March 2026

Updated May 2026

REPORT OF WASTE DISCHARGE

Ventura Countywide Stormwater Quality Management Program

Camarillo
County of Ventura
Fillmore
Moorpark
Ojai
Oxnard
Port Hueneme
Santa Paula
Simi Valley
Thousand Oaks
Ventura
Ventura County Watershed Protection District

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LIST OF NAMES AND ACRONYMS

AMR	Annual Monitoring Report
AWPF	Advance Water Purification Facility
BA	Benefit Assessment
Basin Plan	Los Angeles Region Water Quality Control Plan
Bight	Southern California Bight Regional Monitoring Program
BMP	Best Management Practice
BPO	Basin Plan Objective
Caltrans	California Department of Transportation
CASQA	California Stormwater Quality Association
CBRP	Comprehensive Bacteria Reduction Plan
CCTV	Closed-Circuit Television
CIBCSD	Channel Island Beach Community Services District
CIMP	Coordinated Integrated Monitoring Program
CSCI	California Stream Condition Index
CTR	California Toxics Rule
CURB	City Urban Restriction Boundary
DO	Dissolved Oxygen
FIB	Fecal Indicator Bacteria
GIS	Geographic Information Systems
IMP	Integrated Monitoring Program
LID	Low Impact Development
LVMWD	Las Virgenes Municipal Water District
MCM	Minimum Control Measures
MFAC	Minimum Frequency Assessment and Collection Program
MOA	Memorandum of Agreement
MUN	Municipal Beneficial Use
MRP	Monitoring and Reporting Program
MS4	Municipal Separate Storm Sewer System
NPDES	National Pollutant Discharge Elimination System
OC	Organochlorine
O&M	Operation and Maintenance
PCBs	Polychlorinated Biphenyls

PIPP	Public Information and Participation Program
QISP	Qualified Industrial Storm Water Practitioner
QMRA	Quantitative Microbial Risk Assessment
QSP/D	Qualified Stormwater Pollution Prevention Plans Practitioner and Developer
Regional Board	Los Angeles Regional Water Quality Control Board
RAA	Reasonable Assurance Analysis
ROWD	Report Of Waste Discharge
RSBW	Revolon Slough and Beardsley Wash
RWL	Receiving Water Limitations
SCCWRP	Southern California Coastal Water Research Project
SCOTUS	U.S. Supreme Court
SOAR	Save Open Space and Agricultural Resources
SSO	Single Sample Objective
SWPPP	Stormwater Pollution Prevention Plans
SWRCB	State Water Resources Control Board
TDS	Total Dissolved Solids
TMDL	Total Maximum Daily Loads
TGM	Technical Guidance Manual
TMRP	Trash Monitoring & Reporting Plan
TSP-SC	City of Oxnard Technical Services Program –Source Control
TST	Test of Significant Toxicity
TWSD	Triunfo Water & Sanitation District
Program or Ventura Countywide Program	Ventura Countywide Stormwater Quality Management Program
POC	Pollutants of Concern
USEPA	United States Environmental Protection Agency
VCAILG	Ventura County Agricultural Irrigated Lands Group
WBPC	Water Body-Pollutant Combination
WDID	Waste Discharger Identification Numbers
WLA	Waste Load Allocations
WMA	Watershed Management

WMP	Watershed Management Program
WOTUS	Waters of the United States
WPD	Watershed Protection District
WQBEL	Water Quality-Based Effluent Limitations
WQO	Water Quality Objective
WQS	Water Quality Standard

EXECUTIVE SUMMARY

The Ventura County Watershed Protection District (WPD), the County of Ventura, and the incorporated cities of Camarillo, Fillmore, Moorpark, Ojai, Oxnard, Port Hueneme, Ventura, Santa Paula, Simi Valley, and Thousand Oaks, operate municipal storm drain systems and discharge stormwater and urban runoff pursuant to the regional National Pollutant Discharge Elimination System (NPDES) for Municipal Separate Storm Sewer System (MS4) Permit (Order R4-2021-0105, 2021 Permit or Permit). This Permit, administrated by the Los Angeles Regional Water Quality Control Board (Regional Board), requires a Report of Waste Discharge (ROWD) to be submitted March 16, 2026, 180 days before the Permit expires on September 11, 2026, as an application for Permit renewal. This document is the ROWD submittal.

The first NPDES MS4 Permit covering Ventura County was adopted by the Regional Board in 1994 and covered the Ventura County WPD, the County of Ventura, and the incorporated cities of Camarillo, Fillmore, Moorpark, Ojai, Oxnard, Port Hueneme, Ventura, Santa Paula, Simi Valley, and Thousand Oaks (each a Permittee and collectively known as Permittees). Since then, the NPDES MS4 Permit has been renewed three times, each time substantially increasing requirements for the Permittees. The most recent Permit, issued in 2021, Order R4-2021-0105, incorporated the Watershed Management Programs (WMPs) option to support compliance with Receiving Water Limitations (RWLs) and interim Total Maximum Daily Load (TMDL) deadlines. The 2021 Permit also clarified that TMDL limits are considered Water Quality-Based Effluent Limitations (WQBELs). The Regional Board also included a Coordinated Integrated Monitoring Program (CIMP) in the 2021 Permit. Ventura County (Ventura County or County) and its watersheds are notably distinct from Los Angeles, as land use within the County is dominated by open space and agriculture, with interspersed pockets of urban areas, which is reflected in their WMPs. The Permittees submitted WMPs for the five County watersheds and a CIMP for approval in 2023 which reflected the geographic reality in Ventura County. In 2025 the Regional Board approved the CIMP, but provided limited approval of the WMP, which resulted in the remaining areas of the County subject to the baseline 2021 Permit and minimum control measures (MCMs).

PROGRAM ACCOMPLISHMENTS

Beyond meeting the 2021 Permit requirement, this Report of Waste Discharge (ROWD) serves to inform the Regional Board and the public on the accomplishments achieved by the Ventura Countywide Stormwater Quality Management Program (Program or Countywide Program), the individual Permittees, and the broader watershed management groups, towards improving water quality in Ventura County. Since the adoption of the 2021 Permit, and later with the partial approval of the WMP, the Countywide Program has achieved many accomplishments in each of the program elements, and beyond Permit requirements. **Section 2** illustrates the extensive work done by the Permittees. **Section 3** demonstrates the high-quality waters found in Ventura County. The Countywide Program is mature, robust, and effective and that continues to improve through adaptive management. All these efforts have resulted in water quality at Ventura County beaches to be among the best in the state. There are many more accomplishments listed in this ROWD, including watershed scale efforts such as the multiple Memorandum of Agreements groups formed countywide to address TMDLs.

WATER QUALITY ACROSS VENTURA COUNTY'S WATERSHEDS

Through the Program's decades of monitoring in the County, improvements in water quality have been demonstrated through implementation of the Program and collaboration with watershed partners. The high water quality throughout the County is demonstrated by the small number of constituents that exceeded water quality objectives during the most recent permit term.

Ventura River Watershed

The Permittees with MS4s that drain to the Ventura River Watershed are the County of Ventura, and the cities of Ojai and San Buenaventura (Ventura). **Figure ES-1** below shows the total number of constituents monitored compared to constituents that exceed in the Ventura River Watershed from 2015-2025. In the Ventura River Watershed, exceedances occurred in roughly equal numbers under both wet and dry conditions. During wet weather, most exceedances were observed at outfalls without corresponding exceedances in the receiving water at any time.

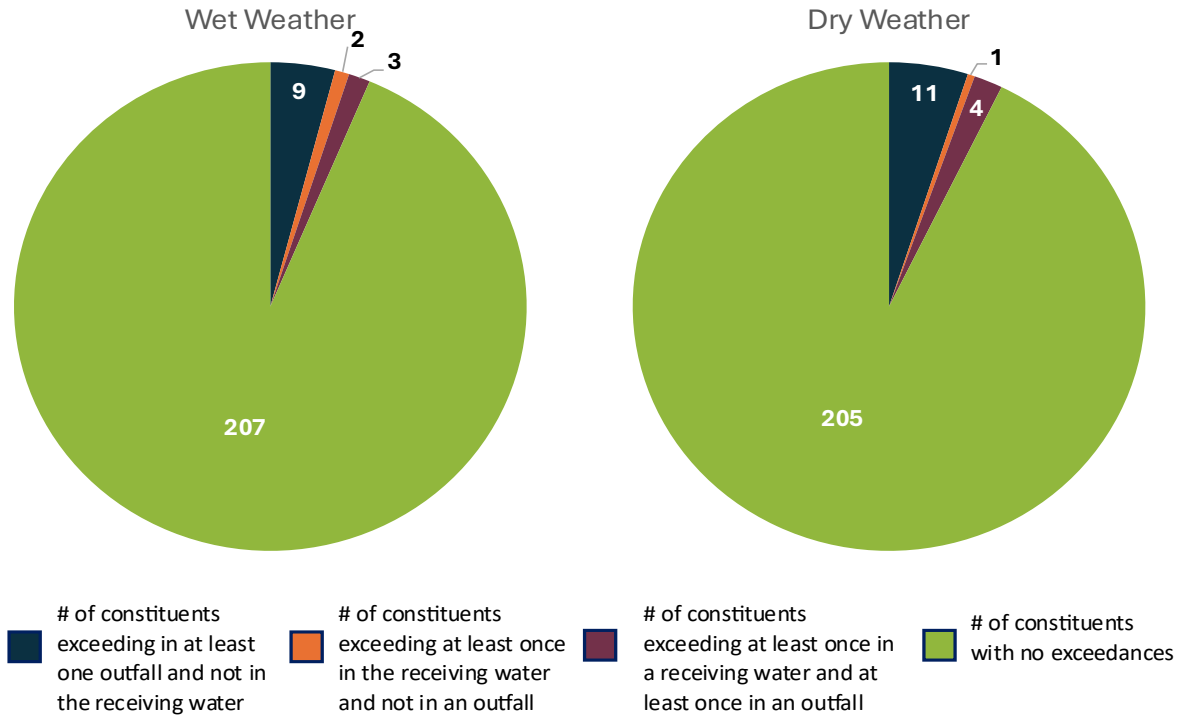
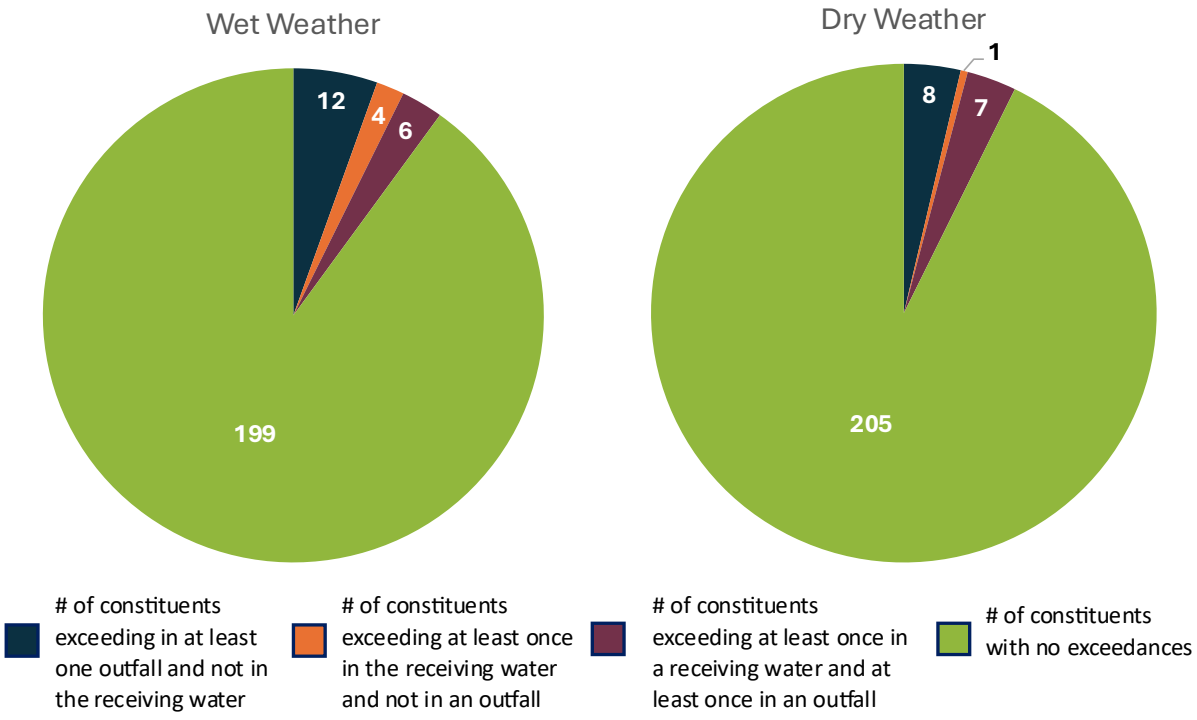


Figure ES-1. Number of Constituents Monitored Compared to Constituents that Exceed in the Ventura River Watershed During Wet and Dry Weather from 2015-2025

Calleguas Creek Watershed

The Permittees with MS4s that drain to the Calleguas Creek Watershed are the County of Ventura and the cities of Camarillo, Moorpark, Simi Valley, Thousand Oaks, and Oxnard. **Figure ES-2** below shows the total number of constituents monitored compared to constituents that exceed in the Calleguas Creek Watershed from 2015-2025. Exceedances have been slightly more frequent during wet weather, occurring primarily at outfalls rather than in receiving waters. The receiving water shows the fewest exceedances in the Calleguas Creek Watershed under both wet and dry conditions.



ES-2. Total Number of Constituents Monitored Compared to Constituents that Exceed in the Calleguas Creek Watershed from 2015-2025

Santa Clara River Watershed

The Permittees included in this ROWD with MS4s that drain to the Santa Clara River Watershed are the County of Ventura, and the cities of Fillmore, Santa Paula, Oxnard, and Ventura. **Figure ES-3** below shows the total number of constituents monitored compared to constituents that exceed in the Santa Clara River Watershed from 2015-2025. This figure shows that, as in the other major watersheds, most monitored constituents meet WQOs in both the receiving water and at outfalls.

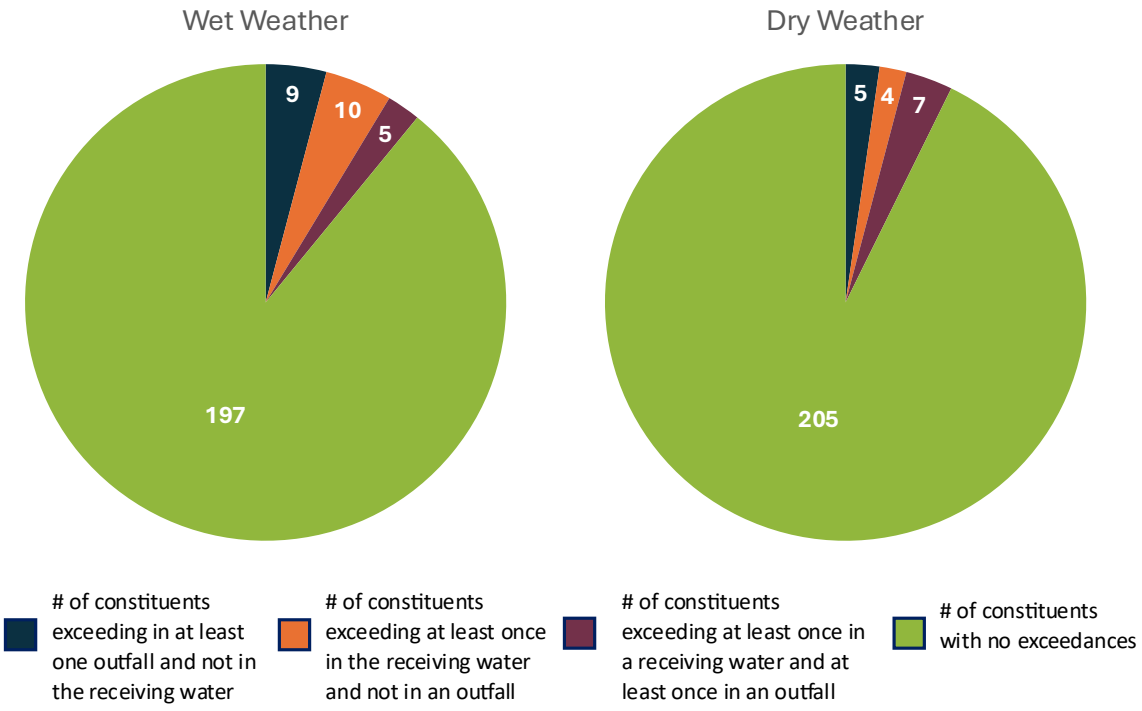


Figure ES-3. Total Number of Constituents Monitored Compared to Constituents that Exceed in the Santa Clara River Watershed During Wet Weather from 2015-2025

Malibu Creek Watershed

The only Permittees with MS4s that drain to the Malibu Creek Watershed are the County of Ventura and City of Thousand Oaks. Prior to the 2024/2025 monitoring year, the only site-specific data available for the Malibu Creek Watershed consisted of bacteria TMDL monitoring results. Starting in the 2024/2025 monitoring year, a Mass Emission site and Major Outfall site were specified in the CIMP for monitoring constituents other than those in the TMDL. Additionally, the Malibu Creek WMP was the only WMP approved by the Regional Board in May 2025. **Section 5** details the information on the implementation program and updates for Malibu Creek Watershed.

Miscellaneous Ventura Coastal Watershed

The Miscellaneous Ventura Coastal Watersheds Management Area receives MS4 discharges from the County of Ventura and the cities of Oxnard, Port Hueneme, and Ventura. These drainage areas are typified by small coastal streams, wetlands, or marinas/urban centers. These small watersheds include the Channel Islands Harbor, Port Hueneme Harbor, Ventura Marina, McGrath Lake, Ormond Beach, and Ormond Beach Wetlands. For more information regarding the Miscellaneous Ventura Coastal Watershed, see **Section 1.4.1.5**.

GOALS AND GUIDING PRINCIPLES

In the last ROWD, the Permittees developed guiding principles, which have been carefully considered and updated to reflect the current needs and challenges of the Program:

- The Program's overarching goal is to work collaboratively with the Regional Board and other watershed partners to cost effectively achieve water quality objectives and protect beneficial uses. Permit recommendations provided in the ROWD are based on supporting this overarching goal.
- Program efforts should be coordinated with other entities that affect water quality in the region, as appropriate. Permit language should not hinder comprehensive watershed management and provide flexibility to consider the unique nature of each watershed and its opportunities.
- The Program supports the use of the best available science that leads to informed stormwater management and public policy decisions. Permit compliance pathways should allow for consideration of the latest science.
- There should be an emphasis on the ability to prioritize actions to focus on identified pollutants of concern. Permit language should be supportive of these concepts and conflicting requirements should be eliminated.
- The Program supports the evolution of MS4 Program elements through the adaptive management process starting with a focus on source control actions, followed by multi-benefit structural projects only where needed. The Permit should support this approach and provide compliance options when only source control activities are needed to meet the permit limitations.
- The Program supports streamlined Permit requirements that directly support effective Program implementation to conserve resources. For example, monitoring and reporting requirements need to be limited to those elements that provide information that will help answer key questions, inform management decisions, and should be coordinated where appropriate.

These guiding principles were used to develop recommendations for Permit modifications during the upcoming permit renewal.

RECOMMENDED PERMIT MODIFICATIONS

Given the good water quality throughout the County and the limited number of remaining constituents to be addressed, the Permittees have proposed numerous changes to the Permit to support effective implementation of actions that will address these remaining pollutants of concern. The detailed recommendations are included in **Section 4** and include:

1. Revised TMDL and Receiving Water Limitation Language and Compliance Approaches

- Replace the existing numeric receiving water and TMDL limitations with specific, measurable and enforceable BMPs.
- Revise the receiving water limitation language to align with the recent Supreme Court of the United States (SCOTUS) decisions.

2. Minimum Control Measures (MCMs) Improvements

- Simplify training documentation requirements.
- Streamline progressive enforcement procedures.
- Provide flexibility in industrial/commercial facility inspections.

- Clarify planning and land development requirements, particularly for redevelopment and post-disaster rebuilding.
- Reduce redundant construction inspection requirements.
- Adjust public agency parking lot inspection and maintenance requirements.

3. Monitoring and Compliance

- Remove outdated TMDL monitoring plan references that have been replaced by the CIMP.
- Update toxicity testing requirements in alignment with recent court cases.

4. TMDLs

- Add risk-based compliance pathways for bacteria TMDLs (demonstrating <32 illnesses/1000 people).
- Allow compliance demonstration through meeting TMDL targets, WQOs, or receiving water limitations.

ADAPTIVE MANAGEMENT FOR MALIBU CREEK WATERSHED WMP

Although the Malibu Creek Watershed WMP was just approved in May 2025, the affected Permittees have been evaluating the proposed activities and controls to ensure that the WMP is effective. As a result of their evaluation, the applicable Permittees have decided to prioritize dry weather diversion projects and thus adapt their current WMP strategy to replace its proposed project in the WMP for the Ocho Rios Way Diversion project as a strategic structural control measure. The Ocho Rios Way Diversion project is being prioritized due to several reasons including the ability to construct the project, availability of grant funding, and alignment of stormwater and recycled/potable water interests including providing a regional multi-benefit opportunity.

This ROWD proposes improvements for a measurable, enforceable, attainable and feasible NPDES MS4 Permit pathway to compliance for Permittees in the County of Ventura.

1 INTRODUCTION

1.1 Ventura Countywide Stormwater Quality Management Program Overview

The Ventura County Watershed Protection District (WPD), the County of Ventura and the incorporated cities of Camarillo, Fillmore, Moorpark, Ojai, Oxnard, Port Hueneme, Ventura, Santa Paula, Simi Valley, and Thousand Oaks, (each a Permittee, and collectively known as Permittees) operate municipal storm drain systems and discharge stormwater and urban runoff pursuant to the regional National Pollutant Discharge Elimination System (NPDES) for Municipal Separate Storm Sewer System (MS4) Permit (Order R4-2021-0105 or Permit). This Permit, administrated by the Los Angeles Regional Water Quality Control Board (Regional Board), requires a Report of Waste Discharge (ROWD) to be submitted March 16, 2026, 180 days before the Permit expires on September 11, 2026, as an application for Permit renewal.

1.2 Goals of Report of Waste Discharge

Beyond meeting the Permit requirement, this ROWD serves to inform the Regional Board and the public about the accomplishments achieved by the Ventura Countywide Stormwater Quality Management Program (Ventura Countywide Program or Program), the individual Permittees, and the broader watershed management groups towards improving water quality in Ventura County, and includes the lessons learned over the last thirty years of addressing urban runoff pollution, the challenges identified for the future and recommended actions to help meet those challenges.

1.3 Structure of the ROWD

The ROWD is organized into five sections, each of which serves a distinct purpose in meeting the requirements of the MS4 Permit and the October 23, 2025 memo from the Regional Board entitled *Guidance for Submittal of Report of Waste Discharge and Adaptive Management Process Results; Regional Phase I Municipal Separate Stormwater Sewer System Permit* (NPDES Permit No. CAS004004; Order No. R4-2021-0105) (ROWD Submittal Memo).

Section 1 provides an overview of Ventura County, including watershed characteristics, the Permittees, and a description of the MS4 facilities. This section provides the basic information (agency names and contacts, etc.) and the identification of any previously unidentified waterbodies that receive discharges from the MS4[1] required in the ROWD Submittal Memo.

Section 2 summarizes key accomplishments and implementation actions undertaken by the Permittees during the current permit term. This section demonstrates progress in implementing the Countywide Program and provides an evaluation of accumulated programmatic information from annual reports.

Section 3 summarizes the results of the evaluation of annual monitoring report information with a focus on water quality monitoring results. This section highlights the effectiveness of the Program by demonstrating the limited number of remaining water quality issues within Ventura County watersheds.

Section 4 presents the recommended modifications to the upcoming MS4 Permit based on the evaluations and findings documented in Sections 2 and 3, with the challenges and guiding principles developed to proactively work with the Regional Board. These recommendations are intended to most effectively address the remaining pollutants of concern identified in **Section 3**, while recognizing the

[1] As will be discussed in the section, while additional MS4 infrastructure has been identified and documented, no previously unidentified waterbodies have been identified that receive discharges from the MS4. As a result, there are no water quality impacts to these waterbodies to be summarized.

technical, fiscal, and geographic challenges associated with addressing those pollutants. This section meets the ROWD Submittal Memo requirement to identify proposed changes or improvements to the stormwater management program and monitoring activities for the upcoming five year permit term.

Section 5 serves as the adaptive management report for the portion of the Malibu Creek Watershed with an approved WMP. This section fulfills the permit requirement in Part IX.E.4 to submit the results of the WMP adaptive management process as part of the ROWD.

1.4 Region Overview

Ventura County has a population of more than 835,427 people (2020 Census) and is located north and west of Los Angeles County, east of Santa Barbara County and south of Kern County. The Pacific Ocean forms the southwestern boundary of the County of Ventura providing 42 miles of coastline. The County has a total area of 1.2 million acres (1,875 square miles). Over 574,000 acres (47% of the County's total land area), are in the Los Padres National Forest, although there are privately owned holdings scattered throughout the Los Padres National Forest area. Outside of the Los Padres National Forest, there are approximately 528,000 acres of land in the unincorporated area and 121,000 acres in the County's 10 incorporated cities. Residential, agricultural and business uses are primarily located in the southern portion of the County. Ventura County has a Mediterranean climate, with an average July high temperature of 79 degrees, and an average January low temperature of 42 degrees. The temperature varies significantly from inland valleys to coastal areas.

The average annual rainfall in the County is approximately 18 inches. However, rainfall is highly variable in the region— across watersheds, seasonally, and from year to year. Rainfall typically occurs in just a few significant storms each year, with 90% of the rainfall occurring between November and April. This average is spread across multiple environments with the highlands and mountains of the Western Transverse Mountain Range in the northern portion of the County getting most of the rainfall.

1.4.1 Watersheds

The urbanized areas of Ventura County are divided among five main watersheds and the coastal region. In the areas regulated by the Regional Board. The watershed are, from north to south: the Ventura River Watershed, Santa Clara River Watershed, Calleguas Creek Watershed, Malibu Creek Watershed, and Miscellaneous Ventura Coastal Watersheds shown in **Figure 1-1.** Watershed-based management plans have been prepared for the major watersheds in the region: the Calleguas Creek Watershed Management Plan (2005), the Santa Clara River Enhancement and Management Plan (2005), and the Ventura River Watershed Management Plan (2014). Starting with the new Permit issuance in 2021, the Permittees collaboratively developed draft Watershed Management Programs (WMPs) for all watersheds in Ventura County. Different iterations were submitted and resubmitted to the Regional Board between 2023 and 2024, with a final Regional Board decision to approve only portions of the Malibu Creek Watershed WMP, in May 2025.

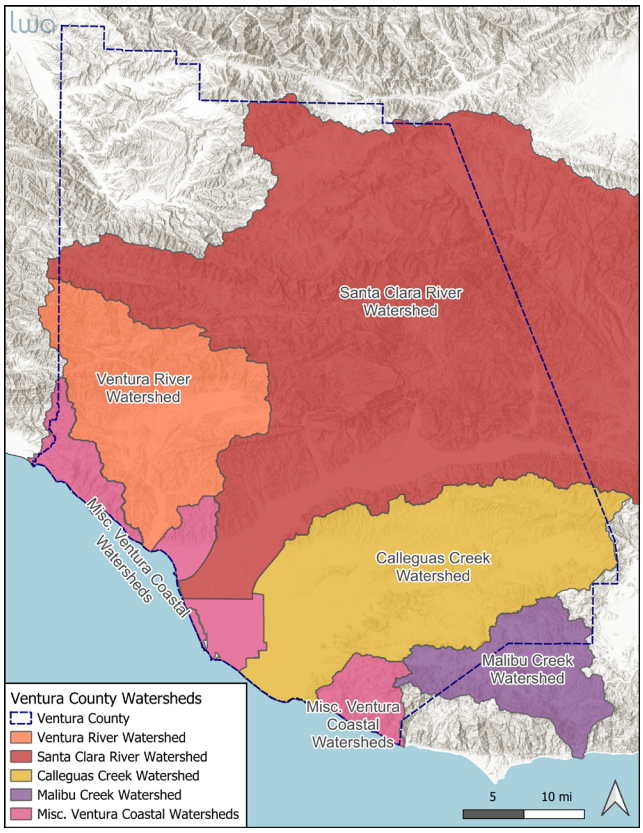


Figure 1-1. Ventura County Watersheds

1.4.1.1 Ventura River Watershed

The Ventura River Watershed is a coastal watershed located in the northwestern portion of Ventura County draining an area of 228 square miles, roughly half of which is on Forest Service land (USFS, 1997)) and is 87% open space.[2]. The Ventura River has several major tributaries including Matilija, North Fork Matilija, San Antonio, and Cañada Larga. Lake Casitas serves as the primary water supply for the area within the watershed. The Ventura River Watershed is minimally developed, and compared to other watersheds of the region, has large areas with good water quality and excellent aquatic habitat. In 1992, as part of the Los Padres Condor Range and River Protection Act, the United States Congress designated 29,600 acres of the Upper North Fork and Matilija Creek subwatershed as the Matilija

Figure 1-2. Ventura River Watershed via cleanwatershed.org

[2]Ventura Countywide Stormwater Quality Management Program, *Coordinated Integrated Monitoring Program*, January 2025.

Wilderness with protections. Some of the Matilija WIlderness has been nominated for Wild and Scenic River designation.[3]

The Permittees with MS4s that drain to the Ventura River Watershed are County of Ventura, and the cities of Ojai and San Buenaventura (Ventura).The Ventura River watershed's rainfall patterns vary geographically. The watershed's upper areas receive over twice as much rainfall, almost 20 inches more, as its lower areas.

1.4.1.2 Calleguas Creek Watershed

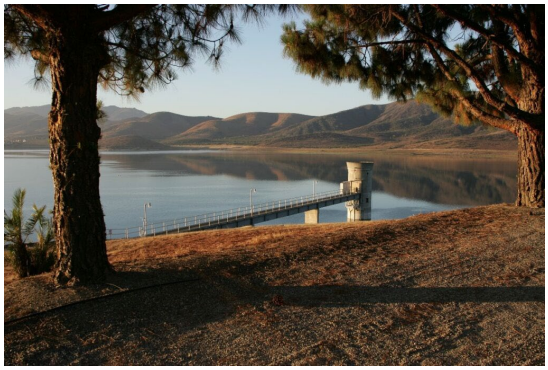


Figure 1-3. Calleguas Creek Watershed via watershedscoalition.org

The Calleguas Creek Watershed encompasses an area of approximately 343 square miles, predominantly in southeastern Ventura County. The major hydrologic features of the watershed include Conejo Creek, Arroyo Santa Rosa, Arroyo Simi, Arroyo Las Posas, and Calleguas Creek, as well as Revolon Slough and Mugu Lagoon. The northern boundary of the watershed is formed by the Santa Susana Mountains, South Mountain, and Oak Ridge Mountains. The southern boundary is formed by the Simi Hills and Santa Monica Mountains. Presently 50 percent of the watershed is undeveloped open space, 25 percent is agricultural, and the remaining 25 percent is in urban land use. The watershed ultimately drains to the Pacific Ocean through Mugu Lagoon.

Prior to the 1940s, Calleguas Creek and its main tributaries provided drainage for stormwater and irrigation discharge with rare occurrences of year-round flow, primarily due to groundwater. However, wastewater discharges now provide portions of Calleguas Creek and its tributaries with perennial flow.

The Permittees with MS4s that drain to the Calleguas Creek Watershed are the County of Ventura, and the cities of Camarillo, Moopark, Simi Valley, Thousand Oaks, and Oxnard.

The Calleguas Creek Watershed is a temperate Mediterranean Climate regime with mild temperatures with little variation in temperature extremes. Mean annual precipitation is between 12 inches on the Oxnard Plain near Point Mugu to 21 inches in the higher elevations of Tapo Canyon, with a weighted average of 15 inches per year.[4]

[3] U.S. Forest Service. *Los Padres National Forest: Wilderness Education Plan*. https://www.fs.usda.gov/sites/nfs/files/legacy-media/lospadres/Wilderness%20Education%20Plan.pdf

[4] Calleguas Creek Watershed Hydrology Study Present Condition, Ventura County Public Works Agency Watershed Protection District March 2003

1.4.1.3 Santa Clara River Watershed

Figure 1-4. Santa Clara River Watershed via watershedcoalition.org

The Santa Clara River is the largest river system in Southern California that remains in a relatively natural state. The Santa Clara River headwater is at Pacifico Mountain in the San Gabriel Mountains, and it flows in a generally western direction for approximately 84 miles through Tie Canyon, Aliso Canyon, Soledad Canyon, the Santa Clarita Valley, the Santa Clara River Valley, and the Oxnard Plain before discharging to the Pacific Ocean near the Ventura Harbor. The Santa Clara River and tributary system have a watershed area of about 1,832 square miles. Major tributaries include Castaic Creek and San Francisquito Creek in Los Angeles County, and the Sespe, Piru, and Santa Paula Creeks in Ventura County. Approximately 60 percent is in Ventura County and 40 percent of the watershed is in Los Angeles County. The Ventura County portion is over 90% open space[5]

The Santa Clara River Watershed is the largest Watershed in the County and has the lowest percentage of development. About 90 percent of the Watershed lies east and north of the floodplain in the mountainous terrain of the San Gabriel Mountains, Sierra Pelona, and the Topatopa Mountains, extending into the Sespe back-country toward headwaters near Pine Mountain and Mt. Pinos. It also includes areas to the south of the river including the Santa Susana Mountains, Oak Ridge, and South Mountain. Much of this area is in the Angeles National Forest and Los Padres National Forest. The remaining 10 percent of the watershed is mostly located in the relatively flat terrain of the Oxnard Plain, the Santa Clarita Valley, Castaic Valley, the Santa Clara River Valley, and the floors of the larger canyons, including the upper Soledad, and lower Sand, Mint, Bouquet, Placerita, San Francisquito, Piru, Santa Paula, and Sespe Canyons.

The Permittees included in this ROWD with MS4s that drain to the Santa Clara River Watershed are County of Ventura, and the cities of Fillmore, Santa Paula, Oxnard, and Ventura.

Consistent with other rivers in the region, the Santa Clara River watershed experiences highly variable annual rainfall and peak flows. During the rainy season, flows can increase, peak, and subside rapidly in response to high intensity rainfall. Between winter rainfall events in wet years, the river may exhibit continuous baseflow to the ocean from residual watershed discharge; in dry years, flow may be intermittent. During the dry summer season, flows in the mainstem are intermittent or non-existent, depending primarily on areas of rising groundwater or inflows from dam releases or other anthropogenic sources. Groundwater discharges to the mainstem Santa Clara River occur when groundwater levels are high and the water table is close to the surface.[6] The mean annual precipitation is about 17-18 inches in Santa Paula, Piru, and Fillmore.[7]

[5] Ventura Countywide Stormwater Quality Management Program, *Coordinated Integrated Monitoring Program*, January 2025.
[6] Santa Clara River Parkway Floodplain Restoration Feasibility Study, October 2007
[7] Ventura County Public Works Agency, Watershed Protection District, Wettest/Driest Years Report https://hydrology.venturacounty.gov/fws/reports/wettest-driest-report .

1.4.1.4 Malibu Creek Watershed

Figure 1-5. Malibu Creek Watershed

The Malibu Creek Watershed drains 109 square miles, with approximately one-third of its upper region situated in southern Ventura County, and the lower two thirds in Los Angeles County. The watershed drains a mountainous area extending from the Santa Monica Mountains and Simi Hills to the Santa Monica Bay at Malibu State Beach. The Malibu Creek Watershed contains numerous tributaries and lakes. Open and predominantly natural spaces comprise a majority (79%) of the watershed, including vacant land (58%), open space and recreation (13%), and undevelopable or protected land (8%; SCAG, 2018). A significant portion of the watershed is located within Malibu Creek State Park and/or the Santa Monica Mountains National Recreation Area, which is managed by the National Park Service. Other land uses in the watershed include high and low density residential (14%), commercial (4%), transportation (2%), agricultural (1%), and industrial (1%). In addition to flows from the watershed area, Malibu Creek receives effluent from the Tapia Water Reclamation Facility at the primary discharge location in Los Angeles County. Jurisdictions in Ventura County within the watershed include the County of Ventura, City of Thousand Oaks, and an undeveloped portion of the City of Simi Valley that contains no MS4 infrastructure. The only permittees with MS4s that drain to the Malibu Creek Watershed are Ventura County and City of Thousand Oaks.

