ATTACHMENT E – MONITORING AND REPORTING PROGRAM

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TABLES

ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP)

Section 308 of the federal Clean Water Act (CWA) and sections 122.41(h), (j)-(l), 122.44(i), and 122.48 of title 40 of the Code of Federal Regulations (40 C.F.R.) 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 C.F.R. §§ 122.26(d)(2)(i)(F) & (d)(2)(iii)(D), 122.42(c).) California Water Code section 13383 also authorizes the Los Angeles Water Board to establish monitoring, inspection, entry, reporting, and recordkeeping requirements.[1] This MRP establishes monitoring, reporting, and recordkeeping requirements that implement the federal and California laws and/or regulations.

I. PURPOSE AND SCOPE

A. General Objectives

The general objectives of the Monitoring Program are to:

1. Assess the chemical, physical, and biological impacts of discharges from the municipal separate storm sewer system (MS4) on receiving waters.
2. Assess compliance with receiving water limitations and water quality-based effluent limitations (WQBELs) established to implement Total Maximum Daily Loads (TMDLs) during wet weather and dry weather.
3. Characterize pollutant loads in MS4 discharges.
4. Identify sources of pollutants in MS4 discharges.
5. Assess the overall health and evaluate long-term trends in receiving water quality.
6. Measure and improve the effectiveness of pollutant controls implemented under the Order.

B. Purpose

The results of the monitoring requirements outlined below shall be used to refine control measures for the reduction of pollutant loading and the protection and enhancement of the beneficial uses of the receiving waters in the Region. Furthermore, the monitoring program allows Permittees to coordinate monitoring efforts on a watershed or subwatershed basis to leverage monitoring resources in an effort to increase cost-efficiency and effectiveness and to closely align monitoring with TMDL monitoring requirements, and if Permittee(s) are participating, closely align monitoring with Watershed Management Programs.

C. Monitoring Program Elements

The Monitoring Program shall include the following elements:

1. **Receiving water monitoring** shall be performed at previously designated mass emission stations, TMDL receiving water compliance points (as designated in the most recently approved Monitoring Plans as identified in Table E-1 and Table E-2 of this MRP), and additional receiving water locations representative of the impacts from MS4 discharges. The objectives of the receiving water monitoring include the following:

[1] *In the Matter of the Petitions of The City of Oceanside, Fallbrook Public Utilities District, and the Southern California Alliance of Publicly Owned Treatment Works*, For Review of WDR Order Nos. R9-2019-0166 [NPDES No. CA0107433] and R9-2019-0169 [NPDES No. CA0108031] ("*Fallbrook*"), State Water Resource Control Board Order WQ 2021-0005 at pp. 12-13 & n.31 (the plain language of section 13383 alone provides the Board the authority to establish monitoring and reporting requirements for MS4 discharges, and is consistent with the Clean Water Act).

a. Determine whether the receiving water limitations are being achieved including receiving water limitations derived from TMDL WLAs that apply in-stream,

b. Assess trends in pollutant concentrations over time, or during specified conditions,

c. Determine whether the designated beneficial uses are fully supported as determined by water chemistry, as well as aquatic toxicity and bioassessment monitoring.

2. **Stormwater outfall-based monitoring** shall be performed at outfall monitoring locations that are representative of the land uses within the Permittees' jurisdiction, and at TMDL outfall monitoring locations (as designated in the most recently approved Monitoring Plans as identified in Table E-1 and Table E-2 of this MRP). The objectives of the stormwater outfall-based monitoring program include the following:

   a. Determine whether a Permittee's discharge is in compliance with applicable stormwater WQBELs derived from TMDL WLAs that apply at the outfall,

   b. Determine whether a Permittee's discharge causes or contributes to an exceedance of receiving water limitations that apply in-stream.

3. **Non-stormwater outfall-based monitoring** shall be performed at TMDL outfall monitoring locations (as designated in the most recently approved Monitoring Plans as identified in Table E-1 and Table E-2 of this MRP) and additional outfalls with significant non-stormwater (NSW) discharges that remain unaddressed after source identification. The objectives of the non-stormwater outfall-based monitoring program include the following:

   a. Determine whether a Permittee's discharge is in compliance with applicable non-stormwater WQBELs derived from TMDL WLAs that apply at the outfall,

   b. Determine whether a Permittee's discharge contributes to or causes an exceedance of receiving water limitations that apply in-stream,

   c. Assist a Permittee in identifying illicit discharges as described in Part VIII.I of the Order.

4. **Regional studies** are encouraged to further characterize the impact of the MS4 discharges on the beneficial uses of the receiving waters. Appropriate regional studies include the Southern California Stormwater Monitoring Coalition (SMC) Regional Watershed Monitoring Program, Southern California Bight Project, and special studies as specified in this MRP Parts X and XI, and approved TMDLs (see Part XV TMDL Reporting).

II. GENERAL MONITORING PROVISIONS

A. Monitoring shall be conducted in accordance with the requirements specified in Attachment D of the Order (Part III, Standard Provisions – Monitoring).

B. Records of monitoring information shall include information required under Attachment D of the Order (Part IV, Standard Provisions – Records).

C. All applications, reports, plans, or other information submitted to the Los Angeles Water Board, State Water Board, and/or U.S. EPA shall be signed and certified in accordance with Attachment D of the Order (Part V.B, Standard Provisions - Reporting, Signatory and Certification Requirements).

D. Monitoring results shall be reported in accordance with the requirements specified in Attachment D of the Order (Part V.C, Standard Provisions - Reporting, Monitoring Reports).

E. All monitoring and reporting shall be conducted in accordance with the Standard Monitoring Provisions specified in Part XIII of this MRP.

F. Unless otherwise indicated in this MRP, if the Permittee(s) wishes to modify any monitoring requirements specified in this MRP including an approved Monitoring Program (e.g., reduce or eliminate monitoring of specified pollutants, reduce monitoring frequencies, change monitoring locations), then the Permittee(s) shall submit a written request to the Executive Officer of the Los Angeles Water Board for approval prior to making any modifications. This provision may be waived if the Los Angeles Water Board determines that the modification is (a) minor and (b) does not otherwise violate any applicable provision of law.

G. Sampling Methods

1. Sampling methods shall be implemented as per the Standard Provisions for Monitoring described in Attachment D of the Order and Part XIII of this MRP.

2. Grab samples shall be taken for constituents that are required to be collected as such (e.g., pathogen indicator bacteria, oil and grease, cyanides, and volatile organics); in instances where grab samples are generally expected to be sufficient to characterize water quality conditions (primarily dry weather); and where the sample location limits Permittees' ability to install an automated sampler.

3. At a minimum, a sufficient volume of sample must be collected to perform all the required biological and chemical tests, including TIEs where aquatic toxicity is observed during the sample event.

4. Monitoring methods for trash shall be conducted in accordance with the applicable requirements specified in Part III.B and Part IV.B.3 of the Order.

5. Flow may be estimated using U.S. EPA methods at receiving water monitoring locations, where flow measuring equipment is not in place.

6. Flow may be estimated for stormwater outfall monitoring based on drainage area, impervious cover, and precipitation data.

H. Analytical Procedures

1. All monitoring, sampling, sample preservation, and analyses must be conducted according to sufficiently sensitive test procedures approved under 40 CFR Part 136 for the analysis of pollutants, unless another test procedure is required under 40 CFR subchapter N or is otherwise specified in the Order for such pollutants. (40 CFR section 122.41(j)(4); 40 CFR § 122.21(e)(3); 79 Fed. Reg. 49001 (Aug. 19, 2014).)

2. Suspended-Sediment Concentration (SSC) shall be analyzed per American Society for Testing and Materials (ASTM) Standard Test Method D-3977-97.

3. For polychlorinated biphenyls (PCBs) in aqueous samples, Permittees are encouraged to conduct their analysis using a high-resolution EPA-approved method with recommended Reporting Levels of at least 20 pg/L for ocean waters and 170 pg/L for non-ocean marine waters and freshwater for each congener[2]. At a minimum, PCBs shall be analyzed for all 55 PCB congeners listed in Table A-7 of the Water Quality Control Plan for Enclosed Bays and Estuaries – Part 1, Sediment Quality Provisions.

4. Trash shall be analyzed in accordance with the applicable requirements specified in Part III.B and Part IV.B.3 of the Order.

5. Aquatic toxicity shall be monitored in accordance with Part IX of this MRP.

6. All parameters shall be analyzed according to the Standard Provisions for Monitoring described in Attachment D of the Order and Part XIII of this MRP.

[2] Non-ocean marine waters include enclosed bay, estuarine, and coastal lagoon waters.

7. Permittees shall use sufficiently sensitive analytical test methods that are consistent with 40 CFR Parts 122 and 136, and 40 CFR chapter I, subchapters N. While attainment of recommended Reporting Levels in Table E-6 of this MRP are not required, Permittees are encouraged to attain these recommended Reporting Levels to ensure that analytical test methods are capable of detecting and measuring constituents at, or below the applicable receiving water limitations and/or WQBELs.

I. Laboratory Certification. Laboratories analyzing monitoring samples shall be certified by the State Water Board's Division of Drinking Water, Environmental Laboratory Accreditation Program (ELAP), and must include quality assurance/quality control (QA/QC) data with their reports. The Permittee shall provide a copy of the laboratory certification to the Los Angeles Water Board with their submittal of the Monitoring Report each time a new certification and/or renewal of the certification is obtained from ELAP.

J. Standard Operating Procedures (SOPs). For any monitoring conducted under this MRP, Permittees shall continue to develop and maintain Standard Operation Procedures (SOP or SOPs). An SOP consists of five elements: Title page, Table of Contents, Procedures, Quality Assurance/Quality Control (QA/QC), and References. The SOP shall:

1. Briefly describe the purpose of the work or process, including any regulatory information or standards that are appropriate to the process, and the scope to indicate what is covered.

2. Denote what sequential procedures should be followed, divided into significant sections; e.g., possible interferences, equipment needed, equipment/instrument maintenance and calibration, personnel qualifications, and safety considerations.

3. Describe QA/QC activities and list any cited or significant references.

4. Include copies of field form templates.

III. MONITORING PROGRAMS

Los Angeles County Permittees shall continue to implement the most recent version of the monitoring programs specified in Table E-1 of this MRP until those monitoring programs are revised per this MRP. Ventura County Permittees shall develop an Integrated Monitoring Program (IMP) or Coordinated Integrated Monitoring Program (CIMP). Required elements of an IMP and CIMP and a schedule to revise or develop an IMP/CIMP are described below in this Part III.

A. Integrated Monitoring Program (IMP)

1. An Integrated Monitoring Program (IMP) provides flexibility to allow each Permittee to satisfy the monitoring requirements in this MRP. The IMP may leverage monitoring resources by selecting monitoring locations, parameters, or monitoring techniques that will satisfy multiple monitoring requirements.

2. The requirements of an approved TMDL Monitoring Plan may be modified by an IMP that is subsequently approved by the Executive Officer of the Los Angeles Water Board.

3. Where appropriate, the IMP may utilize alternative approaches to meet the General Objectives (Part I.A of this MRP). Sufficient justification shall be provided in the IMP for the alternative approach(es). Such alternative approaches shall be subject to public review and final approval by the Los Angeles Water Board Executive Officer.

4. At a minimum, the IMP must address all TMDL and non-TMDL monitoring requirements in this MRP, including receiving water monitoring, stormwater outfall-based monitoring, non-stormwater outfall-based monitoring, unless otherwise addressed by a separate Monitoring Plan(s).

B. Coordinated Integrated Monitoring Program (CIMP)

1. A Coordinated Integrated Monitoring Program (CIMP) provides flexibility to allow multiple Permittees to collaborate on a watershed or subwatershed basis to satisfy the monitoring requirements in the Order. Permittees are encouraged to coordinate their monitoring programs with other Permittees to develop and implement a CIMP. The CIMP may be county-wide or limited to a single watershed, or sub-watershed.

2. Benefits of the CIMP Approach

a. The CIMP may leverage monitoring resources by selecting monitoring locations, parameters, or monitoring techniques that will satisfy multiple monitoring requirements.

b. The CIMP provides Permittees opportunities to increase the cost efficiency and effectiveness of the monitoring program. The greatest efficiency may be achieved when a CIMP is designed and implemented on a watershed basis.

c. If Permittees opt to participate in regional studies, a CIMP may be employed to implement regional studies, where a single Permittee takes the lead in directing the study, and the other Permittees provide funding or in lieu services.

