capital cost of implementing the 45 TMDLs included in the Order to be $5.75 Billion with total annual operation and maintenance (O&M) costs of $482.29 Million. The total 20-year costs add up to $15.62 Billion in 2022 dollars.

In response to a request by the Santa Ana Water Board, the Permittees for the Counties of Orange, Riverside, and San Bernardino submitted the total costs of compliance with TMDLs.

In Orange County, Permittees reported annual costs for fiscal years 2015-16 through 2024-25[77]. After adjusting to 2022 dollars, the annual reported cost of compliance with the Sediment TMDL ranged from $166,719.72 to $621,447.73 with an annual average cost of $314,675.85. The Permittees reported the annual cost of compliance with the Nutrients, Fecal Coliform, and Toxics TMDLs ranged from $790,000.21 to $1,465,461.86 with an average annual cost of $1,131,670.37. The cost of compliance with the Coyote Creek metals TMDL ranged from $102,650.38 to $120,952.62 with an average annual cost of $110,374.88. Table D.7 below summarizes the annual costs of compliance with the TMDLs. The costs have been adjusted to 2022 dollars:

Table D.7: Adjusted Orange County Compliance Costs per TMDL

TMDL Costs in 2022 Dollars					
TMDLs	**2015-16**	**2016-17**	**2017-18**	**2018-19**	**2019-20**
Sediment	$621,447.73	$246,804.09	$288,856.21	$166,719.72	$249,549.20
Nutrients, Fecal Coliform, Toxics	$790,000.21	$944,261.11	$1,250,530.22	$1,208,096.13	$1,465,461.86
Coyote Creek Metals	$108,309.72	$109,795.02	$102,650.38	$110,166.63	$120,952.62

In Riverside County, the costs of compliance with MSAR bacterial TMDL were provided for fiscal years 2016-17 through 2020-21[78]. After adjusting to 2022 dollars, the annual cost of compliance ranged from $525,958.10 to $1,266,295.59 with an annual average cost of $727,679.64.

The annual cost of compliance with the Lake Elsinore/Canyon Lake Nutrients TMDL ranged from $787,632.47 to $3,278,897.51 with an average annual cost of

[77] Reported in an email by Orange County on March 25, 2021, and Annual Reports for fiscal years 2015-16 through 2019-20.

[78] Annual Reports for fiscal years 2016-17 through 2020-21

$1,510,874.61. The table below summarizes the annual costs of compliance with the TMDLs. The costs have been adjusted to 2022 dollars:

Table D.8: Adjusted Riverside County Compliance Costs per TMDL

TMDL Costs in 2022 Dollars					
TMDLs	**2016-17**	**2017-18**	**2018-19**	**2019-20**	**2020-21**
MSAR Bacterial TMDL	$582,222.41	$555,244.21	$525,958.10	$708,680.19	$1,266,295.59
LE/CL Nutrients TMDL	$1,085,581.13	$787,632.47	$3,278,897.51	$999,636.08	$1,402,627.02

In San Bernardino County, Permittees reported the costs for fiscal years 2016-17 through 2020-21[79]. After adjusting to 2022 dollars, the annual cost of compliance with the MSAR bacterial TMDL ranged from $1,441,863.85 to $2,545,488.35 with an annual average cost of $1,985,164.66. The annual cost of compliance with the Big Bear Lake TMDL ranged from $186,409.47 to $261,545.52 with an average annual cost of $213,235.80. The table below summarizes the annual costs of compliance with the TMDLs.

[79] Annual Reports for County of Riverside for fiscal years 2016-17 through 2020-21.

Table D.9: Adjusted San Bernardino County Compliance Costs per TMDL

TMDL Costs in 2022 Dollars					
TMDLs	**2016-17**	**2017-18**	**2018-19**	**2019-20**	**2020-21**
MSAR Bacterial TMDL	$1,472,985.02	$1,441,863.85	$1,955,189.40	$2,545,488.35	$2,510,296.69
Big Bear Lake TMDL	$261,545.52	$199,787.54	$186,463.54	$186,409.47	$231,971.78

This economic consideration provides a summary of costs associated with the reasonably foreseeable means of compliance with stormwater requirements. This economic consideration combines an array of cost estimates and examples and considers various means of compliance. The costs considered demonstrate the range of costs the Permittee may face in selecting compliance strategies.

The Santa Ana Water Board has provided the Permittees with significant flexibility to choose how to implement this Order. This allows the Permittees the opportunity to evaluate and improve their stormwater program while reducing the cost of compliance.

The Santa Ana Water Board finds that the requirements of this Order are reasonably necessary to protect beneficial uses identified in the Basin Plan and the economic information related to costs of compliance supports protecting those beneficial uses.

E. The Need for Developing Housing Within the Region

The population of the Inland Empire is anticipated to grow by 20 percent over the next 25 years[80]. An increase in population creates a higher demand for water, exacerbates usage of natural resources, and increases generation of waste and pollution. To protect human health and the environment, create economic opportunities, and provide attractive and affordable neighborhoods, U.S. EPA encourages smart growth and Low Impact Development (LID)[81] (According to U.S. EPA, using smart growth and LID strategies, communities and developers can reduce runoff quantity, protect water quality, and conserve water by developing compactly, preserving ecologically critical open space, and using green infrastructure strategies[82].

[80] https://www.sbsun.com/2023/02/20/inland-empire-to-grow-twice-as-fast-as-rest-of-southern-california-in-next-25-years/. Accessed Oct. 17, 2023

[81] https://www.epa.gov/smartgrowth/about-smart-growth. Accessed Oct. 17, 2023

[82] https://www.epa.gov/smartgrowth/smart-growth-and-water. Accessed Oct. 17, 2023

The Order contains requirements that support LID practices to protect water quality. LID practices generally increase the local water supply by adding higher quality stormwater runoff to receiving waters and reducing dependence on imported water. High quality water addresses the water needs associated with increasing housing demand. LID attempts to replicate the natural hydrology of the site, increasing infiltration and reducing pollutant loads in runoff over traditional development, and thereby reduces negative impacts of development on water quality. The LID requirements of the Order emphasize the necessity to balance growth with sustainable water resource management.

The Order also supports an integrated water resources approach that integrates wastewater, non-stormwater, stormwater, recycled water, and potable water planning. This Order includes requirements that support the capture and beneficial use of MS4 discharges on a regional scale. This Order also allows integrated approaches to demonstrate compliance with receiving water limitations and WLAs. It encourages collaboration between various dischargers in a watershed to develop compliance solutions. These dischargers include water suppliers, wastewater treatment plant operators, municipalities, and others with water supply and water quality interests. Collaboration allows the dischargers to integrate water quality challenges with water supply and other community interests and develop solutions that serve multiple purposes. An integrated approach can preserve and augment local groundwater resources thereby reducing imported water needs and increasing local water resiliency. Local water resiliency increases the region's capacity to support increases in population and the accompanying need for housing.

F. The Need to Develop and Use Recycled Water

Water Code section 13050(n) defines recycled water as "water which, as a result of treatment of waste, is suitable for a direct beneficial use or a controlled use that would not otherwise occur and is therefore considered a valuable resource." Harvested stormwater does not meet the definition of recycled water since it is not treated.

California's water supply is anticipated to diminish by up to 10 percent by 2040 as a result of a hotter, drier climate[83]. In anticipation of a reduced water supply, California's 2022 Water Supply Strategy (the Strategy) calls for increasing recycled water use and stormwater capture to 1.8 million and 0.5 million acre-feet per year, respectively, by 2040.

Increasing recycled water and harvested stormwater are the two main sources of new water supply in the Strategy. Harvested stormwater may, in some cases, reduce demand for recycled water. This may be the case during winter months when the supply of both harvested water and recycled water exceed demand and storage of either is not cost effective. Nevertheless, both recycled

[83] California's Water Supply Strategy – Adapting to a Hotter, Dryer Future. August 2022

water and harvested stormwater provide water supply benefits in alignment with public policy objectives.

The Order supports water supply resilience through LID requirements in section VIII.G. Section VIII.G includes a hierarchy that requires permittees to consider LID treatment controls, including harvest and use or infiltration measures, prior to other measures which would not provide water supply benefits. The Order further encourages harvest and use by restricting the basis for its rejection. Section VIII.J requires water demand calculations to support rejection of harvest and use on the basis of insufficient water demand under most conditions.

As described in section III.A of this Fact Sheet, indirect potable reuse and direct non-potable reuse are major aspects of the Santa Ana Region's water supply portfolio. In alignment with the Strategy, the Order continues to support recycled water use in the Santa Ana Region by excluding provisions in the previous permits that discouraged regional facilities. In addition, this Order encourages, wherever feasible, retention of stormwater from the 85th percentile, 24-hour storm event, consistent with State Water Board Order WQ 2015-0075. The use of large, regional facilities would potentially serve multiple purposes, including recharge for stormwater, recharge of recycled water, and flood control.