Average annual rainfall in the Malibu Creek Watershed is about 24 inches (61 cm) in the southern half of the watershed, and 14 inches (35 cm) in the northern half. Annual precipitation is highly variable, ranging from near zero to 70 inches (178 cm) over the period of record.[8]

1.4.1.5 Miscellaneous Ventura Coastal Watersheds

Figure 1-6. Misc. Ventura Coastal Watershed via US Army Corps of Engineers Los Angeles

The Miscellaneous Ventura Coastal Watersheds Management Area is composed of four separate coastal drainage areas located between the watershed boundaries previously discussed of the Ventura River, Santa Clara River, Calleguas Creek, and the Malibu Creek. These drainage areas are typified by small coastal streams, wetlands, or marinas/urban centers. These small watersheds include the Channel Islands Harbor, Port Hueneme Harbor, Ventura Marina, McGrath Lake, Ormond Beach, and Ormond Beach Wetlands. The Miscellaneous Ventura Coastal Watersheds Management Area receives municipal storm drain discharges from County of Ventura and the cities of Oxnard, Port Hueneme, Ventura[9].

[8] Watershed Management Area Plan for the Malibu Creek Watershed, January 2001

[9] https://www.waterboards.ca.gov/rwqcb4/water_issues/programs/regional_program/Water_Quality_and_Watersheds/misc_ventura_coastal/miscVentura_coastal.pdf

The mean annual precipitation is about 14-15 inches in Port Hueneme and Ventura.[10]

1.4.2 Urban Development and Land Use

In addition to being Permittees, each incorporated city in the region serves as the land use agency for areas within its jurisdiction. The ten incorporated cities include Ventura, Ojai, Camarillo, Thousand Oaks, Simi Valley, Moorpark, Oxnard, Port Hueneme, Santa Paula and Fillmore. The County of Ventura serves as the land use agency for unincorporated areas of the County. In unincorporated Ventura County, urban infill areas are Piru, Saticoy, El Rio, Oak Park, Newbury Park, Meiners Oaks, Oak View, and Casitas Springs. These unincorporated urban infill areas include a storm drain system where the MS4 Permit applies.

The County of Ventura and the ten cities within the County have collaborated in land use decision-making since 1969 when, in cooperation with the Local Agency Formation Commission, a landmark set of county-wide policies entitled the "Guidelines For Orderly Development" was adopted. These policies clarified the relationship between the County of Ventura and the cities regarding land use planning. These guidelines have resulted in confining urban development within cities' boundaries, which are much better equipped to deliver urban services.

The County of Ventura, local cities and other agencies successfully collaborated again in 1974 to adopt the Regional Land Use Program. This program led to coordination among the cities and the County of Ventura regarding such issues as population forecasting and planning for transportation, spheres of influence, air quality, and water quality. Many of these early planning efforts have directly resulted in continued cooperative water management efforts.

The County's residents are united in their efforts to moderate the pace of urban growth and preserve agricultural and open space resources. In 1998 the County's Save Open Space and Agricultural Resources (SOAR) initiative was approved by voters. This initiative relies on establishing voter-controlled City Urban Restriction Boundary (CURB) lines around the cities in the County which define and limit where growth can occur. Outside of CURB areas, any proposed land use changes on areas zoned for agricultural or open space land uses require voter approval to prevent urban sprawl. There are two cities which do not have these measures: Port Hueneme, which is surrounded by the City of Oxnard and the Pacific Ocean, and therefore has no potential to expand; and the City of Ojai, which uses its General Plan and zoning approval process to limit growth. In 2016, citizens renewed SOAR until 2050 with 59% of the vote. The Ventura County SOAR CURB Areas map is shown in **Attachment A[11].**

[10] Ventura County Public Works Agency, Watershed Protection District, Wettest/Driest Years Report https://hydrology.venturacounty.gov/fws/reports/wettest-driest-report .

[11] https://services5.arcgis.com/V0QlfY0p6DRAyng0/arcgis/rest/services/Ventura_County_SOAR_Boundary/FeatureServer

Existing urban infill areas and city boundaries are based on the cities' CURB lines, and in the case of the unincorporated County of Ventura, the Existing Community designation. The location of each incorporated city, its CURB lines, and the existing urban infill areas in unincorporated areas of the County of Ventura are shown in **Figure 1-7.**

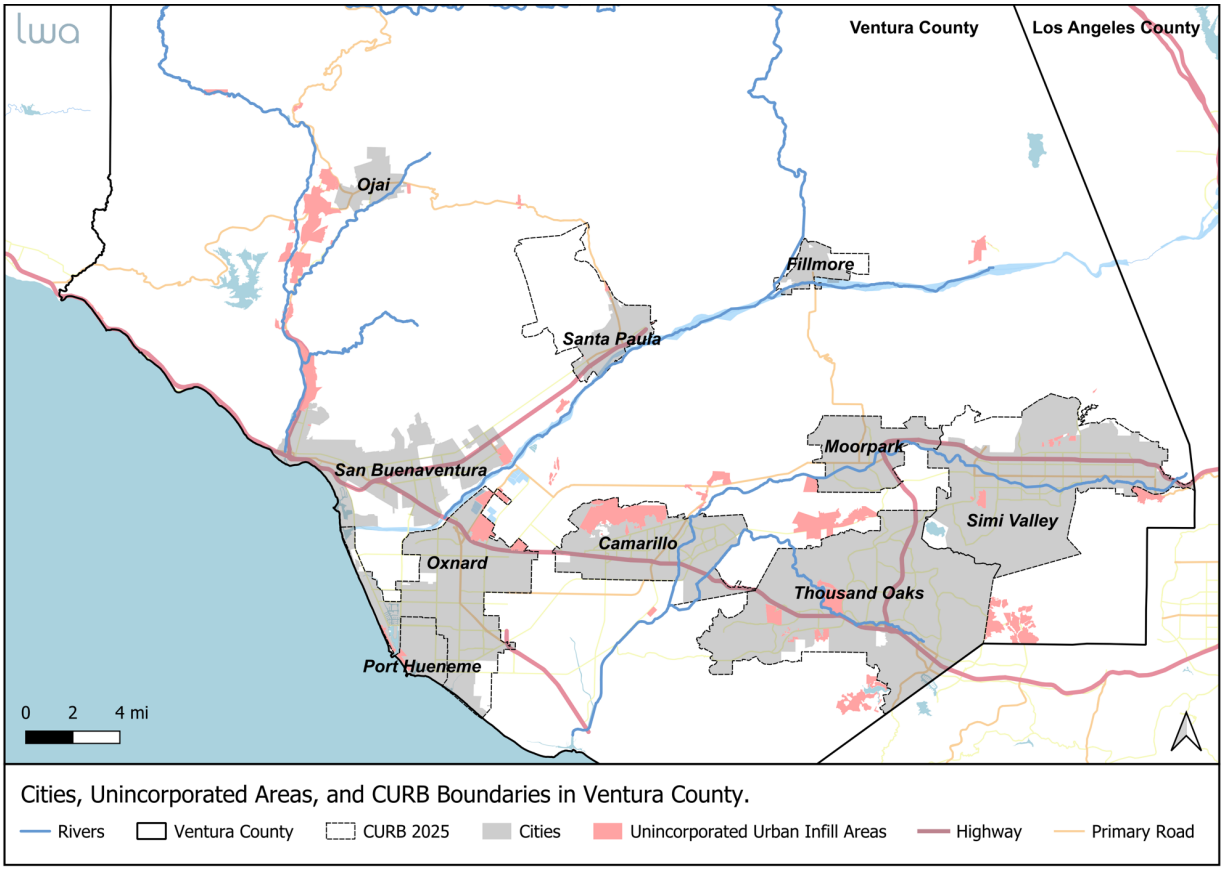


Figure 1-7.Incorporated Cities and Existing Urban Infill Areas in Unincorporated County

Figure 1-8 shows the MS4 facilities located in these urbanized areas. There are no MS4 facilities outside of these urbanized areas**.** The Permit, and therefore this ROWD, only applies to areas with MS4 facilities.

1.5 Description of MS4 Facilities

The MS4 System Countywide in Ventura includes:

- 38,000 Inlets
- 552 Outfalls discharging to WOTUS[12]
- 950 Miles of Storm Drains

The Countywide Program consists of eleven distinct MS4s. Other than where the cities' and the County of Ventura's storm drains discharge into WPD facilities, and a few areas where cities and unincorporated areas may intersect, these facilities are not highly interconnected. Originally designed to protect life and property, many storm drains followed the natural landscape and drainage routes. Because of this there are many areas where natural springs feed into the MS4 during dry weather and runoff from upland natural areas enter during wet weather. The range of flows entering and exiting these MS4s will vary dramatically depending on storm intensity and the size of the catchment and antecedent moisture conditions.

The WPD possesses jurisdictional authority over any channel containing runoff with a peak flow rate of more than 500 cubic feet per second during a 100-year storm (referred to as "redline" channels). Jurisdictional authority does not define the channel as an MS4 but grants the WPD the authority to require sufficient information and engineering studies to show that any connections do not negatively impact the conveyance capacity of the jurisdictional channel. These redline channels may or may not have engineered improvements and may or may not require ongoing maintenance. Operations and maintenance field crews inspect and remove debris from the improved and unimproved open channels for facilities owned by the WPD.

The Permittees currently are owners and operators for all MS4 facilities, which include close to 950 miles of storm drains. Storm water enters the storm drains through roughly 38,000 inlets and exits to over 4,000 outfalls countywide. Of those, only 552 outfalls discharge to Waters of the United States (WOTUS[12]). Included in these systems are over 1,900 water quality treatment Best Management Practices (BMPs) including, but not limited to, infiltration basins, bioswales, filtration devices, and treatment vaults[13].

1.5.1 Unified Integrated Storm Drain Map

In 2015, the Program completed its Ventura Countywide Unified Storm Drain Mapping project. This project involved the creation of five new Storm Drain System Geodatabases and sub watershed boundaries for the five small cities of Fillmore, Moorpark, Ojai, Port Hueneme, and Santa Paula who did not have this mapped in Geodatabase format. A single Geodatabase now contains all available storm drain information from all Permittees. This information is also available in Google Earth KMZ files downloadable from vcstormwater.org[14]. This project also included a Countywide spatial analysis using geographic information systems (GIS) to identify infiltration constraints per the 2011 Technical Guidance Manual (TMG) and mapping of the natural stream network. A screen shot of the Ventura Countywide Unified Storm Drain Map is shown in **Figure 1-8**.

[12] Waters of the United States (WOTUS) as defined in Los Angeles Regional Water Quality Control Board Order R4-2021-0105 Attachment D.
[13] Ventura County Watershed Management Programs, August 2024.
[14] https://www.vcstormwater.org/index.php/publications/maps/ventura-countywide-unified-storm-drain-map

In 2024, a large-scale update to the 2015 Ventura Countywide Unified Storm Drain Mapping GIS system was completed. This update added newly constructed storm drains built since 2015 and incorporated older storm drain records that had been identified over the previous several years. To support the development of an outfall-based database, the update also included new geospatial layers, such as WOTUS, major and minor outfalls with associated tributary areas, low flow diversion locations, and an ownership and responsibility polygon layer. Permittees used the updated outfall information to conduct non-stormwater discharge screening and source investigation activities. Including changes to the MS4, including identification of new MS4 infrastructure, are required in a ROWD consistent with EPA guidance.[15]

The updated information also helped during the last permit renewal to clarify Permittee responsibilities for several TMDLs by documenting where no Ventura County MS4 facilities are present. No Ventura County MS4 facilities are present at the following locations:

- Santa Monica Bay Nearshore and Offshore Debris TMDL besides the Malibu Creek Watershed urban areas,
- Santa Monica Bay Bacteria TMDL besides the Malibu Creek Watershed urban areas,
- Los Angeles River Trash TMDL, and
- Santa Clara River in Reach 3 or 4b.

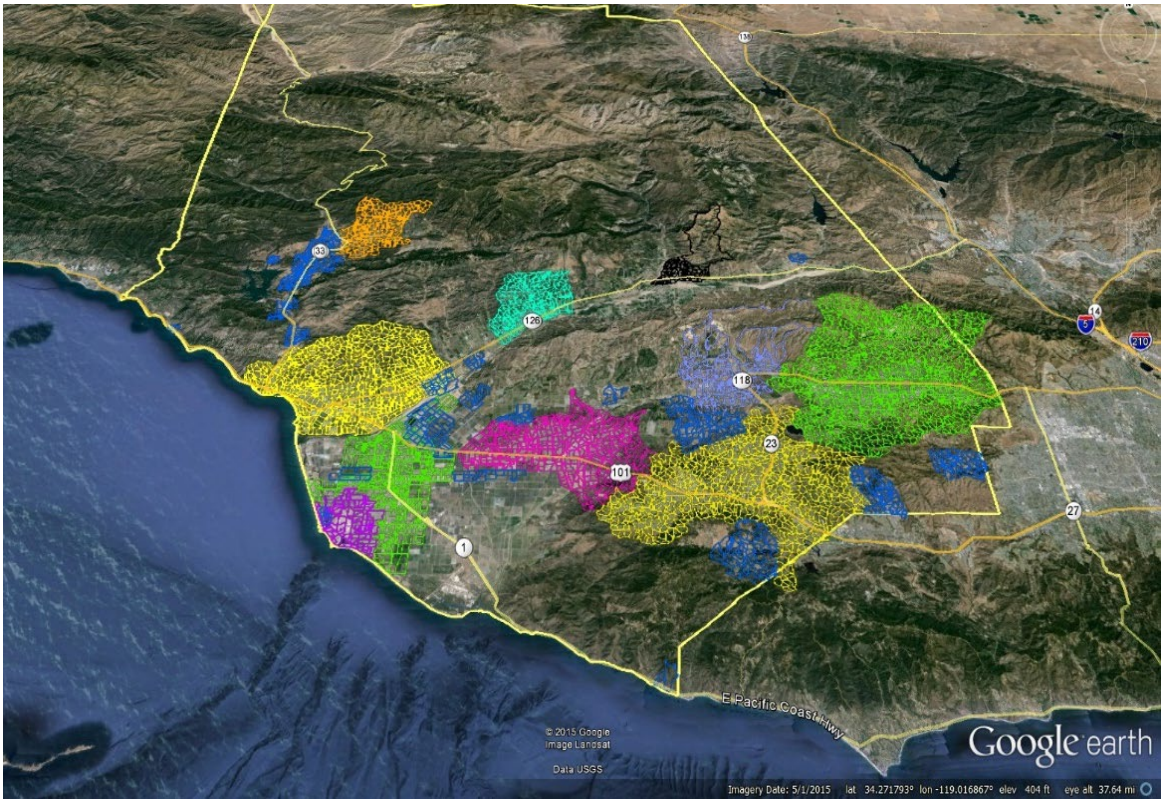


Figure 1-8. Screenshot of Countywide Unified Storm Drain Atlas as seen on Google Earth Pro with All Storm Drain Information in a Single Database

[15] EPA, *Interpretative Policy Memorandum on Reapplication Requirements for MS4s*, 61 FR 41698 (Aug. 9, 1996)

2 VENTURA COUNTYWIDE STORMWATER MANAGEMENT PROGRAM SUCCESSES AND ACCOMPLISHMENTS

2.1 Countywide Program Background

The Permittees have been participating and contributing to the Countywide Program over many Permit terms. In each iteration, the Countywide Program improves, adapts, and supports Permittees to achieve Permit goals and responsibilities. The following section provides more details on the Program, both as a group and additional efforts by individual Permittees.

2.1.1 Permit History

The first NPDES MS4 Permit for covering Ventura County was adopted in 1994 and included all ten cities, the County of Ventura, and the WPD. At that time, the City of Oxnard was considered the only Phase 1 municipality, but the remaining agencies in Ventura County decided to work proactively to prevent stormwater pollution and joined the Permit. This first Permit served to increase awareness of stormwater pollution to both the municipal agency staff and the public. On July 27, 2000, a second Permit was adopted that included logical and incremental increases in the requirements. Notable new requirements were increased monitoring and land development criteria for the treatment of stormwater runoff. That five-year Permit was on administrative extension until May 7, 2009, when Regional Board Order 09-0057 was adopted. Shortly after adoption of that permit the Regional Board rescinded it to hold a new adoption hearing. On July 8, 2010, Order No. R4 2010-0108 was adopted with minor changes. The 2010 Permit had a new set of implementation deadlines and replaced the order adopted in 2009 in its entirety. This permit greatly increased the monitoring requirements by adding eleven Major Outfall sites on top of the three wet weather receiving waters sites that had been monitored under the previous permit and added TMDL requirements for the first time. Additionally, this is the first time LID and runoff retention requirements were required by the Regional Board.

The 2010 Permit expired on July 8, 2015, but was continued by administrative extension until the new Regional Permit (Order R4-2021-0105) was adopted on September 11, 2021. This Permit incorporated the WMP option to support compliance with Receiving Water Limitations (RWLs) and interim TMDL deadlines. However, the WMP option does not provide a compliance option for final TMDL limits. Currently, the only TMDLs with compliance dates that have not yet passed are the Calleguas Creek Watershed Organochlorine Pesticides, PCBs, and Siltation TMDL (March 24, 2026), the Malibu Creek Watershed Nutrient TMDL (September 11, 2026), the Malibu Creek Watershed Wet Weather Bacteria TMDL (July 15, 2026), and the Santa Clara River Bacteria TMDL during wet weather only (March 21, 2029). The new permit also clarified that TMDL limits are considered Water Quality-Based Effluent Limitations (WQBELs).

Permittee Organization

- Camarillo
- County of Ventura
- Fillmore
- Moorpark
- Ojai
- Oxnard
- Port Hueneme
- Santa Paula
- Simi Valley
- Thousand Oaks
- Ventura
- Watershed Protection District

2.1.2 Organization and Coordination

The first ROWD submitted in 1992 identified the Permittees to be covered by the Countywide Program and the organization structure. The first implementation agreements were established on June 30, 1992. The WPD (as the Permit's Principal Permittee in 1992) entered into four separate District-zone-based implementation agreements with the ten Ventura County cities and the unincorporated areas of the County (the Permittees). Collectively, these four agreements were known as the Implementation Agreement for the Countywide Program. The Implementation Agreements identified the responsibilities of the parties to the Permit and set forth the methodology for using the WPD's Benefit Assessment financing to fund a portion of the NPDES Stormwater Program in the Permittee's respective jurisdictions. The Benefit Assessment, while important, funds a declining percentage of the NPDES Stormwater Program costs because it cannot be increased to address inflation (see 2.1.4 Funding).

The Agreement has been amended over the years and, with the 2021 Permit, a renewed effort to secure a long-term agreement was initiated. The result was a five-year Implementation Agreement with all Permittees to replace the original agreement. The Agreement defines the fiscal responsibilities (expenditures and contributions) of all collective parties with respect to the current Permit. It formalizes the Permittees' commitment to cooperate and to mutually fund an integrated Countywide Program for protecting and improving water quality in Ventura County.

The Waste Discharger Identification Numbers (WDID) and contacts for all Permittees are listed in **Table 2-1.**

Table 2-1. WDID Numbers and Contacts for the Permittees

Permittee	Contact	Address	WDID Number
Ventura County Watershed Protection District	Hayley Luna, Deputy Director (805) 662-6737	800 S. Victoria Ave. Ventura CA 93009	4 56M1000326
Ventura County Unincorporated	Kenji Miyata, County Stormwater Program Manager (805) 654-2079	800 S. Victoria Ave. Ventura CA 93009	4 56M1000183
Camarillo	Ken Matsuoka, Deputy Director of Public Works (805) 388-5340	601 Carmen Drive Camarillo, CA 93010	4 56M1000173
Fillmore	Joe Bellomo, Public Works Director (805) 265-0948	250 Central Ave. Fillmore, CA 93015	4 56M1000174
Moorpark	Igor Leontiy, Management Analyst (805) 517-6248	799 Moorpark Ave, Moorpark, CA 93021	4 56M1000175
Ojai	Joseph M. Padilla Jr., Public Works Project Manager/Inspector (805) 646-5581 x251	408 S. Signal Street Ojai, CA 93023	4 56M1000176
Oxnard	Heather D'Anna Nichols, Senior Wastewater Environmental Specialist (805) 385-3961	305 West Third Street Oxnard, CA 93030	4 56M1000177
Port Hueneme	Fred Camarillo, Public Works Director (805) 986-6556	250 North Ventura Road Port Hueneme, CA 93041	4 56M1000178
Santa Paula	Dale Goodman, Public Works Director (805) 933-4212	970 Ventura Street P.O. Box 569 Santa Paula, CA 93061	4 56M1000179
Simi Valley	Wanda Moyer, Deputy Public Works Director (805) 583-6077	2929 Tapo Canyon Rd. Simi Valley, CA 93063	4 56M1000180
Thousand Oaks	Paul Jorgensen, Water Quality Supervisor (805) 491-8166	2100 Thousand Oaks Blvd. Thousand Oaks, CA 91362	4 56M1000181
Ventura	Peter Shellenbarger, Environmental Compliance Supervisor (805) 652-4582	501 Poli Street Ventura CA 93001	4 56M1000182

2.1.3 Countywide Program Management, Subcommittees and Elements

The NPDES Management Committee is the principal forum for directing the Countywide Program development and implementation. This Committee is attended by senior staff from all Permittee agencies and meets monthly to ensure Countywide Program continuity. Committee members have been authorized by their Director of Public Works as Management Committee Voting Representatives with the authority to approve the Countywide Program's budget and modifications. If no Representative is authorized, it is the responsibility of the Directors of Public Works to voice their opinion at meetings when these items are on the agenda. In addition to budgeting and program direction, this committee also periodically evaluates the need to create ad hoc committees or workgroups to develop tools and accomplish the objectives of the Permit.

Subcommittees provide a forum for discussion of Countywide Program elements and are attended by the staff with the appropriate expertise from each Permittee. These meetings allow for a more uniform approach and regional consistency to Countywide Program implementation. This helps provide a level playing field for businesses and residents countywide. More importantly, it allows the Permittees to learn from each other and have access to tools that have already been developed. This is very beneficial for the smaller agencies which have limited resources.

The subcommittees were created at the beginning of the Countywide Program and have continued to meet and evolve over the years as requirements and pollutant priorities have changed. Each subcommittee focuses on specific Permit requirements and implementation programs to improve water quality. The subcommittees generally follow the program elements outlined in the next section (Public Information and Participation, Industrial/Commercial Discharge, New Development and Re-development, Construction, Public Agency (Municipal) Operations, and Illicit Discharge Detection and Elimination Program). However, since the inspection staff usually performs both functions, the Industrial/Commercial Discharges and Illicit Discharge Detection and Elimination Program have been combined into one subcommittee. Likewise, the Public Agency and Construction subcommittees typically meet together.

The Countywide Program follows the structure presented in the MS4 NPDES Permit, consistent with the Clean Water Act Section 402(p) requirements, which require Phase I MS4s to implement a stormwater management program that contains the following elements:

- **Program Management:** including program structure, institutional arrangements, legal authority, and fiscal resources.
- **Public Information and Participation:** including general and focused outreach, school education programs, citizen participation, and effectiveness evaluation of the public information program.
- **Industrial / Commercial Discharges:** including identification of sources, BMPs, outreach, inspections, staff training, and coordination with State General Permit.
- **New Development and Re-development:** including planning processes, local permits, staff training, post-construction structural BMPs, and outreach.
- **Construction:** including erosion and grading permits, construction BMPs, site inspections, enforcement, and coordination with State General Permit.
- **Public Agency (Municipal) Operations:** including inventory and BMPs for corporation yards, parks and recreation, storm drain system operation and maintenance, streets and roads, flood control, public facilities, ponds, fountains, and other public water bodies.
- **Illicit Discharge Detection and Elimination Program:** including prohibition of illicit connections and dumping, hotline response, and enforcement procedures.

- **Water Quality Monitoring Program:** including characterization of discharges from the MS4 and impacts to the receiving waters.

The Countywide Program subcommittee structure mimics these elements. The subcommittees for each of the above elements help the Permittees collaborate and discuss focused issues related to the Program and the MS4 Permit.

2.1.4 Funding

The funding sources used by the Permittees include General Fund, WPD Benefit Assessment Program, Utility Tax, Separate Tax, Gas Tax, Special District Fund, and others (Developer Fees, Business Inspection Fees, Sanitation Fees, Fleet Maintenance, Community Services District, Water Fund, Grants, and Used Oil Recycling Grants).

To facilitate management of its revenues and projects, the WPD is divided into four zones, roughly corresponding to the major watersheds within the County (**Figure 2-1**). Zone 1 essentially follows the boundaries of the Ventura River Watershed and coastal drainages in the western part of the County. Zone 2 essentially follows the boundaries of the Santa Clara River Watershed and local coastal drainages in the cities of Ventura and Oxnard. Zone 3 essentially follows the boundaries of the Calleguas Creek Watershed and its tributaries. Zone 4 is a mixture of Malibu Creek, coastal drainages in the southern part of the County, and the relatively undeveloped Cuyama River Watershed in the northern part of the County.

All Permittees except the City of Moorpark gave authorization to use the WPD Benefit Assessment to finance the activities and requirements in the Implementation Agreements for the Benefit Assessment Program. **Table 2-2** lists the rates and Benefit Assessment Units for each Permittee.

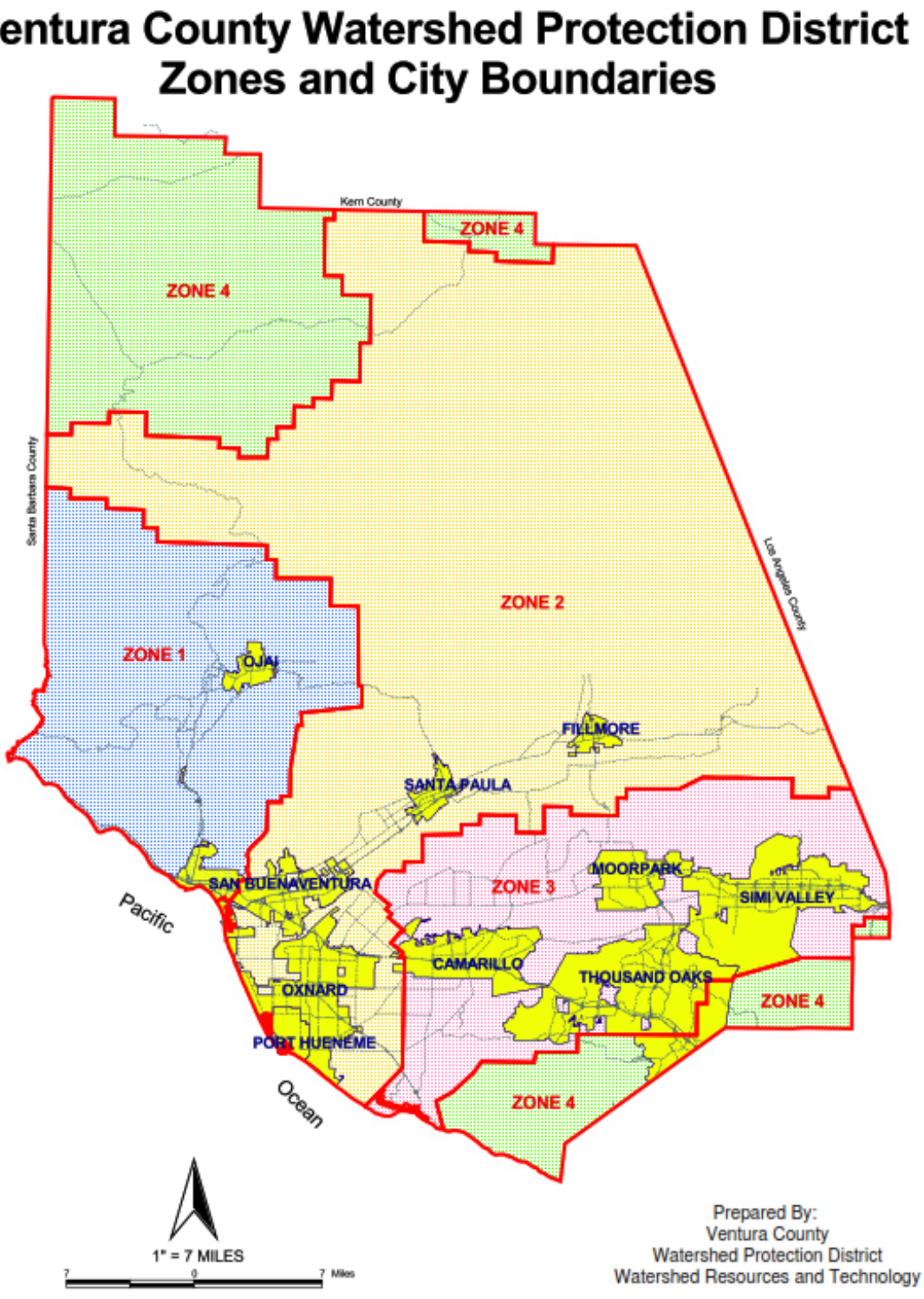


Figure 2-1. Benefit Assessment Zone Map

Table 2-2. Stormwater Benefit Assessment Units and Rates

Zone	City	Parcels	Assessment Units	Rate	Total Assessment
Zone 1 (Ventura River)	Ojai	3,002	4,372	$7.82	$34,182
	Ventura	8,265	10,030	$5.90	$59,143
	Unincorporated County	9,514	14,080	$1.45	$20,385
Zone 2 (Santa Clara River)	Fillmore	5,008	4,986	$4.00	$19,941
	Oxnard	43,132	58,407	$10.28	$600,253
	Santa Paula	7,771	10,043	$6.65	$66,751
	Ventura	25,461	33,550	$5.90	$197,850
	Port Hueneme	6,574	4.993	$3.00	$14,969
	Camarillo[1]	18	221	$5.00	$1,106
	Unincorporated County	11,149	26,698	$1.36	$36,270
Zone 3 (Calleguas Creek)	Moorpark	11,052	13,397	$0.00	$0.00
	Camarillo[1]	24,211	31,310	$5.00	$156,465
	Simi Valley	39,582	48,693	$3.87	$188,270
	Thousand Oaks	37,298	50,335	$5.12	$257,541
	Unincorporated County	11,811	22,345	$0.00	$0.00
Zone 4 (Malibu Creek)	Thousand Oaks	5,615	8,667	$5.47	$47,366
	Unincorporated County	9,471	7,836	$0.00	$0.00
Total Revenue for NPDES Compliance					**$1,700,492**

1. Camarillo is part of Zones 2 and 3. Total Camarillo: Parcels 24,229; Assessment Units 31,531; Total Assessment $157,571.

As seen in **Table 2-2**, the total revenue from the program for MS4 NPDES Permit compliance is approximately $1.7 million. In 1996, California voters passed Proposition 218, a California Constitutional Amendment. Proposition 218 limits local governments' ability to increase taxes, fees, and charges without taxpayer consent. It requires voter approval before creating new or increasing existing general taxes, assessments, and certain user fees, including the Benefit Assessment fees. As a result, the Benefit Assessment fees are not adjusted for inflation and have not changed since 1996. The purpose of the existing Benefit Assessment Program is to provide the revenue needed for the WPD to manage the operations of the stormwater program but is insufficient for construction of structural control measures.

For operational activities and projects requiring implementation that go beyond costs for existing programs, low-interest loans and grants offer near-term potential sources of funding for Permittees. However, many grants preclude funding for operations and maintenance (O&M) activities. In 2024, the Program began a funding feasibility study to assess the priorities of registered voters and property owners

as they relate to Countywide funding for stormwater and other related infrastructure needs. Results from the study will inform the type of potential funding measure that will gain the most support from registered voters. While the Program is committed to identifying additional funding sources, current available funding is limited and insufficient to maintain existing infrastructure, let alone construct additional structural control measures. This has resulted in a focus on efficiencies, coordination with regional partners, and implementation of effective non-structural control measures that will result in water quality improvements.

2.2 Program Accomplishments

Since the adoption of the fourth term Permit, the Program has had many accomplishments in each of the program elements. While the annual reports provide a comprehensive summary of all Permittee activities, below is a compilation of Program accomplishment highlights since 2021, presented by Program element. Also included are the special studies performed by the Program.

2.2.1 2021 MS4 Permit Implementation with WMPs and the CIMP

After the adoption of the MS4 NPDES Permit, the Permittees embarked on developing WMPs for Ventura County watersheds. In September 2023, the Permittees submitted the developed draft WMPs for Ventura County watersheds to the Regional Board, updating them in response to comments in August 2024. The purpose of the Ventura County WMPs was to demonstrate—using the latest data, science, and technical approaches—how the Permittees can manage and reduce the discharge of pollutants from their MS4 systems to improve water quality and meet regulatory standards in their five major watersheds. The Ventura County WMPs represent a combination of rigorous data analysis and modeling, technical engineering, and extensive stakeholder coordination to provide a clear pathway towards compliance with Permittees' requirements for improved water quality and healthier waterways. On May 12, 2025, the Regional Board issued a limited approval letter of only the part of the submitted WMPs covering the Ventura County portion of the Malibu Creek Watershed (with the exception of *E. coli*). The approval letter clarified compliance metrics for Water Body-Pollutant Combinations and specified additional requirements, including requirements for the adaptive management process. The MCMs and other baseline permit conditions as defined in the Permit became effective for the remaining areas of Ventura County with the limited approval of the WMP.

Likewise, on May 12, 2025, the CIMP was approved. In developing the CIMP, a comprehensive countywide data review of monitoring programs was conducted to streamline monitoring requirements and more effectively use program resources. The approval of the CIMP was a significant step in coordinating monitoring resources to focus on remaining water quality concerns and conserve resources in alignment with the Guiding Principles.

A timeline of the Permit and WMP process is shown in **Figure 2-2**.

Over twenty years of receiving water data and more than fifteen years of outfall data were analyzed, including more than two hundred constituents analyzed per site. The datasets were used to identify and evaluate water quality priorities and support pollutant source assessments. **Section 3** provides an overview of some of the results of the analysis.

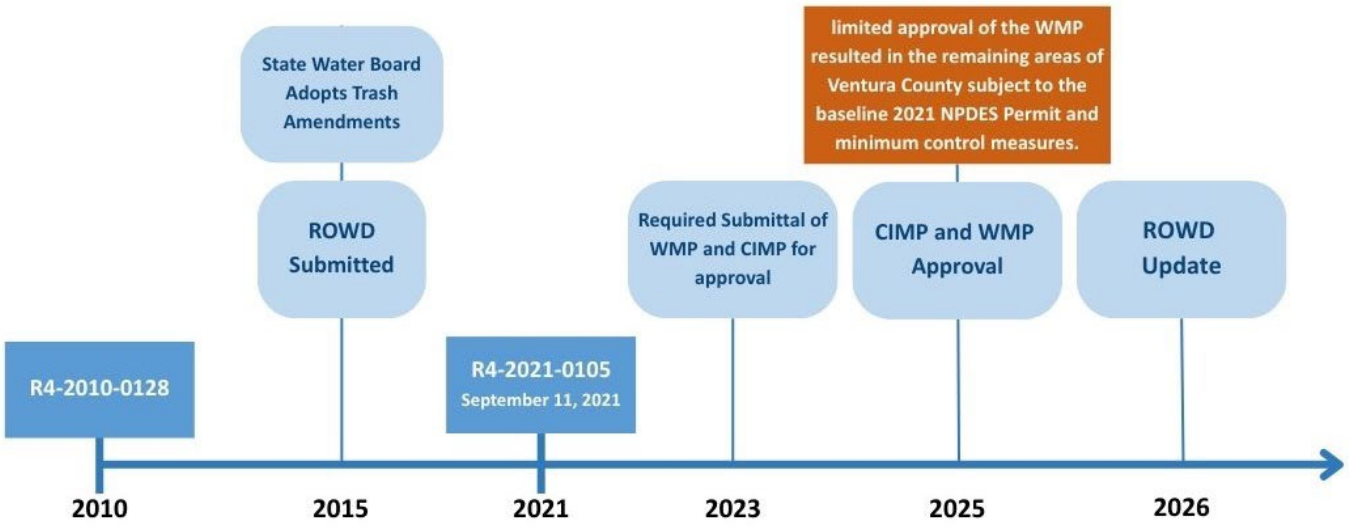


Figure 2-2. Permit Renewal and ROWD Update Process Timeline

2.2.2 Countywide Program Management

As previously discussed, successful Program management has led to ongoing collaboration among Permittees, supported by transparent communication. The Program is guided by an organized and knowledgeable leadership and management structure, which includes a County of Ventura/WPD lead, NPDES Management Committee, and various subcommittees. This program structure has been essential for meeting monitoring requirements, especially during wet weather events. The collaboration provides economy of scale for outreach efforts, training, reporting, and special studies. The structure eliminates competition for a limited pool of consultant support, allows for successful implementation of Permit requirements, allows for effective data and information sharing, and provides support for smaller city Permittees. Some specific program accomplishments are outlined below.

- The Program successfully maintains implementation agreements and effectively utilizes the WPD Benefit Assessment financing to secure partial funding for the countywide Program.
- The Program provides strong oversight of TMDL and CIMP monitoring programs and ensures successful implementation of the CIMP.
- The Program actively participates in the Stormwater Monitoring Coalition of Southern California, SCCWRP, and the California Stormwater Quality Association (CASQA).
- The Program updates the Unified Storm Drain Mapping GIS system, which ensures regional understanding of MS4 infrastructure at watershed and countywide scales. It fosters collaboration by mapping smaller cities and enabling analysis of treatment opportunities. This effort also supports Permit renewal by helping regulators, non-governmental organizations, and the public understand local conditions and the complexity of planning, designing, and implementing stormwater and urban runoff treatment to meet Permit requirements and TMDLs.