3. The requirements of an approved TMDL Monitoring Plan may be modified by a CIMP that is subsequently approved by the Executive Officer of the Los Angeles Water Board.

4. Where appropriate, the CIMP may utilize alternative approaches to meet the General Objectives (Part I.A of this MRP). Sufficient justification shall be provided in the CIMP for the alternative approach(es). Such alternative approaches shall be subject to public review and final approval by the Los Angeles Water Board Executive Officer.

5. A CIMP shall address all TMDL and non-TMDL monitoring requirements in this MRP, including receiving water monitoring, stormwater outfall-based monitoring, non-stormwater outfall-based monitoring.

C. Monitoring Requirements for IMP and/or CIMP

The IMP and/or CIMP must contain the following information:

1. General

a. A list of the participating Permittee(s).

b. A map (preferably GIS) delineating the geographic boundaries of the monitoring program including the receiving waters, the MS4 catchment drainages and outfalls, subwatershed boundaries (i.e., HUC 12), political boundaries, land use, and the proposed monitoring locations for both dry weather/non-stormwater and wet weather/stormwater monitoring.

c. Proposed monitoring locations and an explanation of how and why monitoring at the proposed locations will provide representative measurement of the effects of the MS4 discharges on the receiving water.

d. Alternative monitoring proposal(s) for any of the monitoring requirements in this MRP and a rationale for the alternative proposal(s) (e.g., monitoring location, monitoring frequency, wet/dry weather criteria, constituents to monitor).

e. A description of how the Permittee(s) is implementing monitoring requirements in this MRP (i.e., TMDL compliance monitoring, receiving water monitoring, stormwater outfall based monitoring, non-stormwater outfall-based screening and monitoring, and aquatic toxicity monitoring).

f. If monitoring will occur at new locations not previously monitored and a Permittee(s) opts to install new monitoring infrastructure, the Permittee(s) shall propose a time schedule specifying when monitoring will commence at these stations.

g. Test species sensitivity screening results for aquatic toxicity per Part IX.H.3 of this MRP.

2. TMDLs

a. A description of how the Permittee(s) is fulfilling its obligations for TMDL compliance monitoring under an IMP, CIMP, or other monitoring plan(s). TMDL compliance monitoring shall be consistent with the recommendations within the TMDL and align with the requirements in Attachments K through S of the Order.

b. A list of applicable TMDLs and TMDL compliance points, based on approved TMDL Monitoring Plans and/or as identified in the Basin Plan or U.S. EPA established TMDL.

c. Identification of the proposed monitoring locations that fulfill the TMDL Monitoring Plan(s) requirements.

d. Shoreline Monitoring Locations shall be monitored for bacterial indicators (e.g., total coliform, fecal coliform (or *E. coli*), and enterococcus) consistent with the applicable bacteria TMDL per the frequency proposed in a Monitoring Plan.

3. Mass Emission/Receiving Water Monitoring

a. Location and description of receiving water locations,

b. A description of how the Permittee(s) is contributing to the monitoring of mass emission stations or a discussion of why monitoring at mass emission stations is not being supported.

4. Stormwater Outfall-Based Monitoring

a. Stormwater discharges from the MS4 shall be monitored at outfalls and/or alternative access points such as manholes or in channels at the Permittee's jurisdictional boundary.

b. The Permittee(s) shall consider the following criteria when selecting outfalls for stormwater discharge monitoring:

i. The stormwater outfall-based monitoring program should ensure representative data by monitoring at least one major outfall per subwatershed (HUC 12) drainage area, within the Permittee's jurisdiction, or alternate approaches as approved in an IMP and/or CIMP.

ii. The drainage(s) to the selected outfall(s) shall be representative of the land uses within the Permittee's jurisdiction.

iii. If a Permittee is implementing an IMP, to the extent possible, the selected outfalls shall not receive drainage from another jurisdiction. If this is not possible, the Permittee shall conduct "upstream" and "downstream" monitoring as the system enters and exits the Permittee's jurisdiction.

iv. The Permittee(s) shall select outfalls with configurations that facilitate accurate flow measurement and in consideration of safety of monitoring personnel.

v. The specific location of sample collection may be within the MS4 upstream of the actual outfall to the receiving water if field safety or accurate flow measurement require it.

5. Other Monitoring Requirements

A description of how the Permittee(s) is implementing other monitoring requirements in this MRP (i.e., non-stormwater outfall-based screening and monitoring, aquatic toxicity monitoring, and if applicable, regional studies, and special studies).

D. Schedule for Submitting New/Revised Monitoring Programs

1. Los Angeles County Permittees

a. Within 18 months of the effective date of the Order, Los Angeles County Permittee(s) with an existing Monitoring Program(s), as listed in Table E-1 of this MRP below, shall submit an updated monitoring program(s) for approval by the Executive Officer of the Los Angeles Water Board. Updates shall be consistent with applicable requirements in this MRP, monitoring provisions in applicable TMDLs, and specifically, with Attachments K through S of the Order.

b. The cities of Compton and Gardena, which have a Board Directive for monitoring per Table E-1 of this MRP below, shall develop an IMP or join a CIMP. If developing an IMP, the cities shall submit it to the Los Angeles Water Board for Executive Officer approval no later than 18 months after the effective date of the Order. If joining a CIMP, the cities of Compton and Gardena shall notify the Los Angeles Water Board by the effective date of the Order.

c. Los Angeles County Permittee(s) shall implement the revisions to their monitoring program(s) immediately upon approval, unless otherwise indicated in the approved monitoring program or directed by the Executive Officer of the Los Angeles Water Board.

d. After adoption of the Order, if there is any change in which Permittees are participating in a CIMP, that Permittee shall notify the Los Angeles Water Board promptly. The Permittee(s) shall then revise/develop their monitoring program as directed by the Los Angeles Water Board.

e. Monitoring requirements pursuant to Order No. R4-2012-0175 including MRP No. CI-6948 and Order No. R4-2014-0024 including MRP No. CI-8052 and pursuant to the most recently approved version of the Monitoring Programs in Table E-1 of this MRP shall remain in effect until the Executive Officer of the Los Angeles Water Board approves the respective updated Monitoring Program.

Table E-1. Approved Monitoring Programs by WMAs for Los Angeles County Permittees

Los Angeles County Permittee / Group Name	Monitoring Program	Initial Approval Date
Upper Santa Clara River Watershed Group (Los Angeles County, LACFCD, and city of Santa Clarita)	CIMP	09/02/2015
Upper Los Angeles River Watershed Group (Los Angeles County, LACFCD, and cities of Alhambra, Burbank, Calabasas, Glendale, Hidden Hills, La Cañada Flintridge, Los Angeles, Montebello, Monterey Park, Pasadena, Rosemead, San Fernando, San Gabriel, San Marino, South El Monte, South Pasadena, and Temple City)	CIMP	11/03/2015
Los Angeles River Upper Reach 2 Sub Watershed Group (LACFCD and cities of Bell, Bell Gardens, Commerce, Cudahy, Maywood, and Huntington Park, and Vernon)	CIMP	03/22/2016

Los Angeles County Permittee / Group Name	Monitoring Program	Initial Approval Date
Lower Los Angeles River Watershed Group (LACFCD and cities of Downey, Lakewood, Long Beach, Lynwood, Paramount, Pico Rivera, Signal Hill, and South Gate)	CIMP	09/16/2015
Rio Hondo/San Gabriel River Water Quality Group (Los Angeles County, LACFCD, and cities of Arcadia, Azusa, Bradbury, Duarte, Monrovia, and Sierra Madre)	CIMP	09/27/2015
Upper San Gabriel River Group (Los Angeles County, LACFCD, and cities of Baldwin Park, Covina, Glendora, Industry, La Puente, West Covina, and South El Monte)	CIMP	09/17/2015
East San Gabriel Valley Watershed Management Area Group (cities of Claremont, La Verne, Pomona, and San Dimas)	CIMP	09/23/2015
Lower San Gabriel River Group (LACFCD, and cities of Artesia, Bellflower, Cerritos, Diamond Bar, Downey, Hawaiian Gardens, La Mirada, Lakewood, Long Beach, Norwalk, Pico Rivera, Santa Fe Springs, and Whittier)	CIMP	09/16/2015
Los Cerritos Channel Watershed Group (LACFCD, and cities of Bellflower, Cerritos, Downey, Lakewood, Long Beach, Paramount, and Signal Hill)	CIMP	09/16/2015
Malibu Creek Watershed Group (Los Angeles County, LACFCD, and Agoura Hills, Calabasas, Hidden Hills, and Westlake Village)	CIMP	04/20/2016
Marina del Rey Group (Los Angeles County, LACFCD, and cities of Culver City and Los Angeles)	CIMP	08/21/2016
North Santa Monica Bay Coastal Watersheds Group (Los Angeles County, LACFCD, and city of Malibu)	CIMP	11/03/2015
Santa Monica Bay Watershed Jurisdictions 2 & 3 Group (Los Angeles County, LACFCD, and cities of El Segundo, Los Angeles, and Santa Monica)	CIMP	10/08/2015
Beach Cities Watershed Management Group (LACFCD and cities of Hermosa Beach, Manhattan Beach, Redondo Beach, and Torrance)	CIMP	11/23/2015
Palos Verdes Peninsula Watershed Management Group (Los Angeles County, LACFCD, and cities of Palos Verdes Estates, Rancho Palos Verdes, Rolling Hills Estates, and Rolling Hills)	CIMP	04/20/2016
Ballona Creek Group (Los Angeles County, LACFCD, Beverly Hills, Culver City, Inglewood, Los Angeles, Santa Monica, and West Hollywood)	CIMP	11/05/2015
Dominguez Channel Watershed Management Area Group (Los Angeles County, LACFCD, and cities of Carson, El Segundo, Hawthorne, Inglewood, Lawndale, Lomita, and Los Angeles)	CIMP	12/21/2015
Alamitos Bay/Los Cerritos Channel Group (Los Angeles County and LACFCD)	CIMP	09/22/2015

Los Angeles County Permittee / Group Name	Monitoring Program	Initial Approval Date
Santa Monica Bay Watershed Jurisdiction 7 Group (LACFCD and city of Los Angeles)	CIMP	02/20/2017
City of Compton	Board Directive	09/05/2016
City of El Monte	IMP	01/20/2016
City of Gardena	Board Directive	11/21/2016
City of Irwindale	IMP	02/18/2016
City of La Habra Heights	IMP	11/02/2015
City of Rolling Hills	NSW Screening & Monitoring Program	12/08/2014
City of Walnut	IMP	09/04/2015
City of Long Beach: Nearshore Watersheds (Port)	IMP	07/06/2016
City of Long Beach: Nearshore Watersheds (Non-Port)	IMP	12/03/2016

2. Ventura County Permittees

a. Ventura County Permittee(s) shall develop an IMP or CIMP or join an existing CIMP designed to satisfy the monitoring requirements in this MRP. Within 3 months of the effective date of the Order, Ventura County Permittee(s) shall submit a NOI to the Executive Officer of the Los Angeles Water Board describing whether it intends to develop in an IMP or CIMP or join an existing CIMP.

b. Ventura County Permittee(s) shall submit the new or updated IMP or CIMP to the Executive Officer of the Los Angeles Water Board for approval within 24 months after the effective date of the Order.

c. Ventura County Permittee(s) shall commence monitoring within 30 days after approval of the IMP, or within 90 days after approval of the CIMP unless otherwise directed by the Executive Officer of the Los Angeles Water Board.

d. Monitoring requirements pursuant to Order No. 2010-0108 including MRP No. CI-7388 and pursuant to the most recently approved version of the Monitoring Plans in Table E-2 shall remain in effect until the Executive Officer of the Los Angeles Water Board approves the IMP(s) or CIMP(s).