In addition, participation in WMPs provides opportunities for collaboration between entities in constructing regional facilities. As noted above, these facilities may support recycled water in addition to other uses. The Order also incorporates the stormwater retention approach in WMPs to achieve compliance with WQBELs and RWLs. The approach would likely require large, regional infiltration facilities that could support recycled water as well. Sections XIV.FF and XIV.GG of this Fact Sheet contain further discussion on the stormwater retention approach.

XXII. STATE MANDATES[84]

Article XIII B, section 6(a) of the California Constitution provides that whenever "any state agency mandates a new program or higher level of service on any local government, the state shall provide a subvention of funds to reimburse that local government for the costs of the program or increased level of service." No provision of the Order constitutes a reimbursable state mandate under Article XIII B, section (6)(a) of the California Constitution.

[84] This section includes a brief discussion of mandates law based on statutory and case law as of the date the Order was issued. References to a specific permit provision are not intended to be exhaustive. The omission of any particular provision from this discussion does not suggest that the Santa Ana Water Board believes that provision to constitute a reimbursable state mandate.

A. Permittees Have Authority to Fund Permit Compliance Costs Through Service Charges, Fees, or Assessments.

As a threshold matter, even if any of the Order's provisions could be considered state mandates, they are not eligible for reimbursement because the Permittees can levy service charges, fees, or assessments sufficient to pay for compliance with the Order. (Gov. Code, § 17556, subd. (d).) Article XIII D, section 6, of the California Constitution, known as Proposition 218, is not an impediment to Permittees' fee authority.

First, Proposition 218 does not apply to fees or service charges unrelated to real property, such as fees for development permits, other fees imposed on real property development, and fees for inspections incident to permitting. (Cal. Const. Art. XIII D, § 1, subd. (b), § 2, subd. (b), (e), § 3; *Department of Finance v. Commission on State Mandates* (2022) 85 Cal.App.5th 535, 587 (*San Diego MS4 Permit*); *Department of Finance v. Commission on State Mandates* (2021) 59 Cal.App.5th 546, 561-62.) Permittees have authority to recover through regulatory fees their costs of implementing Sections VIII and XIII of the Order, including such "overhead" costs as developing guidance documents, developing construction ordinances, assessing program effectiveness; and related staff training, and recordkeeping and reporting costs found elsewhere in the Order. (*See, San Diego MS4 Permit*, 85 Cal.App.5th at pp. 551, 581-582, 588-595.)

Second, the voter approval requirements of Proposition 218 do not apply to "fees or charges for sewer, water, and refuse collection services." (Cal. Const. Art. XIII D, § 6, subd. (c).[85] "Water" for purposes of articles XIII C and XIII D, means "water from any source." (Gov. Code, § 53750, subd. (n).) "Sewer" includes "systems, all real estate, fixtures, and personal property owned, controlled, operated, or managed in connection with or to facilitate sewage collection, treatment, or disposition for sanitary or *drainage purposes*, including lateral and connecting sewers, interceptors, trunk and outfall lines, sanitary sewage treatment or disposal plants or works, drains, conduits, outlets *for surface or storm waters*, and any and all other works, property, or structures necessary or convenient for the collection or disposal of sewage, industrial waste, *or surface or storm waters*." (Gov. Code, § 53750, subd. (k) (emphasis added); *see also,* § 53751 (Legislative declarations.) Such fees are subject only to Proposition 218's majority protest procedures. (Cal. Const. Art. XIII D, §6, subd. (c); Gov. Code, § 53750 et seq.) The majority protest procedure does not eviscerate a local agency's authority to levy fees for purposes of determining whether compliance costs are reimbursable. (*San Diego MS4 Permit, supra,*

[85] Such authority is also undiminished by Proposition 26, which specifically excludes assessments and property-related fees imposed in accordance with Proposition 218 from the definition of taxes. (Cal. Const., art. XIII C, § 1, subd. (e)(7).).

85 Cal.App.5th at p. 581, citing *Paradise Irrigation Dist. v. Commission on State Mandates* (2019) 33 Cal.App.5th 174, 192-195.)[86]

Permittees thus have adequate authority under their police powers to levy service charges, fees or assessments to cover *all* costs of complying with the Order. (*See*, Cal. Const., art. XI, § 7; *Freeman v. Contra Costa County Water Dist.* (1971) 18 Cal.App.3d 404, 408 (preventing water pollution is a valid exercise of police power).) Permittees likewise have fee authority for "services and facilities furnished … in connection with its … storm drainage …system." (Health & Safety Code, § 5471, subd. (a).) And they have fee authority for "[a]spects of solid waste handling which are of local concern, including, but not limited to, frequency of collection, means of collection and transportation, level of services, charges and fees, and nature, location, and extent of providing solid waste handling services." (Pub. Res. Code, § 40059, subd. (a)(1).)

B. New or Modified Permit Requirements Do Not Mandate New Programs or Higher Levels of Service.

"Programs" for purposes of Article XIII B, section 6, are: (1) programs that carry out the governmental function of providing services to the public, or (2) laws which, to implement a state policy, impose unique requirements on local governments and do not apply generally to all residents and entities in the state. (*San Diego MS4 Permit, supra,* at p. 555, citing *San Diego Unified School Dist. v. Commission on State Mandates* (2004) 33 Cal.4th 859, 874.) The term "higher level of service" refers to "state mandated increases in the services provided by local agencies in existing programs." (*Ibid.,* internal quotations deleted.) A higher level of service requires "an increase in the actual level or quality of government services provided," not merely a change that increases the cost of providing services. (*San Diego Unified School Dist.* at p. 877; *County of Los Angeles v. Commission on State Mandates* (2003) 110 Cal.App.4th 1176, 1191, quoting *Workers' Compensation Mandates Decision*, *supra*, 43 Cal.3d. at p. 55.)

One of the most significant new features of the Order -- the option to comply with various requirements by participating in a watershed management plan (WMP) -- is voluntary, and provides a more flexible, cost-effective way to comply with permit requirements over a longer period of time. The WMP option is therefore not a mandated program. Other requirements of the Order do not constitute a new program or a higher level of service as compared to the requirements contained in the previous permits.

[86] Permittees had fee authority adequate to fund all requirements related to refuse collection, including associated monitoring and reporting requirements, independent of the amendments to Government Code section 53750. (*San Diego MS4 Permit, supra,* at pp. 551, 581-582.) This authority would extend to all new requirements implanting the statewide Trash Provisions.

1. Requirements that are also found in other stormwater permits are not unique to local government.

   Some of the Order's requirements are the same as those found in State Water Board Orders WQ 2022-0057-DWQ (NPDES General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities) ("CGP") as amended or revised, WQ 2015-0122-DWQ (NPDES General Permit for Storm Water Discharges Associated with Industrial Activities) ("IGP") as amended or revised, and 2022-0033-DWQ (NPDES Statewide Stormwater Permit and Waste Discharge Requirements for State of California Department of Transportation ("Caltrans Permit") as amended or revised. These permits cover, respectively, discharges from public and private construction and industrial sites and CalTrans' MS4s. These requirements are not unique to local government and are therefore not a "program."

   For example, the Trash Provisions apply to all stormwater dischargers subject to NPDES permitting requirements. (Trash Provisions, §§ IV.A.2 and A.3.c [inland]; Ocean Plan, §§ III.I.6 and L.2.C.) Both the CGP and Caltrans Permit prohibit the discharge of trash and require compliance with statewide Trash Provisions. (CGP, provision IV.B.4; Caltrans Permit, provision 3.3 and Attachment E. The IGP has not been updated since the Trash Provisions were adopted.). In another example, section XIV.B.9 requires that Permittees use effective controls that prevent materials or waste associated with municipal facilities or activities from being dispersed by wind or stormwater runoff. This requirement is based on similar requirements in the CGP. (CGP, Attachments D and E, §§ II.A.2.d. and g., II.A.4.a.)

2. TMDL-based requirements

   The TMDL-based requirements in the Order do not require a new program or a higher level of service. MS4 permits issued since 1999 have prohibited discharges that cause or contribute to exceedances of water quality standards in the receiving water, as required by State Water Board Order WQ 99-05. (*See,* Order No. R8-2002-0010 (Orange County); Order No. R8-2002-0011 (Riverside County); Order No. R8-2002-0012 (San Bernardino County).) TMDL provisions, including federally-required WQBELs, simply provide a process for meeting this requirement, generally based on a compliance schedule that provides Permittees additional time to comply with existing receiving water limitations.

   In addition, the federal requirement to comply with TMDL-based WQBELs is not unique to local government. This requirement applies to any stormwater or non-stormwater NPDES permittee assigned a wasteload allocation. (40 CFR §§ 122.44(d)(1)(vii)(B); 130.3(h).)