2.2.3 Public Information and Participation Program (PIPP)

The Permittees, through the Program, partnered with Sagent, a marketing consultant, to launch a community-centered outreach campaign focused on education, accessibility, and local partnerships. A new outreach and education approach was implemented, delivering high-quality digital content across multiple platforms[16]. The Countywide PIPP Report outlines outreach activities and successes, as well as the Program's continued goals.

- The County of Ventura provides outreach through annual events such as the Public Works Day event, featuring a stormwater booth on pervious pavement. Additionally, the County of Ventura conducts watershed health presentations at schools upon request, educating students about their local watersheds.
- Continued outreach to schools for the “What in the Watershed?” Bingo, a Ventura County-specific bingo game customized to youth. In addition to the English versions, Spanish versions were prepared for both elementary and high school bingo cards for students, families, and teachers.
- Each year, the EcoHero Show visits elementary schools with interactive performances that combine dance, music, and storytelling. The program teaches students about stormwater pollution prevention and inspires them to become “EcoHeroes” by practicing good environmental stewardship.
- Four unique die-cut stickers were dispersed to local public organizations at key points throughout the 2023-2024 and 2024-2025 years to foster a "collect them all" engagement style and promote awareness of Community for a Clean Watershed.
- Monthly Facebook and Instagram content calendars with videos, images, posts, and stories were created. Topics addressed general messages about stormwater, main pollutants of concern (POCs) and proper behaviors, highlighting the work of the Permittees, and upcoming stormwater-related events.
- Ventura Countywide Program continued running the “Every Litter Bit Matters” campaign messaging from the previous two years, with some supporting assets from “Yours to Enjoy, Yours to Protect”. Both resources continued to be utilized to promote the beauty of the watersheds, something that past awareness surveys have shown resonates with residents.
- Awareness surveys are executed at regular intervals (every two to three years) to gain an understanding of the public’s awareness of stormwater quality concerns, Ventura Countywide Program branding and outreach tactics, and comprehension of correct behaviors. Powerful insights are gained about behavior change over time and are used to guide strategies moving forward.
- The Spring 2025 paid media campaign delivered more than 25 million total impressions through radio, outdoor, digital, and social tactics.
- Ventura Countywide Program representatives serve on the Coastal Cleanup Day Steering Committee and help coordinate and lead Ventura County’s annual Coastal Cleanup Day events. Multiple events took place throughout the County’s watersheds as well as the coast.

2.2.4 Industrial Commercial Business Program

Several specific accomplishments of the Industrial Commercial Business Program are outlined below.

- Permittees inspect food establishments annually for both pretreatment and stormwater, ensuring grease treatment devices are maintained, minimizing the chances of sanitary sewer overflows.

[16] Countywide PIPP Report of the 2023-2024 Ventura Countywide Program Annual Report, Attachment B

- The City of Simi Valley provides outreach and education during inspections and requires commercial businesses to complete a Stormwater Pollution Control Plan (SWPCP), which identifies potential sources of pollution and details their best management practices.
- The City of Fillmore increased its inspection frequency as required by the 2021 Permit and has enhanced outreach to Industrial/Commercial Facilities, which has helped reduce illicit discharges.
- The City of Camarillo strengthened its Industrial/Commercial program by requiring mobile detailers to acknowledge BMPs and disclose proper wash water disposal.
- The City of Thousand Oaks uses interdepartmental coordination to ensure accurate business license tracking and SB-205 compliance across the current business inventory and utilizes ArcGIS mapping and Locus Technologies database software to track and record inspections.
- The City of Thousand Oaks provides outreach and educational materials to industrial and commercial facilities through inspections, verbal communication, posters, and the City website and social media resources.
- In the City of Ventura, the business inventory is updated every 3–4 months and synced nightly with the Business Licensing database, ensuring alignment with stormwater compliance records.
- In the City of Ventura, outreach and education are consistently delivered at critical source facilities through verbal communication, posters, online resources, and easily accessible outreach cut cards.
- The City of Ventura and the City of Oxnard implemented ArcGIS Online tools—including dashboards, Field Maps, and Survey123— to support streamlined inspection tracking.
- Businesses in the City of Moorpark are well-informed about stormwater requirements, resulting in minimal need for follow-up inspections, only 10% in FY 2023/2024 and just 1% in FY 2024/2025. The City also integrates a stormwater inspection fee into the business license renewal process, supporting program sustainability.

2.2.5 Planning and Land Development Program

One Countywide Program accomplishment was the successful update of the 2025 Ventura County Technical Guidance Manual for Stormwater Quality Control Measures (TGM) for Stormwater Quality Control Measures, which was done through a comprehensive review to align with the 2021 Permit requirements. This updated document enhances clarity and consistency in implementation. Several specific accomplishments of the Planning and Land Development Program are listed below.

Ventura County has over 1,900 Structural Control BMPs

- Biofiltration
- Bioretention
- Bioswales
- Infiltration Basins
- Retention Basins
- Pervious Pavement
- 15 Other Types

- There are over 1,900 structural treatment BMPs in Ventura County, the vast majority of which were constructed because of the collaborative, long term Permittee implementation of the Planning and Land Development Program.
- The Community Development Department in the City of Oxnard maintains strong, ongoing relationships with developers and effectively communicates permit requirements to the development community, ensuring a clear understanding and compliance.
- The City of Camarillo requires conceptual review and approval of a post-construction plan prior to the submittal of any development application for entitlements.

- The City of Moorpark requires a post-construction stormwater quality report to be submitted for all applicable projects when submitting a Permit application for entitlements.
- The City of Thousand Oaks' Community Development Department fosters strong partnerships with developers and provides clear communication of permit requirements to ensure regulatory compliance. The Public Works Department requires conceptual review and approval of a post-construction plan before the submittal of any development application for entitlements.
- The City of Oxnard required post-construction BMPs in the 63-acre Oxnard Village-Wagon Wheel Junction redevelopment, including continuous deflection separation and biofiltration systems, and deployed GIS platforms for tracking and maintaining structural BMPs citywide.
- The County of Ventura implemented a biweekly Development Review Committee with representatives from all County Agencies that review development applications to identify interrelations and sync municipal review of proposed projects.
- The City of Ventura requires a Stormwater Compliance Study to be reviewed and approved prior to projects receiving an entitlement and building permits.

2.2.6 Construction Program

The Program benefits from over 20 years of cross-department collaboration and continues to evolve through strong communication, training, and use of innovative technologies. Reducing mandatory inspection frequencies for small construction sites and removing local Stormwater Pollution Prevention Plan (SWPPP) and certification requirements have streamlined processes and increased access to resources, allowing higher-priority sites to be addressed. Some specific accomplishments of the Development Construction Program are listed below.

- Inspection staff ensure that construction BMPs are installed and function properly prior to any work on the site and conduct regular inspections regardless of weather conditions.
- Permittee inspectors throughout the County oversee public and private construction and enforce other local and state regulations that can include fugitive dust and hazardous materials on construction sites.
- In the City of Camarillo, sites that are less than one acre and issued a grading permit are inspected on a quarterly basis.
- Staff from multiple departments in the City of Oxnard collaborate closely and maintain strong relationships with construction sites, ensuring effective ongoing compliance through coordinated field inspections and communication.
- Multiple departments in the City of Thousand Oaks oversee and collaborate with construction sites, ensuring continuous compliance through regular field inspections, consistent communication, and progressive enforcement.
- The City of Simi Valley Public Works Department maintains a comprehensive inspection program for construction BMPs. For those projects that do not require a SWPPP, contractors must adhere to a Storm Water Pollution Control Plan that has been approved by the City.
- In the City of Ventura, new projects over 1 acre or of high priority are actively tracked using ArcGIS Online tools, with two full-time stormwater inspectors and additional staff that are qualified stormwater pollution prevention plans practitioners for conducting regular inspections.

- In the City of Ventura, source control BMPs are consistently implemented, supported by clear interdepartmental coordination, progressive enforcement, and targeted outreach using digital tools and cut cards.
- In the County of Ventura unincorporated areas, grading permit inspectors are trained to inspect stormwater controls during each inspection. Stormwater controls are a priority item for inspection during the wet season for active construction projects.

2.2.7 Public Agencies Activities Program

Countywide, one key success of the Public Agencies Activities Program has been prioritizing street sweeping, which has proven more efficient and effective than catch basin cleaning, offering broader pollutant removal. Some specific Public Agencies Activities Program accomplishments are listed below.

- The City of Camarillo has successfully integrated stormwater training into the new hire orientation process, ensuring that all new employees complete the required training within 180 days of hire.
- The City of Simi Valley has successfully used the clear guidance provided in the Permit to update and enhance the stormwater training program, ensuring that all required topics and timelines are effectively addressed.
- The City of Ventura successfully transitioned all stormwater training into Workday, a Human Resources and Finance Platform, significantly increasing the effectiveness and efficiency of the Public Agencies Activities and the Illicit Discharge Detection and Elimination Programs' training by assigning it based on job descriptions. All new staff in targeted positions are required to complete Stormwater Compliance training through Workday before beginning their job duties.
- In the City of Ventura, all construction, industrial, and commercial inspectors receive training at least annually and hold accreditations in hazardous waste and pollution prevention management.
- The City of Ventura Parks Department staff and contractors also follow California Department of Pesticide Regulation requirements, along with all applicable Permit requirements.
- The cities of Simi Valley and Oxnard have transitioned from the use of paper maps and inspection forms to GIS, which has made tracking inspections and infrastructure more effective.
- The City of Thousand Oaks has implemented an effective 24-hour hotline and mobile app that empowers residents to report issues, while a robust Capital Improvements Program ensures ongoing maintenance and enhancement of stormwater infrastructure. The City also increased the frequency of street sweeping to further support stormwater compliance and water quality protection.
- The City of Thousand Oaks ensures consistent compliance across operations by requiring inspection and field staff to complete stormwater training during new hire orientation and to participate in annual training programs that address all applicable Permit requirements.
- The City of Moorpark goes above and beyond Permit requirements for street sweeping and sweeps all public streets twice per month.
- The County of Ventura has successfully integrated stormwater training on all required topics into their new employee training platform, Ventura County Learning Hub, which automates assignments by job title and issues annual reassignments with frequent reminders. The County of Ventura also develops training materials in-house to periodically provide new content for employees.
- In February 2019, the County of Ventura submitted the Compliance Response to Water Code Section 13383 Order for Implementation of Track 1 of the Statewide Trash Provisions for the Ventura County unincorporated, urban areas. To achieve compliance with the Statewide Trash Provisions, the County of Ventura has identified 36 additional full capture systems that will be required within

unincorporated areas. The County of Ventura has a consultant contract underway to complete design of the remaining required full capture systems to ensure installation of at least 50% of the required full capture systems by December 2026.

- The City of Simi Valley implements robust street sweeping and catch basin maintenance programs and routine cleaning of connector pipe screening units.
- The City of Port Hueneme implemented enhanced street sweeping and catch basin cleaning in coastal corridors, installed full capture trash devices and provided expanded weekend and special event trash service.

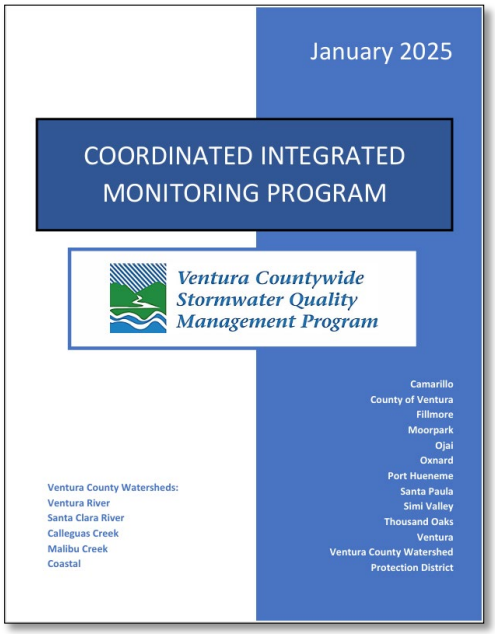
2.2.8 Illicit Discharge and Illegal Connections Elimination Program

The Program continues to identify and eliminate illicit discharges and illegal connections. Through comprehensive and repeated training, all Permittee staff are trained to identify, report, and respond to illicit discharges, using clear procedures and follow-up actions, including agency coordination, controlling and/or abating the discharge, clean-up, follow-up inspections, tracking, and reporting. Specific accomplishments are listed below.

- All field staff of the City of Thousand Oaks are trained to report illicit discharges to the Public Works Environmental Compliance Division, which utilizes ArcGIS mapping and Locus Technologies database software to track and record all illicit discharge investigations and inspections.
- The City of Ventura and the City of Oxnard use ArcGIS Online tools for inspection tracking, utilizing dashboards, Field Maps, and Survey123.
- Field staff in the City of Ventura and staff in the City of Oxnard are trained to report illicit discharges to Public Works Stormwater Compliance and response time is typically 1-2 hours for investigation from City stormwater staff once notified.
- In addition to maintaining an illicit discharge hotline and a web-based reporting portal, the County of Ventura uses the Accela CRM platform to track, coordinate internally, respond to, and document illicit discharge reports.

2.2.9 Monitoring and Water Quality

Strong collaboration among the watershed groups (including the Calleguas Creek Watershed TMDL MOA Group, the Ventura River Algae TMDL implementation group, the Santa Clara River Watershed group, the Santa Clara River TMDL MOA Group, the Malibu Creek Watershed TMDL MOA group, and the Countywide Monitoring Program) led to the development and approval of the CIMP, which integrated TMDL and MS4 permit monitoring, resulting in cost savings for both programs. Discussion of water quality and monitoring trends are detailed in **Section 3**.



The CIMP included an analysis of monitoring data collected historically by the Program and many pollutants were determined to have never been detected above water quality objectives in some reaches in either wet or dry weather conditions. In summary, the CIMP analysis found:

- More than 100 constituents no longer needed to be monitored because the results have been below the water quality objectives (or did not have a water quality objective) or were non-detected for the 4 years of the data analyzed.
- Over ten years of weekly TMDL monitoring for the Malibu Creek and Lagoon Bacteria TMDL has adequately characterized conditions and provided the opportunity to adaptively reduce monitoring frequency until the final geometric mean RWLs are required to be evaluated. The changes to the monitoring locations and monitoring frequency are designed to focus monitoring on the reaches with bacteria sources, discontinue monitoring at sites that are generally dry, and align the monitoring locations with the new sites proposed for MS4 Permit and Nutrient TMDL monitoring.

Additionally, the Program is in the process of completing non-stormwater screening and source investigations required by the 2021 Permit. The screening process has identified that most Permittees do not have outfalls with significant flow from MS4 discharges. Per the CIMP, factors that Permittees may take into consideration when determining significant outfall discharges may include one or more of the following criteria.

- Discharges from major outfalls subject to dry weather TMDLs.
- Outfall has persistent flows, meaning if more than one screening event occurs per outfall, flow was observed at the outfall on at least 50% of screenings at a rate "greater than a garden hose".
- Greater than a garden hose flow will be categorized as:
    - No Flow/Wet (0 gpm),
    - Trickle (<2 gpm),
    - Garden Hose (2-10 gpm), or
    - Greater than Garden Hose (>10 gpm).
- Observations of discharges from areas where there is evidence of ongoing potential illegal dumping or illicit connections.

Examples demonstrating the success of the non-stormwater program include:

- The City of Camarillo conducted screenings of all major non-stormwater outfalls. In Calleguas and Conejo Creeks during the first screening event, it was determined that one major outfall had a significant flowing discharge from a permitted source. At the second screening event, the same outfall was dry. For major outfalls in Beardsley Wash and in the Camarillo Hills Drain (9 outfalls total), no significant discharges were found.
- The City of Moorpark has identified 22 major outfalls and non-stormwater outfalls for screening, with no significant discharges found.
- The City of Ventura investigated 161 outfalls (both minor and major) for non-stormwater discharges. Investigations went above and beyond permit requirements with the intention of understanding all drainage areas within the City's jurisdiction. Nine major outfalls and four minor outfalls had significant discharges. During drainage area investigations, of the nine major outfalls, seven were identified as permitted sources with the remaining two identified as high groundwater and agricultural discharges and needing more investigation. Drainage area investigations for all minor outfalls were identified as a permitted source. All permitted sources for major and minor outfalls were either direct agricultural discharges from irrigation or well pumping or agricultural tile drains.

2.2.10 Total Maximum Daily Loads (TMDLs)

The Permittees have successfully collaborated towards achieving compliance with TMDLs with other responsible parties to the TMDLs. The joint implementation of TMDLs has resulted in significant water quality improvements, including the ability to delist TMDL pollutants in the Calleguas Creek and Santa Clara River Watersheds. The County of Ventura leads TMDL MOA groups for the Ventura River Algae TMDL, Ventura River Estuary Trash TMDL, Santa Clara River TMDLs, and Malibu Creek TMDLs. The County of Ventura served as the project manager for the Calleguas Creek TMDL MOA group until July 2023 and the City of Thousand Oaks is currently the chair. A list of all the watershed groups and the collaborating partners that the Permittees participate in is shown in **Table 2-3**.

Table 2-3. TMDLs Memorandum of Agreements

Watershed	TMDL	MOA Collaboration Since	Participating Parties
Ventura River Watershed	Algae, Eutrophic Conditions, & Nutrients TMDL	05/01/2014	City of Ventura, City of Ojai, County of Ventura, WPD, Ojai Valley Sanitary District, & Caltrans
		01/19/2015	
		01/05/2015	City of Ventura, City of Ojai, County of Ventura, WPD, & Caltrans
	Ventura River Estuary Trash TMDL	03/28/2009	City of Ventura, County of Ventura, WPD, Fairgrounds, State Parks, VCAILG (Farm Bureau of Ventura County), & Caltrans
Santa Clara River Watershed	SCR Nitrogen Compounds, Chloride, and Bacteria TMDLs	09/04/2012	City of Fillmore, City of Santa Paula, City of Oxnard, City of Ventura, WPD, & County of Ventura
		11/01/2014	
Calleguas Creek Watershed	OC Pesticides TMDL	06/30/2009	CCW MS4s, CCW WWTPs, VCAILG (Farm Bureau of Ventura County), US Navy, local water districts, and Caltrans.
	Metals TMDL		
	Salts TMDL		
	Toxicity, Chlorpyrifos, and Diazinon TMDL		
	RSBW Trash TMDL		
	Oxnard Drain TMDLs		
Coastal Watershed	Harbor Beaches TMDL	07/08/2012	County of Ventura, WPD, and Ventura County Environmental Health Department.
Malibu Creek Watershed	Malibu Creek Bacteria and Nutrients TMDLs	07/20/2010	WPD, County of Ventura, & City of Thousand Oaks
	Malibu Creek Trash TMDL	07/30/2012	

Specific examples of TMDL successes include:

Calleguas Creek Watershed

- Over ten years of monitoring data in the Calleguas Creek Watershed demonstrate that in most reaches, copper, nickel, many organochlorine pesticides, PCBs, diazinon and chlorpyrifos, and ammonia TMDL limitations are being attained.
- The Revolon Slough Trash TMDL is being attained through a combination of full capture devices and trash monitoring and clean-up activities.
- In 2022, the City of Camarillo initiated a source investigation study for salts and bacteria. The source investigation of the drainage area identified priority subareas for further investigation and potential sources for which outreach and targeted enforcement are implemented to control the identified sources.
- The City of Camarillo and the City of Thousand Oaks prohibit saltwater pool discharges to the MS4, require notification for swimming pool discharges with dechlorination requirements, and ban expanded polystyrene food containers.
- The City of Camarillo developed a municipal desalination facility to reduce long-term chloride inputs to the water supply, which will reduce chloride in non-stormwater discharges.
- The City of Moorpark completed bio infiltration improvements at its Metrolink parking lots and restricts saltwater swimming pool discharges to limit chloride loading to the MS4.
- The City of Simi Valley has successfully reduced dry weather salts discharges through water conservation outreach and regulation of saltwater pool discharges.

Malibu Creek Watershed

- A Sewer Diversion Feasibility Study was conducted in the upper Malibu Creek Watershed. This collaborative study with the County of Ventura, WPD and the City of Thousand Oaks helped analyze and identify runoff that could be diverted to the sewage treatment plants for a recycled and potable water source, pollutant reduction, and TMDL compliance. The study identified a potential diversion project that is moving forward for implementation, and the City of Thousand Oaks has been approved for an Environmental Protection Agency Community Grant for the project.
- The City of Thousand Oaks implements multi-benefit stormwater capture and treatment projects in transportation corridors, parks, and redevelopment areas. The City has also implemented enhanced street sweeping and trash management activities, including installation of full capture devices.
- The County of Ventura completed the Oak Park Green Streets project, treating 114 acres of residential runoff.
- The Malibu Creek Trash TMDL is being attained through a combination of full capture devices and trash monitoring and clean-up activities.

Miscellaneous Coastal Watersheds

- The County of Ventura has completed multiple special studies in the Harbor Beaches (Kiddie and Hobie Beaches) subwatershed to identify sources of bacteria. Efforts have included dye testing, CCTV, human fecal marker studies with SCCWRP, installation of monitoring wells and groundwater quality investigations with SCCWRP, and a feasibility study aimed at project options to achieve compliance with the Harbor Beaches TMDL. The County of Ventura recently completed 30% of the design for a diversion project that would divert flows from the County storm drain up to the 85th percentile event.

Santa Clara River Watershed

- The County of Ventura has completed construction of green infrastructure projects at the Government Center, El Rio, Piru, and Saticoy capturing over 121 acres of runoff for infiltration and groundwater recharge in the Santa Clara River watershed. In addition, the County of Ventura collaborated with Caltrans on the completion of an additional stormwater capture project in the Santa Clara River watershed. The County of Ventura has completed additional feasibility studies for stormwater projects in the Santa Clara River Watershed and has developed 30% of the designs for two additional projects to capture and treat stormwater runoff.
- The City of Santa Paula is advancing an Advanced Water Purification Facility to reduce chloride concentrations in recycled water and groundwater supplies that will also reduce chloride concentrations in non-stormwater discharges. The City also enforces a stringent water conservation ordinance that significantly reduces dry weather runoff.

Ventura River Watershed

- The City of Ventura installed full capture trash devices in priority drainage areas to beaches and harbor and operates enhanced beach and harbor maintenance programs with targeted cleaning and public education initiatives. The City also prohibits the use of expanded polystyrene containers used by food and beverage providers.
- The City of Ojai installed full capture trash devices in all priority land use areas, implemented enhanced street sweeping through the City, and pet waste management in high-use areas.
- The County of Ventura installed full capture trash devices and continues to conduct monthly cleanups for the Ventura River Estuary Trash TMDL and completed the Meiners Oaks LID Retrofit Project capturing runoff from 37 acres for treatment. The County of Ventura has completed additional feasibility studies for stormwater projects in the Ventura River Watershed.

2.2.11 Special Studies

There are many Special Studies with a variety of Permittee participation that have helped develop the best available science to prioritize Program implementation and efforts.

- The Southern California Bight Regional Monitoring Program (Bight) is an ongoing regional marine monitoring collaboration that examines how human activities affect the health of Southern California coastal waters. Participating organizations pool their resources and expertise to investigate the condition of marine ecosystems across both time and space. Ventura County Stormwater Management Program Participated in Bight'18 and '23.
    - Bight Program '18: The Program participated in the microbiology study element to research better methods of determining health risks to swimmers, which could result in fewer unnecessary beach closings and cost savings for compliance with bacteria TMDLs.
    - Bight Program '23 Microbiology Beach Human Marker: The Program participated in the microbiology study element to determine the extent and magnitude of human fecal contamination at selected southern California beaches and in the storm drains, creeks, or lagoons that discharge to these beaches under wet and dry conditions.
- Pyrethroid Insecticides Study: Monitoring of sediment for pyrethroids, total organic carbon, and toxicity to the amphipod *Hyalella azteca* was conducted at two sites in the Calleguas Creek, Ventura River, and Santa Clara River watersheds in 2012, 2015, 2018, and 2021.

- Bioassessment: WPD continues to participate with the Southern California Regional Monitoring Program through extensive field data collection and by guiding the development of the Program through the Regional Monitoring Program Steering Committee and Southern California Stormwater Monitoring Coalition.

Regional collaboration with respect for the unique characteristics of each watershed, using the best science in decision making, prioritizing and adapting as information becomes available, and prioritizing source control and multi-benefit structural controls where appropriate and needed as a last resort have been critical in implementing effective programs and improving water quality conditions in the County. These successes demonstrate the Guiding Principles in action, as will be discussed further in **Section 4.2**.

3 CHARACTERIZATION OF DISCHARGE

3.1 Purpose of this Section

The requirement for the characterization of discharge is an important part of the reapplication process for the ROWD. In the ROWD Submittal Memo, the Regional Board requires "An evaluation of the accumulated Annual Report information, including an evaluation of all monitoring data collected during the current term of the permit (i.e., data collected under Integrated Monitoring Programs (IMPs), Coordinated Integrated Monitoring Programs (CIMPs), or the Monitoring and Reporting Program (MRP) as set forth in Attachment E of the Order and any related monitoring directives issued to a Permittee)."

To meet this requirement from the Regional Board, this section provides a summary of the evaluation of the annual report information with a focus on the data collected under the MS4 permit and TMDL monitoring programs in the County. A summary of other annual report information highlighting the accomplishments of the Program was included in **Section 2**.

3.2 Monitoring Program Overview

The Program has been performing monitoring at key receiving water locations and multiple outfalls within the County for more than ten years (since 2009). Previously, selected land use sites were monitored as far back as 1995. Additionally, MS4 Permittees have participated in multiple coordinated TMDL monitoring programs throughout the County. Through this combination of monitoring, the Program has a solid understanding of the water quality in receiving waters and in discharges from the MS4 system. The 2010 Permit required sampling at one representative station (Major Outfall) for each Permittee's MS4.

To meet the requirements of the 2021 Permit and address the diverse needs of the five Watershed Management Groups, the Program developed one CIMP for the entire County. The CIMP outlines monitoring activities for the Ventura River, Santa Clara River, Calleguas Creek, Malibu Creek, and various coastal watersheds within Ventura County. It meets the requirements of the Permit, the MRP Attachment E, and the 17 TMDLs applicable to the region.

The monitoring program is designed to achieve several key objectives:

- Evaluate the chemical, physical, and biological impacts of MS4 discharges on receiving waters.
- Assess compliance with RWLs and WQBELs established to implement TMDLs under both wet and dry conditions.
- Characterize pollutant loads and identify their sources; assess overall watershed health and long-term trends.
- Measure the effectiveness of pollutant control measures implemented under the Permit.

To meet these objectives, the CIMP incorporates all TMDL and non-TMDL monitoring requirements specified in the MRP through three primary components: Receiving Water Monitoring, Stormwater Outfall-Based Monitoring, and Non-Stormwater Outfall-Based Monitoring. Additionally, the CIMP is coordinated with collaborative TMDL monitoring in the Calleguas Creek and Ventura River Watersheds that addresses TMDL monitoring requirements for multiple responsible parties. The CIMP was approved on May 12, 2025, and monitoring generally began according to the timelines in the approved CIMP, with start dates varying by monitoring type. Prior to the new CIMP approval, the Program performed monitoring in accordance with the 2010 Permit monitoring program.

Mass emission monitoring occurs in the receiving water stations, with one mass emission station located in each major watershed. These stations are used to monitor a broad range of parameters. Complementing this effort, each Permittee conducts monitoring events at a designated major outfall station, along with dry-weather monitoring or field observation events at outfalls identified as having qualifying non-stormwater flows. In the Calleguas Creek, Malibu Creek and Ventura River Watersheds, additional receiving water monitoring locations are monitored by the TMDL groups to meet TMDL requirements for multiple responsible parties. Each of these monitoring programs is described in more detail in the following sections.

3.2.1 Mass Emission Monitoring

Mass Emission stations are located in the lower reaches of three major watersheds in Ventura County (Ventura River, Santa Clara River, and Calleguas Creek). As such, the mass emission station drainage areas are much larger than the drainage areas associated with Major Outfall stations, and include large contributions from other sources of discharge, such as wastewater treatment plants, agricultural runoff, non-point sources, open space, and groundwater discharges.

The purpose of mass emission monitoring is to identify pollutant loads to the ocean and identify long-term trends in receiving water pollutant concentrations. This type of monitoring in conjunction with the Major Outfall monitoring is also useful in determining if the MS4 is contributing to exceedances of WQOs by comparing results to applicable WQOs in the Los Angeles Region Water Quality Control Plan (Basin Plan) and the California Toxics Rule (CTR).

Prior to the CIMP approval and during the period covered by the ROWD, each monitoring season included water quality sampling from three wet weather events and one dry weather event at every mass emission station for water chemistry analysis, as required by the 2010 Permit. Monitoring occurring under the updated CIMP will include two dry weather events instead of one and an additional mass emission station in the Malibu Creek Watershed, near the Ventura-Los Angeles County line. Aquatic toxicity samples are collected at each mass emission station during the first sample event of the monitoring year and tested with the species that was determined to be the most sensitive to contaminants for each station. For the monitoring covered by this ROWD, the most sensitive species was based on the results from the 2009/2010 monitoring year. Under the CIMP, new testing was conducted to determine the most sensitive species. The newly identified most sensitive species will be used for toxicity testing under the CIMP monitoring.

3.2.2 Major Outfall Monitoring

Only 0.3% of constituent/site combinations with increasing trends had any detected values above WQOs in the history of the monitoring program.

The 2010 Permit required sampling at one representative station (Major Outfall) for each Permittee's MS4. Many of the monitoring requirements for Major Outfall stations are similar to those for the mass emission stations, as are the reasons for undertaking this monitoring. Four of the stations were monitored beginning in the 2009/2010 monitoring season and seven of the stations were added during the 2010/2011 monitoring season. The 2021 Permit MRP required Ventura County Permittees to continue monitoring these eleven sites, and to propose an outfall monitoring location in the Malibu Creek subwatershed within Ventura County, in lieu of monitoring at least one major outfall per subwatershed (HUC 12) drainage area (as is required in Los Angeles County). The drainage(s) to the selected stormwater outfall(s) are to be representative of the land uses within the Ventura County Permittee's jurisdiction. Per the CIMP, the County of Ventura unincorporated major outfall station for MRP Part VI monitoring was discontinued at its 2010 Permit location in the Ventura River Watershed (MO-MEI) after CIMP approval and will be replaced with monitoring at the 2021 Permit location in the Malibu Creek Watershed (MO-OKP) to improve the distribution of monitoring stations across the County and to meet the 2021 Permit requirements.

Prior to the CIMP approval and during the period covered by the ROWD, each monitoring season included water quality sampling from three wet weather events and one dry weather event at every Major Outfall station for water chemistry analysis, as required by the 2010 NPDES Permit. Aquatic toxicity samples were also collected at each of the Major Outfall stations during Event 1 of each monitoring year and for the monitoring covered by this ROWD, tested with the species that was determined to be the most sensitive to contaminants for that station, based on the results from the 2009/2010 or 2010/2011 monitoring year, as applicable. There was no toxicity observed in any of the Major Outfall toxicity samples for the five-year period covered by this ROWD (all samples passed the Test of Significant Toxicity (TST) and were not statistically different to the controls). The 2021 Permit does not require toxicity testing at outfalls except for specific circumstances described in the Permit, so toxicity testing at outfalls is not scheduled in the CIMP.

Using the data from the Major Outfall monitoring in conjunction with the mass emission monitoring, the Stormwater Monitoring Program helps the Program determine if an MS4 is potentially contributing to exceedances of WQOs by comparing results to applicable WQOs in the Basin Plan and the CTR. The Program uses data from the entire monitoring record to describe trends in receiving waters and from the Major Outfall stations. This information is useful in evaluating the effectiveness of the Program implementation and provides Permittees with real data on which to base future management decisions. In the 2025 annual report, the trends analysis showed:

- 71% of the constituent/site combinations monitored had not been detected in enough samples over the entire history of the monitoring program to be able to run trend analyses.
- 4% of the constituent/site combinations had significant decreasing trends.
- 24% of the constituent/site combinations monitored demonstrated no significant trend over the entire monitoring history.

- 1.3% of the constituent/site combinations monitored demonstrated an increasing trend, but only 0.3% of the constituent/site combinations with increasing trends had any detected values above WQOs in the history of the monitoring program.

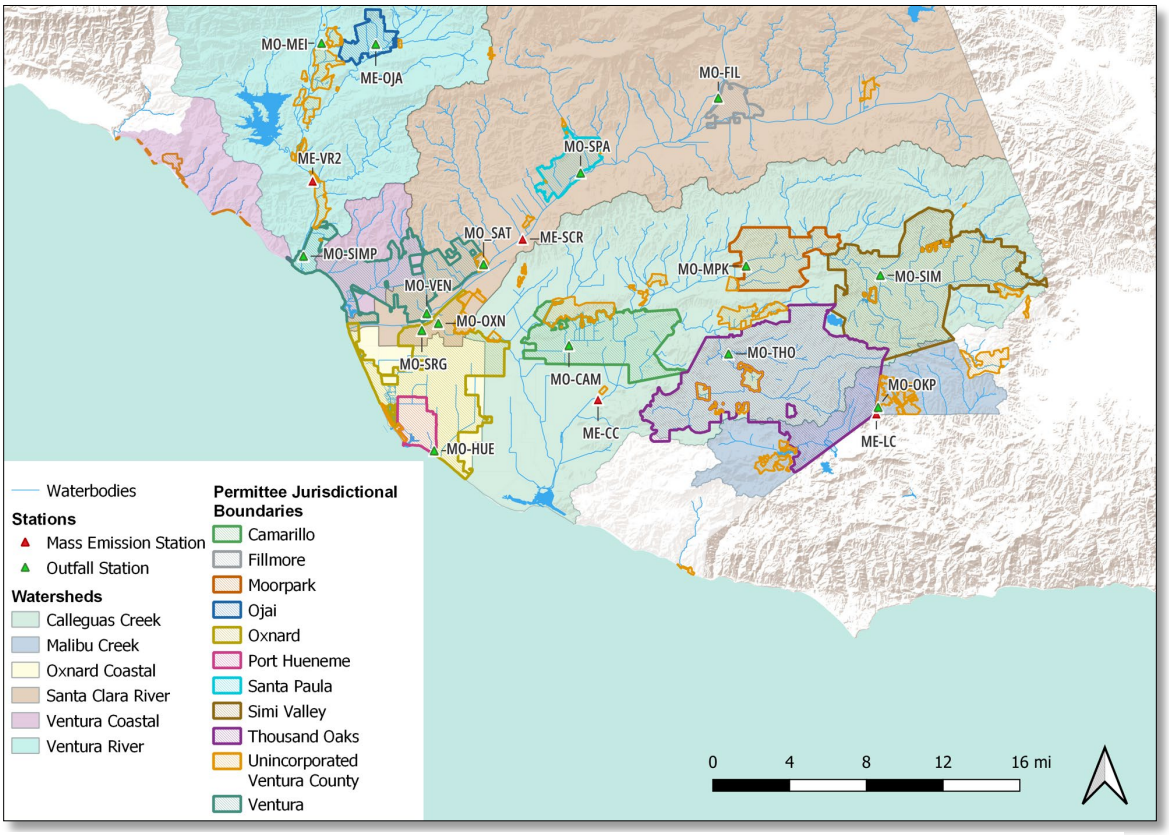


Figure 3-1. Mass Emission and Major Outfall Sampling Locations

3.2.3 Non-Stormwater Outfall Screening

The 2021 Permit required the Permittees to conduct a screening of all major outfalls, conduct a source investigation for outfalls that have significant non-stormwater flows, and potentially conduct monitoring of the outfalls, depending on the results of the source investigation. All Permittees completed their screening and the required source investigations per the timelines required by the 2021 Permit. For more information about significant non-stormwater flows, see **Section 2.2.9**.

3.2.4 TMDL Monitoring

Prior to the CIMP approval, TMDL monitoring required under the 2010 Permit was conducted through separate TMDL monitoring agreements. TMDL monitoring programs were implemented to address the following TMDLs under this permit term:

- Organochlorine (OC) Pesticides, Polychlorinated Biphenyls (PCBs) and Siltation in Calleguas Creek, its Tributaries, in Mugu Lagoon TMDL (OC Pesticides TMDL).
- Toxicity, Chlorpyrifos, and Diazinon in the Calleguas Creek, its Tributaries and Mugu Lagoon TMDL (Toxicity TMDL).
- Metals and Selenium in the Calleguas Creek, its Tributaries and Mugu Lagoon TMDL (Metals TMDL).
- Calleguas Creek Watershed Salts TMDL (Salts TMDL).