Table E-2. TMDL Monitoring Plans by WMA for Ventura County Permittees

TMDL	Comment	Date of Final Plan	Los Angeles Water Board Approval Date
Ventura River Watershed Management Area			
Ventura River and its Tributaries Algae, Eutrophic Conditions, and Nutrients TMDL	Ventura River and Tributaries Algae, Eutrophic Conditions, and Nutrients Total Maximum Daily Load Draft Comprehensive Monitoring Plan for Receiving Waters	June 27, 2014	October 20, 2014
Ventura River Estuary Trash TMDL	Ventura River Estuary Trash Monitoring and Reporting Plan (TMRP) – Addendum No. 1	October 22, 2014	October 23, 2013
Miscellaneous Ventura County Coastal Watershed Management Area			

TMDL	Comment	Date of Final Plan	Los Angeles Water Board Approval Date
Harbor Beaches of Ventura County (Kiddie Beach and Hobie Beach) Bacteria TMDL	Ocean Water Quality Monitoring Program by Ventura County Environmental Health	N/A	Board approval not required unless modifying the existing monitoring frequency or location.
Santa Clara River Watershed Management Area			
Santa Clara River Estuary and Reaches 3, 5, 6, and 7 Indicator Bacteria TMDL	Final In-Stream Compliance Monitoring Plan for Santa Clara River Estuary and Reach 3 Bacteria Total Maximum Daily Load	May 10, 2016	April 11, 2016
Santa Clara River Nitrogen Compounds TMDL	Comprehensive Water Quality Monitoring Plan for the Santa Clara River Watershed	March 2006	Has not been approved yet
Santa Clara River Reach 3 Chloride TMDL	U.S. EPA Established TMDL	N/A	N/A
Upper Santa Clara River Chloride TMDL	Monitoring Plan was not required.	N/A	N/A
Calleguas Creek Watershed Management Area			
Calleguas Creek Nitrogen Compounds and Related Effects TMDL	Calleguas Creek Watershed Management Plan Quality Assurance Project Plan Revision No.4	September 8, 2020	May 24, 2021
Calleguas Creek, its Tributaries, and Mugu Lagoon OC Pesticides TMDL	Calleguas Creek Watershed Management Plan Quality Assurance Project Plan Revision No.4	September 8, 2020	May 24, 2021
Calleguas Creek, its Tributaries, and Mugu Lagoon Toxicity TMDL	Calleguas Creek Watershed Management Plan Quality Assurance Project Plan Revision No.4	September 8, 2020	May 24, 2021
Calleguas Creek, its Tributaries, and Mugu Lagoon Metals TMDL	Calleguas Creek Watershed Management Plan Quality Assurance Project Plan Revision No.4	September 8, 2020	May 24, 2021
Calleguas Creek Watershed Salts TMDL	Calleguas Creek Watershed Management Plan Quality Assurance Project Plan Revision No.4	September 8, 2020	May 24, 2021
Revolon Slough and Beardsley Wash Trash TMDL	Revolon Slough/ Beardsley Wash Trash Monitoring and Reporting Plan (TMRP)-Addendum No. 2	August 6, 2020	June 4, 2021

TMDL	Comment	Date of Final Plan	Los Angeles Water Board Approval Date
Oxnard Drain TMDL for Pesticides, PCBs, and Sediment Toxicity	U.S. EPA Established TMDL	N/A	N/A
Santa Monica Bay Watershed Management Area			
Santa Monica Beaches Bacteria TMDL (wet and dry)	Santa Monica Bay Beaches Bacteria TMDL Coordinated Shoreline Monitoring Plan	April 7, 2004	April 28, 2004
Santa Monica Bay Nearshore and Offshore Debris TMDL	Submission for Malibu Creek Watershed Trash TMDL satisfies the requirement for a TMRP	--	--
	Plastic Pellets Monitoring and Reporting Plan (PMRP) Exemption Request	April 26, 2013	August 30, 2013
Malibu Creek Subwatershed			
Malibu Creek and Lagoon Bacteria TMDL	Malibu Creek and Lagoon Bacteria TMDL Compliance Monitoring Plan	February 25, 2008	April 8, 2008
Malibu Creek Watershed Trash TMDL	Trash Monitoring and Reporting Program Update for the Malibu Creek Watershed Trash TMDL	August 6, 2020	June 3, 2021
Implementation Plan for the U.S. EPA-Established Malibu Creek Nutrients TMDL and the U.S. EPA-Established Malibu Creek and Lagoon Sedimentation and Nutrients TMDL to Address Benthic Community Impairments	(U.S. EPA Established TMDL) Monitoring Plan due May 16, 2019	No Monitoring Plan received	--

IV. MONITORING LOCATIONS FOR VENTURA COUNTY PERMITTEES

A. Receiving Water Monitoring Locations

1. Inland Receiving Water Monitoring Locations

a. Ventura County Permittee(s) shall include the following receiving water monitoring[3] locations listed below in Table E-3 of this MRP in their IMP or CIMP and continue to monitor at these locations:

[3] These receiving water monitoring locations were known as mass emissions stations in the previous Ventura County MS4 Permit Order No. R4-2010-0108.

Table E-3. Receiving Water Monitoring Locations

Receiving Water	Monitoring Location Name	Monitoring Location Description
Ventura River	ME-VR2	Ventura River at Ojai Valley Sanitation District Latitude: 34.34305° Longitude: - 119.29888°
Santa Clara River	ME-SCR	Santa Clara River at Freeman Diversion Latitude: 34.29917° Longitude: -119.10722°
Calleguas Creek	ME-CC	Calleguas Creek at Camarillo Street Latitude: 34.17917° Longitude: -119.03889°

b. Notwithstanding subpart a above, Ventura County Permittees may propose additional or alternative monitoring locations in their IMP or CIMP as necessary to satisfy the requirements of this MRP.

c. In the IMP or CIMP, Ventura County Permittee(s) shall propose a receiving water monitoring location in the Malibu Creek subwatershed within Ventura County. This monitoring location shall be representative of the impacts from MS4 discharges.

2. Shoreline Monitoring Locations

Ventura County Permittees shall continue to monitor for indicator bacteria (i.e., fecal coliform (or E. coli) and enterococcus) at the following shoreline monitoring locations listed below in Table E-4 of this MRP and, shall include these monitoring locations in their IMP or CIMP. Sampling for indicator bacteria at shoreline monitoring locations shall be conducted once a week, at a minimum.

Table E-4. Shoreline Monitoring Locations

Site ID	Site Description	Monitoring Location Latitude (North)	Monitoring Location Longitude (West)	Receiving Water
2500	La Conchita Beach	34.36420º	-119.45010º	Pacific Ocean
13000	Surfer's Point at Seaside Park – end of the access path via wooden gate	34.27301º	-119.30503º	Pacific Ocean
14000	Promenade Park Beach – Figueroa Street	34.27441º	-119.29764º	Pacific Ocean
15000	Promenade Park Beach – Redwood Apts	34.27534º	-119.29548º	Pacific Ocean
17000	Promenade Park Beach – Calif. Street	34.27566º	-119.29303º	Pacific Ocean
18000	San Buenaventura State Beach - Kalorama Street	34.27362º	-119.28883º	Pacific Ocean

Site ID	Site Description	Monitoring Location Latitude (North)	Monitoring Location Longitude (West)	Receiving Water
19000	San Buenaventura State Beach – south of drain at San Jon Road	34.27223º	-119.28518º	Pacific Ocean
20000	San Buenaventura State Beach – Dover Lane	34.26587º	-119.27786º	Pacific Ocean
21000	San Buenaventura State Beach – Waymouth Lane	34.25690º	-119.27153º	Pacific Ocean
29000	Oxnard Beach – 5th Street	34.19789º	-119.24869º	Pacific Ocean
30000	Oxnard Beach – Outrigger Way	34.19035º	-119.24458º	Pacific Ocean
32000	Oxnard Beach Park – Falkrik Avenue	34.17873º	-119.23846º	Pacific Ocean
33000	Oxnard Beach Park – Starfish Drive	34.17652º	-119.23708º	Pacific Ocean
39000	Silverstrand Beach – S. Paula	34.15244º	-119.22010º	Pacific Ocean
40000	Silverstrand Beach - Sawtelle	34.14739º	-119.21683º	Pacific Ocean

B. Stormwater Outfall-Based Monitoring Locations

In lieu of monitoring at least one major outfall per subwatershed (HUC 12) drainage area, within the Permittee's jurisdiction, Ventura County Permittee(s) shall continue to monitor the following monitoring locations in Table E-5 of this MRP and shall include these monitoring locations in their IMP or CIMP. The drainage(s) to the selected stormwater outfall(s) shall be representative of the land uses within the Ventura County Permittee's jurisdiction:

Table E-5. Stormwater Outfall Monitoring Locations

Permittee	Major Outfalls / Locations	Monitoring Location Latitude (North)	Monitoring Location Longitude (West)	Receiving Water / Watershed
Camarillo	MO-CAM / Camarillo Hills Drain	34.219517º	- 119.066053º	Tributary to Revolon Slough / Calleguas Creek Watershed
Ojai	MO-OJA / Fox Canyon Drain	34.444744º	- 119.241219º	Tributary to San Antonio Creek / Ventura River Watershed

Permittee	Major Outfalls / Locations	Monitoring Location Latitude (North)	Monitoring Location Longitude (West)	Receiving Water / Watershed
Unincorporated Ventura County	MO-MEI / Happy Valley Drain	34.445539º	- 119.290319º	Tributary to Ventura River / Ventura River Watershed
Ventura	MO-VEN / Moon Ditch	34.243561º	- 119.194986º	Tributary to Santa Clara River / Santa Clara River Watershed
Fillmore	MO-FIL / North Fillmore Drain	34.404586º	-118.930686º	Tributary to Sespe Creek / Santa Clara River Watershed
Moorpark	MO-MPK / Walnut Canyon Drain	34.279053º	- 118.905425º	Tributary to Arroyo Las Posas / Calleguas Creek Watershed
Oxnard	MO-OXN / El Rio Drain	34.236139º	- 119.184425º	Tributary to Santa Clara River / Santa Clara River Watershed
Port Hueneme	MO-HUE / Hueneme Drain	34.140808º	- 119.188217º	Tributary to Tsumas Creek[4] at the Pacific Ocean / Miscellaneous Ventura County Coastal Watersheds
Santa Paula	MO-SPA / 11th Street Drain (Santa Paula Airport)	34.348608º	- 119.055506º	Tributary to Santa Clara River / Santa Clara River Watershed
Simi Valley	MO-SIM / Bus Canyon Drain	34.272097º	- 118.783736º	Tributary to Arroyo Simi / Calleguas Creek Watershed
Thousand Oaks	MO-THO / North Fork Arroyo Conejo	34.213311º	- 118.921397º	Tributary to Conejo Creek / Calleguas Creek Watershed

1. Notwithstanding Part IV.B above, Ventura County Permittees may propose additional or alternative monitoring locations in their IMP or CIMP as necessary to satisfy the requirements of this MRP.

2. Ventura County Permittee(s) shall propose an outfall monitoring location in Malibu Creek subwatershed within Ventura County in their IMP or CIMP.

[4] Tsumas Creek was formerly known as J Street Drain.

V. RECEIVING WATER MONITORING REQUIREMENTS

A. Minimum Wet Weather Receiving Water Monitoring Requirements

All Permittees shall incorporate in their monitoring program the following minimum requirements for monitoring the receiving water during wet weather conditions:

1. Unless required more frequently by an applicable TMDL, the receiving water shall be monitored a minimum of three times per water year during wet weather for all parameters, except aquatic toxicity which must be monitored at least once per water year during wet weather.

2. Monitoring shall be performed in the receiving water during wet weather conditions, defined for the purposes of this monitoring program as follows:

a. Monitoring shall occur during wet weather conditions, including targeting the first significant storm event of the water year following the criteria below, and at least two additional wet weather events within the same wet season.

i. First Significant Storm Event. Permittees shall target the first storm event of the water year with a predicted rainfall of at least 0.25 inch at a seventy percent probability of rainfall at least 24 hours prior to the event start time.

ii. Subsequent Wet Weather Events. Permittees shall target subsequent storm events that forecast sufficient rainfall and runoff to meet program objectives and site-specific study needs. Wet weather is defined as greater than or equal to 0.1 inch of precipitation, as measured from the nearest Los Angeles County or Ventura County Watershed Protection District controlled rain gauge within the watershed.

b. As an alternative to subpart a above, Permittees may propose:

i. An alternative precipitation threshold in a Monitoring Program for Los Angeles Water Board Executive Officer approval and/or,

ii. A precipitation threshold as defined by applicable TMDLs within the watershed.

c. Sampling events shall be separated by a minimum of three days of dry conditions (less than 0.1 inch of rain each day).

3. Receiving water monitoring during wet weather shall be conducted as soon as possible (within 6 hours)[5] of starting stormwater outfall-based monitoring, to be reflective of potential impacts from MS4 discharges.