3. Non-stormwater discharge prohibition

The CWA has long required that all dischargers, including private industrial dischargers and local governments, effectively prohibit "all types" of non-stormwater discharges identified as sources of pollutants to waters of the United States. (33 U.S.C. § 1342(p)(3)(B)(ii); 40 C.F.R. § 122.26(d)(2)(iv)(B)(1).) In addition, MS4 dischargers must demonstrate adequate legal authority, through ordinance, permit, or other means, to prohibit illicit discharges from others to the MS4. (40 C.F.R. § 122.26(d)(2)(i)(B).) As a result, the Permittees have been subject to these requirements since 1990. (Order Nos. 90-01 (Orange County), 90-104 (Riverside County), and 90-136 (San Bernardino County).)

The requirements associated with effectively prohibiting non-stormwater discharges do not change or increase the level or quality of service already required by law; they simply require the Permittees to comply with existing federal law to prohibit non-stormwater discharges to waters of the United States.

Finally, non-municipal dischargers of stormwater are also subject to the non-stormwater prohibition. (CGP, provisions IV.A (Authorized Non-Stormwater Discharges), IV.B.3. (non-stormwater prohibition), IV.B.4 (trash prohibition); IGP, provisions III.B (non-stormwater prohibitions), IV.A (Authorized Non-Stormwater Discharges); Caltrans Permit, provisions 3.9 (non-stormwater prohibition) and 3.3, and Attachment E (trash prohibition).) These permits cover, respectively, discharges from public and private construction and industrial sites and CalTrans' MS4s. Thus, the non-stormwater prohibition is not unique to local government and is not a "program."

4. Discretionary projects

Building standards that are not unique to local governments do not meet the definition of a "program." In addition, requirements for stormwater controls on municipal development or redevelopment projects are not mandates because Permittees are under no legal or practical compulsion to construct or operate such facilities, but rather do so at their own discretion. (*See, Coast Community College Dist. v. Commission on State Mandates* (2022) 13 Cal.5th 800 [defining "legal compulsion" and "practical compulsion"].) Any costs Permittees incur to comply with LID, hydromodification, or retrofitting requirements applicable to such facilities do not constitute state mandates.

C. The Permit Requirements Are Non-Reimbursable Federal Mandates.

Even if some of the Order's requirements could be considered a new program or higher level of service, those requirements are required to meet the

standards set forth in the federal Clean Water Act and implementing regulations and are therefore non-reimbursable federal mandates.[87]

If a requirement is mandated by a federal law or regulation and the federal requirements result in increased costs, no reimbursement is required unless a state statute or executive order mandates costs that exceed the federal mandate. (Gov. Code, § 17556, subd. (c).) The Order implements federally mandated requirements under the CWA and implementing regulations, which are not subject to reimbursement. This includes federal requirements to: (i) effectively prohibit non-stormwater discharges through the MS4 to receiving waters; (ii) reduce the discharge of pollutants in stormwater to the maximum extent practicable; (iii) include such other provisions as the Santa Ana Water Board determines appropriate for the control of such pollutants; (iv) attain applicable TMDL WLAs; and (v) conduct monitoring and reporting.

Non-stormwater discharge prohibition: Federal law requires that an MS4 permit effectively prohibit non-stormwater discharges through the MS4 to receiving waters. (33 U.S.C. § 1342(p)(3)(B)(ii).) Regulatory exceptions for certain categories of low-threat discharges do not apply to discharges that are identified as a significant source of pollutants to waters of the United States. (40 C.F.R. § 122.26(d)(2)(IV)(B).) The Order includes various requirements to achieve the effective prohibition of non-stormwater discharges, including Sections IV (Discharge Prohibitions), IX (Illicit Discharge Detection and Elimination Program), and various education, outreach and training requirements. These requirements are compelled by federal law and are separate from the requirement to reduce the discharge of pollutants to the maximum extent practicable.

TMDL requirements: The CWA requires TMDLs be established for waterbodies that do not meet federal water quality standards. (33 U.S.C. § 1313(d).) The CWA also requires that MS4 permits include "such other provisions as the Administrator or the State determines appropriate for the control of [] pollutants." (33 U.S.C. § 1342(p)(3)(B)(iii).) USEPA interprets this provision to mandate "controls to reduce the discharge of pollutants to the maximum extent practicable, *and where necessary water quality-based controls*." (Phase I Stormwater Regulations, Final Rule, 55 Fed. Reg. 47990, 47994 (Nov. 16, 1990) [emphasis added]; see also *Building Industry Ass'n of San Diego County v. State Water Resources Control Bd.* (2004) 124 Cal.App.4th 866, 882-887; Phase II Stormwater Regulations, Final Rule, 64 Fed. Reg. 68722, 68737.)

Once USEPA or a state establishes a TMDL, federal law requires that NPDES permits must contain water quality-based effluent limitations (WQBELs) consistent with the assumptions and requirements of any applicable waste load allocation (WLA). (40 C.F.R. § 122.44(d)(1)(vii)(B).) Indeed, TMDLs are

[87] Other sections of this Fact Sheet provide additional citations to federal requirements mandating specific provisions.

developed for the purpose of specifying requirements for the achievement of water quality standards in impaired waters. (33 U.S.C. § 1313(d); 40 C.F.R. § 130.7.) Associated compliance schedules must require NPDES permittees to attain WLAs as soon as possible. (40 C.F.R. § 122.47.) The Order's requirements for attainment of TMDL WLAs are therefore compelled by federal law.

Monitoring and reporting requirements: Federal law requires that NPDES permits incorporate monitoring and reporting provisions. (33 U.S.C. §§ 1318(a), 1342(a)(2); 40 C.F.R. §§ 122.26(d)(2)(i)(F); 122.41(h), (j)-(l); 122.42(c); 122.44(i); 122.47(a)(4); 122.48.) Monitoring and reporting must be adequate to determine compliance and noncompliance with permit conditions and to report that information to permitting authorities. (*Ibid.*) None of the current permits explicitly require monitoring to determine compliance with receiving water limitations or with wasteload allocations that were expressed as WQBELs. In many cases, monitoring activities were controlled by other resolutions or orders adopted by the Santa Ana Water Board. In some cases, monitoring activities were changed without corresponding updates to the permits' monitoring programs. The Order includes updated monitoring and reporting requirements to address these deficiencies. The Order's monitoring and reporting requirements are thus imposed pursuant to federal law.

Maximum Extent Practicable (MEP) standard: The CWA mandates that the Order "require controls to reduce the discharge of pollutants to the maximum extent practicable." (33 U.S.C. § 1342(p)(3)(B)(iii).) *Department of Finance v. Commission on State Mandates* (2016) 1 Cal.5th 749, as modified on denial of rehearing (Nov. 16, 2016) (*Los Angeles MS4 Permit*) analyzed whether the CWA's MEP standard required four provisions concerning trash receptacles and inspections in the 2001 Los Angeles County MS4 permit. In concluding that the provisions were not required by federal law, the Supreme Court stated that, "[h]ad the Regional Board found when imposing the disputed permit conditions, that those conditions were the only means by which the maximum extent practicable standard could be implemented, deference to the board's expertise in reaching that finding would be appropriate." (*Los Angeles MS4 Permit*, *supra*, 1 Cal.5th at p. 768.) The Supreme Court further stated that "[s]uch findings are "case specific, based among other things on factual circumstances." (*Id.*, fn. 15.) To be entitled to deference, regional water boards must make an express finding that the particular set of permit conditions finally embodied in a given permit is required to meet that federal standard and must support that finding with evidence.

The Santa Ana Water Board finds that the Order specifies requirements necessary for the Permittees to reduce the discharge of pollutants in MS4 discharges to the MEP. The Order establishes requirements for stormwater

management "minimum control measures,"[88] including programs for public information and participation, industrial and commercial facilities, construction activities, planning and land development, public agency activities, and illicit discharge detection and elimination, among others required by 40 CFR section 122.26(d)(2)(iv). The requirements of these programs represent structural and non-structural water quality control measures that are effective, technically feasible, and generally accepted as appropriate.

Past approaches to the Adaptive Management process of achieving MEP have not resulted in the stormwater quality improvements necessary to meet the MEP standard and meet water quality standards. The Order therefore requires program effectiveness assessments (PEAs). New restrictions on the use of USEPA's Green Streets program are necessary because this guidance contains few enforceable standards for selecting structural treatment controls for priority projects that involved improvements to existing transportation rights of way. These rights of way make up 10 percent to 25 percent of an urban area and are a significant source of pollutants. Audits and inspections by Santa Ana Water Board staff have shown that use of the guidance has resulted in excluding structural treatment controls with no meaningful analysis, in conflict with the federal requirement to reduce the discharge of pollutants to the MEP.

At the same time, existing requirements that are no longer necessary have been eliminated or reduced. Examples include reduced frequency of refresher training, reducing reporting frequency for non-compliant industrial or construction sites, reduced inspection frequency for high priority sites, elimination of inspection requirements for short-duration construction projects, a new provision authorizing the Executive Officer to waive requirements for discharges that may create hydrologic conditions of concern (Section VIII.L.1.e) and a more streamlined process for obtaining waivers of treatment controls for priority projects subject to WQMPs (section VIII.E).