- Revolon Slough and Beardsley Wash Trash TMDL (Calleguas Creek Watershed Trash TMDL).
- Malibu Creek and Lagoon Bacteria TMDL (MCW Bacteria TMDL).
- Malibu Creek Watershed Trash TMDL (MCW Trash TMDL).
- Santa Monica Bay Beaches Bacteria TMDL (SMB Beaches Bacteria TMDL).
- Santa Monica Bay Nearshore and Offshore Debris TMDL (SMB Debris TMDL).
- Santa Clara River Estuary and Reaches 3, 5, 6, and 7 Indicator Bacteria TMDL (SCR Bacteria TMDL).
- TMDL for Algae, Eutrophic Conditions, and Nutrients in the Ventura River and its Tributaries (VR Algae TMDL).
- Ventura River Estuary Trash TMDL (VR Trash TMDL).
- Harbor Beaches of Ventura County (Kiddie Beach and Hobie Beach) Bacteria TMDL (VC Bacteria TMDL).

The following additional TMDLs were added to the CIMP. Modifications to support coordination with the CIMP were incorporated into the Calleguas Creek TMDL monitoring program and the Santa Clara and Malibu Creek TMDL monitoring programs were incorporated into the CIMP.

- Pesticides, PCBs, and Sediment Toxicity in Oxnard Drain 3 (Oxnard Drain #3 TMDL).
- Malibu Creek Nutrients TMDL (MCW Nutrients TMDL).
- Santa Clara River Nitrogen Compounds TMDL (SCR Nitrogen TMDL).
- TMDL For Chloride in the Santa Clara River, Reach 3 (SCR Chloride TMDL).

The details of TMDL monitoring that are relevant to the MS4 permittees' evaluation of monitoring data are discussed in the watershed-specific discussions below.

3.2.5 Bioassessment Monitoring

Prior to the adoption of the 2010 Permit, the Program performed bioassessment monitoring in the Ventura River watershed at fixed locations. That sampling effort was terminated in favor of a new program working to standardize bioassessment monitoring throughout Southern California undertaken by the Stormwater Monitoring Coalition of Southern California and led by SCCWRP. The Stormwater Monitoring Program was instructed to participate in this new Regional Monitoring Program by performing sampling at 15 random sites and three targeted sites throughout the County annually, for the duration of the five-year study. The initial study focused on perennial streams and ended in 2013, however the regional bioassessment effort is ongoing and has been modified and revised as new information became available. As of 2025, about 18 bioassessment sites have been sampled per year over the last ~17 years. Some of the sites are sampled only once through a randomized approach, and others are sampled most years. The monitoring generates data for chemistry, taxonomy, California Stream Condition Index (CSCI), Algal Stream Condition Index using Diatoms, physical habitat, etc. Studies are ongoing to understand the impact of channel engineering and modifications on bioassessment scores and determine whether these modifications constrain the CSCI scores that can be obtained in these channels. For example, the San Diego Regional Water Quality Control Board adopted biological objectives that exempted fully hardened channels due to concerns about the ability of those channels to obtain the objectives without removing the channel hardening.

3.3 Evaluation of Monitoring Data

Per the requirement in the ROWD guidance from the Regional Board, all data collected under the monitoring programs described in the previous section were evaluated. This section describes the methodology and results of the evaluation.

3.3.1 Analytes

Dry weather and wet weather samples from the mass emission stations and the Major Outfall stations are analyzed for well over 200 constituents including conventional pollutants, bacteria, general chemistry, total and dissolved metals, nutrients, semi-volatile organics, chlorinated pesticides, polychlorinated biphenyls, organophosphate pesticides, herbicides, and chronic aquatic toxicity. Attachment E of the 2021 Permit lists the constituents to be analyzed.

3.3.2 Methodology

For this analysis, water quality exceedance data gathered from the Program's Annual Monitoring Reports (AMRs) between 2015 and 2025 were evaluated to identify potential pollutants of concern in each watershed and weather condition. The longer period (beyond just this Permit term) was selected to provide information about the evolution of the program and monitoring results. To support this evaluation, quadrant graphs were developed for the three major watersheds, illustrating exceedance patterns under both dry and wet weather conditions. Exceedances were determined using Basin Plan Objectives (BPOs) – including site-specific objectives where they have been assigned to reaches – and the CTR. Each graph shows the most recent year that a WQO for a monitored constituent exceeded at least one major outfall in the watershed (y-axis) and the most recent year that a WQO was exceeded at a Mass Emission site in the watershed (x-axis). This approach categorizes constituents into four quadrants, providing insight into their relative significance.

Figure 3-2 illustrates how to interpret the quadrant graphs in the watershed sections below. Quadrant One represents constituents with no receiving water exceedances (i.e., at the Mass Emission site) but at least one outfall sample above the objective during the permit term. Constituents appearing in Quadrant Two indicate no concern, as there were no exceedances for these constituents in either outfalls or in the receiving water during this permit term. Quadrant Three identifies constituents for which there were receiving water exceedances during the permit term but no outfall exceedances during the permit term, suggesting that sources other than MS4 discharges may be contributing to the pollutant load. Quadrant Four identifies constituents of potential concern, which were associated with exceedances in both receiving waters and outfalls during the permit term – albeit not necessarily in the same event or even the same monitoring year. Constituents falling within Quadrant Four are discussed in the individual watershed sections that follow.

Each watershed section below also includes two pie charts that illustrate the total number of constituents monitored and categorize them into four groups:

1. The number of constituents exceeding in at least one outfall, but not in the receiving water at any time.
2. The number of constituents exceeding at least once in the receiving water, but not in an outfall at any time.
3. The number of constituents exceeding at least once in the receiving water and at least once in an outfall at any time.
4. The number of constituents with no exceedances at any time.

The timeframe for the pie chart data was the same as for the quadrant graphs (2015-2025).

The following points address unique conditions that apply to all quadrant graphs in the following sections:

- In the prior permit term, exceedances were identified for WQOs based on the municipal beneficial use (MUN). However, MUN includes an asterisk in the Basin Plan, meaning that permit limitations cannot be applied. Therefore, exceedances for MUN objectives were no longer identified after 2015.
- Fecal coliform objectives were no longer applicable for inland waters after the adoption of the Statewide Bacteria Provisions. Monitoring of fecal coliform ceased in May 2018.
- Sulfate monitoring was conducted as a special study that ended in 2020.

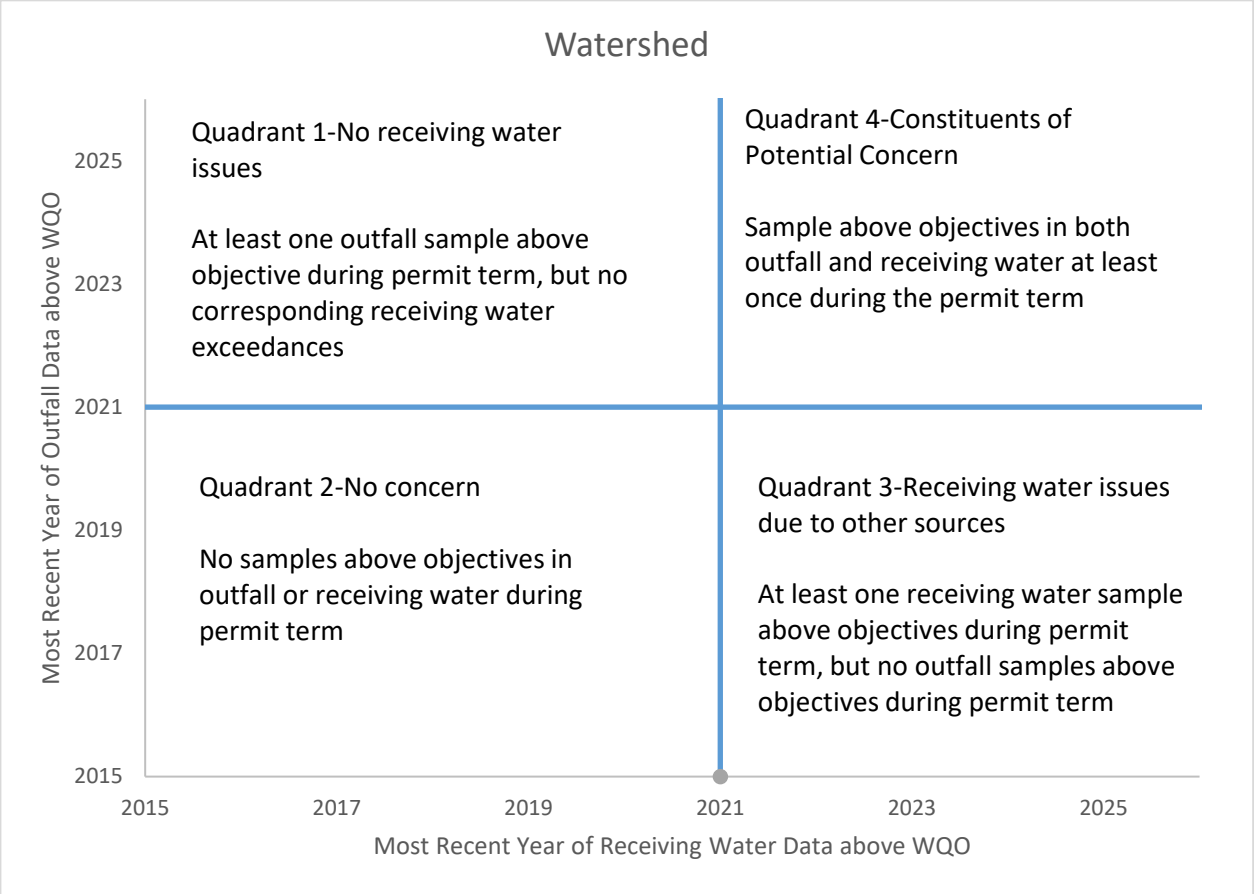


Figure 3-2. Quadrant Graph Explanation

3.3.2.1 TMDL Considerations

MS4 effluent limitations from TMDLs that apply to Ventura County Permittees are identified in Attachments K-O of the Permit. The effluent limitations for some of the TMDLs are different than the WQOs that the Program uses to tabulate exceedances in AMRs for the mass emission and major outfall sites. Consequently, it is possible for there to have been an exceedance of a TMDL limit during the Permit term for a constituent that was not revealed as one of potential concern in Quadrant 4 of a quadrant graph. Conversely, it is possible that a constituent in Quadrant 4 of the quadrant graph did not exceed its TMDL final limit during the Permit term. Further, cause-and-contribute evaluations are performed for Calleguas Creek Watershed TMDLs that consider both concentrations and loads (the latter, depending on the TMDL) in receiving water and at outfalls during the same events to identify exceedances. For some

TMDLs, data from TMDL-specific receiving water sites are utilized (e.g., for subwatersheds, where established), as opposed to results at mass emission sites. Finally, quadrant graphs were not developed using data from the Miscellaneous Coastal and Malibu Creek watersheds because mass emission sites are not located there and Program monitoring is restricted to TMDL-related constituents. Considerations related to TMDL monitoring and TMDL limits are discussed below where pertinent for identifying potential constituents of concern.

3.3.3 Calleguas Creek Watershed

The Calleguas Creek Watershed encompasses an area of approximately 343 square miles, predominantly in southeastern Ventura County, split approximately equally between open space, agricultural, and developed land uses. More information regarding the Calleguas Creek Watershed can be found in **Section 1.4.1.2** of this document.

Figure 3-4 and **Figure 3-3** show that during wet weather, exceedances for TDS, chloride, and *E. coli* were observed in the receiving water and in at least one outfall during the permit term. During dry weather, the same three constituents are found to be constituents of potential concern. Bis(2-ethyhexyl) phthalate was also found to have at least one exceedance in the receiving water and at least one in an outfall during the permit term. Additionally, **Figure 3-5** illustrates that most monitored constituents have met WQOs over the past decade in both the receiving water and at outfalls. Exceedances have been slightly more frequent during wet weather, occurring primarily at outfalls rather than in receiving waters. The receiving water shows the fewest exceedances under both wet and dry conditions.

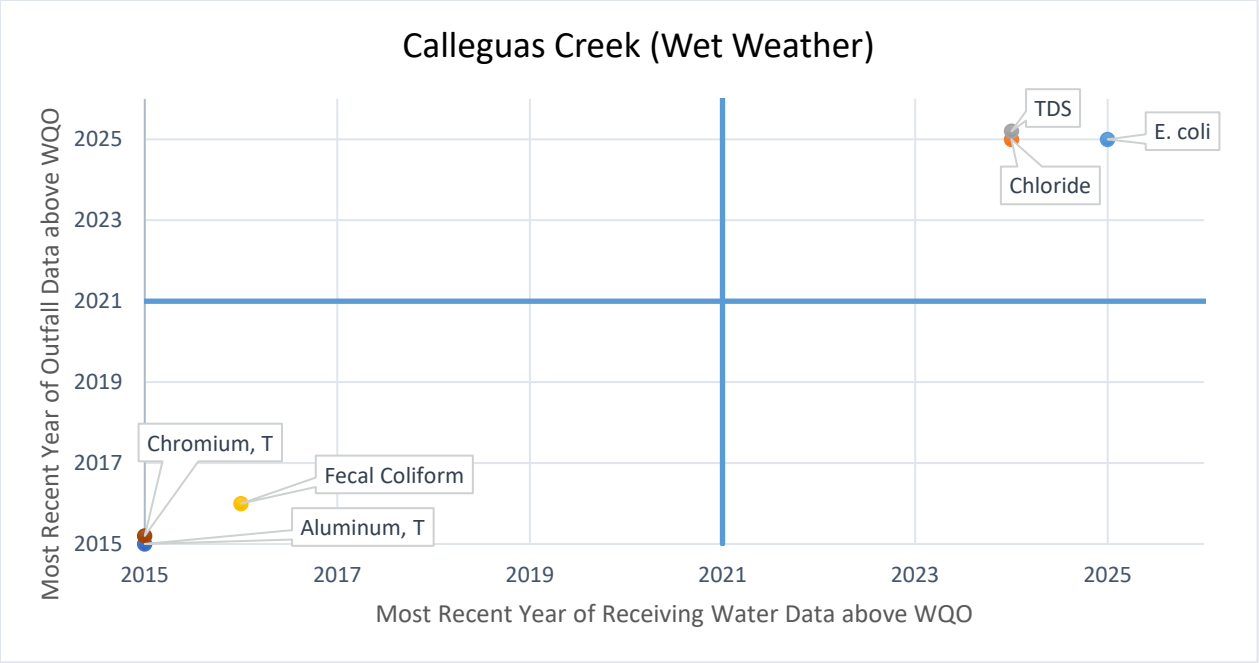


Figure 3-3. Receiving Water and Outfall Exceedances in the Calleguas Creek Watershed During Wet Weather from 2015-2025

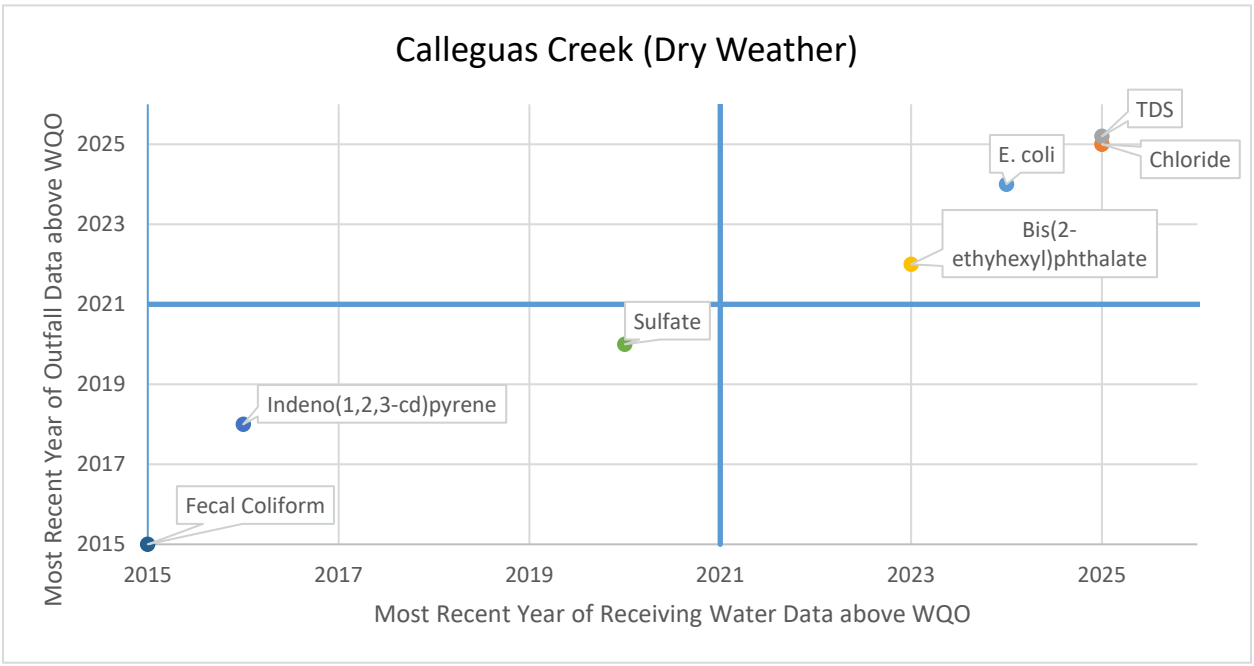


Figure 3-4. Receiving Water and Outfall Exceedances in the Calleguas Creek Watershed During Dry Weather from 2015-2025

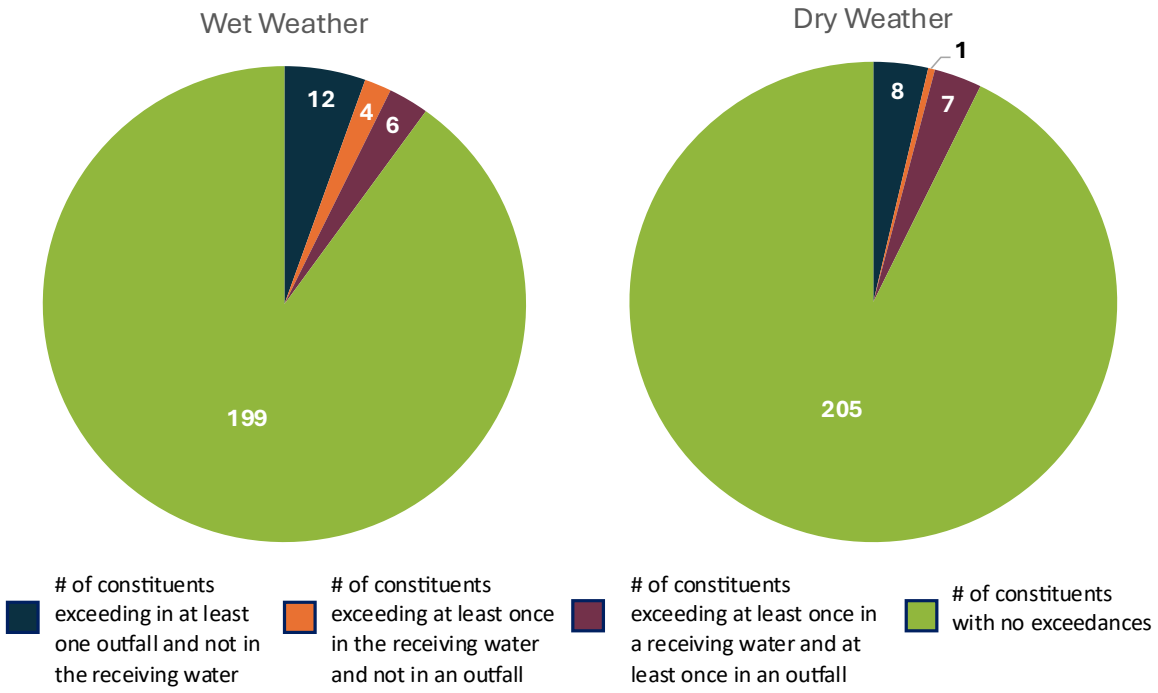


Figure 3-5. Total Number of Constituents Monitored Compared to Constituents that Exceed in the Calleguas Creek Watershed from 2015-2025

3.3.3.1 TMDL Considerations in the Calleguas Creek Watershed

TMDLs that apply to the Calleguas Creek Watershed are:

- OC Pesticides, PCBs and Siltation in Calleguas Creek, its Tributaries, in Mugu Lagoon TMDL (OC Pesticides TMDL).
- Toxicity, Chlorpyrifos, And Diazinon in the Calleguas Creek, its Tributaries and Mugu Lagoon TMDL (Toxicity TMDL).
- Metals and Selenium in the Calleguas Creek, its Tributaries and Mugu.
- Lagoon TMDL (Metals TMDL).
- Calleguas Creek Watershed Salts TMDL (Salts TMDL).
- Revolon Slough and Beardsley Wash Trash TMDL (Calleguas Creek Watershed Trash TMDL).
- Pesticides, PCBs, and Sediment Toxicity In Oxnard Drain 3 (Oxnard Drain #3 TMDL).

The majority of the TMDLs in the Calleguas Creek watershed have TMDL limitations that differ from the WQOs. For these TMDLs, a separate data evaluation is needed to identify if any of the TMDL constituents are of potential concern. **Table 3-1** provides a summary of which Calleguas Creek Watershed TMDLs have different limitations that require a separate data evaluation.

Table 3-1. Comparison of Calleguas Creek Watershed TMDL limitations to WQOs

TMDL	Date Final Limits Effective	WQBELs = WQOs?	RWL = WQOs?	Other Notes
Toxicity TMDL	9/11/2021	N/A	No	TMDL constituents do not have WQOs
Trash TMDL	9/11/2021	N/A	No	Trash has narrative WQO, TMDL is numeric
Metals TMDL	3/27/2022	N/A	No	TMDL RWLs are loads
Salts TMDL	12/2/2023	N/A	No	TMDL RWLs are loads
Oxnard Drain #3 TMDL	5/12/2025	Yes, water No, sediment	Yes, water No, sediment	No WQOs for sediment exist for these constituents.
OC Pesticides TMDL	3/24/2026	N/A	No	TMDL RWLs are concentrations in sediment. No data evaluations have been conducted for final limits as they are not yet effective.

Pertinent evaluations for CCW TMDLs are provided below.

3.3.3.2 Toxicity TMDL

The Toxicity TMDL establishes RWLs for chlorpyrifos, diazinon and toxicity. The RWLs are concentrations that are interpretations of a narrative Basin Plan objective. As a result, there are no numeric WQOs that were evaluated as part of the Program's assessment. The final TMDL RWLs became effective on the effective date of the 2021 Permit. Since that time, there have been no exceedances of the diazinon or chlorpyrifos RWLs that had a corresponding exceedance in an MS4 outfall. Some values above the toxicity RWL have been observed, but the MS4 permittees have initiated Toxicity Identification Evaluations when required to meet the RWLs[17].

3.3.3.3 Metals TMDL

The Metals TMDL establishes load-based RWLs for copper, nickel, mercury and selenium in Revolon Slough. No exceedances of the copper, nickel, and mercury limitations have been observed in this permit term. Since the Metals TMDL became final, and using cause-and-contribute evaluations based on both receiving water and outfall concentrations and loads, one exceedance of the selenium limitation in Revolon Slough was observed during this permit term. However, a new selenium WQO was promulgated by USEPA in 2025. The new WQO is based on fish tissue concentrations and allows for the development of a site-specific translator to a water column concentration. The Calleguas Creek Watershed Stakeholders have submitted a special study, developed in accordance with EPA guidance for the new selenium WQO,

[17] "Permittees shall comply with the receiving water limitation of 1 TUc measured in-stream at the base of each subwatershed as of the effective date of the Order. The receiving water limitation shall be implemented as a trigger for initiation of the TRE/TIE process as outlined in U.S. EPA's "Understanding and Accounting for Method Variability in Whole Effluent Toxicity Applications Under the National Pollutant Discharge Elimination System Program" (2000).", 2021 Permit, Attachment N, II.C.

that supports a site-specific water column concentration in Revolon Slough that is higher than the CTR objective used to develop the limitations in the 2021 Permit. The observed concentrations in the MS4 outfalls would not exceed the site-specific water column concentration. Additionally, the study demonstrated that selenium is primarily from natural sources in Revolon Slough.

3.3.3.4 Salts TMDL

The Salts TMDL establishes RWLs for sulfate, TDS, chloride and boron (the latter in only two subwatersheds), and became final in December 2023. Although **Figure 3-3** and **Figure 3-4** identified TDS and chloride as potential constituents of concern in both wet and dry weather, the RWLs for salts in the TMDL apply only during dry weather and are load-based limits that apply to the combined MS4 discharges within specified subwatersheds, not concentrations applied to individual monitoring sites. Since the Salts TMDL became final, and using cause and-contribute evaluations using receiving water concentrations and loads, outfall concentrations, and subwatershed loads, exceedances of the final RWLs for TDS, sulfate, and chloride occurred during the 2023/2024 monitoring year.[18] However, eleven of the thirteen exceedances were triggered by water samples taken during the March 19, 2024, dry weather monitoring event, during which groundwater tables were high and base flows were elevated after near-record winter precipitation in the region. No exceedances of the TMDL limitations were observed in the 2024/2025 monitoring year.

3.3.3.5 Calleguas Creek Watershed Trash TMDL

Consistent with the requirements of the Trash TMDL, WPD, County of Ventura, the cities of Camarillo and Oxnard, in conjunction with Caltrans and VCAILG, submitted a Trash Monitoring and Reporting Program (TMRP) in 2009. A Revised TMRP was submitted in 2015 (Addendum 1). Addendum 2 was submitted in August 2020 to comply with the Revised Trash TMDL Conditional Waiver (effective May 2020). Monitoring is conducted as outlined in the TMRP Addendum 2. All permittees have complied with the Trash TMDL through installation of full capture devices and implementation of a Minimum Frequency of Assessment and Collection (MFAC) program that ensures zero trash is present in the waterbody after the collection events.

3.3.3.6 Oxnard Drain #3 TMDL

The Oxnard Drain #3 TMDL became effective in May 2025, and no evaluations have been conducted yet for monitoring data collected after the effective date. Monitoring only began in the 2024/2025 monitoring year, so it is not possible to determine if any additional constituents of concern may arise from this TMDL.

3.3.3.7 OC Pesticides TMDL

The OC Pesticides TMDL is not yet effective; no exceedance evaluations could be conducted with final limitations. The interim limitations were not exceeded during the Permit term.

3.3.4 Malibu Creek Watershed

The Malibu Creek Watershed drains 109 square miles, of which approximately one-third is in southern Ventura County and the remaining two-thirds in Los Angeles County. The watershed has TMDLs for bacteria, nutrients, and trash. For more information regarding the Malibu Creek Watershed, see **Section 1.4.1.4**.

Prior to the 2024/2025 monitoring year, the only site-specific data available for the Malibu Creek Watershed consisted of bacteria TMDL monitoring results. In previous reporting cycles, sites monitored exclusively for TMDL compliance were not included in the Program's AMR evaluation process. Starting in the 2024/2025 monitoring year, a mass emission site (ME-LC) and Major Outfall site (MO-OKP) were

[18] Exceedances only occurred in the Simi, Camarillo, and Conejo Subwatersheds defined in the Salts TMDL.

specified in the CIMP for monitoring constituents other than those in the TMDL. Because of the limited number of constituents monitored in this watershed, quadrant graphs were not generated.

Historically, bacteria data reported in Program AMRs were compared to BPOs. It is important to note that BPOs have evolved over the past decade. For example, fecal coliform was removed as an objective for freshwater reaches, and the *E. coli* criterion was revised from 235 MPN/100 mL to 320 CFU/100 mL for non-TMDL sites in the Statewide Bacteria provisions, which were incorporated into the Basin Plan with an effective date of June 27, 2022. Data screening for Program AMRs was performed using the objectives in effect at the time of sampling. Single-sample exceedances of *E. coli* were most recently seen at MCW-12 and ME-LC during 2025 and at MO-OKP in 2024. However, there were no *concurrent* exceedance days (exceedances occurring at the receiving water and its associated outfall on the same day) for any of the exceedances reported in the 2024/2025 monitoring year.

3.3.4.1 TMDL Considerations in the Malibu Creek Watershed

The TMDLs in the Malibu Creek Watershed are:

- Malibu Creek and Lagoon Bacteria TMDL (MCW Bacteria TMDL).
- Malibu Creek Watershed Trash TMDL (MCW Trash TMDL).
- Malibu Creek Nutrients TMDL (MCW Nutrients TMDL).

Some of the TMDLs in the Malibu Creek watershed have TMDL limitations that differ from the WQOs. For these TMDLs, a separate data evaluation is needed to identify if any of the TMDL constituents are of potential concern. **Table 3-2** provides a summary of which TMDLs have different limitations that require a separate data evaluation.

Table 3-2. Comparison of MCW TMDL limitations to WQOs

TMDL	Date Final Limits Effective	WQBELs = WQOs?	RWL = WQOs?	Other Notes
MCW Bacteria	9/11/2021-dry 7/15/2026-wet	No	No	Geomean WQBELs are higher than the WQOs, SSO WQBELs lower than the STV WQO, and RWLs have allowable exceedances.
MCW Trash	9/11/2021	No	N/A	Trash has narrative WQO, TMDL is numeric
MCW Nutrients	9/11/2026	No	N/A	TMDL WQBELs are loads in summer. Winter concentrations are less than the WQO.
Santa Monica Bay Beaches Bacteria	9/11/2021-dry 7/15/2024-wet	No-Enterococci, Total Coliform Yes-Fecal Coliform	No-Enterococci, Total Coliform Yes-Fecal Coliform	Geomean WQBELs are higher than the WQOs, SSO WQBELs lower than the STV WQO, Total Coliform no longer has WQO, and RWLs have allowable exceedances.
Santa Monica Bay Debris	9/11/2021	No	N/A	Trash has narrative WQO, TMDL is numeric

Pertinent evaluations for TMDLs are provided below.

3.3.4.2 MCW Bacteria TMDL

The Malibu Creek Bacteria TMDL established effluent limitations for discharges of *E. coli* to Malibu Creek. A daily maximum limit of 235 MPN/100 mL has been set for wet and dry weather conditions in Malibu Creek. The Program's 2024-2025 AMR indicates that the most recent exceedances of single-sample *E. coli* limits occurred in 2025 at all monitored sites: ME-LC, MO-OKP, and MCW-12.

3.3.4.3 MCW Nutrients TMDL

The 2024/2025 AMR reports that monthly sampling was conducted to meet Nutrient TMDL requirements at the two receiving water sites identified in the CIMP (MCW-12 and ME-LC) during the reporting year. Monthly sampling at the outfall (MO-OKP) was also conducted during the first three months of the reporting year but was paused pending CIMP approval. The CIMP was approved on May 12, 2025, and thus, quarterly dry weather monitoring at the outfall was initiated during the next monthly monitoring event (June 2025). Wet weather monitoring at outfall MO-OKP was not conducted as the CIMP was not approved until after the end of the 2024/2025 wet season. There were no exceedances of the TMDL WQBELs at the outfall. Attachment O of the Permit does not include RWLs.

3.3.4.4 MCW Trash TMDL

Consistent with the requirements of the Malibu Creek Watershed Trash TMDL, WPD, County of Ventura and City of Thousand Oaks submitted a TMRP in April 2010. A revised TMRP was submitted in August 2020 consistent with the requirements of the Revised Trash TMDL Conditional Waiver and conditionally approved by the Regional Board in June 2021. Monitoring is conducted as outlined in the Revised TMRP.

All permittees have complied with the Trash TMDL through installation of full capture devices and implementation of an MFAC program that ensures zero trash is present in the waterbody after the collection events.

3.3.4.5 SMB Beaches Bacteria and SMB Debris TMDLs

The Ventura County MS4 Permittees comply with these TMDLs through monitoring conducted in the Malibu Creek Watershed and contributing to SMB beaches TMDL monitoring. The evaluations for these TMDLs are the same as for the Malibu Creek Bacteria and Malibu Creek Trash TMDLs, respectively.

3.3.5 Santa Clara River Watershed

The Santa Clara River and tributary system have a watershed area of about 1,634 square miles spanning Los Angeles (40%) and Ventura (60%) Counties, of which almost 90% is open space. The watershed has TMDLs for bacteria, chloride, and nitrogen. For more information regarding the Santa Clara River Watershed, see **Section 1.4.1.3**.

Figure 3-6 and **Figure 3-7** show that during wet weather, an exceedance of *E. coli* was seen in at least one receiving water sample and in at least one outfall sample during the permit term. Dissolved oxygen (DO) appears in Quadrant 4 for wet weather; however, DO levels in outfall discharges are unlikely to determine DO in receiving waters during storm runoff events. During dry weather, there was at least one exceedance for total selenium in the receiving water sample and one in an outfall sample during the permit term. Overall, **Figure 3-8** illustrates that, as in the other major watersheds, most monitored constituents meet WQOs in both the receiving water and at outfalls.

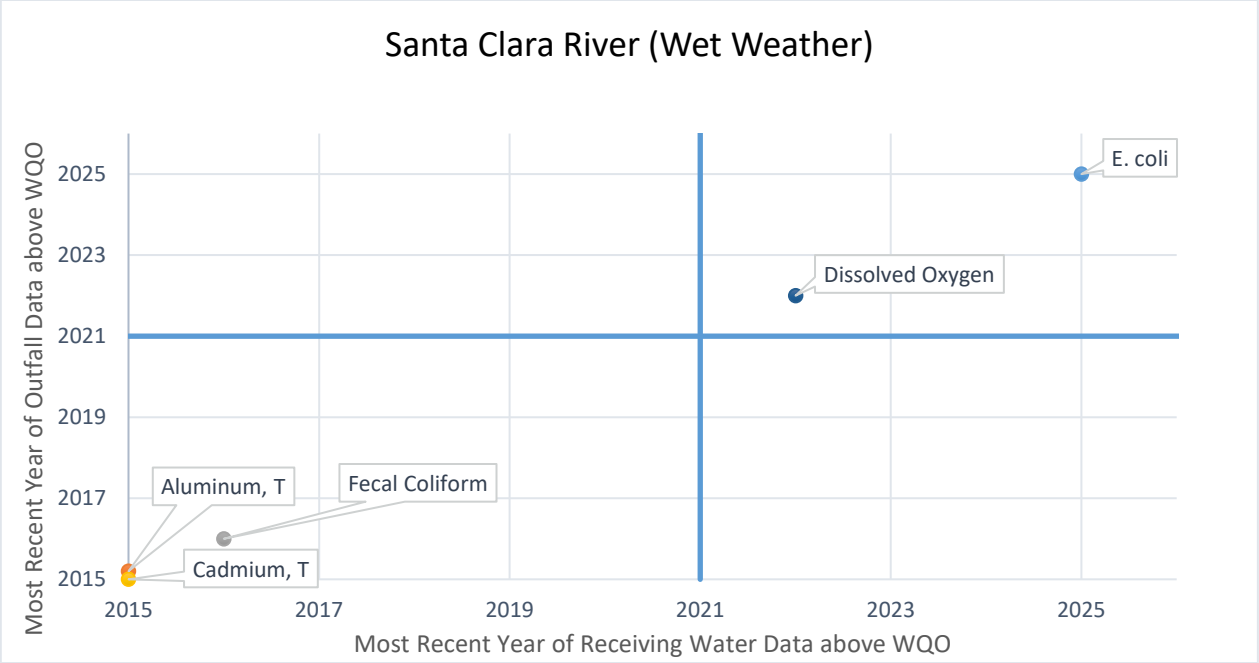


Figure 3-6. Receiving Water and Outfall Exceedances in the Santa Clara River Watershed During Wet Weather from 2015-2025

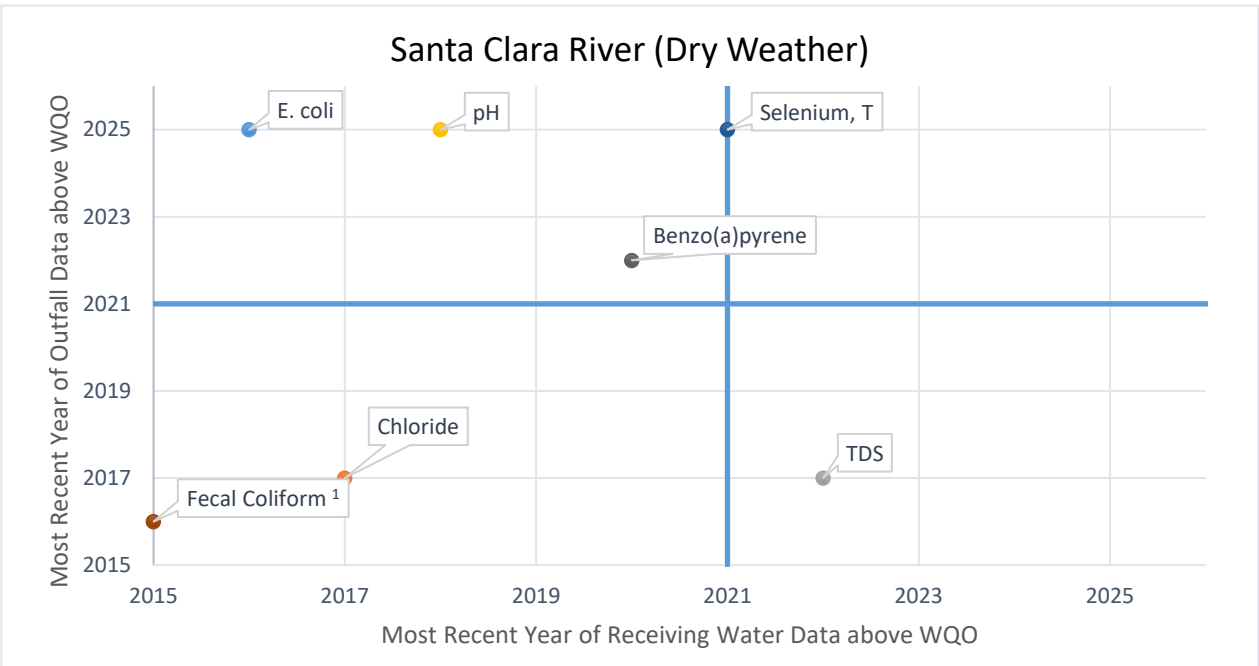


Figure 3-7. Receiving Water and Outfall Exceedances in the Santa Clara River Watershed During Dry Weather from 2015-2025

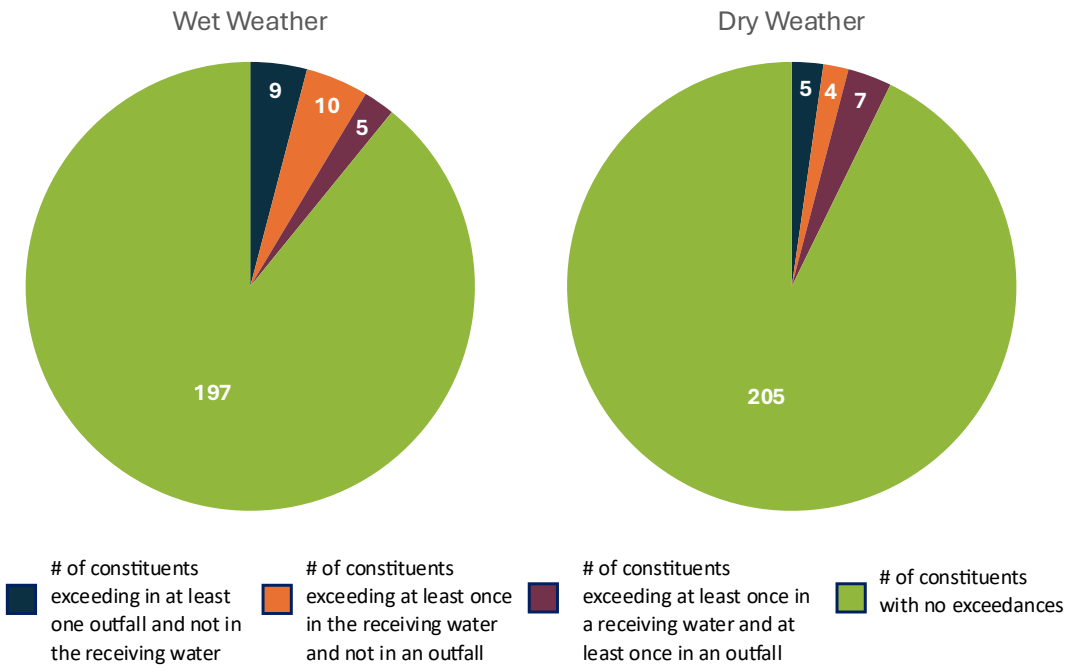


Figure 3-8. Total Number of Constituents Monitored Compared to Constituents that Exceed in the Santa Clara River Watershed During Wet Weather from 2015-2025

3.3.5.1 TMDL Considerations in the Santa Clara River Watershed

The TMDLs in the Santa Clara River Watershed are:

- Santa Clara River Nitrogen Compounds TMDL (Santa Clara River Nitrogen TMDL).
- TMDL For Chloride in the Santa Clara River, Reach 3 (Santa Clara River Chloride TMDL).
- Santa Clara River Estuary and Reaches 3, 5, 6, and 7 Indicator Bacteria TMDL (Santa Clara River Bacteria TMDL).