4. At a minimum, the following parameters shall be monitored during wet weather unless a surrogate pollutant has been approved by the Executive Officer of the Los Angeles Water Board.

a. Flow,

b. Pollutants assigned a wet weather receiving water limitation derived from TMDL WLAs (see Attachments K through S of the Order) and parameters to determine compliance with receiving water limitations,

[5] Marine waters receiving water monitoring where a boat is used to collect samples during wet weather shall be conducted as soon as conditions are safe for small crafts (as defined by the National Oceanic and Atmospheric Administration's) to be reflective of potential impacts from MS4 discharges.

c. Other pollutants identified on the CWA section 303(d) List for the receiving water or downstream receiving waters. Permittees may propose in a Monitoring Program not to monitor for specific 303(d) listed pollutant(s), if one or more of the following applies:

i. If the Permittee(s) demonstrates, using recent monitoring data, that the waterbody is no longer impaired; and/or

ii. If the Permittees(s) demonstrates, using relevant information, that there is no MS4 source causing or contributing to the impairment in the receiving water.

d. Total Suspended Solids (TSS) and hardness, when metals are monitored,

e. Suspended-Sediment Concentration (SSC) if the receiving water is listed on the CWA section 303(d) list for sedimentation, siltation or turbidity,[6]

f. Field measurements applicable to inland freshwater bodies only: pH, dissolved oxygen, temperature, and specific conductivity,

g. Aquatic Toxicity (once per water year, during first storm event of the water year).

5. Additionally, the screening parameters in Table E-6 of this MRP shall be monitored during wet weather in the first water year during the first significant rain event. If a parameter is at or below the Reporting Level (RL) per Part II.H.7 of this MRP, or the result is below the lowest applicable water quality objective, and is not otherwise identified in subparts 4.a-4.g above, it need not be further analyzed. Otherwise, the parameter shall be analyzed for the remainder of the Order during wet weather at the receiving water monitoring location where the exceedance was found. The Permittee(s) may propose in a Monitoring Program not to monitor for specific constituents in Table E-6 of this MRP if it is not a constituent listed above in subparts 4.a-4.g and the Permittee(s) demonstrates with relevant information that there is no MS4 source causing or contributing to exceedances in the receiving water and/or recent data shows that the result is at or below the RL per Part II.H.7 of this MRP, or below the lowest applicable water quality objective.

B. Minimum Dry Weather Receiving Water Monitoring Requirements

All Permittees shall incorporate the following minimum requirements for monitoring the receiving water during dry weather conditions:

1. Unless required more frequently by an applicable TMDL, the receiving water shall be monitored a minimum of two times per water year during dry weather for all parameters, except aquatic toxicity which must be monitored at least once per water year during dry weather.

a. Historically Driest Month. One of the dry weather monitoring events shall be during the month with the historically lowest instream flows. Where instream flow data are not available, monitoring shall occur during the historically driest month. Dry weather occurs on days with less than 0.1 inch of rain as measured from the nearest Los Angeles County or Ventura County Watershed Protection District controlled rain gauge within the watershed.

b. Additional Dry Weather Event. The additional dry weather monitoring event shall occur on days with less than 0.1 inch of rain as measured from the nearest Los Angeles County or Ventura County Watershed Protection District controlled rain gauge within the watershed.

[6] Gray, John, R., G. Douglas Glysson, Lisa M. Turcios, and Gregory E. Schwarz. 2000. *Comparability of Suspended-*Sediment Concentration and Total Suspended Solids Data. United States Geological Survey. Water Resources Investigations Report 00-4191. August 2000.

2. As an alternative to subpart 1 above, Permittees may propose:

a. An alternative criterion in a Monitoring Program for Los Angeles Water Board Executive Officer approval and/or,

b. A criterion as defined by applicable TMDLs within the watershed.

3. Dry weather sampling shall occur at least three days after a rain event of 0.1 inch or greater.

4. At a minimum the following parameters shall be monitored during dry weather, unless a surrogate pollutant has been approved by the Executive Officer of the Los Angeles Water Board:

a. Flow,

b. Pollutants assigned a dry weather receiving water limitation derived from TMDL WLAs (see Attachments K through S of the Order) and parameters to determine compliance with receiving water limitations,

c. Other pollutants identified on the CWA section 303(d) List for the receiving water or downstream receiving waters. Permittees may propose in a Monitoring Program not to monitor for 303(d) listed pollutant(s) if one or more of the following applies:

i. If the Permittee(s) demonstrates, using recent monitoring data, that the receiving water is no longer impaired by the 303(d) listed pollutant(s); and/or

ii. If the Permittees(s) demonstrates, using relevant information, that there is no MS4 source causing or contributing to the impairment in the 303(d) listed receiving water.

d. TSS and hardness, when metals are monitored,

e. Suspended-Sediment Concentration (SSC) if the receiving water is listed on the CWA section 303(d) list for sedimentation, siltation or turbidity,

f. Field measurements for monitoring of inland freshwater bodies: dissolved oxygen, pH, temperature, and specific conductivity,

g. Aquatic Toxicity (once per water year, during the historically driest month).

5. Additionally, the parameters in Table E-6 shall be monitored during dry weather in the first water year during the historically driest weather event. If a parameter is at or below the Reporting Level (RL) per Part II.H.7 of this MRP, or the result is below the lowest applicable water quality objective, and is not otherwise identified in subparts 4.a-4.g above, it need not be further analyzed. Otherwise, the parameter shall be analyzed for the remainder of the Order during dry weather at the receiving water monitoring location where the exceedance was found. The Permittee(s) may propose in a Monitoring Program not to monitor for specific constituents in Table E-6 of this MRP if it is not a constituent listed above in subparts 4.a-4.g and the Permittee(s) demonstrates with relevant information that there is no MS4 source causing or contributing to exceedances in the receiving water and/or recent data shows that the result is at or below the RL per Part II.H.7 of this MRP, or below the lowest applicable water quality objective.

Table E-6. Core Monitoring Constituents and their Associated Recommended Reporting Levels (RLs)[7]

CONSTITUENTS	Recommended RLs
CONVENTIONAL POLLUTANTS	**mg/L**
Oil and Grease	5
Total Phenols	0.1
Cyanide	0.005
pH	0-14 units
Temperature	N/A
Dissolved Oxygen	N/A
BACTERIA[8]	**MPN/100ml**
Enterococcus (marine waters)	30
Fecal coliform (ocean waters)	200
E. coli (freshwater)	100
GENERAL	**mg/L**
Orthophosphate as P (Dissolved)	0.05
Total Phosphorus	0.05
Turbidity	0.1 NTU
Total Suspended Solids (TSS)	2
Total Dissolved Solids (TDS)	2
Suspended Sediment Concentration (SSC)	5
Total Organic Carbon (TOC)	1
Dissolved Organic Carbon (DOC)	0.2
Total Petroleum Hydrocarbon	5
Biochemical Oxygen Demand (BOD)	2
Chemical Oxygen Demand (COD)	20
Total Ammonia-Nitrogen	0.1
Total Kjeldahl Nitrogen	0.1
Nitrate+Nitrite	0.1
Alkalinity	2
Specific Conductance	1 umho/cm
Total Hardness	2
MBAS	0.5
Chloride	2
Fluoride	0.1
Methyl tertiary butyl ether (MTBE)	0.013
Perchlorate	0.006
METALS (Dissolved & Total)	**µg/L**
Aluminum	87
Antimony	0.5
Arsenic	1
Beryllium	0.5
Cadmium	0.25
Chromium (total)	0.5
Chromium (Hexavalent)	2
Copper	0.5

[7] See Attachment A for RLs, MLs, and MDLs definition.
[8] See Attachment A for definitions of freshwater, marine waters, and ocean waters.

CONSTITUENTS	Recommended RLs
Iron	100
Lead	0.5
Mercury	0.04
Nickel	1
Selenium	1
Silver	0.25
Thallium	0.24
Zinc	1
SEMIVOLATILE ORGANIC COMPOUNDS - ACIDS	**µg/L**
2-Chlorophenol	1
4-Chloro-3-methylphenol (3-Methyl-4-Chlorophenol)	1
2,4-Dichlorophenol	1
2,4-Dimethylphenol	2
2,4-Dinitrophenol	4
2-Nitrophenol	10
4-Nitrophenol	5
Pentachlorophenol	1
Phenol	1
2,4,6-Trichlorophenol	1
SEMIVOLATILE ORGANIC COMPOUNDS - BASE/NEUTRAL	**µg/L**
Acenaphthene	1
Acenaphthylene	1
Anthracene	1
Benzidine	5
1,2 Benzanthracene (benzo[a]anthracene)	1
Benzo(a)pyrene	1
Benzo(g,h,i)perylene (1,12-benzoperylene)	2
3,4 Benzofluoranthene (benzo[b]fluoranthene)	1
Benzo(k)fluoranthene	1
Bis(2-Chloroethoxy) methane	4.4
Bis(2-Chloroisopropyl) ether	2
Bis(2-Chloroethyl) ether	1
Bis(2-Ethylhexyl) phthalate	5
4-Bromophenyl phenyl ether	5
Butyl benzyl phthalate (Benzyl butyl phthalate)	1
2-Chloroethyl vinyl ether (Chloroethyl Vinyl Ether, 2)	1
2-Chloronaphthalene	7.5
4-Chlorophenyl phenyl ether	5
Chrysene	1
Dibenzo(a,h)anthracene	0.1
1,3-Dichlorobenzene	1
1,4-Dichlorobenzene	1
1,2-Dichlorobenzene (Dichlorobenzene, 1,2-)	1
3,3'-Dichlorobenzidine	5
Diethyl phthalate	2
Dimethyl phthalate	2
di-n-Butyl phthalate	3

CONSTITUENTS	Recommended RLs
2,4-Dinitrotoluene	1
2,6-Dinitrotoluene	5
4,6 Dinitro-2-methylphenol (2-Methyl-4,6-dinitrophenol)	5
1,2-Diphenylhydrazine	1
di-n-Octyl phthalate	3
Fluoranthene	0.05
Fluorene	0.1
Hexachlorobenzene	1
Hexachlorobutadiene	1
Hexachloro-cyclopentadiene	1
Hexachloroethane	1
Indeno(1,2,3-c,d)pyrene	0.05
Isophorone	1
Naphthalene	0.2
Nitrobenzene	1
N-Nitrosodimethyl amine	1
N-Nitrosodiphenyl amine	1
N-Nitrosodi-n-propyl amine	1
Phenanthrene	0.05
Pyrene	0.05
1,2,4-Trichlorobenzene	1
CHLORINATED PESTICIDES	**µg/L**
Aldrin	0.005
alpha-BHC (alpha-HCH)	0.01
beta-BHC (beta-HCH)	0.005
delta-BHC (delta-HCH)	0.005
gamma-BHC (lindane) (gamma-HCH)	0.01
alpha-chlordane	0.025
gamma-chlordane	0.025
4,4'-DDD	0.025
4,4'-DDE	0.025
4,4'-DDT	0.005
Dieldrin	0.005
alpha-Endosulfan	0.02
beta-Endosulfan	0.01
Endosulfan sulfate	0.01
Endrin	0.005
Endrin aldehyde	0.01
Heptachlor	0.01
Heptachlor Epoxide	0.01
Toxaphene	0.5
POLYCHLORINATED BIPHENYLS (PCBs)[9, 10]	**pg/L**

[9] For subsequent monitoring after the first water year, PCBs may be monitored once during wet weather and once during dry weather for monitoring locations that are not subject to Toxics TMDLs.

[10] Analysis should include at a minimum, all 55 PCB congeners listed in Table A-7 of the Water Quality Control Plan for Enclosed Bays and Estuaries – Part 1, Sediment Quality Provisions.