Section XII of the Order establishes an elective program providing an alternative compliance path through the preparation of a Watershed Management Plan (WMP). WMPs allow the Permittees to identify water quality issues and propose the specific control measures to achieve the receiving water limitations and numeric WQBELs in accordance with time schedules that meet federal requirements. This alternative provides Permittees with flexibility to select the most cost-effective water quality control measures that will reduce pollutants in stormwater to the maximum extent practicable, comply with TMDL wasteload allocations, and meet other receiving water limitations.

[88] The term "minimum control measures" is borrowed from USEPA's Storm Water Phase II Final Rule. It is not found in 40 CFR section 122.26(d)(2). The control measures the term refers to in the Phase II Final Rule are essentially the same as those in 40 CFR section 122.26(d)(2). The term is used here as a convenient way to collectively describe the control measures in 40 CFR section 122.26(d)(2).

Finally, USEPA's inclusion of equivalent or substantially similar provisions in its MS4 permits support a finding that the provisions are necessary to achieve MEP. The Santa Ana Water Board has examined the following USEPA issued permits, among others, and concluded that they contain equivalent and/or substantially similar provisions: Massachusetts MS4 General Permit, Washington D.C. MS4 Permit, Middle Rio Grande (Albuquerque, NM) MS4 Watershed Permit, Boise/Garden City MS4 Permit, and Guam MS4 Permit.

The Santa Ana Water Board finds that the programmatic requirements of the Order are necessary to meet the MEP standard. The mix of pollution controls and BMPs are necessary to attain the level of pollutant reduction expected by the demanding federal MEP standard, but also balances different interests such as effectiveness, regulatory compliance, public acceptance, cost, and technical feasibility. To the extent there may be multiple means of achieving pollutant reductions and that there could be trade-offs between program areas with potentially higher costs and greater pollutant reductions, the Order affords Permittees discretion to select the specific means of reducing the discharge of pollutants to the MEP based on the methodical application of performance metrics. This finding is the expert conclusion of the Santa Ana Water Board based on its technical expertise and experience administering the MS4 program.

XXIII. PUBLIC PARTICPATION AND NOTIFICATION

The Santa Ana Water Board has considered the issuance of WDRs that will serve as an NPDES permit for MS4 discharges within the Santa Ana Region. The Santa Ana Water Board staff has encouraged public participation in the permit development process. Over a period of many years, the Santa Ana Water Board has held multiple listening sessions, workshops, and Board meeting agenda items focusing on issues pertinent to stakeholders and Permittees in all three counties. Additionally, Santa Ana Water Board staff have met with Permittees and interested stakeholders upon request. The following information is provided pursuant to 40 CFR section 124.8(b)(6) and (7).

A. Overview of Regional MS4 Permit Outreach Efforts

Santa Ana Water Board staff began discussions regarding a regional MS4 permit concept with the San Bernardino and Riverside Counties on January 30, 2014. There were further meetings with the counties on March 5, 2015, June 23, 2015, and August 16, 2016.

Santa Ana Water Board staff held a series of meetings on August 21, 2018, August 28, 2018, September 18, 2018, September 19, 2018, and October 9, 2018 with representatives of Riverside County, Orange County, San Bernardino County, and NGOs to discuss combining all existing MS4 permits into a single, regionwide permit. Another set of individual meetings were held on November 27, 2018, November 28, 2018, and December 5, 2018 with

Riverside County, Orange County, and San Bernardino County MS4 permittees, respectively.

On June 16, 2021, August 1, 2022, and May 3, 2023, Santa Ana Water Board staff also met with USEPA to discuss the regional MS4 permit.

On January 25, 2022, Santa Ana Water Board staff released a staff working proposal for a regional, Phase I MS4 permit (referred to as the "Staff Working Proposal") to solicit input from all stakeholders such as Permittees, non-governmental agencies, and other interested parties. Santa Ana Water Board staff have incorporated several revisions based on the prior inputs and informal discussions.

At the request of the Permittees, a series of facilitated remote meetings were held to hear the comments by the Permittees which included Permittees from the Counties of Riverside, Orange, and San Bernardino, referred to as the Tri-County Group (TCG). On January 12, 2022, a kickoff meeting was held between Santa Ana Water Board staff and the TCG. Further meetings were held on January 26, 2022, March 22, 2022, April 5, 2022, April 26, 2022, June 14, 2022, August 2, 2022, January 17, 2023, February 8, 2023, June 16, 2023, and July 12, 2023. Separate TMDL focused meetings were held on March 6, 2023 for Riverside County and San Bernardino County, and on March 13, 2023 for Orange County.

Separate meetings took place between Santa Ana Water Board staff and the Orange County Coastkeeper on March 1, 2023, April 13, 2023, and May 22, 2023.

Santa Ana Water Board staff also held public workshops to solicit input from all interested parties. The first workshop was held on February 4, 2022, to inform the Santa Ana Region's Board members of the Staff Working Proposal and hear comments from the public. Other workshops and listening sessions were held on August 2, 2022, May 10, 2023, May 16, 2023, May 17, 2023, and May 18, 2023.

Regarding Claremont and Pomona. Santa Ana Water Board staff met with the Permittee representatives on May 24, 2018 at the Pomona City Hall and a second meeting was held via videoconference on February 2, 2023. On November 15, 2024, a Staff Working Proposal for a proposed renewal to Order R8-2013-0043, NPDES Permit No. CA8000410, was released to solicit input from the cities of Claremont and Pomona, and USEPA.

Following issuance of a Tentative Order on March 1, 2024 and during the 120-day written public comment period, the Santa Ana Water Board held public workshops on March 15, 2024 and September 13, 2024, and a staff-level workshop on June 6, 2024, to solicit additional input from all interested parties. After the September 13, 2024 Board meeting, additional staff-level workshops

took place on November 4, 2024 and January 7, 2025 focused on Riverside County, November 20, 2024 and January 13, 2025 focused on Orange County, December 4, 2024 and December 18, 2024 focused on San Bernardino County, March 4, 2025 and March 18, 2025 focused on the TCG and the Orange County Coastkeeper, and an additional meeting on April 15, 2025 among legal counsel.

On May 5, 2026, the Revised Tentative Order was released with redlines to indicate changes made from the March 1, 2024 Tentative Order. This also proposed to incorporate previously released requirements for Claremont and Pomona into the Revised Tentative Order. This initiated a 75-day written public comment period. Staff-level workshops were publicly announced and held on June 18, 2026, June 23, 2026, June 30, 2026, July 15, 2026, and July 16, 2026, prior to the close of the written comment period.

B. Outreach and AB 2108

Effective January 1, 2023, Assembly Bill (AB) 2108 added sections 189.7 and 13149.2 to the California Water Code. Water Code section 189.7 requires the Water Boards to conduct equitable, culturally relevant outreach when considering proposed discharges of waste that may have disproportionate impacts on water quality in disadvantaged communities or tribal communities. Water Code section 13149.2(c) requires that when the Water Boards issue or re-issue regional or statewide WDRs, they make a concise, programmatic finding on potential environmental justice, tribal impact, and racial equity considerations related to the issuance, particularly on any anticipated water quality impacts to those communities and measures available to address them. For reissuances, the finding may be limited to considerations related to any changes to the requirements of the prior WDRs. The finding is based on readily available information identified by staff or raised during the public review process.

The discharge of stormwater and non-stormwater runoff from Municipal Separate Storm Sewer Systems (MS4s) in the Santa Ana Region regulated by this Order may occur in the area of one or more disadvantaged or tribal communities. The scope of the discharges encompasses the entirety of the Santa Ana Region and therefore implicates numerous disadvantaged and tribal communities. After consulting the Native American Heritage Commission, Santa Ana Water Board staff identified 22 different tribal communities within the Santa Ana Region. Further, a search of CalEnviroScreen 4.0 identified potentially 200 different disadvantaged communities across portions of Orange, Riverside and San Bernardino Counties with the Santa Ana Region.

1. Targeted AB 2108 Outreach

Consistent with Water Code section 189.7, the Santa Ana Water Board has conducted outreach to potentially affected disadvantaged and/or tribal communities concerning this Order. The Santa Ana Water Board's efforts to do so following the effective date of AB 2108 are summarized below.

In early 2023, Water Board staff used CalEnviroScreen 4.0 to select locations for a series of public workshops intended to solicit comments from disadvantaged communities. These workshops were held on May 10, 2023 in the City of San Bernardino, May 17, 2023 in the City of Moreno Valley, and May 18, 2023 in the City of Huntington Beach. In addition, a virtual, online public workshop was held on May 16, 2023.