Some of the TMDLs in the Santa Clara River watershed have TMDL limitations that differ from the WQOs. For these TMDLs, a separate data evaluation is needed to identify if any of the TMDL constituents are of potential concern. **Table 3-3** provides a summary of which TMDLs have different limitations that require a separate data evaluation.

Table 3-3. Comparison of SCR TMDL limitations to WQOs

TMDL	Date Final Limits Effective	WQBELs = WQOs?	RWL = WQOs?	Other Notes
SCR Bacteria	9/11/2021	No- *E. coli,* Enterococci, Total Coliform Yes-Fecal Coliform	No-*E. coli,* Enterococci, Total Coliform Yes-Fecal Coliform	Geomean WQBELs are higher than the WQOs, SSO WQBELs lower than the STV WQO, Total Coliform no longer has WQO, and RWLs have allowable exceedances.
SCR Chloride	9/11/2021	Yes	N/A	
SCR Nitrogen	9/11//2021	No	N/A	TMDL WQBELs include a margin of safety that make the WQBELs lower than the WQOs

Pertinent evaluations for TMDLs are provided below.

3.3.5.2 SCR Bacteria TMDL

The Santa Clara River Bacteria TMDL establishes effluent limitations for total coliform, fecal coliform, and Enterococcus in the Santa Clara River Estuary and Reaches 1 and 2, as well as effluent limitations for *E. coli* in Reaches 3 and above. These limits are set at 235 MPN/100 mL for *E. coli*, 10,000 MPN/100 mL for total coliform, 400 MPN/100 mL for fecal coliform, and 104 MPN/100 mL for Enterococcus.

During the 2024/2025 monitoring year, the mass emission site ME-SCR and outfall sites MO-FIL, MO-SPA, and MO-VEN exceeded the WQO for *E. coli*, while the last exceedance at outfall MO-OXN occurred in 2024. *E. coli* seems to be a constituent of potential concern in the Santa Clara River Watershed.

3.3.5.3 SCR Chloride TMDL

Per CIMP requirements, monitoring was conducted for the Santa Clara River Chloride TMDL in 2025. As shown in the quadrant graph, chloride did not exceed WQOs in this permit term. Given that the TMDL limitations are equal to the WQOs, no exceedances of the Santa Clara River Chloride TMDL limitations have been observed in this permit term.

3.3.5.4 SCR Nitrogen TMDL

Separate TMDL monitoring for the Santa Clara River Nitrogen TMDL was not conducted during this Permit term. As shown in the quadrant graphs, nitrogen compounds have not exceeded the WQOs at any time in the past 10 years. The Santa Clara River has also been delisted for nitrogen compounds. While the TMDL limitations are lower than the WQOs, the concentrations observed in the receiving water and MS4 discharges are unlikely to exceed the WQBELs and no exceedances of the limitations were observed since the CIMP was approved.

3.3.6 Ventura River Watershed

The Ventura River Watershed is in the northwestern portion of Ventura County, draining an area of 228 square miles, roughly half of which is on Forest Service land and 87% is open space. Total Maximum Daily Loads (TMDLs) in the watershed have been developed for algae/nutrients and trash. For more information regarding the Ventura River Watershed, see **Section 1.4.1.1**.

Figure 3-9 and **Figure 3-10** show that during wet weather, an exceedance of *E. coli* was seen in at least one receiving water sample and in at least one outfall sample during the permit term. Dissolved oxygen (DO) appears in Quadrant 4 for dry weather; however, DO levels in outfall discharges are unlikely to determine DO in receiving waters. Additionally, **Figure 3-11** shows that, like countywide patterns, most constituents have not exceeded WQOs in the past decade. In the Ventura River Watershed, exceedances occurred in roughly equal numbers under both wet and dry conditions. During wet weather, most exceedances were observed at outfalls without corresponding exceedances in the receiving water.

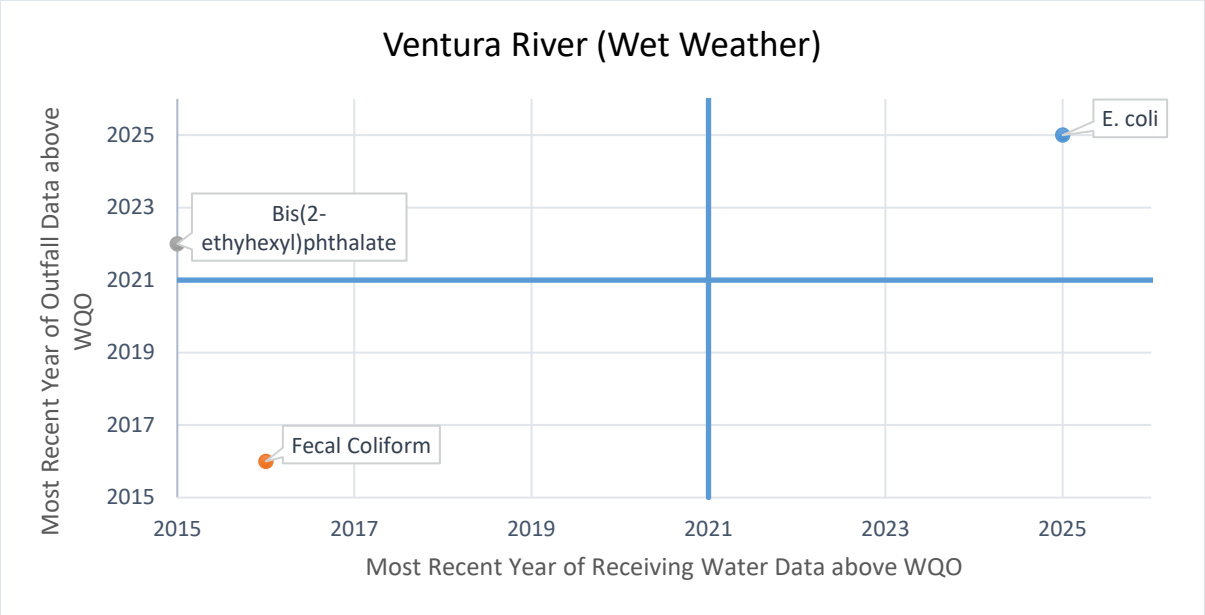


Figure 3-9. Receiving Water and Outfall Exceedances in the Ventura River Watershed During Wet Weather from 2015-2025

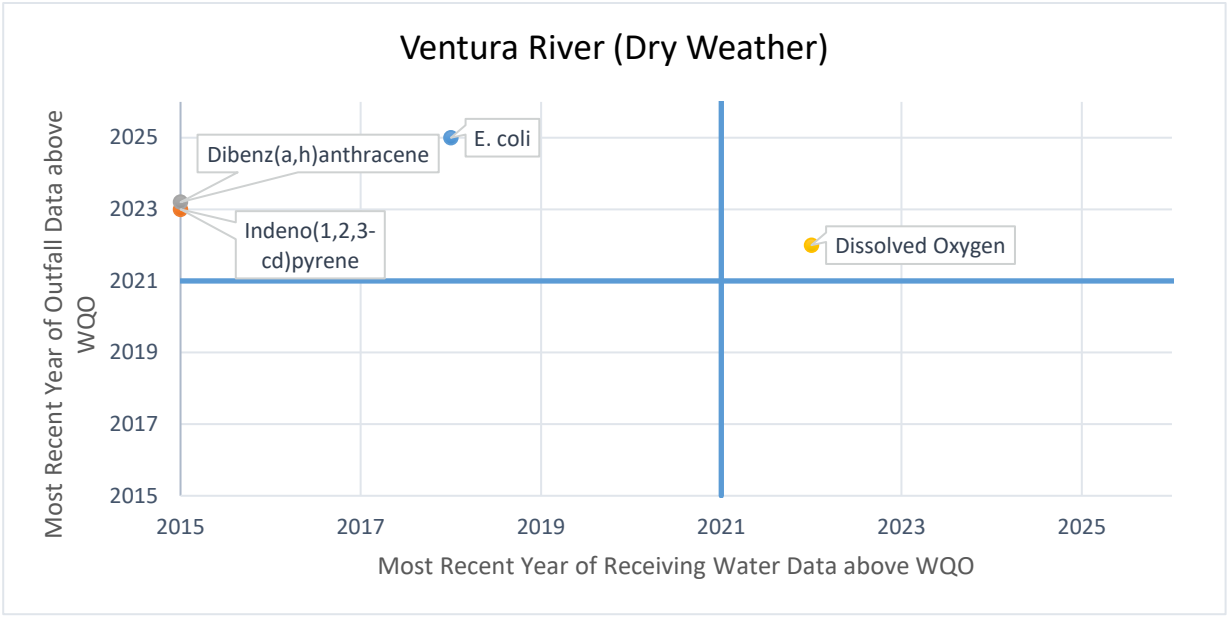


Figure 3-10. Receiving Water and Outfall Exceedances in the Ventura River Watershed During Dry Weather from 2015-2025

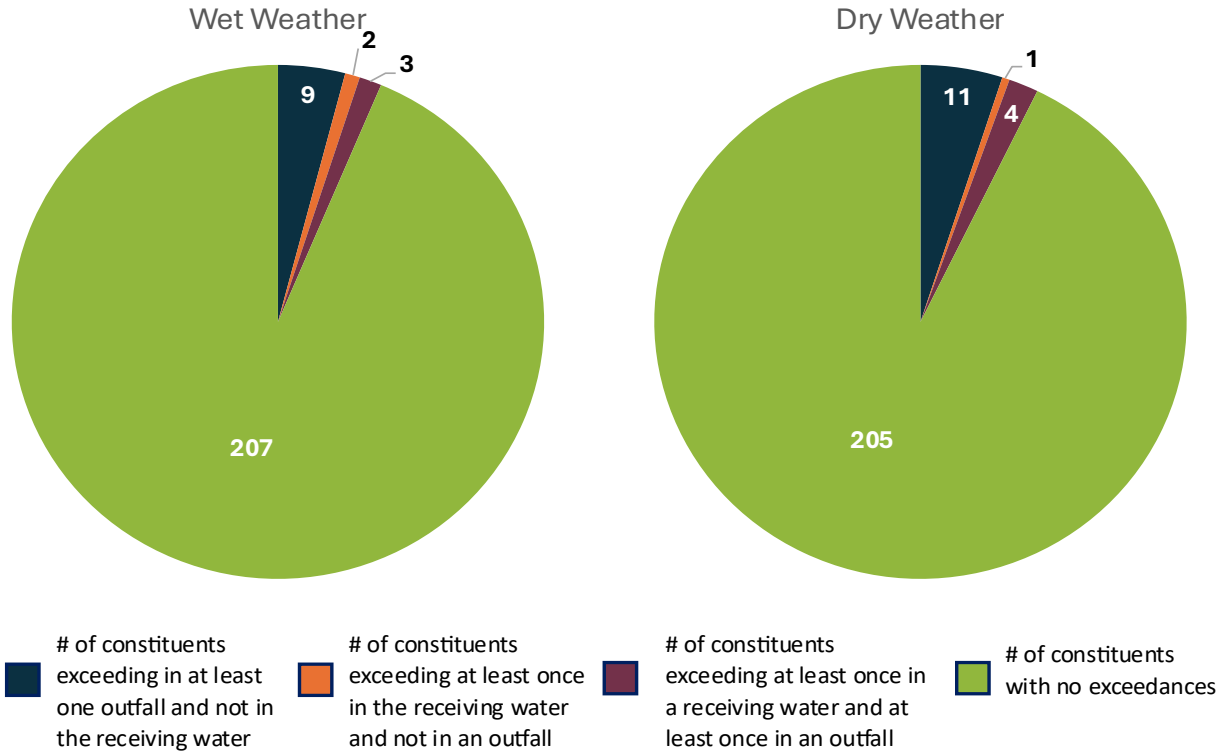


Figure 3-11. Number of Constituents Monitored Compared to Constituents that Exceed in the Ventura River Watershed During Wet and Dry Weather from 2015-2025

3.3.6.1 TMDL Considerations in the Ventura River Watershed

The TMDLs in the Ventura River Watershed are:

- TMDL for Algae, Eutrophic Conditions, and Nutrients in the Ventura River and its Tributaries (Ventura River Algae TMDL).
- Ventura River Estuary Trash TMDL (Ventura River Trash TMDL).

Both TMDLs in the Ventura River watershed have TMDL limitations that differ from the WQOs. As a result, separate TMDL evaluations are needed in the Ventura River watershed. **Table 3-4** provides a summary of the different limitations in the watershed that require a separate data evaluation.

Table 3-4. Comparison of VR TMDL limitations to WQOs

TMDL	Date Final Limits Effective	WQBELs = WQOs?	RWL = WQOs?	Other Notes
VR Algae	9/11/2021	No-dry weather, wet weather Estuary and Reach 1 Yes-wet weather inland waterbodies	N/A	WQBELs are loads in dry weather
VR Trash	9/11/2021	No	N/A	Trash has narrative WQO, TMDL is numeric

Pertinent evaluations for TMDLs are provided below.

3.3.6.2 Ventura River Algae TMDL

The Algae TMDL established wet weather concentration-based effluent limits for urban discharges that (for most reaches) match the BPO site-specific objectives for Nitrate-N + Nitrite-N (5 mg/L or 10 mg/L, depending on reach). Urban discharges to the lowest reach of the mainstem Ventura River (Reach 1) and the estuary were assigned an effluent limit of 7.4 mg/L for total nitrogen, which does not match a WQO. During the last two permit terms, the major outfalls monitored in the Ventura River Watershed have been MO-MEI and MO-OJA.[19] MO-MEI discharges to Reach 4 of the Ventura River's main stem and MO-OJA discharges to San Antonio Creek. The pertinent wet weather TMDL limit for Nitrate-N + Nitrite-N for these two reaches (5 mg/L) has not been exceeded at either outfall since monitoring began.

The Algae TMDL assigned dry weather WLAs for total nitrogen and total phosphorus to the combined urban area within the watershed (expressed as pounds per day). The Permit re-expressed the WLAs as per-acre daily loads, to be compared to the per-acre load calculated for individual outfalls on dry events using the drainage areas of the outfall sites. The 2024/2025 AMR indicates that there has been an exceedance of the dry weather effluent limit for total nitrogen at least once during the permit term, at MO-OJA. However, during the event of the documented exceedance (in April 2025), MO-OJA had flow that was estimated but not measured by the onsite field team, and the discharge was not checked to determine if it was reaching surface flow in San Antonio Creek.

3.3.6.3 Ventura River Trash TMDL

Consistent with the requirements of the Trash TMDL, WPD, County of Ventura and cities of Ojai and Ventura, in conjunction with the California Department of Parks and Recreation Channel Coast District, Ventura County Fairgrounds, Caltrans, and VCAILG, submitted a TMRP in 2009 (original TMRP). A Revised TMRP was submitted in 2014 to adjust the monitoring approach and has been approved by the Regional Board. Monitoring is conducted as outlined in the Revised TMRP. All permittees have complied with the Trash TMDL through installation of full capture devices and implementation of an MFAC program that ensures zero trash is present in the waterbody after the collection events.

3.3.7 Miscellaneous Ventura Coastal Watershed

The Ventura Coastal Watershed drains small watersheds close to the Pacific Ocean. The Port Hueneme major outfall station (MO_HUE) is included in this watershed, but there is no receiving water mass

[19] The CIMP added a third outfall monitoring site in the Ventura River Watershed (MO-SIMP, to represent the City of Ventura)

emission station for this location due to the configuration of the waterbodies preventing the collection of representative samples. There is one Coastal Watershed TMDL for bacteria at the Harbor Beaches. The mean annual precipitation is about 14-15 inches in Port Hueneme and Ventura.[20]

For more information regarding the Ventura Coastal Watershed, see **Section 1.4.1.5**.

Because there is no receiving water site associated with the outfall site MO-HUE, quadrant graphs could not be created for this watershed. However, based on the Program's annual exceedance evaluations, the most recent exceedances of *E. coli* during dry and wet weather occurred during 2025. The most recent dissolved oxygen exceedance also occurred during dry weather in 2025 and during wet weather in 2024 at site MO-HUE. However, DO levels in outfall discharges are unlikely to determine DO in receiving waters.

3.3.7.1 TMDL Considerations in the Ventura Coastal Watershed

One TMDL applies to the Ventura Coastal Watershed:

- Harbor Beaches Of Ventura County (Kiddie Beach and Hobie Beach) Bacteria TMDL (Harbor Beaches Bacteria TMDL).

Like the other bacteria TMDLs in Ventura County, the WQBELs and RWLs are set equal to the old bacteria WQOs from the Basin Plan, which are not equal to the new objectives based on the Statewide Bacteria Provisions. Additionally, the TMDL provides for allowable exceedances of the RWLs.

A pertinent evaluation for the one TMDL in this watershed is provided below.

[20] Ventura County Public Works Agency, Watershed Protection District, Wettest/Driest Years Report.

3.3.7.2 Ventura Coastal Bacteria TMDL

The most representative receiving water monitoring sites for this watershed are Station 36000 (Hobie Beach) and Station 37000 (Kiddie Beach). These shoreline locations correspond to the beaches where the Harbor Beaches Bacteria TMDL applies. In the 2024/2025 AMR, the Program states that due to difficulty in locating an outfall sampling point discharging to Channel Islands Harbor beaches because of a submerged outfall and dry weather diversions, compliance with the bacteria WQBEL for the TMDL is demonstrated through receiving water data when discharge occurs during monitoring (conducted as part of the Ocean Water Quality Monitoring Program by Ventura County Environmental Health), or documentation of no discharge. Dry weather discharge only occurs on days that the San Nicolas Pump Station operates.

For summer dry weather, Hobie Beach had three days above the single sample objective (SSO) but no discharge on those days, and Kiddie Beach had two days above SSO but only discharged on one of those days. For winter dry weather, Hobie Beach had one day above SSO and discharge on that day, and Kiddie Beach had three days above SSO but only discharge on two of those days. For wet weather, Kiddie Beach had one day above the SSO.

3.3.8 Bioassessment Data

Median bioassessment scores in the Santa Clara Watershed during the permit term were above common thresholds for evaluation thresholds for CSCI (0.79) and were close to the threshold in the Ventura River Watershed (above the threshold in two of the past four years). Median bioassessment scores were below 0.79 in the Calleguas Creek Watershed during the permit term.

3.3.9 Summary of Evaluation

Overall, the Program's monitoring data demonstrate that among the more than 200 constituents sampled at Mass Emission and Major Outfall locations, the vast majority are meeting applicable WQOs and TMDL WQBELs in both receiving water and outfalls. Pollutants of potential concern revealed by quadrant graphs and TMDL considerations (where appropriate) are confined to a relatively small group of constituents, most notably indicator bacteria like *E. coli* (countywide); chloride, TDS, and sulfate in the Calleguas Creek Watershed (in three of five subwatersheds); and total nitrogen in San Antonio Creek in the Ventura River Watershed (dry weather). *E. coli* is the only constituent that is a widespread pollutant of concern due to its occurrence above WQOs (or TMDL limits) in watersheds throughout the County. Most exceedances of other constituents are not widespread; they tend to be isolated to particular sites or events and often reflect influences beyond municipal stormwater discharges.

3.4 County-wide Pollutants of Concern: Challenges and Opportunities

Throughout Ventura County watersheds, *E. coli* consistently appears as the only countywide constituent of concern in both receiving waters and outfalls, with most concurrent exceedances (receiving water and outfalls) occurring during wet weather. Given the persistent presence of bacteria as a pollutant of concern for all Permittees, significant effort has been expended in both studying sources and approaches to address the exceedances and implementation efforts. **Section 2** highlights the significant investments in structural projects, studies and source control efforts that have been implemented to address bacteria TMDL requirements. In

To effectively manage and protect the recreational beneficial use, the upcoming permit renewal needs to provide mechanisms for the Permittees to manage risk and consider the latest science when addressing *E. coli* exceedances.

parallel, the WQOs and understanding about the risks associated with indicator bacteria exceedances have been evolving. The widespread nature of the exceedances and the significant cost and effort associated with meeting the existing WQOs highlights the importance of understanding how regulatory targets were established and whether they reflect current science.

Numeric targets in bacteria TMDLs are based on older assumptions that do not fully reflect current science or local watershed conditions. Historically, these targets relied on FIB as proxies for illness risk based on an assumed relationship with pathogens. While updated Federal and State criteria now incorporate illness risk and acknowledge variability in FIB sources, the underlying numeric levels remain similar to older standards and may not accurately represent risk in areas without wastewater discharges. The 2012 Recreational Water Quality Criteria and California's Statewide Bacteria Provisions introduced important concepts, such as linking numeric targets to an intended illness rate and recognizing that risk varies depending on FIB sources. Despite these improvements, the numeric thresholds themselves remain largely unchanged from those established decades ago.

Research in Southern California, including studies on recreational exposure during wet weather (such as the Surfer Health Study[21]), suggests that illness risk in runoff-driven systems is often lower than assumed by current criteria. These studies indicate that while illness rates do increase during and immediately after storms, the magnitude of risk is generally below the level implied by existing bacteria standards. The widespread nature of exceedances combined with this evidence highlights the need for alternative and adaptive management approaches to address the exceedances, combined with regulatory changes that reflect the latest science.

To effectively manage and protect the recreational beneficial use, the upcoming permit renewal needs to provide mechanisms for the Permittees to manage risk and consider the latest science when addressing *E. coli* exceedances. By considering local conditions, natural background contributions, and the latest science, the Program can better align monitoring and compliance strategies with actual public health risks, ensuring that resources are directed toward measures that provide meaningful protection for recreational users. Suggestions for permit modifications to support this approach are provided in **Section 4.**

[21] Southern California Coastal Water Research Project (SCCWRP). 2016. The Surfer Health Study: A Three-Year Study Examining Illness Rates Associated with Surfing During Wet Weather. Technical Report 943. September 2016

4 VENTURA COUNTYWIDE PROGRAM SUGGESTIONS FOR UPCOMING PERMIT

The Permittees' overarching goal is to work collaboratively with the Regional Board and other watershed partners to cost-effectively achieve WQOs and protect beneficial uses. The ability to prioritize programs and requirements using the best available science in decision-making is also important. **Section 3** illustrated the high-quality and improved receiving water conditions in Ventura County. This reflects the persistent hard work of the Permittees and the Regional Board, along with partner and stakeholder collaboration, to improve and protect the region's waters, consistent with State and Federal requirements. For the next Permit iteration, Permittees are seeking clarity on the actions to be taken to achieve these goals and attain compliance with the Permit. The suggestions outlined in this section are based on the Permittees' experience implementing various iterations of the stormwater Permit over the past 35 years and an understanding of what is needed to address the remaining issues in the County. The suggestions also reflect what is needed to address challenges to implementation that the Permittees encounter. The Permittees desire to continue to implement effective programs that make steady progress towards improving and maintaining water quality in Ventura County while also maintaining compliance with the permit conditions.

4.1 Constraints and Challenges

As discussed in the previous sections of the ROWD, the Permittees have successfully implemented many programs but also have constraints and challenges that impact the approaches that can be effective in the County. This section provides a summary of those constraints and challenges that inform the recommendations in this section.

4.1.1 Fiscal Challenges and Long-Term Funding

Unlike Los Angeles County, Permittees in Ventura County do not have a sufficient, dedicated funding source for building stormwater treatment facilities. Because of Prop 218, Ventura County is financially constrained and challenged to fund structural BMPs outside of the Planning and Land Development process. As a result, the Permittees prioritize lower cost strategies that provide more targeted, and often more effective, pollutant control. As discussed in **Section 3**, implementing source control and other enhanced non-structural control methods of reducing pollution loading where possible, combined with multi-benefit projects where feasible has proven effective in addressing the vast majority of pollutant discharges. Assuming the implementation of costly structural BMPs are necessary to provide the remaining pollutant reductions is not only unrealistic from a funding perspective but also may not be the most effective implementation strategy (See **Section 4.3.4**). Permittees need a future permit that provides flexibility to implement the strategies that will provide the most pollutant reduction given the limited funding available. To this end, the next permit iteration needs to provide compliance pathways that support source control, where it will achieve beneficial use protection as a cost-effective approach to permit implementation.

4.1.2 Public Awareness and Support

Limited public understanding of stormwater systems, the effects of urban runoff and stormwater on the environment, and the regulatory pressures affecting local jurisdictions require navigation to allow effective implementation and funding of stormwater programs. Additionally, to garner public support, agencies must be able to demonstrate the public benefits of the programs being implemented. Public officials and key decision makers are confronted with many priorities when allocating resources and if the benefits of the Program cannot be clearly demonstrated, support wanes and funding for important programs becomes a lower priority. The Program will continue its strong education and outreach efforts

to inspire public ownership of stormwater resources by implementing individual efforts, making a commitment to clean water, and supporting sustained financing. However, to support this goal, the Program must be able to modify programs and prioritize requirements to implement actions with the public that are most clearly linked to issues important to them.

4.1.3 Watershed Coordination with Other Dischargers is Necessary to Address Remaining Pollutant issues

Sources of pollutants in stormwater and urban runoff are diverse and their effects on the environment are complex. As stormwater regulations were initially implemented, pollutants from sources including commercial and industrial facilities, municipal areas and activities, construction, and development were addressed. Programs to address these sources are mature and have managed many of the pollutants of concern associated with these sources.

Because the watersheds have limited urbanization, the remaining pollutants of concern come from many sources, including agriculture, owners of animals such as horses, wastewater, and natural sources, depending on the pollutants and the watershed. Some Permittees' boundaries include and/or receive drainage from vast agricultural areas. Some of these agricultural areas are interconnected amongst MS4 systems, making TMDL and Permit compliance complicated. The remaining pollutants of concern are better addressed by coordinating with all relevant stakeholders in the watersheds rather than trying to address the problem on a discharger-by-discharger basis.

While the 2021 Permit includes an option for watershed planning, its dedication to MS4 limitations only impedes the ability for full coordination to solve problems with watershed partners. A collaborative, watershed approach is necessary to successfully protect beneficial uses, achieve water quality objectives, and reduce costs for all parties. Coordination among different types of dischargers that manage multiple sources of pollution could facilitate comprehensive strategies and solutions. Permittees would like the new MS4 permit to foster watershed-based cooperation and provide compliance pathways that incentivize cooperation between multiple, diverse dischargers rather than prioritizing MS4 outfall compliance.

4.1.4 Latest Science Incorporated into Regulations

California is a leader in stormwater research and science that is constantly changing and evolving. This science has been used throughout the state to guide implementation requirements for stormwater programs. The lack of timely incorporation of this new research and science into objectives, TMDLs, and the Permit creates challenges for identifying appropriate implementation actions. Permittees are required to address outdated requirements or pursue solutions that don't effectively address the source of pollution to comply with the Permit and incorporated TMDLs. The Permittees would like to continue implementing successful water quality improvement programs. Doing so requires using the latest water quality objectives, peer reviewed scientific studies, and implementation approaches based on the scientific studies that are currently being used in other Regional Board regions in Southern California and having the ability to adaptively manage programs in response to new information as it is developed.

A prime example of this concern is compliance with bacteria TMDLs and objectives. As discussed in **Section 3**, bacteria are the only countywide pollutant of concern remaining to be addressed by the MS4s. As discussed in **Section 3.4**, the latest science demonstrates a clear need to focus on the risk of illness to recreators, which is primarily driven by pathogens in human waste sources of bacteria. However, the TMDLs and objectives do not have a clear way to demonstrate compliance with objectives through a risk-based approach. As a result, the Permittees are exploring the need to build high capital investment structural treatment facilities to reduce loading to receiving waters, even though these facilities may not

be necessary to and may not effectively reduce human risk from source loading in the receiving water. Additional investigations using the latest science on human waste sources of bacteria should be explored to best plan for the protection of beneficial uses in receiving waters.

Other examples are requirements to address pollutants where the primary sources are from open space or other natural sources, requirements to address nutrient concentrations/loads when the beneficial uses are more likely driven by other cofactors (previous water year, flow, habitat, canopy cover, etc.), and objectives that are based on historic water quality rather than protection of beneficial uses (e.g., some salts objectives).

4.2 Guiding Principles

In response to these constraints and challenges, the Program has redeveloped a set of principles to guide the development of recommendations for the Permit re-issuance process. In providing these guiding principles, the Permittees seek a collaborative and synergic relationship with members of the watershed community and, importantly, the Regional Board.

- The Program's overarching goal is to work collaboratively with the Regional Board and other watershed partners to cost effectively achieve water quality objectives and protect beneficial uses in the receiving water. Permit recommendations provided in the ROWD are based on supporting this overarching goal.
- Program efforts should be coordinated with other entities that affect water quality in the region, as appropriate. Permit language should not hinder comprehensive watershed management and should provide flexibility to consider the unique nature of each watershed and its opportunities.
- The Program supports the use of the best available science that leads to informed stormwater management and public policy decisions. Permit compliance pathways should allow for consideration of the latest science.
- There should be an emphasis on the ability to prioritize actions to focus on identified pollutants of concern. Permit language should be supportive of these concepts and conflicting requirements should be eliminated.
- The Program supports the evolution of MS4 program elements through the adaptive management process, starting with a focus on source control actions, followed by multi-benefit structural projects only where needed. The Permit should support this approach and provide compliance options when only source control activities are needed to meet the permit limitations.
- The Program supports streamlined permit requirements that directly support effective program implementation to conserve resources. For example, monitoring and reporting requirements should be limited to elements that provide information to answer key questions, inform management decisions, and be coordinated where appropriate.

Using these Guiding Principles, the Permittees have identified the following recommendations for the upcoming permit. These recommendations include a general suggestion designed to provide clarity to the Regional Board, Permittees and the public on the actions that will be taken to comply with the permit and specific recommendations to align the permit language with this general suggestion and provide other modifications to address the challenges and Guiding Principles.

4.3 Providing Clarity on Actions Needed to Comply with Water Quality-Based Requirements

Until the 2010 Permit, the Permittees had a clear understanding of the specific actions needed to maintain compliance with their MS4 Permit: implement the MCMs, evaluate water quality, and implement additional controls if receiving waters were not meeting WQOs. In the 2010 Permit, TMDLs were included for the first time. Although the Permittees had been taking actions to comply with and implement the TMDLs prior to them being included in the Permit, once they were included, they became vague, enforceable compliance requirements, and the Permittees struggled to identify actions to ensure compliance.

The 2021 Permit exacerbated this issue by formalizing the TMDLs and RWLs as numeric values that must be met at all times unless a very high bar of implementation commitments were made in a WMP. Furthermore, including numeric RWLs as enforceable compliance requirements created impracticable enforcement scenarios that do not take into consideration the myriad of permitted non-MS4 discharges in Ventura County watersheds. The challenge with this approach is that the Permittees are either:

1. Left out of compliance with the numeric limitations without clarity or a realistic path forward on what needs to be done to be in compliance, or
2. Forced to develop a WMP within constraints imposed by the SWRCB Orders developed based on facts specific to Los Angeles County waterbodies. The flexibility provided in the SWRCB Orders for development of WMPs in other regions were not applied to Ventura County waterbodies despite the significant land use and water quality differences.

In either case, the result is the inability to provide leaders and decision-makers of Permittee agencies with clarity on the actions to fund that will be considered as compliant with or, at a minimum, progress towards compliance with the MS4 Permit. Committing funds to stormwater programs without confidence of achieving compliance creates a challenge when many programs are competing for limited funding. In addition, committing funds to stormwater programs for the protection of beneficial uses in receiving waters, with the understanding that beneficial uses in the watershed may never meet targets due to watershed characteristics, is challenging for decision-makers to support. This result is not desirable for either the Permittees or the Regional Board. Therefore, the Permittees would like to propose a path forward for the water quality-based provisions of the Permit, TMDLs and RWLs that provide transparency and clarity to the Permittees, the Regional Board, and the public on what will be done to improve water quality and is specific to the conditions and constraints present in Ventura County.

The Permittees have done extensive planning (TMDL implementation plans and the WMPs) and have invested significant resources in implementation, monitoring, and data analysis. As discussed in **Section 3**, significant water quality improvements have occurred throughout Ventura County as a result of these efforts and those of other watershed stakeholders. As discussed in **Section 3**, most watersheds now meet most water quality standards, leaving only a limited number of remaining pollutant concerns and only *E. coli* as a countywide pollutant of concern. These remaining issues represent the most difficult and complex challenges, with most documented as statewide problems, such as wet weather bacteria. Adding to the difficulty of addressing the remaining challenges is Ventura County's unique land use geography in the Los Angeles Region: small islands of urban storm drains surrounded by large areas of open space and agricultural lands, where diverse permitted non-MS4 dischargers and natural sources (see **Section 3.3.3**) contribute substantially to water quality concerns. **Figure 4-1** demonstrates this geographic challenge. Implementing many structural stormwater BMPs in these pockets of urban areas will not achieve the desired watershed water quality improvements for the remaining pollutants of concern in the County.