CONSTITUENTS	Recommended RLs
Congeners (ocean waters)	20
Congeners (non-ocean marine waters & freshwater)[11]	170
ORGANOPHOSPHATE PESTICIDES	**µg/L**
Atrazine	1
Chlorpyrifos	0.01
Cyanazine	2
Diazinon	0.01
Malathion	0.1
Prometryn	2
Simazine	2
HERBICIDES	**µg/L**
2,4-D	10
Glyphosate	5
Dacthal (DCPA)	0.1
2,4,5-TP(SILVEX)	0.5
PYRETHROIDS	**µg/L**
Bifenthrin	0.002
Cyfluthrin	0.002
Cypermethrin	0.002
Esfenvalerate	0.002
Lambda-cyhalothrin	0.002
Permethrin	0.005
FIPRINOL AND ITS DEGRADATES	**µg/L**
Fipronil	0.002
Fipronil Sulfide	0.002
Fipronil Sulfone	0.002
Fipronil Desulfinyl	0.002
NEONICOTINOIDS	**µg/L**
Imidacloprid	0.5

VI. STORMWATER OUTFALL-BASED MONITORING REQUIREMENTS

A. Minimum Wet Weather Stormwater Outfall-based Monitoring Requirements

All Permittees shall incorporate in their monitoring program the following minimum requirements for monitoring stormwater at outfalls:

1. Unless required more frequently by an applicable TMDL, stormwater discharges shall be monitored a minimum of three times per water year for all parameters except aquatic toxicity.

2. Monitoring shall be performed at the outfalls during wet weather conditions, defined for the purposes of this monitoring program as follows:

a. Monitoring shall occur during wet weather conditions, including targeting the first significant rain event of the water year following the criteria below, and at least two additional wet weather events within the same wet season.

[11] Non-ocean marine waters include enclosed bay, estuarine, and coastal lagoon waters.

i. **First Significant Rain Event.** Permittees shall target the first storm event of the water year with a predicted rainfall of at least 0.25 inch at a seventy percent probability of rainfall at least 24 hours prior to the event start time.

ii. **Subsequent Wet Weather Events.** Permittees shall target subsequent storm events that forecast sufficient rainfall and runoff to meet program objectives and site-specific study needs. Wet weather is defined as greater than or equal to 0.1 inch of precipitation, as determined by the closest rain gauge to the catchment area draining to the outfall.

b. As an alternative to subpart a above, Permittees may propose:

i. An alternative precipitation threshold in a Monitoring Program for Los Angeles Water Board Executive Officer approval and/or,

ii. A precipitation threshold as defined by applicable TMDLs within the watershed.

c. Sampling events shall be separated by a minimum of three days of dry conditions (less than 0.1 inch of rain each day).

3. At a minimum, the following parameters shall be monitored unless a surrogate pollutant has been approved by the Executive Officer of the Los Angeles Water Board:

a. Flow,

b. Pollutants assigned a WQBEL derived from TMDL WLAs (see Attachments K through S of the Order) and parameters to determine compliance with WQBELs,

c. Other pollutants identified on the CWA section 303(d) List for the receiving water or downstream receiving waters the outfall discharges to consistent with Part V.A.4.c of this MRP,

d. TSS and hardness, when metals are monitored,

e. Suspended Sediment Concentration (SSC) if the receiving water the outfall is discharging to is listed on the CWA Section 303(d) list for sedimentation, siltation or turbidity,

f. Field measurements applicable to inland freshwater bodies only: pH, dissolved oxygen, temperature, and specific conductivity,

g. A toxicant or class of toxicants that is identified through a TIE conducted during wet weather at a receiving water monitoring location. Permittees shall analyze for the toxicant(s) during the next scheduled sampling event in the discharge from the outfall(s) upstream of the receiving water location.

4. Other parameters in Table E-6 of this MRP identified as exceeding the lowest applicable water quality objective in the nearest downstream receiving water monitoring location per Part V.A.5 of this MRP.

5. Sampling Methods

a. Grab samples may be collected in specific situations as allowed by Part II.G.2 of this MRP.

b. For all other constituents, flow-weighted composite samples must be collected such that samples are representative of changes in pollutant concentrations and runoff flows during the stormwater discharge. Permittees shall use the following methods or propose an alternative protocol in their IMP or CIMP:

i. Flow-weighted composite samples shall be collected during the first 24 hours of the stormwater discharge, or during the entire stormwater discharge if the discharge is less than 24 hours;

ii. Flow-weighted composite samples shall be collected using a minimum of 3 sample aliquots taken in each hour of the stormwater discharge for the entire stormwater discharge or for the first three hours of the stormwater discharge, with each aliquot collection being separated by a minimum of 15 minutes.

iii. If Permittees propose an alternative sample aliquot collection frequency, the pacing at which aliquots are collected during the sampling period should be representative of the changes in pollutant concentration and runoff flows during the stormwater discharge.

VII. NON-STORMWATER OUTFALL-BASED SCREENING AND MONITORING REQUIREMENTS

Permittees shall include in their monitoring program a non-stormwater outfall-based screening and monitoring program that documents, with written procedures on how requirements in Part VII of this MRP will be implemented.

A. Objectives of the Non-Stormwater Outfall-Based Screening and Monitoring Program

The Permittee(s) shall implement an outfall-based screening and monitoring program to meet the following objectives:

1. Develop criteria or other means to ensure that all outfalls with significant non-stormwater discharges are identified and assessed during the term of the Order.

2. For outfalls determined to have significant non-stormwater flow, determine whether flows are the result of illicit discharges, authorized or conditionally exempt non-stormwater flows, natural flows, or from unknown sources.

3. Address illicit discharges in accordance with the IDDE Program (Part VIII.I of the Order) for appropriate action.

4. Prioritize monitoring of outfalls considering the potential threat to the receiving water and applicable TMDL compliance schedules.

5. Based on existing screening or monitoring data or other institutional knowledge, assess the impact of non-stormwater discharges (other than identified illicit discharges) on the receiving water.

6. Conduct monitoring and assess the monitoring data to determine the impact of non-stormwater discharges on the receiving water.

7. Conduct monitoring or other investigations to identify the source of pollutants in non-stormwater discharges, consistent with the IDDE Program.

8. Use results of the screening process to evaluate the conditionally exempt non-stormwater discharges identified in Parts III.A.2 and III.A.3 of the Order and take appropriate actions pursuant to Part III.A.5.c of the Order for those discharges that have been found to be a source of pollutants.

9. Maximize the use of Permittee resources by integrating the screening and monitoring process into existing monitoring and/or screening efforts.

B. Screening of Outfalls with Significant Non-Stormwater Discharge

Based on the inventory of outfalls required under Part VIII of this MRP, all Permittee(s) shall develop and implement written procedures explaining the screening criteria to identify outfalls

with significant non-stormwater discharges. Significant non-stormwater discharges may be determined by one or more of the following characteristics:

1. Discharges from major outfalls subject to dry weather TMDLs.

2. Discharges that have caused or have the potential to cause overtopping of downstream diversions.

3. Discharges exceeding a threshold discharge rate as proposed by the Permittee.

4. Discharges from areas where there is evidence of ongoing potential illegal dumping or illicit connections. This shall include evidence gathered from field observations and/or monitoring data.

5. Other characteristics as determined by the Permittee(s) and incorporated within their screening program. If other characteristics are used, the Permittee shall provide a definition or a criterion for how a significant non-stormwater discharge will be determined. If the criterion is field measurements and/or water quality data, thresholds shall be specified in the written procedures.

C. Source Investigation for Outfalls with Significant Non-Stormwater Discharge

Each Permittee shall conduct source investigation for outfalls identified to have significant non-stormwater discharge. The Permittee shall prioritize source investigation with consideration of dry weather TMDL compliance schedules, 303(d) listed waterbodies for dry weather constituents, dry weather receiving water monitoring data with recurring exceedances, geographic location, and other necessary factors. The source investigation shall be conducted as follows:

1. If the source of a significant non-stormwater discharge is determined to be an illicit discharge, then each Permittee shall implement procedures to eliminate the discharge consistent with IDDE requirements.

2. If the source of a significant non-stormwater discharge is determined to be an NPDES permitted discharge, a discharge subject to a Record of Decision approved by U.S. EPA pursuant to section 121 of CERCLA, a conditionally exempt essential non-stormwater discharge, or entirely comprised of natural flows as defined at Part III.A.2 of the Order, then the Permittee shall document the source.

3. If the source of a significant non-stormwater discharge is either unknown or a conditionally exempt, but non-essential, non-stormwater discharge, then each Permittee shall conduct monitoring required in Part VII.E of this MRP.

4. If the significant non-stormwater discharge is comprised of more than one source, then the Permittee shall attempt to quantify the relative contribution from each individual source or group of similar sources (e.g., irrigation overspray) and classify the contributions as authorized, conditionally exempt essential, natural, illicit discharge, conditionally exempt non-essential, or unknown.

5. If the source of a significant non-stormwater discharge is unknown, then the Permittee shall describe the efforts undertaken to identify the source. Methods for identifying the source of non-stormwater discharge may include inspection and/or surveillance, discharge monitoring and data loggers, video or physical inspection, monitoring for indicator parameters (e.g., surfactants, chlorine, pyrethroids), or other means.

6. If a source of a significant non-stormwater discharge originates within an upstream jurisdiction, then the Permittee shall inform in writing both the upstream jurisdiction and the Los Angeles Water Board within 30 days of determination of the presence of the discharge,

all available characterization data, contribution determination efforts, and efforts taken to identify its source.

D. Schedule for Screening and Source Investigation

1. Schedule for Ventura County Permittees

a. Ventura County Permittees shall screen outfalls for significant non-stormwater discharges and conduct source investigation for no less than 50 percent of the outfalls with significant non-stormwater discharges within 3 years of the effective date of the Order, and 100 percent of the outfalls with significant non-stormwater discharges within 5 years of the effective date of the Order.

b. Notwithstanding subpart a above, Ventura County Permittees may propose in their IMP or CIMP an alternative source investigation schedule if it can demonstrate an equivalent level of source investigation and abatement.

2. Schedule for Los Angeles County Permittees

a. Los Angeles County Permittees shall continue monitoring outfalls with significant non-stormwater discharges that were identified in previously approved monitoring programs in Table E-1 of this MRP.

b. Additionally, Los Angeles County Permittees shall consider dry weather receiving water monitoring data downstream of the outfalls and other relevant information to determine if re-screening is necessary for any of the previously screened outfalls that did not have significant non-stormwater discharge. Where re-screening is needed, the Permittee(s) shall make the necessary changes in its written program documents, re-screen the necessary outfalls for significant non-stormwater discharges, and conduct source investigation for those outfalls within 3 years of the effective date of the Order.

c. Notwithstanding subpart b above, Los Angeles County Permittees may propose in their IMP or CIMP an alternative source investigation schedule if it can demonstrate an equivalent level of source investigation and abatement.

E. Non-Stormwater Outfall-Based Monitoring

1. For the purposes of this monitoring program, non-stormwater discharges shall be monitored during dry weather when precipitation is less than 0.1 inch and those days not less than 72 hours after a wet day. A wet day is defined as days with 0.1 inch of rain or more.

2. Within 90 days after completing the outfall screening and source investigation for significant non-stormwater discharges or after the Executive Officer of the Los Angeles Water Board approves the IMP or CIMP, whichever is later, each Permittee shall monitor outfalls during dry weather that are 1) comprised of conditionally exempt non-stormwater discharges, 2) continuing discharges attributed to illicit discharges, or 3) from unknown sources. The following parameters shall be monitored:

a. Flow,

b. Pollutants assigned a WQBEL derived from TMDL WLAs for the respective receiving water, as identified in Attachments K through S of the Order and parameters to determine compliance with WQBELs,

c. Other pollutants identified on the CWA section 303(d) List for the receiving water or downstream receiving waters consistent with Part V.B.4.c of this MRP.

d. A toxicant or class of toxicants that is identified through a TIE conducted during dry weather at a receiving water monitoring location. Permittees shall analyze for the toxicant(s) during the next scheduled sampling event in the discharge from the outfall(s) upstream of the receiving water location.

e. Other parameters in Table E-6 of this MRP identified as exceeding the lowest applicable water quality objective in the nearest downstream receiving water monitoring location per Part V.B.5 of this MRP.

3. For outfalls subject to a dry weather TMDL, monitoring frequency shall be as specified in the TMDL or as specified in a monitoring program approved by the Executive Officer of the Los Angeles Water Board.

4. For outfalls not subject to dry weather TMDLs, monitoring frequency shall be four times during the first water year of monitoring, distributed approximately quarterly, during dry weather conditions or as specified in a monitoring program approved by the Executive Officer of the Los Angeles Water Board.