On May 11, 2023, Santa Ana Water Board staff sent 22 letters to tribal contacts within the Santa Ana Region provided by the Native American Heritage Commission related to the Regional MS4 Permit. On December 17, 2024, Santa Ana Water Board staff sent 15 letters to tribal contacts related to the Claremont and Pomona proposed permit. The letters invited recipients to participate in the development of the Order through a variety of means, including by attending workshops and providing feedback on the permit. Santa Ana Water Board staff received no responses to these letters requesting to engage on the permit.

On September 23, 2023, Santa Ana Water Board staff participated in the 2023 Riverside Community Climate Action Day event and had a booth to facilitate public outreach and interaction. At the event, staff distributed flyers that encouraged the public to provide feedback on the Order and attend future workshops.

On March 6, 2024, Santa Ana Water Board staff sent 29 letters to tribal contacts within the Santa Ana Region provided by an updated list from the Native American Heritage Commission. In addition to these contacts, the letter was sent to environmental staff whose contact information was available on the tribal website. The letter invited recipients to comment on the draft Permit and offered a presentation and detailed discussion with Santa Water Board staff. Santa Ana Water Board staff conducted follow up calls on April 2, 2024. From these calls, one tribe requested a meeting. Santa Ana Water Board staff met with tribal representatives and gave a presentation on the permit on June 26, 2024.

On December 7, 2024, Santa Ana Water Board staff hosted a booth at the Los Alamitos Winter Wonderland event. At the event, staff distributed flyers that encouraged the public to provide feedback on the Order and sign up for the project-specific mailing list. Additionally, Santa Ana Water Board staff distributed and posted flyers at key locations within disadvantaged communities. These locations included libraries, laundromats, coffee

shops, churches, mosques, and synagogues. The flyers defined key technical terms related to MS4s, described the Permit, and encouraged the public to provide feedback and attend future workshops. As of October 2023, around 20 flyers were posted in Orange County and 70 in Riverside and San Bernardino Counties combined.

On August 6, 2024, Santa Ana Water Board staff hosted a booth at the Pomona National Night Out event. On March 29, 2025, Santa Ana Water Board staff hosted a booth at the Native Plant Festival at the California Botanic Garden in Claremont. At these events, staff distributed flyers that encouraged the public to provide feedback on the future Permit requirements related to Claremont and Pomona and sign up for the mailing list.

2. **Environmental Justice Findings**

Pursuant to Water Code section 13149.2, the Santa Ana Water Board has taken into account environmental justice, tribal impact, and racial equity considerations in issuing this Order. As noted above, discharges regulated by this Order may occur in the area of one or more disadvantaged communities or tribal communities.

Discharges of stormwater and non-stormwater runoff through MS4s within the Santa Ana Region convey pollutants to surface waters. Polluted stormwater and non-stormwater discharges from MS4s are a leading cause of water quality impairment in the Santa Ana Region. These discharges are often contaminated with pesticides, fertilizers, fecal indicator bacteria and associated pathogens, trash, oil and other automotive byproducts, and many other toxic substances generated by activities in the urban environment. Water that flows over streets, parking lots, construction sites, and industrial, commercial, residential, and municipal areas convey these pollutants through the MS4 directly into receiving waterbodies of the Santa Ana Region.

Section 13149.2 also requires findings on any environmental justice concerns within the Water Board's authority that are raised by interested persons regarding anticipated water quality impacts in disadvantaged or tribal communities. From conversations with a local tribe, staff has heard concerns of pollution from recreational vehicles and unhoused communities in the Santa Ana River bottom.

At public events attended by staff as a part of AB2108 outreach, staff heard concerns from residents about the frequency of catch basin cleaning in their city, concerns about recycled water quality, and inadequate surface water storage.

At the September 2024 board workshop, the Santa Ana Water Board heard concerns from permittees, elected officials, and industry representatives that the cost of compliance with the draft Order could have a negative economic impact on disadvantaged communities, including concerns that increased compliance costs could affect the feasibility of implementing required water quality protection measures in disadvantaged communities. The Board also heard concerns from a non-profit organization that the draft Order would not be enforceable.

This Order addresses potential adverse water quality impacts from MS4 discharges through numerous different means, including but not limited to:

- Prohibiting all non-stormwater discharges, with a few enumerated exceptions, through the MS4 to all receiving waters;
- Requiring that Permittees comply with the "maximum extent practicable" technology-based standard set forth in CWA section 402(p)(3)(B)(iii) and implement the minimum control measures required of a stormwater management program by 40 CFR section 122.26(d)(2)(iv);
- Requiring compliance with receiving water limitations and applicable WQBELs based on TMDL WLAs established for waters in the Santa Ana Region, as required by CWA section 402(p)(3)(B)(iii) and 40 CFR section 122.44(d)(1)(vii)(B);
- Encouraging, wherever feasible, retention of stormwater from the 85th percentile, 24-hour storm event, consistent with State Water Board Order WQ 2015-0075;
- Allowing voluntary participation in WMPs as an alternative for Permittees that gives them the flexibility to implement the requirements of this Order on a watershed scale through customized strategies, control measures, and BMPs, while still providing reasonable assurance that the Permittees' MS4 discharges achieve WQBELs by applicable compliance dates and do not cause or contribute to exceedances of receiving water limitations;
- Requiring an extensive monitoring and reporting program designed to identify changes in water quality at representative outfalls and in receiving waters;
- Requiring that Permittees engage in an adaptive management process by continual improvement and modification of strategies, control measures, and BMPs as necessary based on analysis of monitoring data collected pursuant to the MRP to ensure that applicable WQBELs and receiving water limitations and other milestones set forth in the WMP will be achieved.

The Order is a reissuance of prior MS4 permits issued in three different counties – Orange (Order No. R8-2009-0030 as amended by No. R8-2010-0062), Riverside (Order No. R8-2010-0033), and San Bernardino (Order

No. R8-2010-0036). The Order generally includes either similar or more stringent provisions than in the prior permits, and therefore changes to the requirements are not expected to result in any new water quality impacts on disadvantaged or tribal communities.

The addition of WMPs as an alternative means of compliance with WQBELs and receiving water limitations is a new addition to the Order. Whereas the past permits provided BMP-based WQBELs for those TMDLs whose compliance dates had not passed, the Order defaults to the inclusion of numeric WQBELs based on the TMDL WLAs. This is a more stringent approach than in past permits. However, the Permittees may, alternatively and voluntarily, comply with the numeric WQBELs by implementing approved WMPs comprised of a suite of BMP-based control measures. WMPs must be accompanied by demonstrations, via the reasonable assurance analysis (RAA), that the BMPs will meet the numeric WQBELs and receiving water limitations.

Although the WMPs essentially allow compliance schedules for achievement of WQBELs, the final compliance date must be as short as possible and must not exceed the final date for attainment of the TMDL WLA for that pollutant-waterbody combination found in the Basin Plan. The Order mitigates any potential impacts to disadvantaged and/or tribal communities that may arise from WMPs by requiring that WMPs include public comment and participation prior to approval.

3. Racial Equity

The State Water Board's Racial Equity Resolution No. 2021-0050 directs statewide integration of racial equity into Water Board programs, including permitting. Consistent with this direction, on March 15, 2024, the Santa Ana Water Board adopted Resolution R8-2024-0029. In addition to AB 2108's permitting and basin planning requirements, the Santa Ana Water Board and staff consider racial equity issues in overseeing and enforcing permits. (*See, e.g.,* Resolution R8-2024-0029; 2024-2029 Racial Equity Action Plan) This Order reflects those commitments by incorporating provisions that promote equitable program implementation, public participation, and targeted outreach to disadvantaged and tribal communities.

C. Written Comment Period and Public Hearing

The Santa Ana Water Board notified the Permittees and interested agencies and persons of its intent to prescribe WDRs for Phase I MS4 discharges within the Santa Ana Region and has provided an opportunity to submit written comments and recommendations. A Notice of Public Hearing was disseminated to interested persons and posted on the Santa Ana Water

Board's website. The public had access to the agenda and any changes in dates and locations through the Santa Ana Water Board's website at: http://www.waterboards.ca.gov/santaana.

Interested persons were invited to submit written comments concerning the draft WDRs during a 120-day comment period. Comments were due either in person or by mail to the Executive Officer at the Santa Ana Water Board at the address on the cover page of this Order, or by email to rb8-stormwater.comments@waterboards.ca.gov. The deadline to submit written comments was by 5:00 pm on July 3, 2024. Interested persons were invited to submit written comments on revisions made to the permit in response to received comments and legal and regulatory changes since the 2024 draft was released and as otherwise necessary during a 75-day comment period. The deadline to submit written comments on the revisions was by 5:00 pm on July 20, 2026.