Rather than following the previous Permit approach that relied on development of numerous plans and years of back-and-forth negotiations, the Permittees are recommending the development of a permit that includes specific, measurable and enforceable actions that are targeted at the complex remaining challenges. The proposed integrated approach would include the following:

- **MCMs, with some suggested modifications** as the foundation to maintain the existing water quality.
- **Enhanced source control actions** specific to the remaining pollutants of concern in each watershed.
- **Specific, actionable, collaborative watershed communications and planning** that engage stakeholders beyond MS4 permittees, including agricultural and other non-MS4 dischargers, to identify potential regional solutions.
- **Multi-benefit structural projects** implemented only where critically needed, appropriate to address the pollutants of concern given the latest and best available science, programmatic efforts will not achieve permit limits, and feasible given natural geologic and watershed constraints.

This approach has been the foundation of the water quality improvements already achieved in Ventura County. However, the Permittees would like to work collaboratively with the Regional Board to identify permit conditions that document this approach in a way that provides clear, specific, and enforceable actions that the Permittees can feasibly implement to be in compliance with the permit conditions, given the complex nature of the remaining pollutants of concern. The Permittees have identified two possible approaches to providing this clarity:

1. **BMP-based approach to compliance with TMDLs and receiving water limitations.** This approach would involve including specific implementation actions for the Ventura County Permittees to implement during the next permit term for any remaining TMDL and receiving water limitation permit exceedances. Implementing the BMPs and an adaptive management program would constitute compliance with the TMDLs and receiving water limitations.
2. **Modifications to the WMP provisions for Ventura County to reflect Ventura County-specific facts and conditions** and provide flexibility allowed by the SWRCB Orders. The modifications would clarify the Reasonable Assurance Analysis (RAA) and implementation action requirements to provide a pathway for Ventura County Permittees to develop an approvable WMP and would clarify that implementation of the actions in an approved WMP and an adaptive management program is compliance with final TMDL limitations.

With either approach, the goal is to agree upon the specific actions the Permittees will take over the next permit term that are effective, feasible, and most likely to achieve future water quality improvements. Each also accounts for influences from the actions of other dischargers, the benefits of a holistic approach to water management in the County, rapidly changing science and technology, and funding constraints. Both approaches would also support the Permittees with obtaining funding by providing decision-makers with clarity that implementing the agreed upon actions would provide compliance with the permit during the permit term. The Permittees would like to spend more time implementing actions and improving water quality but need confidence that implementing those actions will achieve compliance with the MS4 Permit conditions, improve receiving water quality and protect public health and safety.

4.3.1 Rationale and Justification for the Proposed Approach

The Regional Board is not required to include final numeric effluent limitations for TMDLs but is using its discretion to do so. TMDL waste load allocations are WQBELs (see 40 CFR §130.2(h)). There are three ways to incorporate these WQBELs into MS4 permits. TMDL waste load allocations are WQBELs (see 40 CFR §130.2(h)). There are three ways to incorporate these WQBELs into MS4 permits:

1. As numeric effluent limitations.

2. As "a measurable, objective BMP-based limit that is projected to achieve" the waste load allocation.
3. As a combination of numeric effluent limitations and BMPs to be used to achieve TMDLs.

The Regional Board has options of how to include TMDLs in the permit and is not required to include numeric WQBELs

The Regional Board has discretion under the Federal Clean Water Act to incorporate BMP-based (or narrative) WQBELs pursuant to 40 CFR §122.44(k)(2) (specifically incorporating BMPs where authorized under Section 402(p) of the Federal Clean Water Act). The Permittees suggest that this approach will be more effective in Ventura County due to our success in water quality improvements and the County's unique land use geography, with islands of MS4 areas surrounded by open space, agricultural lands and other non-MS4 permitted discharges. Open space, agricultural lands and other non-MS4 permitted discharges contribute to remaining water quality issues observed in receiving waters and create challenges for water quality improvement as MS4 Permittees' actions alone are insufficient for meaningful improvements for the remaining pollutants of concern. Additionally, given the limited number of remaining pollutants of concern, developing specific, agreed upon actions to be implemented during the upcoming permit term that are specifically targeted at the pollutants of concern provide both the Regional Board and the public assurance of the actions that will be taken. Then, if the actions are not implemented and MS4 discharges are not meeting objectives, the Regional Board can conduct enforcement actions against the Permittees. Measurable, objective BMP-based limits are critical to achieving water quality success for Ventura County watersheds.

4.3.1.1 USEPA Guidance Support for Proposed Approach

As provided in the 2015 ROWD, the Regional Board has the discretion to establish WQBELs for TMDLs via numeric effluent limits or through a BMP-based approach, as long as the effluent limits are "consistent with the assumptions and requirements of any available WLA for the discharge"[22]. This Regional Board discretion was affirmed by USEPA, stating that "[w]here the TMDL includes WLAs for stormwater sources that provide numeric pollutant loads, the WLA should, where feasible, be translated into effective, measurable WQBELs that will achieve this objective. This could take the form of a numeric limit, or of a measurable, objective BMP-based limit that is projected to achieve the WLA."[23] The 2014 USEPA Memorandum further states that "[t]he permitting authority's decision as to how to express the WQBEL(s), either as numeric effluent limitations or as BMPs, with clear, specific, and measurable elements, should be based on an analysis of the specific facts and circumstances surrounding the permit, and/or the underlying WLA, including the nature of the stormwater discharge, available data, modeling results, and other relevant information."[24]

The requirement in the guidance for BMP-based limitations to include clear, specific, and measurable elements provides the mechanism for enforceability of the permit. The BMP-based limitations would be specific actions to be completed by specified dates. If the actions are not completed by the specified dates, the Permittees could be subject to enforcement.

[22] see 40 CFR 122.44(d)(1)(vii)(B)
[23] USEPA, Memorandum, "Revisions to the November 22, 2002 Memorandum 'Establishing Total Maximum Daily Load (TMDL) Wasteload Allocations (WLAs) for Storm Water Sources and NPDES Permit Requirements Based on Those WLAs,'" (November 26, 2014) (2014 USEPA Memorandum)
[24] *Id*., p. 6

In 2017, the USEPA developed a document entitled *Compendium of MS4 Permitting Approaches.*[25] Part 3 of this document identified four different approaches that had been utilized in MS4 permits to incorporate TMDLs that met federal requirements. The third approach is highlighted below.

1. Listing of applicable TMDLs, WLAs, and/or the affected MS4s.
2. Numeric limits and other quantifiable approaches for the specific pollutants of concern.
3. Required implementation of specific stormwater controls or management measures.
4. Other types of water quality-based requirements:
    a. Permitting Authority Review and Approval of TMDL Plans
    b. Monitoring & Modeling Requirements
    c. TMDL-Related Annual Reporting Requirements

The USEPA document provides numerous examples of permit language from around the country, including examples in California. The examples demonstrate that a wide variety of options are available to permit writers that can be evaluated against the current approach. The third approach highlighted above has been included in MS4 Permits in California. The third approach is consistent with the Permittees' request for a feasible path to compliance.

4.3.1.2 Support from the Supreme Court of the United States for the Proposed Approach

The U.S. Supreme Court (SCOTUS) decision in *City and County of San Francisco v. Environmental Protection Agency* (2025) 145 S. Ct. 704 (*City and County of SF v EPA*) provides significant support for modifying MS4 permit conditions to provide clarity on the specific actions that should be taken to comply with the Permit rather than broad "end-result" provisions. The court defined "end-result" provisions as those where compliance is determined based on the quality of the receiving water, which may include pollutants from many other point and nonpoint sources that discharge to the same receiving water, not just those discharges regulated by the NPDES permit in question.

The holding of the case was stated as follows:

> "In sum, we hold that [section] 1311(b)(1)(C) does not authorize the EPA to include 'end-result' provisions in NPDES permits. Determining what steps a permittee must take to ensure that water quality standards are met is the EPA's [and state's] responsibility, and Congress has given it tools needed to make that determination. If the EPA does what the CWA demands, water quality will not suffer."

In making the decision, SCOTUS looked at contextual history related to when Congress adopted the 1972 Federal Clean Water Act, which overhauled the previous Water Pollution Control Act. In the 1972 Federal Clean Water Act, Congress did not include previous statutory terms that held dischargers accountable for contributing to a violation of water quality standards. (145 S. Ct. 704, 716-717.) The court held that this action was a rejection by Congress of using a backward-looking (or "end-result") approach to the enforcement of water quality standards. [26]

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[25] U.S. Environmental Protection Agency, *Compendium of MS4 Permitting Approaches – Part 3: Water Quality-Based Requirements*, Office of Wastewater Management, Water Permit Division, EPA-830-S-17-001, April 2017. https://www.epa.gov/sites/default/files/2017-06/documents/part3-sw_compendium_wqbels_508.pdf.

[26] California Stormwater Quality Association (CASQA), *Letter to SWRCB: CASQA's Position on Municipal Stormwater Permitting Approach in Consideration of Supreme Court of the United States Decision in City and County of San Francisco v. EPA*, July 22, 2025. https://www.casqa.org/wp-content/uploads/2025/03/SCOTUS-Decision-Member-Communication.pdf

Then, in part III.C., SCOTUS established the importance of the permit acting as a "permit-shield," and the reality that failure to comply with receiving water limitations removes the "permit-shield" advantage of having a permit and leaves dischargers open to civil and criminal penalties. Importantly, SCOTUS notes how a permittee could, "… devise a careful plan for protecting water quality, and it could diligently implement that plan. But if, in the end, the quality of the water in its receiving waters dropped below the applicable water quality levels, it would face dire potential consequences." (145 S. Ct. 704, 718.)

While we recognize the Office of Chief Counsel has issued guidance to the Regional Boards that states that this decision is not applicable to Phase I MS4 Permittees, the rationale outlined in *City and County of SF v EPA* clearly states that the intent of the federal Clean Water Act NPDES Permit provisions is to provide clarity to dischargers on the actions they should take to comply with the permit and that if they diligently implement a plan to protect water quality, they should not be open to civil and criminal penalties. Ventura County Permittees are requesting this type of clarity with respect to compliance with MS4 Permit provisions.

4.3.1.3 MS4 Permits in California that Use the Proposed Approach

The San Francisco Bay Municipal Regional Stormwater MS4 Permit is an example of approach #3 from the USEPA guidance.[27] The San Francisco Bay permit includes specific control measures that are required to achieve TMDL requirements for numerous constituents. The permit has specificity and accountability, so stormwater agencies understand their responsibilities. It establishes substantial rigor to ensure that progress is made in addressing problematic discharges associated with municipal stormwater discharges. It also ensures that the actions are timely and focused on compliance, with prioritized water quality standards through ongoing adaptive management, emphasizing those actions most effective at addressing municipal stormwater. Specificity and accountability in enforcement is demonstrated by a recent enforcement action. On December 10, 2025, the San Francisco Bay Regional Water Quality Control Board issued Cease and Desist Orders to six permittees.[28] The enforcement action established a strict list of additional actions to be completed and maintained. This list is in addition to the actions needed to be in compliance with the original Permit requirement, with an extended deadline of December 31, 2027. Additional enforcement actions, at the discretion of the Executive Officer, were also included if the strict list of actions is not implemented on time. Though completing the actions will require a substantial effort by the Permittees, the conditions are specific and attainable with a clear pathway to compliance.

Similarly, the Santa Ana Regional Water Quality Control Board allows compliance with MS4 Permit requirements through the development and implementation of compliance plans that become the WQBELs for implementing TMDL requirements once approved by the Santa Ana Regional Water Quality Control Board[29]. The Santa Ana Regional Water Quality Control Board adopted a BMP-based compliance pathway into a municipal stormwater NPDES Permit for the Middle Santa Ana River. The cities of Pomona and Claremont were required to develop a Comprehensive Bacteria Reduction Plan (CBRP). Upon approval, the CBRP became the final WQBEL for dry-weather bacterial indicators. Permittees are required

[27] California Regional Water Quality Control Board, San Francisco Bay Region. *Unofficial Version of Municipal Regional Stormwater NPDES Permit (MRP 3), Order No. R2-2022-0018, NPDES Permit No. CAS612008*. Accessed September 27, 2025. https://www.waterboards.ca.gov/rwqcb2/water_issues/programs/stormwater/newfiles/UnofficialVersionofMRP3.docx

[28] San Francisco Bay RWQCB, Agenda Item 7A through 7E: Enforcement., Board Meeting, December 10, 2025, https://www.waterboards.ca.gov/sanfranciscobay/board_info/agendas/2025/December/12-10-2025.pdf

[29] California Regional Water Quality Control Board, Santa Ana Region. *Order No. R8-2010-0062 Amending Order No. R8-2009-0030, NPDES No. CAS618030: Waste Discharge Requirements for Areawide Urban Storm Water Runoff for the County of Orange, Orange County Flood Control District, and the Incorporated Cities of Orange County within the Santa Ana Region*. October 29, 2010.
https://www.waterboards.ca.gov/santaana/board_decisions/adopted_orders/orders/2010/10_062_amending_ocms4_09-0030.pdf

to submit a BMP implementation plan demonstrating expected attainment of WLAs. The CBRP is subject to updates based on BMP effectiveness evaluations. This approach is similar to the second option proposed by the Permittees that would allow the WMP to become a compliance pathway for final TMDL WQBELs. This framework demonstrates a viable compliance pathway, with clear accountability, that is allowed by State and federal law and supports the Permittees' request for a similar framework in the next Permit iteration.[30]

4.3.1.4 Site-Specific Conditions Justify a Different Approach for Ventura County

Land use within Ventura County is dominated by open space and agriculture, with interspersed pockets of urban areas. In contrast, Los Angeles County consists of large areas of open space in the eastern parts of the watersheds, but is dominated by dense, largely impervious urban areas in the western portions. While both contain significant amounts of open space, the differences in density and the location of the urban areas are important factors affecting urban runoff. From a population standpoint, Ventura County has a population of approximately 840,000 and consists of 12 Permittees, including 10 incorporated cities. With a land area of 1,843 square miles, this equates to a density of just over 450 people per square mile. In contrast, Los Angeles County has a population of over 10 million, consisting of 86 permittees, including 84 incorporated cities. With a land area of 4,058 square miles, this equates to a density of over 2,450 people per square mile. The Santa Clara River and Ventura River Watersheds are 90.5% and 84.5% open space with 5.9% and 8.3% urbanization, respectively. In contrast, the Los Angeles River and Ballona Creek watersheds are 44% and 17% open space with 54% and 81% urbanization, respectively. **Figure 4-1** visually depicts the differences in land cover between Ventura and Los Angeles Counties. To put this in perspective, the total developed land in Los Angeles County is over 1 million acres (35%) compared to less than 200,000 acres in Ventura County (13%). Agricultural land is much more predominant in Ventura County, though, with over 90,000 acres (6.5%) of cultivated crops compared to less than 30,000 in Los Angeles (<1%).

[30] California Regional Water Quality Control Board, Santa Ana Region. *Order No. R8-2013-043 NPDES No. CA8000410: Waste Discharge Requirements for the Implementations of Bacterial Indicator Total Maximum Daily Loads for the Middle Santa Ana River Watershed Waterbodies Issued to the Cities of Claremont and Pomona.* September 13, 2013.

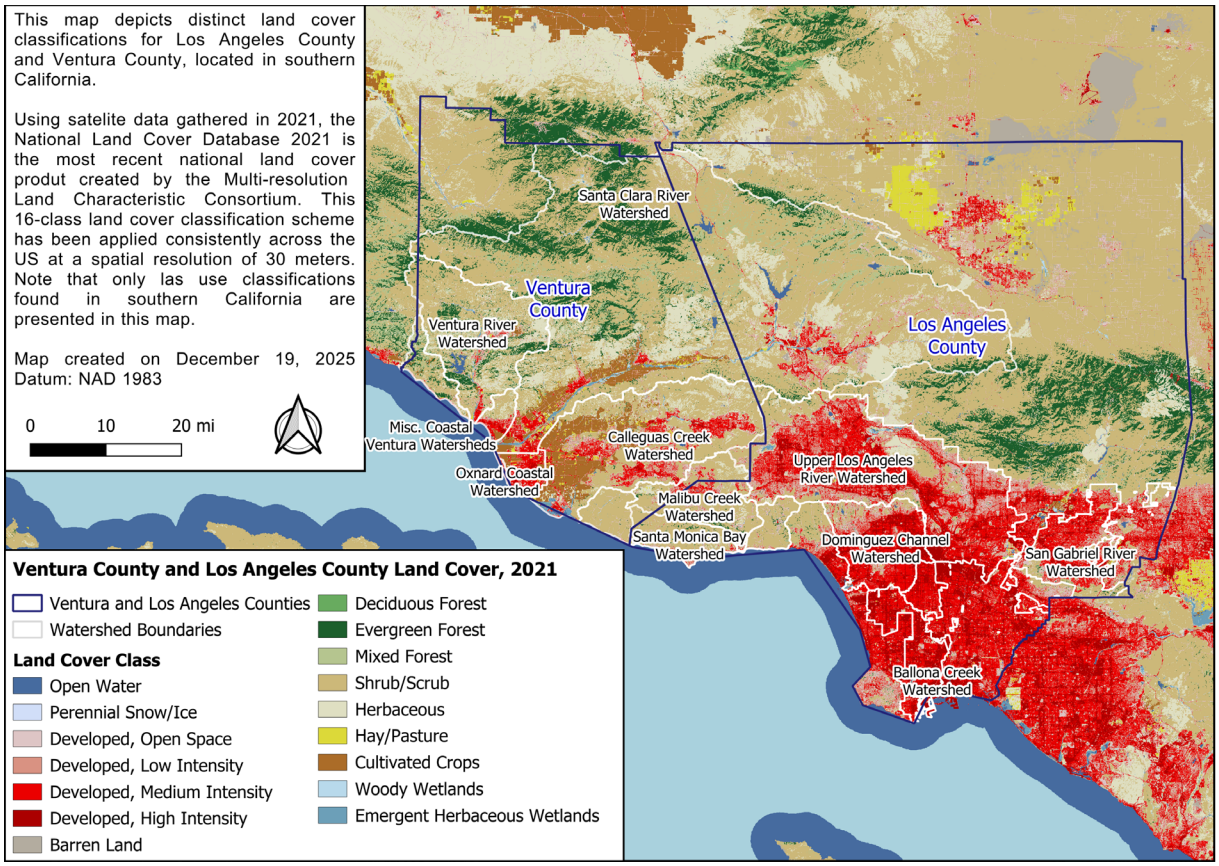


Figure 4-1. Land Cover Comparison, Los Angeles and Ventura Counties

These stark differences in land use and population density are reflected in the pollutant issues and sources of pollutants within the two counties. While both areas have issues in common, such as bacteria, the sources of bacteria are vastly different, with more contribution from agriculture, open space, and natural sources within the Ventura County watersheds. Other pollutants of concern within the Los Angeles County watersheds, such as heavy metals, are reflective of the dense urban environment and are not of concern in Ventura County. As discussed in **Section 3**, the only countywide pollutant of concern is bacteria. The few other watershed-specific pollutants of concern, such as chloride, historic pesticides, and nitrogen, often stem from sources outside of the Permittees' MS4 jurisdictions in the urban environment, including agriculture, open space, underlying geology, and publicly owned treatment works. These differences are key when considering how to improve water quality within the watersheds and what regulatory structures and approaches to utilize for pollutants of concern.

Within Ventura County, the sources of pollutants are diffuse and often the largest contributors are not regulated under the MS4 Permit. For this reason, a BMP-based compliance option is necessary to ensure that MS4 Permittees can comply with the Permit when they have pollutants in their discharges. This is especially important when other significant sources are not regulated by the same constraints and timelines.

4.3.1.5 Ventura County's Successful BMP-based Approach and Rapid Implementation Benefits

Including a BMP-based approach as a pathway to compliance has numerous benefits for improving water quality, including:

1. Providing more rapid implementation by clearly defining up front the actions the Permittees need to take for compliance.
2. Supporting collaborative actions with other types of dischargers.
3. Allowing for adaptations and incorporation of the latest science to proactively address identified issues as they arise.
4. Tailored to the specific remaining water quality issues in Ventura County, providing a focus to achieve improvements.

Permittees and other dischargers within the Ventura County region have undertaken a commitment to improving local water quality through hard work and collaboration. The Permittees have a long history of participation in local watershed working groups and have achieved substantial success in BMP implementation and monitoring. Collaborative solutions are already succeeding in Ventura County and are examples of efficient and effective means of addressing prioritized water quality solutions with flexible action-based methods. The Permittees feel that the water quality improvements that have been observed (see **Section 3**) and the few remaining pollutants of concern demonstrate that BMP-based implementation works and results in water quality improvements.

Incorporation of non-numeric WQBELs as a pathway to compliance will enable the Permittees to meet interim and final TMDL requirements cost-effectively. The proposed approach will provide the Permittees with enough specificity and accountability so that they understand their responsibilities and can proceed directly to permit implementation. The Regional Board will have assurance that actions are timely and focused on prioritized water quality standards. This pathway will also support continued collaboration with the Regional Board and other dischargers, making the approach the most efficient use of existing funding and resources. Most importantly, it will continue to enhance the condition of the current high-quality waters in Ventura County.

Based on the rationale in this section, the Permittees believe that the next MS4 Permit should include options for final compliance with TMDLs, WQBELs and RWLs through a BMP-based compliance option. This is warranted due to the unique nature of the watersheds, pollutants, and contributing sources within Ventura County and is supported by established, successful watershed planning and implementation processes already in place. The Permittees would like to collaborate with the Regional Board on this approach and discuss the options early and often prior to the next iteration of the Permit.

4.3.2 Recommended Permit Changes to Part III. Discharge Prohibitions, Part IV. Effluent Limitations and Discharge Specifications and Part V. Receiving Water Limitations

The Permittees request that enforceable, prescriptive BMP-based permit language replace the numeric WQBELs for TMDLs and general receiving water limitations language in the Permit. To implement the proposed approach, the Permittees recommend replacing the non-trash portions of Part IV and all of Part V language with the specific, prescriptive actions that will be implemented to address the water quality issues of concern. The specific, measurable and enforceable actions would be based on the WMP and other existing planning efforts in Ventura County to facilitate developing the permit language in a timely manner. The proposed actions would include:

- Specific source control actions to address high-risk sources of bacteria, including human waste sources, throughout the County. For example, the permit could include requirements to conduct a specified number of human fecal waste source investigations in priority subareas, as outlined in the WMP, and specific requirements to follow up actions when human fecal waste sources are identified in the investigation.

- Specific source control actions for each watershed targeted at the remaining TMDL and receiving water limit exceedances identified in **Section 3**.
- Implementation of specific, planned structural control measures (e.g., Ochos Rios Diversion project) identified by the Permittees.
- Specific requirements for engaging with other stakeholders to evaluate opportunities for regional projects that address multiple requirements.

Implementation of the actions specified in the permit would constitute compliance with both the receiving water limitations and interim and final TMDL limitations.

Examples of how these specific actions could be structured can be found in Sections C.11 to C.14 in the San Francisco Bay Municipal Regional Stormwater MS4 Permit. Examples of potential discharge prohibitions and receiving water limitations language can be found in Section C.1 of the San Francisco Bay Municipal Regional Stormwater MS4 Permit.

4.3.3 Recommended Permit Changes to Part IX. Watershed Management Program

If a prescriptive approach is not included, or if the Regional Board would like to continue to provide a WMP approach in addition to the prescriptive approach, the Permittees request modifications to the WMP section to support the approach outlined above and include actions the Permittees have identified as the most effective to protect water quality in Ventura County. The requested changes are:

1. Allow the WMP to be used as final compliance for TMDL WQBELs.
2. Include conditions that would allow for approval of a WMP or portion of a WMP that consists entirely of non-structural controls.

The rationale and legal justification for allowing the WMP to be used as final compliance for TMDL WQBELs was discussed in the previous section. The rationale to add provisions that allow for approval of a WMP that mostly or completely consists of non-structural controls is discussed below.

4.3.4 Include Conditions to Allow Non-Structural Controls Entirely for WMP Approval

Given the limited constituents of concern in Ventura County and the ubiquitous nature of the primary constituent of concern (bacteria), structural control measures may not provide the most effective control mechanism. Bacteria loading can originate from non-MS4 areas such as open space, which may be infeasible to control from an engineering and economic perspective. Instead, watershed-scale, collaborative, non-structural programs, such as human waste source investigations, provide a mechanism to more broadly address the constituent of concern while targeting sources that are more likely to cause risk to recreators. Structural controls can only address a limited drainage area, while watershed-scale non-structural control programs can address the entire watershed. Additionally, typical structural controls are designed to treat surface runoff, while recent studies have indicated the primary human waste sources of bacteria are coming from sources connected to the wastewater collection system and likely occur underground. As a result, investment in structural controls to capture stormwater runoff are unlikely to provide as much reduction in risk to recreators as targeted, source investigation and abatement programs will. These types of non-structural programs are significant investments that require collaboration between stormwater, wastewater, and other agencies in the watershed.

In Order WQ 2020-0038, the SWRCB identified that the Los Angeles MS4 Permit could be modified to specify the conditions under which non-modeled controls could be included in the WMP. The non-modeled components of the Los Angeles County WMPs that were under review in the SWRCB Order were

all non-structural controls[31]. The Order stated, "we instruct the Regional Board to either update its existing order or reissue its order within twelve months to make explicit that where the requirements for achievement of an interim compliance deadline consist entirely of non-modeled controls or controls which have not otherwise been quantitatively evaluated through a rigorous permit-defined process" (emphasis added). In the 2021 Permit, the Regional Board provided clarification on when a quantitative analysis could be used instead of a peer-reviewed model. However, the language did not provide clarity on the requirements that would need to be in the WMP to allow the control measures to consist entirely of non-structural controls. The Permittees request that the RAA requirements be updated in the next permit to include the analysis and justification that would be necessary to allow a WMP to consist entirely of non-structural controls.

The Permittees recognize that the Regional Board has interpreted portions of Order WQ 2020-0038 to require implementation of structural controls. However, the commonly cited provision does not require structural controls, but rather "significant investment in collaborative regional- and watershed-based BMP implementation." As noted above, non-structural controls can be significant investments requiring extensive collaborative actions. Therefore, future permit conditions should define the conditions and analysis that would allow for a WMP that consists entirely of non-structural controls, consistent with Order WQ 2020-0038.

4.3.5 Additional Part V. Receiving Water Limitations Permit Provision Recommendations and Part III. Discharge Prohibitions

If the recommendations outlined above for a prescriptive approach are not included, some additional clarification of the RWLs language is needed to address the SCOTUS decision in *City and County of S.F. v EPA* and to provide clarity on requirements if a WMP is not approved or implemented.

The Permittees request that the Regional Board make modifications to the receiving water limitations and discharge prohibitions language in light of the *City and County of SF v. EPA* decision. We understand that the Office of Chief Counsel has provided guidance to RWQCBs that states that the decision does not apply to Phase I municipal stormwater permits. However, the Permittees would like the Regional Board to consider the interpretation provided in a letter from the CASQA to the SWRCB (Attachment B) and include modifications to the receiving water limitations language consistent with this letter. The Permittees also request that the receiving water limitations language be streamlined and clarified to reflect the proposed compliance approaches above and the situation where a WMP is not being implemented. The requested modifications include:

1. Separate Federal and State permit requirements with the RWL language and discharge prohibitions in the State portion of the permit.
2. Modify the RWL language to be limited to the water quality standards that are at issue and are being regulated by the MS4 permit. In addition, include a tiered (or priority-based) approach to identify and address the water quality issues by only covering pollutants with actual beneficial use impacts, persistent exceedances, and sources that are controllable by the Permittees' actions.
3. Include language to clarify that in instances where a TMDL is in place, or a TMDL is being developed, the Permittees shall achieve compliance with receiving water limitations as outlined in the specific provisions for TMDLs, even if not implementing a WMP. The current language is clear that when a WMP is being implemented, implementation of actions to address the TMDL in the WMP also constitutes compliance with the receiving water limitations for the constituent. However, the

[31] Page 41 of the Order, footnote 121: "These non-modeled controls include the Los Angeles MS4 Order's MCMs and non-storm water discharge outfall screening and source investigations." Also see page 44, footnote 146.

language is not clear if a WMP is not being implemented and suggests that separate receiving water limitation compliance reports are needed for the constituent for both the TMDL and the receiving water limitations, particularly if the limitations are different.

4.4 Proposed Improvements to Other Permit Sections

In addition to the primary requested changes outlined above, the Permittees have identified some other requested changes that will help clarify and streamline implementation of the permit based on lessons learned in implementing the 2021 MS4 Permit.

4.4.1 Part II. Findings

The Permittees request that "Part II: Findings" be updated to include language to support and align with the Permittees' requests in this ROWD. This should include the request for BMP-based limitations and should also be discussed in the Fact Sheet. The revisions should include recommended findings to address the SCOTUS decision that are included in **Attachment B**.

4.4.2 Part VII. And Attachment E. Monitoring and Reporting Proposed Improvements

Three improvements are requested as a result of lessons learned from long-term monitoring experience and the recent CIMP approval:

1. Remove references to the historic TMDL monitoring plans in Table E-2 that have been replaced by the CIMP. This will avoid confusion in the future, as the Permittees no longer need to implement the requirements from those historic monitoring programs.
2. Adjust and remove other Ventura County-specific requirements and one-time requirements that have been completed or replaced with the CIMP (e.g., non-stormwater outfall screening).
3. Update and remove the requirement to monitor toxicity using the Test of Significant Toxicity (TST) method, in alignment with the recent *Camarillo Sanitary District et al. v. SWRCB* decision by the Fifth District Court of Appeals.[32]

Implementing these recommendations will reduce confusion with monitoring requirements.

4.4.3 Part VIII – Stormwater Management MCMs Lessons Learned and Proposed Improvements

The Permittees have reflected on their experiences and lessons learned in implementing the MCMs in the current Permit and propose the following improvements to improve effectiveness of their efforts.

4.4.3.1 General: Municipal Employee and Contractor Training

Training Permittee staff is effective; however, the requirements and related documentation are hard to implement across agency divisions due to the complexity and diversity of training required and specific job requirements. In addition, the training requirements are distributed in an inconsistent way throughout the Permit such that it is time-consuming to find them all. The Permittees' current training programs are mature, robust, and successful. Future Permit iterations should simplify the requirements so that Permittee training budgets can be better prioritized, focusing on whether or not the training itself occurred, and not managing burdensome documentation. Consistent with the Guiding Principles to support streamlined permit requirements that directly support effective program implementation to

[32] Camarillo Sanitary District et al. v. SWRCB, No. F087362 (Cal. Ct. App. 5th Dist. Aug. 5, 2025), available at https://courts.ca.gov/opinion/published-extended-post/2025-08-05/f087362.

conserve resources, the Permittees request the following proposed improvements in the training program:

1. Simplify the reporting documentation for training, such as a yes or no answer on the reporting form for training, with no requirement to retain documentation.
2. Simplify the training program requirements by consolidating them into one simplified, general section with overall training intent, or create a consistent naming system through different sections to make the requirements easier to identify.
3. Remove redundant requirements for Permittees to provide training where certification/training programs are already required and administered by the SWRCB. Examples include:
    - Part VIII.A.3.f. - Qualified SWPPP Practitioner and Developer (QSP/D) training program and self-certification reports.
    - Part VIII.A.3.g. - Qualified Industrial Storm Water Practitioner (QISP) training program and self-certification reports.

4.4.3.2 Progressive Enforcement Policy

Permittees have diligently implemented and enforced the Permit requirements; however, enforcement is a resource-intensive activity that needs prioritization to be efficient. One lesson learned is that timely coordination with the Regional Board is more effective when an enforcement action aligns with enforcement by the Regional Board on SWRCB-issued stormwater permits. The Permittees have a mature, successful program, are efficient in enforcement response, and prioritize significant water quality concerns. However, Permittee enforcement actions don't necessarily follow the process and titles in the Permit and can vary between jurisdictions while still being effective. The severity of the enforcement issue can also affect what process is used. Therefore, for the Permittees to effectively manage complex programs, the Permittees require flexibility to prioritize their responsibilities. To support streamlined Permit implementation in enforcement activities, the following specific improvements are requested:

- VIII.B.1.d.ii. – Currently, the Permittees must issue two warning letters or notices of violation before referring compliance violations to the Regional Board for their enforcement. The Permit should only require one warning letter or notice of violation for a Permittee to refer a violation to the Regional Board.
- VIII.B.1.d.ii. – This section should also provide more flexibility than a strict process to acknowledge the variability between Permittees.
- VII.B.2. – Change the language which states that the Permittees shall initiate, "within one business day" to "within three business days."

4.4.3.3 Industrial/Commercial Facilities Program

Inspections of commercial and industrial businesses are an effective way to reduce the potential of pollutants reaching an MS4. They are also resource intensive with significant time required to identify, travel to, and inspect the appropriate businesses. The mature program in Ventura County needs the ability to prioritize and implement actions to focus on identified areas of concern, and to designate businesses where inspection requirements should be reduced or eliminated. Two situations have been identified that would support more effective inspections. The first is to provide a mechanism to reward businesses that have limited potential to discharge pollutants with reduced inspections, reduced inspection magnitude, or eliminated inspections. Businesses that have installed BMPs, or otherwise made improvements to eliminate exposure to stormwater, should see a benefit for their efforts. The second situation that requires modifications is to exclude businesses that the Permittees do not have legal authority to inspect

or for which business locations cannot be identified for inspection. Examples include mobile businesses without fixed operating locations, or schools and other agency facilities where Permittees do not have legal authority. To that end, the following proposed improvements are suggested:

- Definitions of some facilities should be redefined to reduce unnecessary confusion, respect the limits of Permittee authority, prioritize sources of pollutants, and provide flexibility in determining critical sources with non-exposure or areas where there is no authority. The following changes are requested:
  - Part E.2.iii. Redefine Commercial Facilities
    - Narrow the definition of restaurants to exclude food entities like schools, hospitals, and other cafeterias and mobile food carts.
    - Narrow the definition of automotive service facilities to eliminate those with no outside activities or materials that may be exposed to stormwater (e.g., smog test only sites, mobile mechanics, and muffler shops) to only those automotive facilities with potential water pollution.
- Part VIII.E.2.a.i. and ii. Critical Sources
  - References to the federal code are confusing. The Permit should list the SIC and NAIC codes for the facilities, potentially in an appendix, to increase clarity and reduce confusion. Provide discretion for Permittees to add or adjust critical sources. Examples of confusing language include:
    - USEPA Phase I Facilities and 40 CFR 122
    - USEPA "Phase I" Facilities [as specified in 40 CFR §122.26(b)(14)(i)-(xi)] ii. Other federally mandated facilities [as specified in 40 CFR §122.26(d)(2)(iv)(C)]:
    - Industrial facilities subject to section 313 "Toxic Release Inventory" reporting requirements of the Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA) [42 U.S.C. § 11023].
- Part VIII.E.4 Requirements for Industrial Sources
  - Permittees should not be required to perform inspections for sites with SWRCB-issued General Industrial Stormwater Permits; with the inclusion of the QISP inspectors, the Regional Board should conduct these inspections or allow QISP inspections and reports every Permit term.
  - The Permit should maintain language exempting facilities inspected by the SWRCB or Regional Board from Permittee inspection.
- Part VIII.E.4.b. Frequency of Inspections
  - Consistent with the flexibility requested, rather than inspecting every five years, the Permit should allow a Permittee to reduce commercial facilities inspections to once per Permit term when they find operations are not exposed to stormwater. This status would change if any illicit discharges are identified originating from the facility.

4.4.3.4 Planning and Land Development Program

The Planning and Land Development requirements are some of the most complicated in the Permit. The Permittees require clarification to support consistent permit compliance across Ventura County. Land development significantly alters the natural landscape, increasing impervious surfaces such as roads, rooftops, and parking lots. To address these environmental impacts, the Planning and Land Development Program aims to minimize pollution through the implementation of LID strategies. The Permittees implement this complicated Permit requirement through development conditions and the newly updated

Ventura County Technical Guidance Manual for Stormwater Quality Control Measures (referred to as the TGM in the Permit). There have been many lessons learned in implementing these requirements, for both the Permittees and the public who must comply with the requirements on their projects.

One lesson learned is that there is a loophole in the redevelopment criteria that could allow for significantly increased impervious surfaces through redevelopment actions on large sites. This largely results from the Permit language for Priority Development Projects. Specifically, this concern arises with redevelopment projects that create or replace 5,000 square feet or more of impervious surface in an existing development that is less than 10,000 square feet at the time of application. At application, if a redevelopment site is less than 10,000 square feet, it would be evaluated for exemption from the land development requirements. However, the proposed replacement project could be much larger and significantly increase the site's impervious surface (e.g., adding 10,000 square feet or more of impervious surface) without the need to implement LID strategies, based on the way the Permit defines redevelopment applicability. Redevelopment projects should be assessed based on end product results of the project's impact on impervious surface. Additionally, modifications are needed to the Permit language so that redevelopment projects that, individually, do not meet this threshold, but which, over time, increase impervious surfaces on the site above the threshold, are not exempted.

To address this concern, the Permittees request the following modifications:

- Part VIII.F.1.a.ii. Ensure the initial redevelopment criteria focus on the end project results of impervious surface addition, rather than on the existing development or the initial proposed project size, to close the loophole that allows unlimited impervious area increases.
- Include single-family homes as a specific line item in the Permit, like commercial or industrial projects, with an understanding of the unique development circumstances of housing, especially after natural disasters.