5. If outfall monitoring results during the first water year of monitoring do not exceed a water quality standard, the Permittee may conduct field observations (as described below) for that outfall instead of monitoring per Part VII.E.2 of this MRP.

a. When conducting field observations, the Permittee must identify flow estimation (i.e., width of water surface, approximate depth of water, approximate flow velocity, flow rate), odor, color, clarity, floatables, deposits/stains, vegetation condition, structural condition, and biology.

b. If there are changes in field observations, the permittee must resume monitoring as described in Parts VII.E.2 and VII.E.5 of this MRP and must implement illicit discharge elimination procedures in Part VIII.I of the Order. Field observations (in lieu of sampling) may resume if the non-stormwater is identified as an illicit discharge and is eliminated or if monitoring results under Part VII.E.2 of this MRP do not exceed water quality standards for one water year.

6. If outfall monitoring results during the first water year of monitoring exceed a water quality standard, the Permittee shall continue to monitor those outfalls for the exceeded parameters two times a year.

7. For all non-stormwater outfall-based monitoring, the Permittee must record general information including conveyance type, dominant watershed land uses, flow estimation, and sensory observations as described in Part VII.E.5.a of this MRP.

VIII. OUTFALL-BASED DATABASE

A. Storm Drains, Channels and Outfalls Map(s) and/or Database. All Permittee(s) shall maintain a map(s) and/or database (GIS preferred) of its MS4 to include the following information:

1. Surface water bodies within the Permittee(s) jurisdiction

2. Sub-watershed (HUC 12) boundaries

3. Land use overlay

4. Jurisdictional boundaries

5. The location and length of all open channel and underground storm drain pipes 18 inches in diameter or greater (with the exception of catch basin connector pipes)

6. The location of all dry weather diversions (e.g., Low Flow Diversions (LFDs))

7. The location of all major MS4 outfalls within the Permittee's jurisdictional boundary. Each major outfall shall be assigned an alphanumeric identifier, which must be noted on the map.

8. Storm drain outfall catchment areas for each major outfall within the Permittee(s) jurisdiction

9. Each mapped MS4 outfall shall be linked to a database to include the following:

a. Ownership

b. Latitude / Longitude Coordinates

c. Physical description of outfall structure including size (e.g., diameter and shape).

d. Photographs of the outfall, where possible, to provide baseline information to track operation and maintenance needs over time

e. Stormwater and non-stormwater monitoring data

f. Notation of outfalls with significant non-stormwater discharges

g. If the outfall conveys no significant non-stormwater discharges, include the basis for this determination.

h. For outfalls conveying significant non-stormwater discharges:

i. Date and time of last visual observation or inspection.

ii. Description of receiving water at the point of discharge (e.g., natural, soft-bottom with armored sides, trapezoidal, concrete channel).

iii. Parking, access, and safety considerations.

iv. Photographs of outfall condition.

v. Photographs of significant non-stormwater discharge (or indicators of discharge) unless safety considerations preclude obtaining photographs.

vi. Estimation of discharge rate.

vii. All diversions either upstream or downstream of the outfall.

viii. Observations regarding discharge characteristics such as turbidity, odor, color, presence of debris, floatables, or characteristics that could aid in pollutant source identification.

IX. AQUATIC TOXICITY MONITORING METHODS

A. Aquatic Toxicity Monitoring shall be conducted according to the procedures described in this Part IX. When the State Water Board's Policy for Toxicity Assessment and Control is fully approved and in effect, the Los Angeles Water Board Executive Officer may direct the Permittee(s) to replace current toxicity program elements with standardized procedures in the policy.

B. The Permittee(s) shall collect and analyze samples taken from receiving water monitoring locations to evaluate the extent and causes of toxicity in receiving waters.

C. Toxicity samples may be flow-weighted composite samples, or grab samples, for wet and dry event sampling.

D. The total sample volume shall be determined both by the specific toxicity test method used and the additional volume necessary for TIE studies. Sufficient sample volume shall be collected to perform both the required toxicity tests and TIE studies.

E. Holding Times. All toxicity tests shall be conducted as soon as possible following sample collection. The 36-hour sample holding time for test initiation shall be targeted. However, no more than 72 hours shall elapse before the conclusion of sample collection and test initiation.

F. Definition of Acute Toxicity. Acute toxicity measures a lethal effect to experimental test organisms exposed to an effluent or receiving waters compared to that of the control organisms.

G. Definition of Chronic Toxicity. Chronic toxicity measures a sublethal effect (e.g., reduced growth, reproduction) to experimental test organisms exposed to an effluent or receiving waters compared to that of the control organisms.

H. Toxicity Monitoring Program

1. Freshwater Test Species and Methods. If samples are collected in receiving waters with salinity <1 ppt, or from outfalls discharging to receiving waters with salinity <1 ppt, then the Permittee(s) shall conduct the following critical life stage chronic and acute toxicity tests in Table E-7 of this MRP on undiluted samples in accordance with species and short-term test methods in *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms* (EPA/821/R-02/013, 2002; Table IA, 40 CFR Part 136) and *Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms* (EPA/821/R-02/012, 2002; Table IA, 40 CFR Part 136). In no case shall the following test species be substituted with another organism unless written authorization from the Los Angeles Water Board Executive Officer is received:

Table E-7. Freshwater Aquatic Toxicity Species and Analytical Procedures

Test Species	Test Endpoint(s)	U.S. EPA Method
Pimephales promelas (Fathead Minnow)	Larval Survival and Growth	EPA-821-R-02-013
Ceriodaphnia dubia (Freshwater Crustacean)	Survival and Reproduction	EPA-821-R-02-013
Hyalella azteca (Freshwater Amphipod)	Survival	EPA-821-R-02-012
Chironomus dilutus (Midge)	Survival	EPA-821-R-02-012

2. Non-Ocean Marine Waters[12] Test Species and Methods. If samples are collected in receiving waters with salinity ≥1 ppt, or from outfalls discharging to receiving waters with salinity ≥1 ppt, then the Permittee(s) shall conduct the following critical life stage chronic toxicity tests in Table E-8 of this MRP on undiluted samples in accordance with species and short-term test methods in *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to West Coast Marine and Estuarine Organisms* (EPA/600/R-95/136, 1995) or *Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms*, Third Edition, October 2002, (EPA/821-R-02-014). Artificial sea salts shall be used to increase sample salinity. In no case shall the following test species be substituted with another organism unless written authorization from the Los Angeles Water Board Executive Officer is received:

[12] Non-ocean marine waters include enclosed bay, estuarine, and coastal lagoon waters.

Table E-8. Non-Ocean Marine Waters Aquatic Toxicity Species and Analytical Procedures

Test Species	Test Endpoint(s)	U.S. EPA Method
Atherinops affinis[13] (Topsmelt)	Larval Survival and Growth	1006.01
Strongylocentrotus purpuratus (Purple Sea Urchin)	Fertilization	1008.0
Macrocystis pyrifera (Giant Kelp)	Germination and Growth	1009.0

3. **Test Species Sensitivity Screening.** During the first year of the permit term, Permittees shall conduct a sensitivity screening to determine the most sensitive test species. The Permittees' IMP or CIMP shall include the results of the test species sensitivity screening and identify the most sensitive test species that will be used for aquatic toxicity monitoring. To determine the most sensitive test species, the Permittee(s) shall conduct two wet weather and two dry weather toxicity tests with the species listed for freshwater and non-ocean marine waters, as appropriate. Sensitive species determinations may result in one most sensitive test species for wet weather and a different most sensitive test species for dry weather or the same most sensitive test species for both dry and wet weather. Sensitive test species determinations shall also consider the most sensitive test species used for proximal receiving water monitoring. After this screening period, subsequent aquatic toxicity monitoring required per Parts V.A.4.g and V.B.4.g of this MRP shall be conducted using the most sensitive test species (i.e.,1 chronic and/or acute freshwater species and/or 1 chronic marine and ocean waters species, as appropriate).

4. Toxicity test biological endpoint data shall be analyzed using the Test of Significant Toxicity t-test approach specified in *National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document* (U.S. Environmental Protection Agency, Office of Wastewater Management, Washington, D.C. EPA 833-R-10-003, 2010). For this monitoring program, the critical acute and chronic in-stream waste concentration (IWC) is set at 100% receiving water for receiving water samples and 100% effluent for wet and dry weather outfall samples. A 100% receiving water/outfall effluent sample and a control shall be tested. For *Hyalella* and *Chironomus* acute toxicity test methods, the test result will be considered a "pass," regardless of a TST determination of "fail" if the percent survival in the receiving water is equal to or greater than 90 percent.

I. Quality Assurance

1. If the receiving water or outfall effluent test does not meet all test acceptability criteria (TAC) specified in the test methods manuals (*Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms* (EPA/821/R-02/013, 2002), *Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms* (EPA/821/R-02/012, 2002; Table IA, 40 CFR Part 136), and *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to West Coast Marine and Estuarine Organisms* (EPA/600/R-95/136, 1995)), then the Permittee(s) must re-sample and re-test at the earliest time possible.

2. Control water, including brine controls, shall be laboratory water prepared and used as specified in the test methods manuals.

[13] If laboratory-held cultures of the topsmelt, *Atherinops affinis*, are not available for testing, then the Permitee(s) shall conduct a static renewal toxicity test with the inland silverside, *Menidia beryllina* (Larval Survival and Growth Test Method 1006.01), found in the third edition of *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms* (EPA-821-R-02-014,2002; Table IA, 40 CFR part 136).

3. If organisms are not cultured in-house, then concurrent testing with a reference toxicant shall be conducted. If organisms are cultured in-house, then monthly reference toxicant testing is sufficient. Reference toxicant tests and effluent toxicity tests shall be conducted using the same test conditions (e.g., same test duration, etc.).

J. Toxicity Identification Evaluation (TIE)

1. A toxicity test sample is immediately subject to TIE procedures to identify the toxic chemical(s), if either the survival or sublethal endpoint demonstrates a Percent Effect value equal to or greater than 50% at the IWC. Percent Effect is defined as the effect value—denoted as the difference between the mean control response and the mean IWC response, divided by the mean control response—multiplied by 100.

2. A TIE shall be performed to identify the causes of toxicity using the same species and test method and, as guidance, U.S. EPA manuals: *Toxicity Identification Evaluation: Characterization of Chronically Toxic Effluents, Phase I* (EPA/600/6-91/005F, 1992); *Methods for Aquatic Toxicity Identification Evaluations, Phase II Toxicity Identification Procedures for Samples Exhibiting Acute and Chronic Toxicity* (EPA/600/R-92/080, 1993); *Methods for Aquatic Toxicity Identification Evaluations, Phase III Toxicity Confirmation Procedures for Samples Exhibiting Acute and Chronic Toxicity* (EPA/600/R-92/081, 1993); and *Marine Toxicity Identification Evaluation (TIE): Phase I Guidance Document* (EPA/600/R-96-054, 1996).

3. The TIE should be conducted on the test species demonstrating the most sensitive toxicity response at a sampling location. A TIE may be conducted on a different test species demonstrating a toxicity response with the caveat that once the toxicant(s) are identified, the most sensitive test species triggering the TIE shall be further tested to verify that the toxicant has been identified and addressed.

4. A TIE Prioritization Metric (see Appendix 5 in SMC Model Monitoring Program) may be utilized to rank sites for TIEs.

5. Clarification regarding follow-up monitoring requirements in response to observed toxicity in receiving waters can be found in Attachment G of the Order (Aquatic Toxicity: TIE and TRE Requirements).

K. Toxicity Reduction Evaluation (TRE)

1. When a toxicant or class of toxicants is identified through a TIE conducted at a receiving water monitoring location, Permittees shall analyze for the toxicant(s) during the next scheduled sampling event in the discharge from the outfall(s) upstream of the receiving water location.

2. If the toxicant is present in the discharge from the outfall at levels above the applicable limitation, a TRE shall be performed for that toxicant.

3. The TRE shall include all reasonable steps to identify the source(s) of toxicity and discuss appropriate BMPs to eliminate the causes of toxicity. No later than 30 days after the source of toxicity and appropriate BMPs are identified, the Permittee(s) shall submit a TRE Corrective Action Plan to the Los Angeles Water Board Executive Officer for approval. At minimum, the plan shall include a discussion of the following:

a. The potential sources of pollutant(s) causing toxicity.

b. A list of municipalities and agencies that may have jurisdiction over sources of pollutant(s) causing toxicity.

c. Recommended BMPs to reduce the pollutant(s) causing toxicity.

d. Proposed post-construction control measures to reduce the pollutant(s) causing toxicity.

e. Follow-up monitoring to demonstrate that the toxicants have been reduced or eliminated.

4. Participation in a Watershed Management Program that addresses the aquatic toxicity waterbody-pollutant combination shall satisfy the requirement in subpart 3 above to submit a TRE Corrective Action Plan.