The Santa Ana Water Board held a public hearing on the tentative Order during its regular Board meeting on the following date and time and at the following location:

Date: July 24, 2026
Time: 9:00 a.m.
Location: 300 E. Chapman Avenue, Orange, CA 92866

Parties and interested persons were invited to attend. At the public hearing, the Santa Ana Water Board heard and considered testimony pertinent to the discharge and WDRs. At the end of that meeting, the hearing was closed and no action was taken. The hearing was then reopened during its regular Board meeting on the following date and time and at the following location:

Date: August 21, 2026
Time: 9:00 a.m.
Location: 25541 Barton Road Loma Linda, CA 92354

Parties and interested persons were invited to attend. At the public hearing, the Santa Ana Water Board heard and considered testimony pertinent to the discharge and WDRs. At the end of that meeting, the hearing was closed and no action was taken. The hearing was then reopened during its regular Board meeting on the following date and time and at the following location:

Date: September 11, 2026
Time: 9:00 a.m.
Location: 15600 Sand Canyon Ave, Irvine, CA 92618

Appendix E

Acronyms

Attachment E

ACRONYMS

APN – Assessor's parcel number

ASBS – Area of Special Biological Significance

BMP – Best Management Practice

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

CERCLA – Comprehensive Environmental Response, Compensation, and Liability Act

CEQA – California Environmental Quality Act (section 21000 et seq. of the California Public Resources Code).

CFR – Code of Federal Regulations

CFU – Colony Forming Units

CMP – Consolidated Program for Water Quality Monitoring, Riverside County Flood Control and Water Conservation District, October 2008.

CBRP – Comprehensive Bacteria Reduction Plan

CNRP – Comprehensive Nutrient Reduction Plan

CGP – Construction General Permit

CTR – California Toxics Rule

CWA – Federal Clean Water Act

CWC – California Water Code

CZARA – Coastal Zone Act Reauthorization Amendments

DAMP – Drainage Area Management Plan

DDT – Dichlorodiphenyltrichloroethane

DAR – Duly Authorized Representative

ESAs – Environmentally Sensitive Areas

EO – Executive Officer

GIS – Geographical Information System

HCOC – Hydrologic Condition of Concern

IC/ID – Illicit Connections/Illicit discharges

IDDE – Illicit Discharge Detection and Elimination

IGP – Industrial General Permit

ISWEBE – Inland Surface Waters, Enclosed Bays, and Estuaries of California

LA – Load Allocation

LID – Low Impact Development

LRP – Legally Responsible Person

MEP – Maximum Extent Practicable

MPN – Most Probable Number

MOU – Memorandum of Understanding

MRP – Monitoring and Reporting Program

MSAR – Middle Santa Ana River

MS4 – Municipal Separate Storm Sewer System

NPDES – National Pollutant Discharge Elimination System

NGOs – Non-governmental Organizations

NOI – Notice of Intent

NTR – National Toxics Rule

POTW – Publicly Owned Treatment Works

QAPP – Quality Assurance Project Plan

RCFC&WCD – Riverside County Flood Control and Water Conservation District

REC – Recreational Beneficial Use.

ROWD – Report of Waste Discharge

SAR – Santa Ana River

SARA – Superfund Amendments and Reauthorization Act

SBCFCD – San Bernardino County Flood Control District

SCCWRP – Southern California Coastal Water Research Project

SIC – Standard Industrial Classification

SIP – State Implementation Policy

SMP – Scrap Metal Permit

SSO – Sanitary Sewer Overflow

SWAMP – Surface Water Ambient Monitoring Program

SWPPP – Stormwater Pollution Prevention Plan

TMDL – Total Maximum Daily Load

USEPA – United States Environmental Protection Agency

WDID – Waste Discharge Identification

WDRs – Waste Discharge Requirements

WLAs – Waste Load Allocations

WMP – Watershed Management Plan

WQBELs – Water Quality-Based Effluent Limitations

WQMP – Water Quality Management Plan

Attachment F

Standard Provisions

ATTACHMENT F

STANDARD PROVISIONS

I. STANDARD PROVISIONS – PERMIT COMPLIANCE

A. Duty to Comply

1. Permittees must comply with all the terms, requirements, and conditions of this Order. Any noncompliance constitutes a violation of the Clean Water Act (CWA) and the California Water Code and is grounds for enforcement action; permit termination, revocation and reissuance, or modification; denial of a permit renewal application; or a combination thereof. (40 CFR § 122.41(a); Wat. Code, §§ 13261, 13263, 13265, 13268, 13000, 13001, 13304, 13350, 13385)

2. Permittees shall comply with effluent standards or prohibitions established under section 307(a) of the CWA for toxic pollutants within the time provided in the regulations that establish these standards or prohibitions, even if this Order has not yet been modified to incorporate the requirement. (40 CFR § 122.41(a)(1))

3. Permittees shall comply with the provisions herein outlined in Attachment F of this Order. If there is any conflict, duplication, or overlap between provisions specified in this Order, the more stringent provision shall apply.

B. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for a Permittee, in an enforcement action, that it would have been necessary to halt or reduce the permitted activity to maintain compliance with the conditions of this Order. (40 CFR § 122.41(c))

C. Duty to Mitigate

Permittees shall take all reasonable steps to minimize or prevent any discharge in violation of this Order that has a reasonable likelihood of adversely affecting human health or the environment. (40 CFR § 122.41(d))

D. Proper Operation and Maintenance

Permittees shall, at all times, properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Permittee to achieve compliance with the conditions of this Order. Proper operation and maintenance also includes adequate

laboratory controls and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems that are installed by a Permittee only when necessary to achieve compliance with the conditions of this Order. (40 CFR § 122.41(e))

E. Property Rights

1. This Order does not convey any property rights of any kind or any exclusive privileges. (40 CFR § 122.41(g))

2. The issuance of this Order does not authorize any injury to persons or property or invasion of other private rights, or any infringement of state or local law or regulations. (40 CFR § 122.5(c))

F. Inspection and Entry

Permittees shall allow the Santa Ana Water Board, State Water Board, USEPA, and/or their authorized representatives (including an authorized contractor acting as their representative), upon the presentation of credentials and other documents, as may be required by law, to (33 USC § 1318(a)(4)(B); 40 CFR § 122.41(i); Wat. Code, §§ 13267, 13383):

1. Enter upon the Permittee's premises where a regulated facility or activity is located or conducted, or where records are kept under the conditions of this Order (33 USC § 1318(a)(4)(B)(i); 40 CFR § 122.41(i)(1); Wat. Code, §§ 13267, 13383);

2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Order (33 USC § 1318(a)(4)(B)(ii); 40 CFR § 122.41(i)(2); Wat. Code, §§ 13267, 13383);

3. Inspect and photograph, at reasonable times, any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order (33 U.S.C. § 1318(a)(4)(B)(ii); 40 CFR § 122.41(i)(3); Wat. Code, §§ 13267, 13383); and

4. Sample or monitor, at reasonable times, for the purposes of assuring Order compliance or as otherwise authorized by the CWA or the Water Code, any substances, or parameters at any location. (33 USC § 1318(a)(4)(B); 40 CFR § 122.41(i)(4); Wat. Code, §§ 13267, 13383)

G. Bypass

1. Definitions

a. “Bypass” means the intentional diversion of waste streams from any portion of a treatment facility. (40 CFR § 122.41(m)(1)(i))

b. “Severe property damage” means substantial physical damage to property, damage to the treatment facilities, which causes them to become inoperable, or substantial and permanent loss of natural resources that can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production. (40 CFR § 122.41(m)(1)(ii))

2. **Bypass not exceeding limitations.** Permittees may allow any bypass to occur which does not cause exceedances of effluent limitations, but only if it is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions listed in Standard Provisions – Permit Compliance Parts I.G.3, I.G.4, and I.G.5 of this Attachment F. (40 CFR § 122.41(m)(2))

3. **Prohibition of bypass.** Bypass is prohibited, and the Santa Ana Water Board may take enforcement action against a Permittee for bypass, unless (40 CFR § 122.41(m)(4)(i)):

   a. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage (40 CFR § 122.41(m)(4)(i)(A));

   b. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass that occurred during normal periods of equipment downtime or preventive maintenance (40 CFR § 122.41(m)(4)(i)(B)); and

   c. The Permittee submitted notice to the Santa Ana Water Board as required under Standard Provisions – Permit Compliance Part I.G.5 of this Attachment F. (40 CFR § 122.41(m)(4)(i)(C))

4. The Santa Ana Water Board may approve an anticipated bypass, after considering its adverse effects, if the Santa Ana Water Board determines that it will meet the three conditions listed in Standard Provisions – Permit Compliance Part I.G.3 above. (40 CFR § 122.41(m)(4)(ii))