Due to the frequency of wildfire destruction of structures in Ventura County, there has been some confusion about which criteria in the Permit, if any, should apply to projects rebuilding after natural disasters, with some level of reasonableness in the definition. For example, replacing a home with some minor changes (which could be exempted) versus replacing a small cottage with a massive development (which should not be exempted). The next Permit iteration should provide clarification on exempting rebuilding homes and businesses from the Planning and Land Development requirements after natural disasters through the following modification:

- Part VIII.F.1.a.ii. Permit should define a "rebuild" project and what criteria apply when rebuilding after a natural disaster (e.g., fire, flood, earthquake).

The Planning and Land Development requirements in the current Permit have created significant uncertainty for Permittees (and developers), particularly regarding the use of high flow biofiltration systems, technical infeasibility determinations, and the classification and efficacy of proprietary treatment BMPs. The Permit references the Los Angeles County Low Impact Development Manual (known as the Los Angeles County Design Manual in the Permit), the Ventura County TGM, or the Washington State TAPE program, but contains some provisions that are challenging for the Permittees to interpret. The Regional Board has not provided specific guidance on how to interpret or implement these requirements.

Proprietary on-site treatment BMPs are used in cases where on-site infiltration/retention, bioretention, rainfall harvest and use, or groundwater replenishment/offsite infiltration (within the same HUC-12 subwatershed) are not feasible. Developers are particularly concerned about the absence of a defined category for high-flow biofiltration systems. These systems are currently classified as flow-through BMPs but could also be classified as biofiltration systems depending on the design. This confusion when a single BMP (Proprietary on-site treatment BMPs) could be viewed as two or three types of BMP should be

addressed in the next Permit. Developers favor more space-efficient stormwater treatment on priority and redevelopment projects that meet the alternative compliance measure technical infeasibility criteria. A letter from the Regional Board dated August 3, 2023, deferred the responsibility of defining such systems to Permittees, despite the Permit not providing a mechanism for redefining treatment BMP categories. Permittees do not have the Permit authority nor the resources to certify new, proprietary treatment BMPs, but depend on the State, Washington State TAPE process, and other certifications and engineering specifications as written in the Permit. This has led to confusion and challenges in assessing if development plans comply with the Permit requirements, especially since flow-based BMPs require Executive Officer approval and/or modeling-based approaches that are not currently supported by the Permit.

To address these concerns and provide clarity to the Permittees and developers, we request the following modification to the permit:

- Part VIII.F.1.c. Include a new, clear definition in the Permit to address high-flow biofiltration products. To provide clarification and considering the statewide implications, the Permittees request that the Regional Board develop a clear, State-implemented process for evaluating and approving new treatment technologies to ensure consistent implementation and regulatory certainty across jurisdictions. This may include a BMP certification developed by the State, like full capture trash devices.

Finally, the Permit lacks guidance on how Permittees should measure or address the following Permit language and is inconsistent with clear requirements needed to understand the actions necessary to achieve compliance with the permit requirement, consistent with the SCOTUS decision. Please remove section VIII.F.d.iii:

- "In addition to the requirements for controlling pollutant discharges as described in Part VIII.F.4.c of this Order and the treatment benchmarks described above, each Permittee shall ensure that the new development or redevelopment will not cause or contribute to an exceedance of applicable limitations at the outfall established in Part IV.B and Attachments K through S of this Order."

4.4.3.5 Construction Program

Like the Industrial/Commercial Facilities Program, this mature program needs clarification to prioritize and implement actions to focus on identified areas of concern and areas where requirements should be eliminated. Because this program requires substantial time and staff resources for compliance, only effective efforts should be prioritized and continued. Permittees request that there be no requirement for additional or increased frequency of inspections. All Permittees are meeting or exceeding this requirement by conducting construction site inspections utilizing a checklist to ensure that an effective combination of BMPs is implemented to control erosion and sediment loss and prevent any illicit discharges. These measures have been successful in preventing sediment and other construction waste from entering the storm drain system and downstream receiving waters. Considering the current successes of the construction program, the following proposed improvements are provided for consideration.

- Part VIII.G.5.a. i. Remove the requirement for Permittees to verify a construction project has acquired a 401 Water Quality Certification before issuing local construction permits.
    - Removal of this requirement is needed since there is a lack of clarity in the definition of WOTUS, which is constantly changing.
    - There is no easy or clear way to verify if a project is subject to the requirement and it is difficult to enforce.

- The requirement is redundant with Regional Board processes; therefore, Permittees' limited resources should be prioritized in other areas.

- Part VIII.G.5.b.ii.(i) Post-construction plan review requirements should stay in the Planning and Land Development Program and should not be duplicated in the Construction Program.
- Part VIII.G.5.B.ii(e) Remove requirement to track current construction phase and BMP coordinates in GIS inventories.
- Part VIII.G.5.c.i.(a) Construction Site Inspection. Revise inspections at all construction sites 1 acre or greater and construction sites less than 1 acre that are part of a common plan of development totaling 1 acre or greater in accordance with the frequency and scope stated below:
  - For construction sites that are determined to be a significant threat to water quality and construction sites that discharge to a 303(d)-listed waterbody, the Permittee shall conduct inspections from every 2 weeks to every month.
  - For all other construction sites, the Permittee shall conduct inspections at a minimum frequency of once during the wet season and once during the dry season.
  - If, following a site inspection, the Permittee deems the site in compliance with the requirements listed in Part VIII.G.5.c.ii, the Permittee may reduce the inspection frequency as necessary to a minimum of once during the wet season and once during the dry season.
  - Remove pre and post rain event inspection requirements.
- Update VIII.G.5.c.iii language to make inspection verification meaningful, considering the QSP/D inspectors required on construction projects. To reduce the reliance on Permittees' inspection staff to verify inspections for projects subject to the SWRCB's Construction General Permit, it is suggested that the Regional Board and SWRCB reconsider verification of QSP/D inspector reports. In addition, the Permittees suggest conducting less frequent inspections for projects that have Construction General Permit coverage. Permittees should only be involved to verify that a Permit has been acquired, perform inspections limited to visual site inspection (i.e., no reports), and respond locally, in support of Regional Board inspectors, if there is a problem with compliance.

4.4.3.6 Public Agency Activities Program

Permittees have found that addressing parking lot requirements is challenging and requires revision in the next Permit. The following Permit modifications regarding controlling public parking lots are requested:

- Part VIII.H.9. Inspection frequency should be reasonable, with more frequent checks for chronically impacted parking lots.
  - Change parking lot inspection frequency to quarterly if the parking lot is less than one acre or used for heavy vehicle storage.
  - Change requirements to clean parking lots to only when debris or oil is observed during inspections. Cleaning only when needed promotes better inspections and pollutant identification. Requiring cleaning at least once per month, regardless of the inspection findings, suggests that inspections are irrelevant. This approach can lead to less attention to detail or lack of prioritizing areas that have debris and/or oil observations during inspections. Promoting the quality of inspections by requiring determination if cleaning is necessary better trains the site personnel to identify pollutant sources of concern and how to appropriately address them.
  - Allow routine street sweeping to qualify as an inspection.

4.4.3.7 Illicit Discharge Detection and Elimination System

The public awareness of illicit discharges has greatly increased over the decades. The Permittees successfully completed the Non-Stormwater Outfall-Based Screening program and the following program improvements are suggested:

- VIII.I.2 Illicit Discharge Source Investigation and Attachment E. Monitoring and Reporting Program (MRP) Part VII. – Non-Stormwater Outfall-Based Screening.
  - The schedule for outfall screening should be reduced to once every five years.
- VIII.I.4 Infiltration from Sanitary Sewer to MS4 – Preventive Maintenance.
  - Sanitary sewer operators have a permit that requires them to prevent discharges from the sanitary sewer system to the MS4. Given this existing requirement, the MS4 permit should be modified to promote collaboration and coordination between the agencies to most effectively prevent infiltration from the sanitary sewer to the MS4 but not require the Permittees to have primary responsibility for preventing infiltration of sewage into the MS4.

4.4.4 Part X – Compliance Determination for WQBELs and Receiving Water Limitations Proposed Improvements

For several Ventura County TMDLs, the TMDL includes targets that are not WQOs because the targets are interpreting a narrative objective and the TMDL Attachments in the Permit do not specifically include receiving water limitations. Part X specifies that direct demonstration of compliance can be demonstrated through meeting either the TMDL WQBELs or the TMDL receiving water limitations. Our understanding of the intent of the language is that if the receiving water is meeting WQOs, then the Permittee's discharges are not causing or contributing to an exceedance and compliance is demonstrated. However, because the language is specific to meeting receiving water limitations, it is unclear if compliance is demonstrated through monitoring data that meets the TMDL targets and/or WQOs when a TMDL receiving water limitation is not specified in an attachment. The Permittees request that Part X be modified to allow compliance to be demonstrated through meeting the TMDL target, applicable WQO, or TMDL receiving water limitations in the receiving water.

The Permittees also request that two additional pathways be provided for demonstrating compliance with bacteria TMDL WQBELs and receiving water limitations:

- Demonstrate that an alternative indicator (e.g., enterococci) in the Permittee's MS4 discharge is below levels that are equivalent to a risk to human health of less than 32 illnesses/1000 people.
- Demonstrate, through an approved epidemiological study or Quantitative Microbial Risk Assessment (QMRA), that the risk to human health is less than 32 illnesses/1000 people.

These additional compliance pathways are consistent with the Statewide Bacteria Provisions and the assumptions in the bacteria TMDLs to protect the recreation beneficial uses. Including these additional pathways would encourage the Permittees to implement actions that are most likely to protect the beneficial use by focusing on the highest risk sources of bacteria. This pathway also ensures public health is protected by demonstrating that risk levels are below the recommended thresholds from the USEPA. These compliance pathways have been proposed in the tentative Santa Ana Region MS4 permit.

The Permittees also request that this section be modified to align with any changes made in response to the requests discussed in **Section 4.3** to incorporate a prescriptive BMP-based approach to compliance with interim and final TMDL WQBELs and receiving water limitations and to allow implementation of Ventura County WMPs to be a method for demonstrating compliance with final TMDL WQBELs.

4.4.5 Attachment F – Fact Sheet Proposed Improvements

The Permittees request, overall, that the Fact Sheet include language that supports all the requested changes in this ROWD. This includes updates to the description of water quality issues in Ventura County and the geographic differences between Ventura County and Los Angeles County watersheds, with highlights of successes and high-quality waters generally found in Ventura County, in contrast to other areas regulated by the Permit.

More specifically, to support the proposed pathway to compliance, the Fact Sheet should include support for a prescriptive BMP-based approach to compliance that is based on implementation of source reduction and non-structural BMPs, MCMs, and adaptive management. The support can be developed from the following references:

- USEPA, Memorandum, "Revisions to the November 22, 2002 Memorandum 'Establishing Total Maximum Daily Load (TMDL) Wasteload Allocations (WLAs) for Storm Water Sources and NPDES Permit Requirements Based on Those WLAs,'" (November 26, 2014) (2014 USEPA Memorandum)
- U.S. Environmental Protection Agency, Compendium of MS4 Permitting Approaches – Part 3: Water Quality-Based Requirements, Office of Wastewater Management, Water Permit Division, EPA-830-S-17-001, April 2017. https://www.epa.gov/sites/default/files/2017-06/documents/part3-sw_compendium_wqbels_508.pdf .
- Fact Sheet for the California Regional Water Quality Control Board, San Francisco Bay Region. *Unofficial Version of Municipal Regional Stormwater NPDES Permit* (MRP 3), Order No. R2-2022-0018, NPDES Permit No. CAS612008. Accessed September 27, 2025. https://www.waterboards.ca.gov/rwqcb2/water_issues/programs/stormwater/newfiles/UnofficialVersionofMRP3.docx.

The Fact Sheet should acknowledge that the new and best science (that has been acquired through monitoring programs and other efforts) should be leveraged and referenced to help support the beneficial uses of the receiving waters. Specifically, for the Ventura River Algae TMDL, the Fact Sheet should acknowledge that, based on the results of the monitoring program and other pertinent, site-specific information, non-nutrient drivers such as canopy cover and flow play an important role in determining algal biomass.[33] The Regional Board should utilize this improved understanding of algal dynamics if the Ventura River Algae TMDL is modified in the future. For the Bacteria TMDLs, the Fact Sheet should include justification for including the two new risk-based compliance pathways.

4.4.6 Attachment G - Aquatic Toxicity Proposed Improvements

In Camarillo Sanitary District et al. v. SWRCB, the Fifth District Court of Appeals held that the SWRCB's adoption of the TST for measuring whole effluent toxicity violated the Federal Clean Water Act when applied to NPDES permitting. The Permittees request that the Regional Board update these requirements and remove the TST requirements based on that recent decision.

4.4.7 Attachment H – Reporting Forms

The Permittees have reviewed the SWRCB's new Cost Reporting Policy. Based on the review, the requirements seem consistent with the existing Cost Reporting requirements in the Permit. As a result, we request that no changes be made to the existing permit requirements and that information be included

[33] Larry Walker Associates. (2020, August 28). *Review of the Ventura River Algae TMDL Comprehensive Monitoring Program: Evaluation of Results from 2015–2019 with Recommendations for Program Modifications*.

in the Fact Sheet, if needed, to justify that the existing reporting requirements are consistent with the Cost Reporting Policy.

4.4.8 Attachment K - Ventura River TMDLs

Clearly include a compliance pathway based on meeting TMDL targets that are not WQOs or receiving water limitations. This compliance pathway should include the following features:

- Allow for demonstration of compliance if the receiving water is meeting the Ventura River Algae TMDL targets.
- Provide compliance credit for actions within the watershed that address the non-nutrient drivers of algal growth.

4.4.9 Attachment L - Ventura County Miscellaneous Coastal TMDLs

Include the following compliance pathways based on risk and/or alternative indicators:

- Demonstrate that an alternative indicator (e.g., enterococci) in the Permittee's MS4 discharge is below levels that are equivalent to a risk to human health of less than 32 illnesses/1000 people.
- Demonstrate, through an approved epidemiological study or QMRA, that the risk to human health is less than 32 illnesses/1000 people.

4.4.10 Attachment M - Santa Clara River TMDLs

Make the following changes to the Santa Clara River Bacteria TMDL:

- Remove Estuary receiving water limitations and WQBELs for Reach 1 and 2 in dry weather. These reaches are not listed as impaired on the 303(d) list and are not included in the SCR Estuary TMDL.
- Separate the WQBELs and receiving water limitations into two different tables, consistent with the approach in other TMDLs.
- Include the following compliance pathways based on risk and/or alternative indicators:
    - Demonstrate that an alternative indicator (e.g., enterococci) in the Permittee's MS4 discharge is below levels that are equivalent to a risk to human health of less than 32 illnesses/1000 people.
    - Demonstrate, through an approved epidemiological study or QMRA, that the risk to human health is less than 32 illnesses/1000 people.

4.4.11 Attachment O - Santa Monica Bay TMDLs

Include the following compliance pathways based on risk and/or alternative indicators:

- Demonstrate that an alternative indicator (e.g., enterococci) in the Permittee's MS4 discharge is below levels that are equivalent to a risk to human health of less than 32 illnesses/1000 people.
- Demonstrate, through an approved epidemiological study or QMRA, that the risk to human health is less than 32 illnesses/1000 people.

Include a footnote for the Santa Monica Bay Debris TMDL to allow a demonstration of compliance with this TMDL through implementation of the Malibu Creek Trash TMDL requirements, similar to the footnote for the Santa Monica Bay Beaches TMDL: "The County of Ventura, the Ventura County Watershed Protection District and the City of Thousand Oaks shall comply with the effluent limitations assigned in the Malibu Creek Trash TMDL, in lieu of complying with the Santa Monica Bay Debris TMDL."

5 ADAPTIVE MANAGEMENT REPORT

5.1 Overview

This section of the ROWD presents the required adaptive management evaluation and report for the approved portions of the Malibu Creek Watershed WMP. The County of Ventura, the WPD, and the City of Thousand Oaks are the responsible agencies for the Ventura County portion of the Malibu Creek watershed, together known as applicable Permittees.

- Pursuant to Part IX.E.1 of the 2021 Permit, the Permittee(s) shall implement an adaptive management process for each approved WMP.
- Pursuant to Part IX.E.4 of the 2021 Permit, Permittee(s) shall submit the results of the adaptive management process with the Permittees' ROWD to the Regional Board.

Portions of the Malibu Creek Watershed WMP, as a section of the Ventura County WMPs, were approved on May 12, 2025. As a part of the approval for the Malibu Creek Watershed WMP, the Regional Board approved deemed compliance for certain constituents through the WMP if the actions and schedules specified in the WMP are attained, as outlined in Parts X.B.1.b and X.B.2.b of the Order:

- Table 4-4 (Malibu Creek Watershed WBPC Categories [WBPCs] Addressed in WMP) in Appendix B of the Ventura Countywide WMP:
  - Category 1B WBPCs except for *E. coli* (wet)
  - Category 2B and 2C WBPCs

In accordance with the 2021 Permit Part IX.E, applicable Permittees are required to implement an adaptive management process for a WMP so that watershed control measures become more effective over time. The results of the adaptive management process are required to be submitted with a Permittee's ROWD.

The following outlines the requirements for the Adaptive Management Report submittal, as part of the ROWD:

1. Per Part IX.E.1 of the 2021 Permit, implement an adaptive management process for an approved WMP so that watershed control measures in the WMP become more effective based on, but not limited to, a consideration of the following:
   a) Progress toward achieving interim and/or final WQBELs and/or RWLs in Part IV and Attachments K through S of this Order, according to established compliance schedules set forth in Part IX.B.9 of this Order.
   b) Progress toward achieving improved water quality in MS4 discharges and achieving receiving water limitations through implementation of the watershed control measures based on an evaluation of outfall-based monitoring data and receiving water monitoring data.
   c) Re-evaluation of watershed control measures for the achievement of interim and final milestones for stormwater volume addressed (via capture, infiltration, diversion, etc.), load reduction, or other compliance metric.
   d) Multi-year efforts that were not completed in the current permit term and will continue over the next 5 year(s).

e) Re-evaluation of the water quality priorities identified for the watershed management area (WMA) based on more recent water quality data for discharges from the MS4 and the receiving water(s) and a reassessment of sources of pollutants in MS4 discharges.
f) Availability of new information and data from sources other than the Permittees' monitoring program(s) within the WMA that informs the effectiveness of the actions implemented by the Permittees.
g) Costs and available funding.
h) Regional Board recommendations.
i) Recommendations for modifications to the WMP solicited through a public participation process.

2. Per Part IX.E.2 of the 2021 Permit, based on the results of the adaptive management process, Permittees may propose WMP modifications necessary to improve the effectiveness of the WMP and, if modifications are proposed, clearly identify any WMP modification proposals in their submittal of the adaptive management results; and
3. Per Part IX.E.4 of the 2021 Permit, report the following information to the Regional Board concurrently with the submittal of the ROWD:
   a) On-the-ground structural control measures completed since approval of the WMP.
   b) Non-structural control measures completed since approval of the WMP.
   c) Monitoring data that evaluates the effectiveness of implemented control measures in improving water quality.
   d) Comparison of the effectiveness of the control measures to the results projected by the RAA;
   e) Assessment of the appropriateness of the assumptions used in the RAA (e.g., non-structural BMP implementation and corresponding reductions, rates of redevelopment, etc.).
   f) Comparison of control measures completed to date with control measures projected to be completed to date pursuant to the WMP using equivalent metrics.
   g) Control measures proposed to be completed in the next five years pursuant to the WMP and the schedule for completion of those control measures using metrics consistent with those in the approved WMP.
   h) Status of funding and implementation for control measures proposed to be completed in the next five years.
   i) Identification of the most effective and least effective control measures and explain why those control measures were effective or least effective and how control measures will be optimized, modified, or terminated accordingly for WMP implementation in the next 5 years.

This Adaptive Management section of the ROWD is organized as follows:

- **Section 5.2** details how the Program considered each of the elements identified in Part IX.E.1 of the 2021 Permit to implement its adaptive management process for the Malibu Creek Watershed WMP.
- **Section 5.3** identifies the Program's proposed modifications to its WMP dated August 2024 and approved by the Regional Board on May 15, 2025, to meet the federal and State requirements related to proposed revisions to Permittee programs.
- **Section 5.4** reports the information required to be submitted concurrently with the ROWD per Part IX.E.4 of the 2021 Permit.

5.2 Approach to Adaptive Management Process

This section identifies how the Permittees considered the factors in Part IX.E.1 of the 2021 Permit as a part of the adaptive management process for the Malibu Creek Watershed WMP.

The WMP and CIMP were approved in May 2025, resulting in only approximately 9 months of WMP implementation time and fewer available data points to conduct the assessment. Prior to the development of the CIMP, the Program did not have a monitoring program that assessed the constituents covered by the approved portion of the WMP. As a result, the ability to assess the factors identified in the permit for the Malibu Creek WMP is limited. The Permittees used the following approach:

- Reviewed the available outfall and receiving water monitoring data in the Malibu Creek watershed for nitrogen and phosphorus. As discussed in **Section 3**, twelve receiving water monitoring samples are available at two sites and four outfall monitoring events were collected, all during dry weather for the nutrient TMDL, but monitoring for other constituents did not start in time to be considered for this report. These data were used to assess progress towards achieving the applicable WQBELs and improving water quality in MS4 discharges, as discussed in **Section 5.4.3**.
- Considered new information regarding potential control measures to address WBPCs covered by the approved WMP. During the period while the WMP was being reviewed, the Permittees evaluated the control measures in the WMP and other opportunities, developed a feasibility study to further evaluate some opportunities, and considered opportunities for funding the opportunities. Discussions with other watershed stakeholders were conducted and opportunities identified from the discussions were considered in the evaluation. The opportunities for adaptive management of the WMP that resulted from this evaluation are discussed in **Section 5.3**.
- Considered feedback provided by the Regional Board in the WMP approval letter.

No new information from sources other than the CIMP was identified for evaluation, as there are no other monitoring programs in the Upper Malibu Creek Watershed. Additionally, given the limited available data, no re-evaluation of water quality priorities was conducted.

5.3 Adaptive Management Opportunities

The Ventura Countywide WMP identified the North Ranch Playfield project as the preferred structural control measure for the Malibu Creek Watershed, considering all limiting pollutants in the watershed[34]. However, the WMP noted that full feasibility studies have not been conducted for the project and listed several other potential structural projects in the WMP that could also be considered.

After the submittal of the WMP, the City of Thousand Oaks and County of Ventura completed a feasibility study to identify potential storm drain diversion projects to divert dry weather and/or wet-weather runoff to the Las Virgenes Municipal Water District (LVMWD) and the Triunfo Water & Sanitation District (TWSD). The Upper Malibu Creek Pollutant TMDL reduction feasibility analysis assessed 102 proposed locations for potential diversions in the Upper Malibu Creek watershed. The feasibility analysis evaluated the effectiveness of managing runoff during both wet and dry weather conditions and recommended a suite of feasible projects for dry weather conditions. Diversion of the 85th percentile flow was determined to be infeasible at all sites because wet weather flows exceed the capacity of downstream wastewater treatment plants in every possible scenario. In addition, there is no available space for storing the excess stormwater flows, which would allow the discharge of the stormwater to the wastewater treatment plant at a manageable rate. Possibilities for capturing first flush stormwater discharges were also evaluated.

The study identified the feasibility of implementing a diversion in the same watershed as the North Ranch Playfield project, the Ochos Rios Way Diversion project. The Ochos Rios Way Diversion project is included as an alternative structural control measure in the WMP in *Summary of Alternative Structural Control Measure Opportunities for Malibu Creek Watershed* Appendix D: Reasonable Assurance Analysis[32]. The

[34] Ventura Countywide Watershed Management Programs, Appendix D: Reasonable Assurance Analysis

Ochos Rios Way Diversion project was preferred over the North Ranch Playfield project by watershed stakeholders because it provides a source of water to LVMWD and TWSD for the Pure Water Project. The Pure Water Project will provide additional potable water for the watershed. As a result, this project provides multiple benefits for the watershed.

Additionally, the cost of the diversion project is lower than the North Ranch Playfield project and the City of Thousand Oaks was able to identify potential grant funds to implement the project, making it possible to complete the project on a shorter time frame than the North Ranch Playfield project.

The primary difference between the Ochos Rios Way Diversion project and the North Ranch Playfield project is the capture and treatment of wet weather flows. However, the WBPCs covered by the WMP are primarily of concern in dry weather. The Nutrients TMDL was designed to address algae in the receiving water, which only occurs during the dry season. No wet weather WQBELs are included for this TMDL and all receiving water exceedances occur in the summer season (see **Section 5.4.3**). The North Ranch Playfield project was selected to address all the pollutants in the WMP, including wet weather bacteria. However, when considering the WBPCs in the approved WMP, the Ochos Rios Way Diversion project provides a more targeted way of addressing the pollutants of concern during the period of concern. The North Ranch Playfields Park project will continue to be considered as a future potential project if additional implementation strategies are needed in the future to address continued exceedances or other water quality priorities not covered by the WMP.

5.4 Information to Fulfill Adaptive Management Reporting Requirements in Part IX.E.4 of the Permit

Although the Malibu Creek Watershed WMP was just approved in May 2025, the Permittees are reporting the results of the adaptive management process, which includes the following information, consistent with Part IX.E.4 of the Permit.

5.4.1 On-the-Ground Structural Control Measures Completed

The Sewer Main & Lateral Relining Program is an ongoing program being implemented by the City of Thousand Oaks to reduce exfiltration and infiltration in the Upper Malibu Creek Watershed. The program started in July 2024 and is funded by the Wastewater Utility Fund with an annual budget of $2,500,000 for the next ten years.

5.4.2 Non-Structural Control Measures Completed

The Enhanced Street Sweeping program in the City of Thousand Oaks resulted in an increase in the street sweeping frequencies and inclusion of areas surrounding priority land use areas. The City's street sweeping program began in January 2024 and continues to use a greater frequency of cleaning to prevent accumulation of sediment (which contains nutrients and bacteria), vegetative material (which includes nutrients), and trash. The street sweeping activities are in addition to trash excluders and full capture devices that have been installed in catch basins in priority land use areas. Funding for the enhanced street sweeping comes from a franchise agreement with the waste hauler contractor.

5.4.3 Monitoring Data that Evaluates the Effectiveness of Implemented Control Measures in Improving Water Quality

Since the approval of the WMP, there have been limited control measures implemented and limited water quality data collected to demonstrate the effectiveness of implemented control measures in improving water quality. However, the Permittees have been implementing a wide range of Minimum Control Measures, trash control activities, and other actions to address the TMDLs in the watershed for years.

Because MS4 monitoring data for nutrients are not available in the Ventura County portion of the Malibu Creek Watershed since the TMDL was developed, it is not possible to conduct an analysis of changes over time that have resulted from the implementation of the actions. However, the Permittees can use the recently collected monitoring data to evaluate the status of attainment of the final WQBELs for nitrogen and phosphorus and attainment of RWLs for the remaining WBPCs covered by the approved WMP. The final WQBELs and RWLs are shown in **Table 5-1**.

Table 5-1. Final WQBELs and RWLs

Constituent	Applicable WQO		WQO Reference
Ammonia	**Malibu Creek**:		Malibu Creek Nutrients TMDL targets
	Acute: 2.59 mg/L	Chronic: 1.75 mg/L	
	Lake Sherwood:		
	Acute: 6.7 mg/L	Chronic: 2.1 mg/L	
	Westlake Lake:		
	Acute: 8.5 mg/L	Chronic: 1.5 mg/L	
Dissolved Oxygen	**Waterbodies designated as WARM**: >5 mg/L		Malibu Creek Nutrients TMDL targets
	Waterbodies designated as COLD: >7 mg/L		
Nitrate-N + Nitrite-N	**Summer Season**: 3.1 lbs/day		Attachment O Malibu Creek Nutrients TMDL WQBELs
	Winter Season: 8 mg/L		
Total Phosphorous	**Summer Season**: 0.31 lbs/day		Attachment O Malibu Creek Nutrients TMDL WQBELs
Algae	150 mg/m^2 chlorophyll-a		Malibu Creek Nutrients TMDL targets
Scum	N/A		N/A
Benthic Community	N/A		N/A
Invasive Species	N/A		N/A
Sedimentation	N/A		N/A

In the 2024/25 Annual Report, no exceedances of the interim limitations were reported. For the assessment of the final limitations, the outfall loads provided in the annual report were compared to the final limitations.

Table 5-2. Malibu Creek TMDL Nutrient TMDL Final WQBEL Comparison During Fiscal Year 2024/25

	Nitrate-N + Nitrite N		Phosphorous
Weather	Summer Season	Winter Season	Summer Season
Exceedances	2	N/A	3
# Samples	5	0	5
% Exceedances	13%	N/A	33%

The receiving water data were reviewed and compared with the TMDL targets to determine if the receiving water was above the targets on the dates the outfall loads were above the WQBELs. For both nitrate-N + nitrite-N outfall loads above the WQBELs, the receiving waters met the TMDL targets. For one of the phosphorus outfall loads above the WQBELs, the receiving waters met the TMDL targets.

A summary of receiving water data compared to the TMDL targets is shown in **Table 5-3**. As shown in the table, only phosphorus had any exceedances of the TMDL targets and those exceedances only occurred during the summer, the dry season. The lack of exceedances for nitrogen compounds and chlorophyll-a (chl-a) indicates the control measures that have been implemented to date have been effective in addressing multiple pollutants and any remaining control measures simply need to address dry weather discharges of phosphorus during the summer season to address all WBPCs covered by the approved WMP.

Table 5-3. Malibu Creek TMDL WBPC Receiving Water Monitoring Results During Fiscal Year 2024/25

	Nitrate-N + Nitrite N		Phosphorous	Ammonia	Chl-a
Weather	Summer Season	Winter Season	Summer Season	N/A	Summer
Exceedances	0	0	12	0	0
# Samples	16	8	16	24	1
% Exceedances	0%	0%	75%	0%	0%

5.4.4 Comparison of the Effectiveness of the Control Measures to the Results Projected by the RAA

Since the WMP was just approved in May 2025, the Permittees are unable to compare the effectiveness of the control measures that have been implemented to the results projected by the RAA beyond the analysis provided in the previous section.

5.4.5 Assessment of Assumptions Used in the RAA

Since the WMP was just approved in May 2025, the Permittees are unable to assess the appropriateness of the assumptions that were used in the RAA. However, a limited assessment of the assumptions of the street sweeping enhancements was conducted based on the available data.

Street Sweeping Enhancements

Since structural projects cover a greater percentage of the total RAA-established reduction, street sweeping was not included in the implementation pathway for any constituents in Malibu Creek WMP. However, enhanced street sweeping can be implemented to assist in achieving the RAA-established

reductions, especially if projects are delayed. The WMP estimated the additional number of curb miles needed to assist in meeting the WMP goals. A comparison of the estimated additional curb miles compared to the actual curb miles swept is shown in **Table 5-4**.

Table 5-4. Street Sweeping Enhancement Assumptions in the WMP

Agency	Additional Monthly Baseline Curb Miles Swept from Enhancement	
	Assumed	Actuals
Thousand Oaks	121.8[1]	235[2]
Unincorporated County of Ventura	78.4	1,482[3]
Total	200.2	234

1 Table 8-7 Appendix D: Reasonable Assurance Analysis, Ventura County Watershed Management Programs, August 2024
2 City of Thousand Oaks Annual Reporting Form FY 2022-23 and FY 2024-25; total curb miles swept; FY 2022/23 = 17,920; FY 2024/25 = 18,155
3 County of Ventura Annual Reporting from FY 2022-23 through FY 2024-25; total curb miles swept=304 curb miles annually Oak Park sweeping is 1,786; 1,786 Oak Park – 304 Annual Report = 1,482

5.4.6 Comparison of Control Measures Completed to Date with Control Measures Projected to be Completed to Date

This section identifies the control measures that were included in the Malibu Creek WMP and the current progress to date since the WMP was approved in May 2025.

Structural Projects in Malibu Creek Watershed

No structural projects identified in the WMP have been completed since the WMP approval.

Enhanced Street Sweeping

The City began an enhanced street sweeping program in January 2024, prior to the approval of the WMP. The program has continued since the approval of the WMP. The unincorporated County of Ventura Oak Park neighborhood Community Service Area is one of the most swept areas in the unincorporated at 1,786 curb miles, 1,482 curb miles more than the 304 curb miles used in the WMP.

5.4.7 Control Measures Proposed to be Completed in the Next Five Years and the Schedule for Completion

As discussed in **Section 5.3**, the North Ranch Playfields Park is on hold because an alternative project from the WMP, the Ocho Rios Way diversion, was selected for implementation. The Ocho Rios Way Diversion project is proposed to be completed within the next five years. The current implementation schedule for the project is shown in **Table 5-5**.

Table 5-5: Ocho Rios Way Open Space Low Flow Diversion Project Implementation Schedule

Project	Permitting and Design	Construction	Complete
Ocho Rios Way Diversion	FY 2026	FY 2027	FY 2028

5.4.8 Status of Funding and Implementation for Control Measures Proposed to be Completed in the Next Five Years

The Ocho Rios Way Diversion project has an estimated capital cost of $3M, expected to be provided by an EPA State and Tribal Assistance Grants Community Grant and the City of Thousand Oaks Capital Improvement Program funds. The expected cumulative operation and maintenance costs will be approximately $150,000 per year and will be managed by Ventura County Public Works.

5.4.9 Assessment of Control Measure Effectiveness

Since the Malibu Creek Watershed WMP was approved in May 2025, a quantitative analysis of the most and least effective control measures cannot be conducted at this time. However, as described in **Section 5.4.3,** the majority of the WBPCs covered by the WMP are meeting the TMDL targets, demonstrating that actions implemented prior to the WMP approval have been effective in improving water quality in the watershed.

Additionally, the Permittees commissioned a feasibility analysis to evaluate structural project opportunities to ensure that effective projects would be implemented. As a result of that study, it was determined that the Ocho Rios Way Diversion project would be implemented in lieu of the North Playfields Project, see **Section 5.3** for more information.

6 CONCLUSIONS

Beyond meeting the Permit requirement, this ROWD serves to inform the Regional Board and the public about the accomplishments achieved by the Countywide Program, the individual Permittees, and the broader watershed management groups, towards improving water quality in Ventura County. **Section 3** demonstrates the high-quality waters in Ventura County. These results have been achieved largely with non-structural BMPs and other effective actions from the Countywide Program and collaborative efforts. The ROWD includes the lessons learned over the entirety of the Countywide Program's implementation, the challenges identified for the future, and recommendations to help meet those challenges.

The information provided in the ROWD supports changes to the upcoming permit, including implementation of a source control, risk-based path to compliance, in contrast to a structural treatment approach used in highly urbanized Los Angeles County for compliance with TMDLs, WQBELs and RWLs for Ventura County watersheds. Due to its unique geography, urban storm drain "islands" surrounded by large open space and agricultural regions, this pathway would involve including specific implementation actions for the Ventura County Permittees to implement during the next permit term to address the remaining TMDL and RWL exceedances. Implementing non-structural BMPs with milestones would constitute compliance with the TMDLs, WQBELs and RWLs, like the approach taken by the San Francisco Regional Water Resources Control Board MRP 3.0 Permit.

Including source control and risk-based BMP approaches as a pathway to compliance has numerous benefits for improving water quality:

- Provides more rapid implementation by clearly defining up front the actions the Permittees need to take for compliance.
- Supports collaborative actions with other types of dischargers.
- Allows for adaptations and incorporation of the latest science to proactively address identified issues as they arise.
- Tailored to the specific remaining water quality issues in Ventura County, providing focus to achieve improvements.