5. The TRE process shall be coordinated with TMDL monitoring and implementation (i.e., if a TMDL for 4,4'-DDD is being implemented when a TRE for 4,4'-DDD is required, then efforts shall be coordinated to avoid overlap).

6. Clarification regarding follow-up monitoring requirements in response to observed toxicity in receiving waters can be found in Attachment G of the Order (Aquatic Toxicity: TIE and TRE Requirements).

X. REGIONAL STUDIES

A. Southern California Stormwater Monitoring Coalition Watershed Monitoring Program

Each Permittee is encouraged to continue participation in the Southern California Stormwater Monitoring Coalition (SMC) Regional Watershed Monitoring Program's current study design, by supporting the monitoring at the sites within the watershed management area(s) that overlap with the Permittee's jurisdictional area.

B. Southern California Bight Project

Each Permittee is encouraged to continue participation in the Southern California Bight Project (SCBP) monitoring within the watershed management area(s) that overlap with the Permittee's jurisdictional area.

XI. SPECIAL STUDIES

Each Permittee is encouraged to conduct special studies recommended in a TMDL. Optional special studies include:

A. Dominguez Channel and Greater Los Angeles and Long Beach Harbor Waters Toxic Pollutants TMDL

Permittees may opt to conduct special studies to further refine the site-specific link between sediment pollutant concentrations, depth of bed sediment contamination and fish tissue concentrations; foraging ranges of targeted fish; additional data to refine watershed and hydrodynamic models, additional data on contaminant contributions of the Los Angeles River or San Gabriel River to Greater Harbor waters; stressor identifications; additional diazinon data; and further characterization of direct air deposition loadings for heavy metals and legacy pesticides. If opting to conduct this special study, Permittees shall propose a schedule for monitoring and reporting.

B. Los Angeles Area Lakes TMDL: Legg Lake, Lake Calabasas, Echo Park Lake, Puddingstone Reservoir, and Peck Road Park Lake TMDLs (*U.S. EPA established*)

Permittees may opt to conduct a special study based on the recommendations in the TMDL and propose a schedule for monitoring and reporting.

C. Biotic Ligand Model (BLM) to Establish Site-Specific Objectives for Copper

A Permittee(s) may opt to conduct monitoring at a specific waterbody(ies) and gather monitoring data necessary to establish a site-specific objective for copper using the BLM. If opting to

conduct this monitoring, Permittees shall submit a monitoring and reporting plan in accordance with Los Angeles Water Board recommendations.

XII. REPORTING REQUIREMENT OBJECTIVES

The reporting process is intended to meet the following objectives:

A. Present summary information that allows the Los Angeles Water Board to assess:

1. Each Permittee's appropriate participation in one or more Watershed Management Programs if applicable.

2. The impact of each Permittee(s) stormwater and non-stormwater discharges on the receiving water.

3. Each Permittee's compliance with receiving water limitations and numeric water quality-based effluent limitations.

4. The effectiveness of each Permittee(s) control measures in reducing discharges of pollutants from the MS4 to receiving waters.

5. Whether the quality of MS4 discharges and the health of receiving waters is improving, staying the same, or declining as a result of watershed management program efforts, and/or TMDL implementation measures, and implementation of Minimum Control Measures.

6. Whether changes in water quality can be attributed to pollutant controls imposed on new development, re-development, or retrofit projects.

B. Present detailed data and information in an accessible format to allow the Los Angeles Water Board to verify conclusions presented in a Permittee's summary information.

C. Provide the Permittee(s) a forum to discuss the effectiveness of its past and ongoing control measure efforts and to convey its plans for future control measures.

D. Present data and conclusions in a transparent manner to facilitate the review and understanding by the general public.

E. Focus each Permittee's reporting efforts on watershed condition, water quality assessment, and an evaluation of the effectiveness of control measures.

XIII. STANDARD MONITORING AND REPORTING PROVISIONS

A. All monitoring, reporting, and recordkeeping activities shall be conducted in accordance with requirements specified in Attachments D, E, H and I of the Order.

B. In addition to requirements specified in Part IV.B of Attachment D of the Order, the Permittee shall also retain records of monitoring information to include weather conditions, rainfall amount, and data sheets showing toxicity test results.

C. Reporting requirements related to the monitoring of trash shall be conducted in accordance with Parts IV.B.3 and III.B of the Order and reported per Attachment H and I of the Order.

D. The monitoring data submitted to the Los Angeles Water Board shall specify, for each pollutant, the analytical method used, the applicable Reporting Level (RL), and the current Method Detection Limit (MDL) as determined by the procedure in 40 C.F.R. part 136. For the purpose of reporting compliance with numerical limitations and performance goals, the results of analytical determinations for the presence of chemical constituents in a sample shall be reported using the following reporting protocols:

1. Sample results greater than or equal to the RL shall be reported as measured by the laboratory (i.e., the measured chemical concentration in the sample).

2. Sample results less than the RL, but greater than or equal to the laboratory's MDL, shall be reported as "Detected, but Not Quantified," or DNQ. The estimated chemical concentration of the sample shall also be reported.

3. For the purposes of data collection, the laboratory shall write the estimated chemical concentration next to DNQ. The laboratory may, if such information is available, include numerical estimates of the data quality for the reported result. Numerical estimates of data quality may be listed as percent accuracy (± a percentage of the reported value), numerical ranges (low to high), or any other means considered appropriate by the laboratory.

4. Sample results less than the laboratory's MDL shall be reported as "Not Detected," or ND.

5. The Permittee(s) are to instruct laboratories to establish calibration standards so that the RL value (or its equivalent if there is differential treatment of samples relative to calibration standards) is the lowest calibration standard. At no time is the Permittee to use analytical data derived from extrapolation beyond the lowest point of the calibration curve.

E. Exceedances of applicable limitations in the Order shall be determined using sample reporting protocols defined in Part XIII.D above and Attachment A (refer to definition for reporting level) of the Order. For purposes of reporting and administrative enforcement by the Los Angeles Water Board and State Water Board, the Permittee(s) shall be out of compliance with applicable limitations if the concentration of the pollutant in the monitoring sample is greater than the applicable limitation and greater than or equal to the Reporting Level (RL) unless otherwise stated in Part X (Compliance Determination) of the Order.

F. If no flow occurred during the sampling event, then the Monitoring Report shall so state.

G. All monitoring data submitted to the Los Angeles Water Board shall be reported in units consistent to Table E-6 in this MRP or if reporting TMDL monitoring data, consistent to units in Attachments K through S of the Order.

H. The Los Angeles Water Board or its Executive Officer, consistent with 40 CFR section 122.41, may approve changes to the Monitoring and Reporting Program, after providing the opportunity for public comment, either:

1. By request of a Permittee or by an interested person after submittal of the Monitoring Report. Such request shall be in writing and filed not later than 60 days after the Monitoring Report submittal date, or

2. As deemed necessary by the Los Angeles Water Board Executive Officer, following notice to the Permittees.

I. Permittees must provide a copy of the Standard Operation Procedures (SOP or SOPs) for any monitoring conducted under this MRP to the Los Angeles Water Board upon request.

J. When monitoring cannot be performed to comply with the requirements of the Order due to circumstances beyond a Permittee's control, then within two working days, the following shall be submitted to the Los Angeles Water Board Executive Officer:

1. Statement of situation.

2. Explanation of circumstance(s) with documentation.

3. Statement of corrective action for the future.

XIV. REPORTING REQUIREMENTS

Permittees shall comply with all reporting requirements in this Part XIV unless otherwise specified by the Los Angeles Water Board. Furthermore, all items within Attachment H and Attachment I shall serve as reporting requirements for the Order.

A. Program Reports

Permittees shall use the forms provided in Attachments H and I of the Order starting June 15, 2022 or December 15, 2022, per the schedule below. For the 2020-21 fiscal year reporting, Permittees shall continue their annual reporting per the previous permits.

1. **Annual Report Form.** Each Permittee shall complete and submit an Annual Report using the Annual Report Form (contained in Attachment H) no later than December 15 of each year for the preceding July 1 to June 30 reporting period[14]. Unless otherwise specified by the Los Angeles Water Board, each Permittee shall submit its Annual Report to the Los Angeles Water Board in pdf file format via an electronic method (e.g., CD, USB drive, attachment/link in email[15], etc.).

2. **Watershed Management Program Progress Report Form.** Each Permittee or group of Permittees participating in a Watershed Management Program shall complete and submit a Watershed Management Program Progress Report using the Watershed Management Program Progress Report Form (contained in Attachment H) semi-annually no later than December 15 and June 15 of each year for the preceding January 1 to June 30 and July 1 to December 31 reporting period, respectively. Unless otherwise specified by the Los Angeles Water Board, each Permittee shall submit its Watershed Management Program Report to the Los Angeles Water Board in pdf file format via an electronic method (e.g., CD, USB drive, attachment/link in email[16], etc.). Each Permittee participating in a Watershed Management Program shall make the Watershed Management Program Progress Report readily available to the public through multiple avenues, including direct outreach and posting to its website or a website specifically dedicated for the watershed management group semi-annually. The posting to the website shall be prominent, immediately identifiable, and readily available to visitors to the website. The Watershed Management Program Progress Report shall be easily understandable to the general public. For the web-posting, each Permittee participating in a Watershed Management Program shall extract the progress summary included in Section 1.1 of Attachment H and post it on the website with a link to the full Watershed Management Program Progress Report. The extracted progress summary shall be translated, in a culturally relevant manner, into languages other than English based on community demographics and considering information on linguistic isolation (e.g., Cal EnviroScreen).

3. **Trash Reporting Forms.** Permittees shall annually report on compliance with Trash TMDLs and Trash Discharge Prohibitions using the Trash TMDL Reporting Form and/or Trash Discharge Prohibition Reporting Form (contained in Attachment I or a revised form approved by the Los Angeles Water Board) and submit completed forms as attachments to the Annual Report Form.

4. In the Annual Report Form, each Permittee is required to report on implementation of the Order including not limited to expenditures, funding sources, and progress on implementing the following programs: Non-Stormwater Discharge Prohibitions, Minimum Control Measures, the Non-Stormwater Outfall-Based Screening and Monitoring Program, Trash TMDLs, and Trash Discharge Prohibitions. The Watershed Management Program Progress Report shall be used to report on progress in implementing the WMP.

[14] e.g., the Annual Report due on December 15, 2022 must cover the activities from July 1, 2021 to June 30, 2022.
[15] Email to MS4stormwaterRB4@waterboards.ca.gov.
[16] Ibid.

B. Monitoring Report

1. Each Permittee or group of Permittees shall submit a Monitoring Report per the schedule indicated in Table E-9 below (e.g., the Monitoring Report due on December 15, 2021 must cover the monitoring period from January 1, 2021 to June 30, 2021).

Table E-9. Monitoring Results Reporting Schedule

Items to Submit	Reporting Frequency	Preceding Monitoring Period	Monitoring Report Due Date
Monitoring Results (Part XIV.B.2.a) and Certification (Part XIV.B.2.b)	Semi – Annual	January 1 through June 30	December 15
Monitoring Results (Part XIV.B.2.a) and Certification (Part XIV.B.2.b)	Semi – Annual	July 1 through December 31	June 15
Certification (Part XIV.B.2.b), Summary of Sampling Events (Part XIV.B.2.c), QA/QC (Part XIV.B.2.d), Summary of Exceedances (Part XIV.B.2.e), and Summary of Aquatic Toxicity Monitoring (Part XIV.B.2.f)	Annual	July 1 through June 30	December 15

2. **Monitoring Report Content**: Unless otherwise specified by the Los Angeles Water Board, each Permittee or group of Permittees shall submit Monitoring Reports to the Los Angeles Water Board via an electronic method (e.g., CD, USB drive, attachment/link in email[17], etc.). The Monitoring Report shall include the following items per Table E-9 above:

a. **Monitoring Results.** An electronic copy of all receiving water and outfall monitoring results in Excel or CSV file format and in the California Environmental Data Exchange Network (CEDEN) data entry template format,[18] or in a format specified by the Los Angeles Water Board. Data files shall use CEDEN controlled vocabulary terms and the SWAMP standard list of analyte, matrix and unit combinations (available at https://www.waterboards.ca.gov/water_issues/programs/swamp/swamp_iq/). Any data that is not CEDEN compatible (e.g., photographic evidence, rain data, qualitative data, and narrative data) shall be provided in a format deemed appropriate by the Permittee(s) or as specified by the Los Angeles Water Board.

b. **Certification**. Certification and signature per Part V.B of Attachment D of the Order.

c. **Summary of Sampling Events**. For each sampling event, provide the following information:

i. Date

ii. Site ID (i.e., station ID or monitoring location ID)

iii. Monitoring Location Type (i.e., outfall or receiving water)

iv. Sample Media (e.g., water column, bed sediment, fish tissue, storm-borne sediment)

v. For receiving water monitoring locations, indicate the Site ID of the upstream outfall.