5. **Notice**

a. **Anticipated bypass.** If the Permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible, at least 10 days before the date of the bypass. The notice shall be sent to the Santa Ana Water Board. As of December 21, 2020, all notices must be submitted electronically to the initial recipient defined in Standard Provisions – Reporting Part V.J of this Attachment F. Notices shall comply with 40 CFR part 3, 40 CFR section 122.22, and 40 CFR part 127. (40 CFR § 122.41(m)(3)(i))

b. **Unanticipated bypass.** Permittees shall submit notice of an unanticipated bypass as required in Standard Provisions - Reporting Part V.E of this Attachment F (24-hour notice). The notice shall be sent to the Santa Ana Water Board. As of December 21, 2020, all notices must be submitted electronically to the initial recipient defined in Standard Provisions – Reporting Part V.J of this Attachment F. Notices shall comply with 40 CFR part 3, 40 CFR section 122.22, and 40 CFR part 127. (40 CFR § 122.41(m)(3)(ii))

H. **Upset**

Upset means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the Permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation. (40 CFR § 122.41(n)(1))

1. **Effect of an upset.** An upset constitutes an affirmative defense to an action brought for noncompliance with such technology-based permit effluent limitations if the requirements of Standard Provisions – Permit Compliance Part I.H.2 below are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review. (40 CFR § 122.41(n)(2))

2. **Conditions necessary for a demonstration of upset.** A Permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs or other relevant evidence that (40 CFR § 122.41(n)(3)):

   a. An upset occurred and that the Permittee can identify the cause(s) of the upset (40 CFR § 122.41(n)(3)(i));

b. The permitted facility was, at the time, being properly operated (40 CFR § 122.41(n)(3)(ii));

c. The Permittee submitted notice of the upset as required in Standard Provisions – Reporting V.E.2.b below (24-hour notice) (40 CFR § 122.41(n)(3)(iii)); and

d. The Permittee complied with any remedial measures required under Standard Provisions – Permit Compliance I.C above. (40 CFR § 122.41(n)(3)(iv))

3. **Burden of proof.** In any enforcement proceeding, the Permittee seeking to establish the occurrence of an upset has the burden of proof. (40 CFR § 122.41(n)(4))

(b) STANDARD PROVISIONS – PERMIT ACTION

A. General

This Order may be modified, revoked, reissued, or terminated for cause. The filing of a request by the Permittee for modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any Order condition. (40 CFR § 122.41(f))

B. Duty to Reapply

If a Permittee wishes to continue an activity regulated by this Order after the expiration date of this Order, the Permittee must apply for and obtain a new permit. (40 CFR § 122.41(b))

C. Transfers

This Order is not transferable to any person except after notice to the Santa Ana Water Board. The Santa Ana Water Board may require modification or revocation and reissuance of the Order to change the name of the Permittee and incorporate such other requirements as may be necessary under the CWA and the Water Code. (40 CFR §§ 122.41(l)(3), 122.61)

D. Provisions of this Order are Severable

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

(c) STANDARD PROVISIONS – MONITORING

A. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. (40 CFR § 122.41(j)(1))

B. Monitoring must be conducted according to test procedures approved under 40 CFR part 136 for the analyses of pollutants unless another method is required under 40 CFR chapter 1, subchapter N. Monitoring must be conducted according to sufficiently sensitive test methods approved under 40 CFR part 136 for the analysis of pollutants or pollutant parameters or as required under 40 CFR chapter 1, subchapter N. For the purposes of this paragraph, a method is sufficiently sensitive when:

1. The method minimum level (ML) is at or below the level of the most stringent effluent limitation established in the permit for the measured pollutant or pollutant parameter, and either the method ML is at or below the level of the most stringent applicable water quality criterion for the measured pollutant or pollutant parameter or the method ML is above the applicable water quality criterion but the amount of the pollutant or pollutant parameter in the facility's discharge is high enough that the method detects and quantifies the level of the pollutant or pollutant parameter in the discharge; or

2. The method has the lowest ML of the analytical methods approved under 40 CFR part 136 or required under 40 CFR chapter 1, subchapter N for the measured pollutant or pollutant parameter.

In the case of pollutants or pollutant parameters for which there are no approved methods under 40 CFR part 136 or otherwise required under 40 CFR chapter 1, subchapter N, monitoring must be conducted according to procedure specified in this Order and/or the MRP for such pollutants or pollutant parameters. (40 CFR §§ 122.21(e)(3), 122.41(j)(4), 122.44(i)(1)(iv))

(d) STANDARD PROVISIONS – RECORDS

A. Permittees shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this Order, and records of all data used to complete the application for this Order, for a period of at least three (3) years from the date of the sample, measurement, report or application. This period may be extended by request of the Santa Ana Water Board Executive Officer or USEPA at any time. (40 CFR § 122.41(j)(2); Wat. Code § 13383(a)).

B. Records of monitoring information shall include:

1. The date, exact place, and time of sampling or measurements (40 CFR § 122.41(j)(3)(i));

2. The individual(s) who performed the sampling or measurements (40 CFR § 122.41(j)(3)(ii));

3. The date(s) analyses were performed (40 CFR § 122.41(j)(3)(iii));

4. The individual(s) who performed the analyses (40 CFR § 122.41(j)(3)(iv));

5. The analytical techniques or methods used (40 CFR § 122.41(j)(3)(v)); and

6. The results of such analyses. (40 CFR § 122.41(j)(3)(vi))

C. Claims of confidentiality for the following information will be denied (40 CFR § 122.7(b)):

1. The name and address of any permit applicant or Permittee (40 CFR § 122.7(b)(1)); and

2. Permit applications and attachments, permits and effluent data. (40 CFR § 122.7(b)(2))

(e) STANDARD PROVISIONS – REPORTING

A. **Duty to Provide Information**

Permittees shall submit to the Santa Ana Water Board, State Water Board, or USEPA within a reasonable time, any information which the Santa Ana Water Board, State Water Board, or USEPA may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Order or to determine compliance with this Order. Upon request, the Permittees shall also submit to the Santa Ana Water Board, State Water Board, or USEPA copies of records required to be kept by this Order. (40 CFR § 122.41(h); Wat. Code, §13383)

B. **Signatory and Certification Requirements**

1. All applications, reports, or information submitted to the Santa Ana Water Board, State Water Board, and/or USEPA shall be signed and certified in accordance with Standard Provisions – Reporting Parts V.B.2, V.B.3, V.B.4, V.B.5, and V.B.6 below. (40 CFR § 122.41(k))

2. All permit applications shall be signed by either a principal executive officer or ranking elected official. For purposes of this provision, a principal executive officer of a federal agency includes: (i) the chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of USEPA). (40 CFR § 122.22(a)(3))

3. All reports required by this Order and other information requested by the Santa Ana Water Board, State Water Board, or USEPA shall be signed by a person described in Standard Provisions – Reporting Part V.B.2 above, or by a duly authorized representative of that person. A person is a duly authorized representative only if:

   a. The authorization is made in writing by a person described in Standard Provisions – Reporting V.B.2 above (40 CFR § 122.22(b)(1));

   b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. A duly authorized representative may thus be either a named individual or any individual occupying a named position (40 CFR § 122.22(b)(2)); and

   c. The written authorization is submitted to the Santa Ana Water Board and State Water Board. (40 CFR § 122.22(b)(3))

4. If an authorization under Standard Provisions – Reporting Part V.B.3 above is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of Standard Provisions – Reporting Part V.B.3 above must be submitted to the Santa Ana Water Board and State Water Board prior to or together with any reports, information, or applications, to be signed by an authorized representative. (40 CFR § 122.22(c))

5. Any person signing a document under Standard Provisions – Reporting Parts V.B.2 or V.B.3 above shall make the following certification:

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

the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations." (40 CFR § 122.22(d))

6. Any person providing the electronic signature for documents described in Standard Provisions – Parts V.B.1, V.B.2, or V.B.3 above that is submitted electronically shall meet all relevant requirements of this Standard Provisions – Reporting Part V.B and shall ensure that all relevant requirements of 40 CFR part 3 (Cross-Media Electronic Reporting) and 40 CFR part 127 (NPDES Electronic Reporting Requirements) are met for that submission. (40 CFR § 122.22(e))

C. Monitoring Reports

1. Monitoring results shall be reported at the intervals specified in the Monitoring and Reporting Program (Attachment C) in this Order. (40 CFR § 122.41(l)(4))

2. Monitoring results must be reported in an Annual Report submitted to Santa Ana Water Board. All reports must be submitted electronically according to the Standard Provisions – Reporting Part V.J of this Attachment F and comply with 40 CFR part 3, 40 CFR section 122.22, and 40 CFR part 127. (40 CFR § 122.41(l)(4)(i))

3. If the Permittee monitors any pollutant more frequently than required by this Order using test procedures approved under 40 CFR part 136, or another method required for an industry-specific waste stream under 40 CFR subchapter N, the results of such monitoring shall be included in the calculation and reporting of the data submitted in the monitoring report specified by the Santa Ana Water Board or State Water Board. (40 CFR § 122.41(l)(4)(ii))

4. Calculations for all limitations, which require averaging of measurements, shall utilize an arithmetic mean unless otherwise specified in this Order. (40 CFR § 122.41(l)(4)(iii))

D. Compliance Schedules

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this Order, shall be submitted according to 40 CFR § 122.41(l)(5).