[17] Ibid.
[18] CEDEN data entry templates are available on the website: http://ceden.org/.

vi. For outfall monitoring locations, indicate the receiving water the outfall discharges to and if being monitored, the Site ID of the receiving water monitoring location.

vii. Missed monitoring events and justification (e.g., no discharge, unsafe conditions, holding time exceeded due to lab business hours).

viii. Weather Condition (i.e., wet or dry). If there are applicable TMDLs with a specific definition, indicate so and indicate the weather condition per the TMDL.

ix. Station ID of rain gage station(s) and/or flow gage station(s) used to determine the weather condition.

x. For each wet weather sampling event, provide the following information:

(a) Date

(b) Storm start time

(c) Storm duration (hours)

(d) Highest storm intensity – 15 minutes (inches/hour)

(e) Total storm volume (inches)

(f) Did the sample event occur during the first significant storm?

(g) Was the sampling event preceded by at least three days of dry weather (less than 0.1 inches of rain each day)?

xi. For each dry weather sampling event, provide the following information:

(a) Date

(b) Did the sample event occur during the historically driest month?

(c) Did the sampling event occur at least three days after a rain event of 0.1 inches or greater?

xii. Information in (i)-(xi) above for additional monitoring events (e.g., accelerated monitoring for bacteria)

d. Quality Assurance/Quality Control (QA/QC). Summarize QA/QC results and actions to address any QA/QC issues that arose (e.g., holding time, contamination, precision). This may include a summary of qualified data if necessary.

e. Summary of Exceedances. Summarize exceedances of applicable WQBELs, receiving water limitations, and aquatic toxicity thresholds for all test results, with corresponding sampling dates, monitoring site IDs, and weather conditions (i.e., dry weather or wet weather). Quantitatively describe trends[19] in water quality (e.g., improving, staying the same, declining) in the receiving water and outfalls, using statistical analysis and/or graphical presentation of data, for wet and dry weather conditions. Where the Permittee determines that outfall discharges are causing or contributing to receiving water exceedances, provide a summary of efforts taken to address these exceedances.

[19] Use available monitoring data since July 8, 2010 for Ventura County Permittees, since March 28, 2014 for the City of Long Beach, and since December 28, 2012 for other Los Angeles County Permittees.

f. Summary of Aquatic Toxicity Monitoring. Provide the following:

i. If aquatic toxicity was confirmed and a TIE was conducted, identify the toxic chemicals as determined by the TIE. Include all relevant data to allow the Los Angeles Water Board to review the adequacy and findings of the TIE. This shall include, but not be limited to, the sample(s) date, sample(s) start and end time, sample type(s) (flow-weighted composite, grab, or field measurement), sample location(s), the parameters, the analytical results, and the applicable limitation.

ii. A full laboratory report for each toxicity test prepared according to the appropriate test methods manual chapter on Report Preparation, including:

(a) The toxicity test results for the t-test, reported as "Pass" or "Fail", and the "Percent Effect",

(b) The dates of sample collection and initiation of each toxicity test,

(c) Test species with biological endpoint values for each concentration tested,

(d) Reference toxicant test results,

(e) Water quality measurements for each toxicity test (e.g., pH, dissolved oxygen, temperature, conductivity, hardness, salinity, chlorine, ammonia),

(f) TRE/TIE testing results, and

(g) A printout of CETIS (Comprehensive Environmental Toxicity Information System) program results.

iii. TIEs (Phases I, II, and III) that have been completed or are being conducted, by monitoring location.

iv. The development, implementation, and results for each TRE Corrective Action Plan, beginning the water year following the identification of each pollutant or pollutant class causing toxicity.

C. Receiving Water Limitations Compliance Report

1. If a Permittee is not addressing receiving water limitations per Part V.C (Receiving Water Limitations) of the Order, or if it is determined by the Permittee or the Los Angeles Water Board that discharges from the MS4 are causing or contributing to an exceedance of an applicable receiving water limitation, then the Permittee shall submit a Receiving Water Limitations Compliance Report that:

a. Describes 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; and

b. Includes an implementation schedule for implementing the BMPs that is as short as possible.

2. The Permittee shall submit the Receiving Water Limitations Compliance Report concurrently with their Annual Report per the schedule and submittal method indicated in in Part XIV.A.1 of this MRP for approval by the Los Angeles Water Board Executive Officer.

3. Consistent with Part V.D of the Order, so long as the Permittee has complied with the procedures set forth in Part V.C of the Order and is implementing its approved Receiving Water Limitations Compliance Report, 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 Los Angeles Water Board to modify current BMPs or develop additional BMPs.

4. **Watershed Management Program Exemption**. Per Part IX.B.9.c.(iv) of the Order, implementation of actions to address water quality priorities in a Watershed Management Program related to addressing exceedances of receiving water limitations in Part V (Receiving Water Limitations) of the Order which is not otherwise addressed by TMDLs in Part IV of the Order and Attachments K through S, fulfills the requirements in Part V.C of the Order to prepare a Receiving Water Limitations Compliance Report.

XV. TMDL REPORTING

Permittees shall report on compliance with all TMDLs in Attachments K through S in their Program Reports and Monitoring Reports per Part XIV.A-C of this MRP. Notable TMDL-specific reporting requirements are as follows:

A. Santa Monica Bay Nearshore and Offshore Debris TMDL

Permittees shall notify the Los Angeles Water Board promptly if there is future development of MS4 infrastructure in the Santa Monica Bay WMA within Ventura County but outside of the Malibu Creek subwatershed. After notification, the Los Angeles Water Board may require an updated Trash Monitoring and Reporting Plan (TMRP) and Plastic Pellet Monitoring and Reporting Plan (PMRP) to be submitted.

B. Upper Santa Clara River Chloride TMDL and Santa Clara River Estuary and Reaches 3, 5, 6, and 7 Indicator Bacteria TMDL

Ventura County Permittees shall notify the Los Angeles Water Board promptly if there is future development of MS4 infrastructure within Ventura County that discharges to Santa Clara River Reaches 4B and 5. After notification, the Los Angeles Water Board may require an updated TMDL monitoring and implementation plan to be submitted.

C. Metals and Selenium in the Calleguas Creek, its Tributaries, and Mugu Lagoon TMDL

Board Briefing: By March 27, 2023 and every 2 years thereafter, Permittees shall provide a verbal update to the Los Angeles Water Board, including progress toward meeting the TMDL, water quality data, and a summary of implementation activities completed to date.

D. Boron, Chloride, Sulfate, and TDS (Salts) in the Calleguas Creek Watershed TMDL

Optional Special Studies Results: If participating in an optional special study, Permittees shall submit the results of the special studies 2 years after special study workplan approval by the Los Angeles Water Board Executive Officer.

E. Implementation Plan for the U.S. EPA-Established Malibu Creek Nutrients TMDL and the U.S. EPA-Established Malibu Creek and Lagoon Sedimentation and Nutrients TMDL to Address Benthic Community Impairments

1. **Nutrient Implementation Plan:** If Los Angeles County Permittees have not already submitted a nutrient implementation plan, they shall update their existing Watershed Management Program per the schedule in Part IX.G of the Order, if participating in a Watershed Management Program.

2. **Sediment Implementation Plan:** If Los Angeles County Permittees below Malibu Lake have not already submitted a sediment implementation plan, they shall update their existing Watershed Management Program per the schedule in Part IX.G of the Order, if participating in a Watershed Management Program.

3. **Nutrient Implementation Plan:** If Ventura County Permittees have not already submitted a nutrient implementation plan, they shall address this requirement as part of their

Watershed Management Program per the schedule in Part IX.F of the Order, if participating in a Watershed Management Program.

F. Dominguez Channel and Greater Los Angeles and Long Beach Harbor Waters Toxic Pollutants TMDL

1. **Phase II Implementation Report**: Permittees shall report in writing on the status of implementation and scope, and schedule of remaining Phase II implementation actions to the Los Angeles Water Board by March 23, 2022.
2. Los Angeles County Permittees responsible for the Los Angeles River Metals TMDLs are responsible for conducting and reporting water and sediment monitoring above the Los Angeles River Estuary to determine the Los Angeles River's contribution to the impairments in the Greater Los Angeles and Long Beach Harbor waters.
3. Los Angeles County Permittees responsible for the San Gabriel River Metals TMDLs are responsible for conducting and reporting water and sediment monitoring at the mouth of the San Gabriel River to determine the San Gabriel River's contribution to the impairments in the Greater Los Angeles and Long Beach Harbor waters.

G. Los Angeles River Watershed Bacteria TMDL

1. **Load Reduction Strategy (LRS):** For dry weather, Permittees opting to implement an LRS may submit a stand-alone LRS for Los Angeles Water Board Executive Officer approval or may opt to submit the LRS as part of a Watershed Management Program per the deadlines indicated in Attachment Q (Los Angeles River Watershed TMDL Provisions), Table Q-1 of the Order. Table E-10 is a list of LRS submittals received to date.
2. **Implementation Plan:** By March 23, 2022, Permittees shall submit an Implementation Plan for wet weather with interim milestones for Los Angeles Water Board Executive Officer approval or may opt to address this requirement as part of a Watershed Management Program.

Table E-10. LRS Submittals

Load Reduction Strategy	Submitted By	Document Date	Approval Date
Arroyo Seco Load Reduction Strategy	Upper Los Angeles River Watershed Group	March 2016	Has not been approved yet
Compton Creek Load Reduction Strategy	Upper Los Angeles River Watershed Group	March 2018	Has not been approved yet
Compton Creek Load Reduction Strategy	Lower Los Angeles River Watershed Group	March 2018	Has not been approved yet
Rio Hondo Load Reduction Strategy	Upper Los Angeles River Watershed Group, Los Angeles River Upper Reach 2 Sub Watershed Group, Lower Los Angeles River Watershed Group, City of El Monte, City of Irwindale	March 2016	Has not been approved yet
Rio Hondo Load Reduction Strategy Addendum	Upper Los Angeles River Watershed Group, Los Angeles River Upper Reach 2 Sub Watershed Group, Lower Los Angeles River Watershed Group, City of El Monte, City of Irwindale	September 2017	Has not been approved yet
Segment A Load Reduction Strategy	Lower Los Angeles River Watershed Group	September 2016	Has not been approved yet

Load Reduction Strategy	Submitted By	Document Date	Approval Date
Segment B Load Reduction Strategy	Lower Los Angeles River Watershed Group	September 2014	Has not been approved yet
Segment B Load Reduction Strategy	Upper Los Angeles River Watershed Group as part of the EWMP	June 2015	April 20, 2016
Segment B Load Reduction Strategy	Los Angeles River Upper Reach 2 Sub Watershed Group	December 2014	Has not been approved yet
Segment E Load Reduction Strategy	Upper Los Angeles River Watershed Group	September 2017	Has not been approved yet

H. Los Angeles River and Tributaries Metals TMDL

Permittees shall conduct and report additional receiving water monitoring to verify that water quality conditions are similar to those of the 2008 and 2014 copper WER study periods. The copper WER evaluation monitoring will consist of receiving water monitoring for key chemical parameters needed for estimates of WERs utilizing the Biotic Ligand Model (BLM). Monitoring shall be conducted at the locations sampled in the 2008 and 2014 copper WER studies, as well as additional locations in upstream portions of tributaries. The upstream tributary monitoring may be discontinued or reduced if it is shown that downstream tributary monitoring locations are representative of the entire tributary. Monitoring of sediment chemistry shall be conducted at one site immediately above the Los Angeles River Estuary and one site within the Estuary annually for analysis of general sediment quality constituents and metals.

Permittees will include criteria in their monitoring plan for determining what constitutes a significant change in BLM-predicted WERs. If BLM-predicted WERs significantly change, then Permittees shall submit a plan for Executive Officer approval to conduct WER toxicity testing in the applicable reaches or tributaries to reassess WERs.