E. Twenty-Four Hour Reporting

1. Permittees shall report any noncompliance that may endanger health or the environment. Information shall be provided orally within 24 hours from the time the Permittee becomes aware of the circumstances. A written report shall also be provided within five (5) days of the time the Discharger becomes aware of the circumstances. The written report shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

   For noncompliance events related to combined sewer overflows, sanitary sewer overflows, or bypass events, these reports must include the data described above (with the exception of time of discovery) as well as the type of event (combined sewer overflows, sanitary sewer overflows, or bypass events), type of sewer overflow structure (e.g., manhole, combine sewer overflow outfall), discharge volumes untreated by the treatment works treating domestic sewage, types of human health and environmental impacts of the sewer overflow event, and whether the noncompliance was related to wet weather.

   As of December 21, 2025 or a USEPA-approved alternative date (see 40 CFR § 127.24(e) or (f)), all reports must be submitted electronically outlined in Standard Provisions – Reporting Part V.J of this Attachment F. The reports shall comply with 40 CFR part 3, 40 CFR section 122.22, and 40 CFR part 127. (40 CFR § 122.41(l)(6)(i))

2. The following shall be included as information that must be reported within 24 hours under this paragraph (40 CFR § 122.41(l)(6)(ii)):

   a. Any unanticipated bypass that exceeds any effluent limitation in this Order. (40 CFR § 122.41(l)(6)(ii)(A))

   b. Any upset that exceeds any effluent limitation in this Order. (40 CFR § 122.41(l)(6)(ii)(B))

   c. Any violation of a maximum daily discharge limitation for any of the pollutants listed by the Santa Ana Water Board in this Order. (40 CFR § (l)(6)(ii)(C) and 122.44(g))

3. The Santa Ana Water Board may waive the above-required report under this provision on a case-by-case basis if an oral report has been received within 24 hours. (40 CFR § 122.41(l)(6)(iii))

F. **Planned Changes**

Permittees shall give notice to the Santa Ana Water Board as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required under this provision only when (40 CFR § 122.41(l)(1)):

1. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 CFR section 122.29(b) (40 CFR § 122.41(l)(1)(i)); or

2. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants that are not subject to the effluent limitations in this Order. (40 CFR § 122.41(l)(1)(ii))

G. **Anticipated Noncompliance**

Permittees shall give advance notice of any planned changes in the permitted facility or activity that may result in noncompliance with this Order's requirements. (40 CFR § 122.41(l)(2))

H. **Other Noncompliance**

Permittees shall report all instances of noncompliance not reported under Standard Provisions – Reporting Parts V.C, V.D, and V.E above at the time monitoring reports are submitted. The reports shall contain the information listed in Standard Provision – Reporting V.E above. For noncompliance events related to combined sewer overflows, sanitary sewer overflows, or bypass events, these reports shall contain the information described in Standard Provision – Reporting Part V.E above and the applicable required data in Appendix A to 40 CFR part 127. The Santa Ana Water Board may also require the Permittee to electronically submit reports not related to combined sewer overflows, sanitary sewer overflows, or bypass events under this section. (40 CFR § 122.41(l)(7))

I. **Other Information**

When the Permittee becomes aware that it failed to submit any relevant facts in a permit application or submitted incorrect information in a permit application or in any report, the Permittee shall promptly submit such facts or information. (40 CFR § 122.41(l)(8))

J. **Initial Recipient for Electronic Reporting Data**

The owner, operator, or the duly authorized representative is required to electronically submit NPDES information specified in Appendix A to 40 CFR part 127 to the initial recipient defined in 40 CFR section 127.2(b). USEPA will identify and publish the list of initial recipients on its website and in the Federal Register, by state and by NPDES data group (see 40 CFR § 127.2(c)). USEPA will update and maintain this listing. (40 CFR § 122.41(l)(9))

(f) STANDARD PROVISIONS – ENFORCEMENT

A. The Santa Ana Water Board is authorized to enforce the terms of this permit under several provisions of the Water Code, including, but not limited to, sections 13268, 13385, 13386, and 13387.

B. The CWA provides that any person who violates section 301, 302, 306, 307, 308, 318 or 405 of the CWA, or any permit condition or limitation implementing any such sections in a permit issued under section 402, or any requirement imposed in a pretreatment program approved under sections 402(a)(3) or 402(b)(8) of the CWA is subject to a civil penalty not to exceed $25,000 per day for each violation. The CWA provides that any person who negligently violates sections 301, 302, 306, 307, 308, 318, or 405 of the CWA, or any condition or limitation implementing any of such sections in a permit issued under section 402 of the CWA, or any requirement imposed in a pretreatment program approved under section 402(a)(3) or 402(b)(8) of the CWA, is subject to criminal penalties of $2,500 to $25,000 per day of violation, or imprisonment of not more than one (1) year, or both. In the case of a second or subsequent conviction for a negligent violation, a person shall be subject to criminal penalties of not more than $50,000 per day of violation, or by imprisonment of not more than two (2) years, or both. Any person who knowingly violates such sections, or such conditions or limitations is subject to criminal penalties of $5,000 to $50,000 per day of violation, or imprisonment for not more than three (3) years, or both. In the case of a second or subsequent conviction for a known violation, a person shall be subject to criminal penalties of not more than $100,000 per day of violation, or imprisonment of not more than six (6) years, or both. Any person who knowingly violates section 301, 302, 303, 306, 307, 308, 318 or 405 of the CWA, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of the CWA, and who knows at that time that he thereby places another person in imminent danger of death or serious bodily injury, shall, upon conviction, be subject to a fine of not more than $250,000 or imprisonment of not more than 15 years, or both. In the case of a second or subsequent conviction for a known endangerment violation, a person shall be subject to a fine of not more than $500,000 or imprisonment of not more than 30 years, or both. An organization, as defined in section

309(c)(3)(B)(iii) of the CWA, shall, upon conviction of violating the imminent danger provision, be subject to a fine of not more than $1,000,000 and can be fined up to $2,000,000 for second or subsequent convictions. (40 CFR § 122.41(a)(2), Wat. Code §§ 13385,13387)

C. Any person may be assessed an administrative penalty for violating section 301, 302, 306, 307, 308, 318 or 405 of the CWA, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of the CWA. Administrative penalties for Class I violations are not to exceed $10,000 per violation, with the maximum amount of any Class I penalty assessed not to exceed $25,000. Penalties for Class II violations are not to exceed $10,000 per day for each day during which the violation continues, with the maximum amount of any Class II penalty not to exceed $125,000. (40 CFR § 122.41(a)(3))

D. The CWA provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than $10,000, or by imprisonment for not more than two (2) years, or both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than $20,000 per day of violation, or by imprisonment of not more than four (4) years, or both. (40 CFR § 122.41(j)(5))

E. The CWA provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this Order, including monitoring reports or reports of compliance or noncompliance shall, upon conviction, be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than six months per violation, or by both. (40 CFR § 122.41(k)(2))

(g) ADDITIONAL STANDARD CONDITIONS APPLICABLE TO SPECIFIC CATEGORIES OF NPDES PERMITS [40 CFR SECTION 122.42]

A. *Municipal separate storm sewer systems.* The operator of a large or medium MS4 or a municipal separate storm sewer that has been designated by the Santa Ana Water Board or USEPA under 40 CFR section 122.26(a)(1)(v) shall submit an annual report by the anniversary of the date of the issuance of the permit for such MS4. All reports submitted in compliance with 40 CFR section 122.42(c) shall be submitted electronically by the owner, operator, or the duly authorized representative of the MS4 to the initial recipient, as defined in defined in Standard

Provisions – Reporting Part V.J of this Attachment F, in compliance with 40 CFR section 122.42 and 40 CFR part 3 (including, in all cases, subpart D to part 3), section 122.22, and 40 CFR part 127. The report shall include (40 CFR § 122.42(c)):

1. The status of implementing the components of the stormwater management program that are established as permit conditions (40 CFR § 122.42(c)(1));

2. Proposed changes to the stormwater management programs that are established as permit conditions. Such proposed changes shall be consistent with 40 CFR section 122.26(d)(2)(iii) (40 CFR § 122.42(c)(2)); and

3. Revisions, if necessary, to the assessment of controls and the fiscal analysis reported in the permit application under 40 CFR section 122.26(d)(2)(iv) and (d)(2)(v) (40 CFR § 122.42(c)(3));

4. A summary of data, including monitoring data, that is accumulated throughout the reporting year (40 CFR § 122.42(c)(4));

5. Annual expenditures and budget for year following each annual report (40 CFR § 122.42(c)(5));

6. A summary describing the number and nature of enforcement actions, inspections, and public education programs (40 CFR § 122.42(c)(6)); and

7. Identification of water quality improvements or degradation (40 CFR § 122.42(c)(7)).