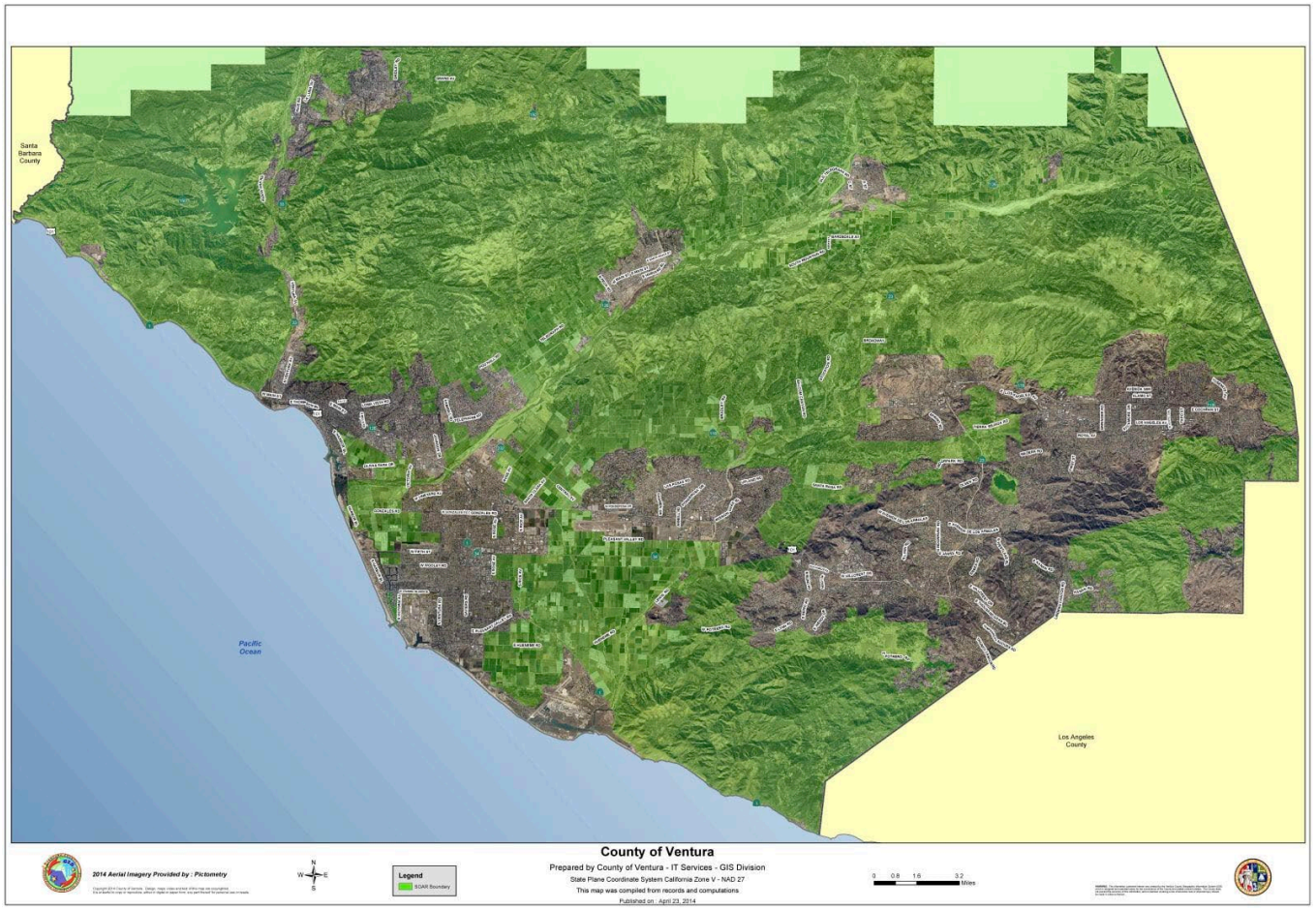
Permittees and other dischargers within the Ventura County region have undertaken a decades-long commitment to improving local water quality through hard work and collaboration. The Permittees have a long history of participation in local watershed working groups and have achieved substantial success in BMP implementation and monitoring. Collaborative solutions are already succeeding in Ventura County and are examples of efficient and effective means of addressing prioritized water quality solutions with a BMP-based approach. The Permittees look forward to developing a future Permit with the Regional Board that is measurable, enforceable, attainable and feasible for Ventura County.

7 ATTACHMENTS

Attachment A. SOAR Map: City Urban Restriction Boundaries and County Existing Community Designated Area

Attachment B. CASQA Position on Muncipal Permitting Approach SCOTUS Decision City and County of San Francisco v. EPA

Attachment A SOAR MAP: CITY URBAN RESTRICTION BOUNDARIES AND COUNTY EXISTING COMMUNITY DESIGNATED AREA



A-1. https://services5.arcgis.com/V0QlfY0p6DRAyng0/arcgis/rest/services/Ventura_County_SOAR_Boundary/FeatureServer

Attachment B CASQA Position on Municipal Stormwater Permitting Approach in Consideration of SCOTUS Decision City and County of San Francisco v. EPA

California Stormwater Quality Association®
Dedicated to the Advancement of Stormwater Quality Management, Science and Regulation

July 22, 2025

Via Email Only

Joaquin Esquivel, Chair
State Water Resources Control Board
1001 I Street, 25th Floor
Sacramento, CA 95814
Joaquin.Esquivel@waterboards.ca.gov

SUBJECT: CASQA's Position on Municipal Stormwater Permitting Approach in Consideration of Supreme Court of the United States Decision in *City and County of San Francisco v. EPA*

Dear Chair Esquivel:

The California Stormwater Quality Association (CASQA)[1] is submitting this letter to share our perspective on how the State Water Resources Control Board and Regional Water Quality Control Boards (collectively, Water Boards) should respond to the recent U.S. Supreme Court decision in *City and County of San Francisco v. Environmental Protection Agency* (2025) 145 S. Ct. 704 (*City and County of SF v EPA*), specifically as it relates to municipal stormwater (MS4) permits.

As many MS4 permits are currently being reissued, we are prioritizing our comments on municipal permits[2]. CASQA has long engaged in the Water Boards' policy-setting processes, including workshops and hearings, to address challenges related to receiving water limitations and similar discharge prohibitions. These issues continue to be a high priority for our municipal members.

In developing our position, CASQA undertook a rigorous and thorough process to obtain input and support from our widely varied MS4 membership. By undertaking an inclusive and transparent process, CASQA can confidently convey that there is support for the position and MS4 permitting approach put forward within this correspondence.

Court's Holding in *City and County of SF v. EPA* Applies to MS4 Permits

The *City and County of SF v. EPA* case involves receiving water limitations and discharge prohibitions, which have been a major issue in California National Pollutant Discharge Elimination System (NPDES) permits for decades. These provisions have been litigated substantially in both state and federal courts. Regardless of previous litigation and outcomes, however, *City and County of SF v. EPA*, is the first SCOTUS decision on this issue and it significantly

[1] CASQA is a nonprofit corporation that advances sustainable stormwater management protective of California water resources. With approximately 2,000 members, our membership is comprised of a diverse range of stormwater quality management organizations and individuals, including cities, counties, special districts, federal agencies, state agencies, ports, universities and school districts, wastewater agencies, water suppliers, industries, and consulting firms throughout the state. Collectively, CASQA represents over 34 million people in California.

[2] In the future, we also intend to provide recommendations related to the Industrial General Permit (IGP) and Construction General Permit (CGP), as appropriate.

impacts Water Board use and justification for such limitations that are included in California NPDES permits. The limitations in question are those considered to be 'end-result' provisions, which may be expressed as a Discharge Prohibition and/or a Receiving Water Limitation (collectively referred to as "end-result provisions" hereafter). Examples include the following:

> **Discharge Prohibition Example:** Discharges of storm water from the MS4 to the Waters of the U.S. in a manner causing or threating to cause a condition of pollution or nuisance as defined in Water Code § 13050 are prohibited.
>
> **Receiving Water Limitation Example**: Discharges shall not cause or contribute to an exceedance of water quality standards contained in a Statewide Water Quality Control Plan, the California Toxics Rule (CTR), or in the application Regional Water Board Basin Plan.[3]

These are considered "end-result" provisions because compliance is determined based on the quality of the receiving water, which may include pollutants from many other point and nonpoint sources that discharge to the same receiving water, not just those discharges regulated by the NPDES permit in question. In the *City and County of SF v. EPA* case, the NPDES permit before the court was for the City and County of San Francisco's combined sewer system and its wastewater treatment facilities that discharge to the Pacific Ocean. Combined sewer system permits are different from MS4 permits because they include discharges of both stormwater and wastewater and, thus, are subject to different provisions of the Clean Water Act.

Because the permit before SCOTUS included end-result provisions under Clean Water Act 33 U.S.C. 1311(b)(1)(C), the holding of the case was stated as follows:

> In sum, we hold that [section] 1311(b)(1)(C) does not authorize the EPA to include 'end-result' provisions in NPDES permits. Determining what steps a permittee must take to ensure that water quality standards are met is the EPA's [and state's] responsibility, and Congress has given it tools needed to make that determination. If the EPA does what the CWA demands, water quality will not suffer.

However, specific reference to section 1311(b)(1)(C) does not negate part of SCOTUS' rational, which arguably applies to all end-result provisions in NPDES permits – regardless of the Clean Water Act section relied on for their inclusion.[4] Specifically, SCOTUS looked at contextual history related to when Congress adopted the 1972 Clean Water Act, which overhauled the previous Water Pollution Control Act. In the 1972 Clean Water Act, Congress did not include previous statutory terms that held dischargers accountable for contributing to a violation of water quality standards. (145 S. Ct. 704, 716-717.) The court held that this action was a rejection by Congress of using a backward-looking (or "end-result") approach to enforcement of water quality standards.

Then, in part III.C., SCOTUS establishes the importance of the permit acting as a "permit-shield," and the reality that failure to comply with receiving water limitations removes the "permit-shield" advantage of having a permit and leaving dischargers open to civil and criminal penalties. Importantly, SCOTUS notes how a permittee could, "… devise a careful plan for protecting water quality, and it could diligently implement that plan. But if, in the end, the

[3] For the purposes of this letter, reference to 'end-result' provisions includes discharge prohibitions and receiving water limitations that are identical or similar to the examples provided herein.

[4] On April 28, 2025, the Water Boards submitted an Amicus Brief in the *San Francisco Baykeeper v. City of Sunnyvale, et al.,* case (5:20-cv-00824-EJD) in Support of Plaintiff's Opposition to Motion for Reconsideration. The Water Boards' primary stated interest for submitting the Amicus Brief was because of concern that the underlying permit was being subject to collateral attack as part of a citizen suit enforcement proceeding and not through the statutory process set forth for challenging permit provisions in California. In their brief, the Water Boards argue that judicial review of the end result provisions in the case before the district court was improper because *City and County of SF v. EPA* "was limited to the Clean Water Act's provisions governing EPA's combined sewer system permits in the Supreme Court's interpretation of 33 U.S.C. § 1311(b)(1)(C), and did not extend to municipal stormwater systems under 33 U.S.C. § 1324(p)(3)(B)." Rather, the Water Boards suggested that permit provisions related to *City and County of SF v. EPA* need to be addressed in a different venue – not the enforcement action before the court. For the reasons explained above, CASQA disagrees with the Water Boards statement that the *City and County of SF v. EPA* does not extend to MS4 permits.

quality of the water in its receiving waters dropped below the applicable water quality levels, it would face dire potential consequences." (145 S. Ct. 704, 718.)

Considering SCOTUS' broad rational for rejecting end-result provisions under the Clean Water Act, it defies logic to think that SCOTUS would find end-result provisions to be authorized by the Clean Water Act and acceptable in MS4 NPDES permits, but not other NPDES permits. Accordingly, CASQA finds that the court's rationale applies equally to end-result provisions contained in MS4 NPDES permits that are justified based on Clean Water Act authority. Notably, CASQA understands that the Water Boards may decide to exclusively rely on state law under the Porter Cologne Water Quality Control Act (Porter-Cologne) for inclusion of end-result type permit provisions (including receiving water limitations and discharge prohibitions) in MS4 NPDES permits. Such state law issues are addressed further below. Here, CASQA's position is specific to the inclusion of end-result provisions in MS4 NPDES permits under the Clean Water Act in that they are no longer authorized – including under Clean Water Act 33 U.S.C. § 1324(p)(3)(B).

Potential Reliance on State Law Moving Forward

Although CASQA agrees with the decision in *City and County of SF v. EPA* and its findings with respect to the impropriety of end-result provisions, CASQA further understands that the Water Boards may decide to maintain use of such provisions under state law authorities. The distinction and form of such provisions, however, has significant implications for MS4 permittees. For example, if the Water Boards retain end-result provisions in MS4 permits, it must be exceedingly clear that such provisions are distinct from federal NPDES permit provisions and not subject to citizen suit actions brought under the Clean Water Act. (See, e.g., *Puget Soundkeeper Alliance v. Port of Tacoma* 104 F.4th 95.) Because of this important distinction, CASQA has invested considerable time and effort in developing a proposed approach that offers MS4 permittees a direct, consistent path to compliance and greater certainty about what is expected to comply with water quality standards. CASQA'S Recommended Approach for Revising Municipal Stormwater Permit Language

CASQA recognizes that the Water Boards must consider and evaluate different permitting approaches/options moving forward in light of SCOTUS' holding in *City and County of SF v. EPA*. CASQA also recognizes that the Water Boards' preferred approach may evolve overtime. Regardless, however, CASQA has identified the following three overarching takeaways from *City and County of SF v. EPA* that need to be applied to MS4 permits moving forward.

- **End-Result Provisions are not authorized under the Clean Water Act but may be authorized under Porter Cologne** – If the Water Boards decide to maintain end-result provisions, the express authority relied on by the Water Boards for including such provisions must be pursuant to Porter-Cologne because such provisions go beyond the scope of the Clean Water Act. Moreover, considering the potential exposure to private citizen suits for violation of such state law provisions when included within the four-corners of an NPDES permit, CASQA's approach seeks to provide the clearest level of protection possible for MS4 permittees against liability associated with violation of end-result provisions if retained by the Water Boards in MS4 permits.
- **Permit Language must Provide a "Permit Shield**" – The Court ruled that NPDES permit provisions cannot be "backward looking" or based on an "end-result." Rather, USEPA (and the States) has the tools necessary to include specific permit provisions related to meeting water quality standards that would provide the Permittee with a known and viable compliance pathway. Importantly, the Court's ruling is, in part, based on statutory context of the Clean Water Act and the importance of NPDES permits acting as a "permit-shield." Without there being a clear path to compliance, the Court was concerned with the liability that permittees may otherwise face for not being able to comply with an "end-result" limit. Accordingly, to the extent that the Water Boards include other water quality-based provisions in MS4 NPDES permits (e.g., effluent limitations or specified management practices), MS4 permittees must have a clear and direct path towards compliance with such provisions to ensure that the NPDES permit provides the proper permit shield

as anticipated by Congress when it adopted the Clean Water Act. Notably, the path towards compliance can and should include in-permit compliance timelines as determined applicable and appropriate.

- **Water Quality Based Effluent Limitations (WQBELs) should not be Numeric** – The Court ruled that the effluent limitations do not need to be numeric and, in fact, that compliance with best management practices (BMPs) and other operational requirements and prohibitions fall within what is allowed under section 1311(b)(1)(C). Although water quality standards provisions in MS4 permits are included under section 1341(p)(3)(B)(iii) of the Clean Water Act and pursuant to Water Board discretion, the Court's rationale would apply here equally. Moreover, considering the unique nature of municipal stormwater and the systems that capture and transport municipal stormwater, implementation of BMPs (or implementation of a watershed plan in lieu of permit specific BMPs) is the most practical and direct path for compliance with water quality standards. Relying on implementation of BMPs or an approved watershed plan for meeting water quality standards would provide MS4 permittees with the "permit-shield" contemplated and demanded by Congress for those authorized to discharge under an NPDES permit. Taking away use of BMPs or approved watershed plans results in uncertainty and liability exposure for MS4 permittees and does not further the ultimate goal of improving water quality and meeting water quality standards. Moreover, when establishing permit-specific BMPs or watershed implementation plans, the Water Boards need to identify and address water quality priorities and not seek to implement or enforce compliance with all water quality standards simultaneously.

Changes to MS4 Permit Structure to Implement CASQA Approach

The *City and County of SF v. EPA* case requires substantive changes in the structure of MS4 permits. CASQA's approach outlines how to affect the necessary changes.

First, merely shifting legal authority from the Clean Water Act to Porter-Cologne is not sufficient. The Water Boards need to make further adjustments in MS4 permits to create a clear pathway for determining compliance with these end-result provisions. MS4 permits need clear permit provisions with respect to meeting water quality standards and viable options for permittees to demonstrate that discharges from their MS4s are not responsible for exceedances in receiving waters, or alternatively that implementation of certain provisions are "deemed to comply" with water quality standards. Importantly, the pathway (or pathways) needs to allow for inclusion of specific actions in municipal stormwater permits, which upon implementation results in compliance with the permit – including any end-result provision retained in an MS4 permit under Porter-Cologne.

Key modifications to permits need to include, but not be limited to, the following:

Modification #1: Separation of Federal vs. State Permit Requirements

Since the MS4 permits are issued as both NPDES Permits (to address federal requirements) and Waste Discharge Requirements (WDRs) (to address state requirements), the permits need to clearly identify which requirements are included pursuant to the Clean Water Act versus Porter-Cologne. To guard against arguments such as those made in *Puget Soundkeeper*, state-mandated permit requirements need to be included in a separate order, or at the very least, a separate section of the permit that clearly indicates the provisions are not federal requirements, go beyond the scope of the Clean Water Act, and are not subject to enforcement under the Clean Water Act. (See 40 CFR § 123.1(i)(2), [If an approved State program has greater scope of coverage than required by Federal law the additional coverage is not part of the Federally approved program."; see also Brief of the United States as Amicus Curiae in the Supreme Court of the United States, *Port of Tacoma v. Puget Soundkeeper Alliance*, encouraging Supreme Court review of the petition for writ of certiorari filed by the Port of Tacoma.)

For example, in some permits, the Monitoring and Reporting Program elements are in a separate order with a unique order number but were developed and considered in parallel with the operative NPDES permit provisions. In another example, although untested legally, NPDES permits for publicly owned treatment works that include groundwater or land use application provisions specifically call out the permit provisions that are included specifically pursuant to State law and are not subject to Clean Water Act liability or enforcement.

Most importantly, there needs to be a clear demarcation as to which permit provisions are being issued under the Clean Water Act as compared to others that go beyond federal authority and are included under state authority. This is critical considering that the enforcement mechanisms between the two authorities varies significantly. Too often, state provisions that go beyond the scope of federal law are intermixed throughout the NPDES permit, creating confusion and expanded liability exposure to MS4 permittees. By creating a clear distinction between permit provisions being issued under state law authority versus those issued under the Clean Water Act will help to provide greater clarity and understanding for the Water Boards, MS4 permittees and other interested parties.

Modification #2: Inclusion of New Findings (may also be supported by other Permit Requirements)

- Establish that the permitting approach has been revised to be consistent with the SCOTUS decision and that actions associated with meeting end-result provisions will promote measurable water quality improvements.
    - Provide enough specificity and accountability so stormwater agencies understand their responsibilities
    - Establish enough rigor to ensure that progress will be made in addressing problematic discharges associated with municipal stormwater discharges
    - Prioritize water quality standards most directly associated with municipal stormwater
    - Ensure that the actions are timely and focused on compliance with prioritized water quality standards

Modification #3: Inclusion of Clear and Concise Compliance Language

- To the extent that compliance with certain permit provisions is dependent on actions taken under other sections or provisions of an MS4 permit, the permit must clearly and concisely incorporate and cross-reference other relevant provisions. For example, if implementation of certain TMDL tasks are equivalent to implementing a BMP-based water quality effluent limitation, then the MS4 permit must clearly state this in multiple relevant sections of the MS4 permit. Otherwise, the provisions will be deemed to apply independently and the cross-relationship between various provisions may not be understood.
- Compliance with TMDL requirements shall constitute compliance with water quality standards (including end-result provisions included under state law) associated with the waterbody-pollutant combinations subject to the TMDL.

Modification #4: Modification of End Result Provision Language to Apply Only to Priority Water Quality Issues

- Current end-result provisions are broad, vague and open-ended, which makes them difficult for determining compliance for MS4 permittees. Rather than generically referencing and requiring compliance with all water quality standards, end-result provisions (or other similar water quality standards provisions) need to clearly identify which water quality standards are at issue and being regulated by the MS4 permit.

- Such modification needs to allow for compliance to be met on a tiered (or priority-based) approach to identify and address priority water quality issues[5].
    - Priorities should be based on actual beneficial use impacts and the frequency/persistence of receiving water and/or discharge exceedances (water quality priorities) as associated with MS4 discharges.
    - Priorities should also be based on "controllable" water quality issues for which MS4s have the ability to affirmatively address rather than the presence of pollution or pollutants that are ubiquitous in the environment.
- Establish that the following principles will be used to comply with priority water quality standards
    - Compliance for MS4 permittees needs to allow for timely implementation of strategies and actions (BMP-based) (i.e., not demonstrating that the receiving water meets applicable water quality standards) either through:
        - Inclusion of **prescriptive permit language** that identifies which actions, if implemented, constitute compliance with select water quality standards specifically identified as a priority (e.g., Phase II Permit, Region 2 Municipal Regional Permit); **OR**,
        - Development of an **implementation plan**, (e.g., Watershed Management Plan, Water Quality Improvement Plan, Stormwater Management Plan) that includes enforceable timeframes for implementing actions.

      For prescriptive permit requirements that are directly related to meeting select water quality standards, the time to implement the prescriptive requirements must act as an in-permit compliance schedule under Water Code section 13263. For an approved implementation plan, the schedule in the approved plan for implementing identified actions must act as an in-permit time schedule per Water Code section 13263. In either case, the Permit or implementation plan contains prescriptive requirements, strategies, and actions that provide reasonable assurance that the discharges, over time, will not cause exceedances of water quality standards.

Modification #5: Compliance Pathway(s) for TMDLs

Since TMDLs essentially address prioritized water quality standards, modifications #3 and #4 apply equally to compliance with TMDL provisions. In other words, permit provisions that incorporate TMDLs into MS4 permits need to incorporate the same principles above. Specifically, such provisions need to act as a clear permit shield and be clear and concise. They must also be practical and feasible considering the complexities associated with municipal stormwater and the primary pollutants of concern such as bacteria. CASQA recognizes the challenges when incorporating some TMDLs that have past compliance dates and that have not been properly updated. However, this challenge can be easily overcome by using BMP-based compliance options, which the court clearly recognized in *City and County of SF v. EPA*.

[5] This approach is consistent with CASQA's Vision for Sustainable Stormwater Management, which (a) recognizes "True Source Control" efforts as a BMP (i.e., seeking to eliminate sources of pollutants into the environment), (b) targets non-structural and structural actions, where warranted, that best address the water quality priorities; and, (c) maximizes stormwater capture and use where feasible.

Modification #6: Implementation Plan Components

Consistent with Order WQ 2015-0075, if an implementation plan is included as a mechanism for complying with select or prioritized water quality standards, Phase I permit provisions should align with the following principles[6]:

1. Rigorous and transparent plan that allows permittees appropriate time to come into compliance with RWLs without being in violation of the RWLs during full implementation of the plan.
2. Have rigor and accountability. Permittees should be required, through a transparent process, to show that they have analyzed the water quality issues in the watershed, prioritized those issues, and proposed appropriate solutions. Permittees should be further required, again through a transparent process, to monitor the results and return to their analysis to verify assumptions and update the solutions. Permittees should be required to conduct this type of adaptive management on their own initiative without waiting for direction from the regional water board.
3. Ensure plans clearly explain their development process, identify enforceable milestones, and detail the water body-pollutant combinations to which the plans apply.
4. Encourage watershed-based approaches, address multiple contaminants, and incorporate TMDL requirements.
5. Encourage the use of green infrastructure and the adoption of low impact development principles.
6. Encourage multi-benefit regional projects that capture, infiltrate, and reuse stormwater and support a local sustainable water supply.
7. Encourage engagement in activities to support true source control for priority water quality issues.

Example Permit Language

To facilitate future conversations, we have provided illustrative permit language in Attachment A, demonstrating how each modification can be incorporated into various permit structures.

Conclusion

Thank you for considering of the perspective of the municipal stormwater community. As always, we are committed to working in partnership with Water Board staff and look forward to ongoing conversations related to municipal stormwater permitting. For any questions or follow up based upon this letter, you can reach me at karen.cowan@casqa.org.

Sincerely,

Karen Cowan, Executive Director
California Stormwater Quality Association

Attachments: Attachment A: Example Permit Language that Incorporates Principles of CASQA's Approach

Cc: Karen Mogus, State Water Resources Control Board
Michael Lauffer, State Water Resources Control Board
Phil Crader, State Water Resources Control Board
CASQA Board of Directors, Policy and Permitting Subcommittee, Phase II Subcommittee

[6] It is recognized that Order WQ 2015-0075 established certain principles for Regional Water Boards to follow when preparing Phase I MS4 permits.

Attachment A

Example Permit Language that Incorporates Principles of CASQA's Approach

California employs a variety of stormwater permitting approaches. Broadly, these approaches fall into two categories: prescriptive permits (e.g., the Phase II Permit and Region 2) and implementation plan-based permits (e.g., Regions 4, 5, and 9).

The following sections present three illustrative examples that could be used to update MS4 permits. These examples are not exhaustive but are intended to demonstrate how Modifications #1–6, outlined above, could be applied within different permit structures.

- Example 1: Phase II – Prescriptive Permit
- Example 2: Phase I – Prescriptive Permits (e.g., Region 2)
- Example 3: Phase I – Implementation Plan-Based Permits (e.g., Regions 4, 5, and 9)

EXAMPLE #1: PHASE II – PRESCRIPTIVE PERMIT

This example incorporates the principles for the Phase II Permit (note this language has been specifically developed for Traditional Phase II Permittees; additional revisions may need to be considered and developed for non-traditional Phase II Permittees).

This example language is based, in part, on (1) the Informal Draft Small MS4 Permit released in July 2024 and (2) the prescriptive permitting approach utilized in Region 2.

Modification #1: Separation of Federal vs. State Permit Requirements

As identified above, should the State Water Board maintain end-result provisions using authority under Porter-Cologne, those provisions need to be effectively removed from portions of the Permit that are designed to meet the mandates of the Clean Water Act. It must be clear that the inclusion of end-result provisions is outside the scope of the Clean Water Act and thus is outside of potential citizen suit liability otherwise available for failure to comply with an NPDES permit.

Modification #2: Inclusion of New Findings and Other Permit Provisions

New Findings will be necessary and they will vary from Permit to Permit. For example, all findings and references to discharge prohibitions and receiving water limitations that are 'end-result' provisions will need to be revised in light of *City and County of SF v. EPA*. For example, in Order 2013-0001-DWQ, Finding at ¶ 37 states that the receiving water limitations language is consistent with State Water Board Order WQ 99-05. The language in Order WQ 99-05 was dictated by U.S. EPA, presumably based on their mistaken belief that they had the authority to require compliance with end result provisions such as those expressed in receiving water limitations. Now that SCOTUS has found no such authority under the Clean Water Act, U.S. EPA's dictates on this issue no longer apply.

Modification #3: Inclusion of Clear and Concise Compliance Language –

Add language to Discharge Prohibitions (DPs), Effluent Limitations (ELs), and Receiving Water Limitations (RWLs) which recognizes that compliance with the TMDLs constituents compliance with the DPs, Els, and RWL for the applicable pollutant-water body combination.

Remove from Main Body of Order to Porter-Cologne Separate Order or Specific Section

5. Discharge Prohibitions

[Add] Compliance with Attachment G constitutes compliance with the discharge prohibitions (Section 5.4-5.7) for the applicable pollutant-waterbody combination(s).

6. Effluent Limitations

2. Permittees shall reduce the discharge of pollutants as necessary to comply with total maximum daily load (TMDL) wasteload allocations in accordance with Attachment G. [Add] Compliance with Attachment G constitutes compliance with the effluent limitations (Section 6.1) for the applicable pollutant-waterbody combination(s).

7. Receiving Water Limitations

Proposed language included in section below

Attachment G – Total Maximum Daily Load Implementation, Compliance and Reporting Requirements

[Add] Compliance with the TMDL(s) requirements constitutes compliance with the Discharge Prohibitions (Sections 5.4-5.7), Effluent Limitations (Section 6.1), Receiving Water Limitations (Section 7).

Modification #4: Modify End Result Provisions[7]

[Replace the language with the following and clearly identify that such language implements State Law. For example, NPDES permit template language in POTW permits calls out specific permit provisions that are included to implement state law only. After identifying such provisions, the language states as follows: "These provisions/requirements are not required or authorized under the federal CWA; consequently, violations of these provisions/requirements are not subject to the enforcement remedies that are available for NPDES violations."]

XX. RECEIVING WATER LIMITATIONS

1. *Except as provided in Parts XX.3, XX.4, and XX.5 below, discharges from the MS4 for which a Permittee is responsible shall not cause an exceedance of any*[8] *applicable water quality standard.*
2. *Discharges of pollutants in urban runoff from the Permittees' MS4s must comply with Part XX.1 through timely implementation of (BMPs) and other actions to reduce pollutants in discharges according to the conditions and provisions of this Order. If a condition of nuisance or exceedances of water quality standards persist, despite implementing BMPs and other actions, the responsible Permittees may either: 1) submit evidence that can demonstrate, to the satisfaction of the Executive Officer, that its discharge did not cause the exceedance of the standard or 2) demonstrate compliance with the provisions in Part XX. A demonstration that the discharger did not cause the exceedance of the receiving water limit or water quality standard may be made through any of the following methods:*
    a) *Demonstrating that there was no discharge from the Permittee's MS4 into the affected receiving water during the relevant time period.*
    b) *Demonstrating that the discharge from the Permittee's MS4 was controlled to a level that it did not cause the exceedance in the receiving water.*

[7] The proposed language is based on language from the San Francisco Bay Region Municipal Regional Stormwater NPDES Permit (Order No. R2-2022-0018).

[8] For the purposes of this illustration, CASQA has retained the vague, broad reference to "any" applicable water quality standard. However, as provided above, the Water Boards water quality standards provisions in MS4 permits should identify and prioritize the applicable water quality standards being specifically regulated by the permit rather than including broad, generic references to all standards.

c) *Demonstrating that there is an alternative source of the pollutant that caused the exceedance; that the pollutant is not typically associated with the MS4 discharges; or that the pollutant was not discharged from the Permittee's MS4.*

d) *Providing objective evidence, acceptable to the Executive Officer, that there is a trend indicating that the relevant pollutant loads, or concentrations are decreasing and that the applicable water quality standard(s) are expected to be satisfied without further intervention.*

3. *In instances where discharges from the MS4 for which the permittee is responsible (1) causes an exceedance of any applicable water quality standard per Part XX.2; (2) the receiving water is not subject to an approved TMDL that is in effect for the constituent(s) involved; (3) the constituent(s) associated with the discharge is otherwise not specifically addressed by a provision of this Order, and (4) the Permittee is not demonstrating compliance through the provisions in Part XX the Permittee shall comply with the following iterative procedure:*

    a. *Submit a report to the Water Board that describes describe the BMPs that are currently being implemented by the Permittee and additional BMPs, including modifications to current BMPs that will be implemented to prevent or reduce any pollutants that are causing or contributing to the exceedances of receiving water limitations. The Report shall include an implementation schedule. The report may be submitted in conjunction with the Annual Report, unless the Water Board directs an earlier submittal.*

    b. *Submit any modifications to the report required by the Regional Water Board within 60 days of notification. The report is deemed approved within 60 days of its submission if no response is received from the Regional Water Board.*

    c. *Implement the actions specified in the report in accordance with the acceptance or approval, including the implementation schedule and any modifications to this Order.*

    d. *As long as the Permittee has complied with the procedure set forth above and is implementing the actions, 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 Regional Water Board to develop additional BMPs.*

4. *For Receiving Water Limitations associated with waterbody-pollutant combinations addressed in an adopted TMDL that is in effect and that has been incorporated in this Order, the Permittees shall achieve compliance as outlined in Part XX (Total Maximum Daily Load Provisions) of this Order.*

5. *If a Permittee is found to have discharges from its MS4 causing an exceedance of an applicable water quality standard in the receiving water, the Permittee shall be deemed in compliance with Parts XX.1 and XX.2 above, unless it fails to implement the requirements provided in Parts XX.3 and XX.4 or as otherwise covered by a provision of this order specifically addressing the constituent in question, as applicable.*

Permittees will not be in violation of the Receiving Water Limitations so long as they are in compliance with the requirements set forth in Section XX.

Modification #5: *Compliance Pathway(s) for TMDLs*

The Permittees demonstrate compliance with the TMDLs through the pathways included within the Permit [may require a TMDL-by-TMDL assessment], including the following compliance pathway:

- *A Permittee is implementing an approved [Implementation Plan], consistent with the actions and schedules therein, to address the interim and final TMDL limitations pursuant to Part XX (Implementation Plan) of this Order*.

Modification #6: Implementation Plan Components

The principles outlined in State Board Order WQ 2015-0075 do not directly apply to the Phase II Permit.

EXAMPLE #2: PHASE I - PRESCRIPTIVE PERMITS

This example illustrates the approach for Phase I Permits that utilize a prescriptive permitting structure (e.g., Region 2). The language is based on and modified from the San Francisco Bay Region Municipal Regional Stormwater Permit (Order No. R2-2022-0018).

Modification #1: Separation of Federal vs. State Permit Requirements

As identified above, should the State Water Board maintain end-result provision language, those provisions need to be effectively removed from portions of the Permit that are designed to meet the mandates of the Clean Water Act. It must be clear that the inclusion of end-result provisions is outside the scope of the Clean Water Act and thus is outside of potential private citizen suit liability otherwise available for failure to comply with an NPDES permit.

Modification #2: Inclusion of New Findings and Other Permit Provisions

New Findings will be necessary, however they will vary from Permit to Permit; one example is below.
All findings and references to end-result provisions will need to be revised in light of *City and County of SF v. EPA*. For example, in Order No. R2-2022-0018, Fact Sheet, Section B (Receiving Water Limitation B.2 Legal Authority) and Section C. Provisions cite that the receiving water limitations language is consistent with State Water Board Order WQ 99-05. The language in Order WQ 99-05 was dictated by U.S. EPA, presumably based on their mistaken belief that they had the authority to require compliance with receiving water limitations. Now that SCOTUS has found no such authority under the Clean Water Act, U.S. EPA's dictates on this issue no longer apply.

Modification #3: Inclusion of Clear and Concise Compliance Language

[no modifications currently identified]

Modification #4: Modify End Result Provisions to Language

[Clearly identify that the end result provisions implement State Law. For example, NPDES permit template language in POTW permits calls out specific permit provisions that are included to implement state law only. After identifying such provisions, the language states as follows: "These provisions/requirements are not required or authorized under the federal CWA; consequently, violations of these provisions/requirements are not subject to the enforcement remedies that are available for NPDES violations."]

Add - Permittees will not be in violation of the Receiving Water Limitations so long as they are in compliance with the requirements set forth in Section C.1.

Modification #5: Compliance Pathway(s) for TMDLs

[no modifications currently identified]

Modification #6: Implementation Plan Components

The principles outlined in State Board Order WQ 2015-0075 have been addressed in the Region 2 Permit (see Attachment A – pages A-97-104, page A 232, and pages 297-207).

EXAMPLE #3: PHASE I - IMPLEMENTATION PLAN-BASED PERMITS

This example illustrates an approach for Phase I Permits that utilize an Implementation Plan-Based permitting structure (e.g., Region 4, Region 5, and Region 9). The approach is based upon (1) language previously developed by CASQA in 2012 as part of a workshop held by the State Water Board on how to address compliance with

receiving water limitations in MS4 permits, in response to a prior Ninth Circuit Court of Appeal decision[9] and (2) language from several other Phase I MS4 permits throughout the state (either currently in effect or in the reissuance process).

Modification #1: Separation of Federal vs. State Permit Requirements

As identified above, should the State Water Board maintain end-result provisions, those provisions need to be effectively removed from portions of the Permit that are designed to meet the mandates of the Clean Water Act. It must be clear that the inclusion of end-result provisions is outside the scope of the Clean Water Act and thus is outside of potential private citizen suit liability otherwise available for failure to comply with an NPDES permit.

Modification #2: Inclusion of New Findings

New Findings will be necessary, however they will vary from Permit to Permit.

Modification #3: Inclusion of Clearn and Concise Compliance Language

Add language to Discharge Prohibitions (DPs), Effluent Limitations (ELs), and Receiving Water Limitations (RWLs) which recognizes that compliance with the TMDLs constituents compliance with the DPs, Els, and RWL for the applicable pollutant-water body combination.

Modification #4: Modify End Result Provisions

[Clearly identify that the end-result provisions implement State Law. For example, NPDES permit template language in POTW permits calls out specific permit provisions that are included to implement state law only. After identifying such provisions, the language states as follows: "These provisions/requirements are not required or authorized under the federal CWA; consequently, violations of these provisions/requirements are not subject to the enforcement remedies that are available for NPDES violations."]

XX. RECEIVING WATER LIMITATIONS

3. *Except as provided in Parts XX.3, XX.4, and XX.5 below, discharges from the MS4 for which a Permittee is responsible shall not cause an exceedance of any[10] applicable water quality standard.*

4. *Discharges of pollutants in urban runoff from the Permittees' MS4s must comply with Part XX.1 through timely implementation of (BMPs) and other actions to reduce pollutants in discharges according to the conditions and provisions of this Order. If a condition of nuisance or exceedances of water quality standards persist, despite implementing BMPs and other actions, the responsible Permittees may either: 1) submit evidence that can demonstrate, to the satisfaction of the Executive Officer, that its discharge did not cause the exceedance of the standard or 2) demonstrate compliance with the provisions in Part XX (Implementation Plans). A demonstration that the discharger did not cause the exceedance of the receiving water limit or water quality standard may be made through any of the following methods:*

    e) *Demonstrating that there was no discharge from the Permittee's MS4 into the affected receiving water during the relevant time period.*

    f) *Demonstrating that the discharge from the Permittee's MS4 was controlled to a level that it did not cause the exceedance in the receiving water.*

[9] See, e.g., NRDC v. County of LA (9th Cir. 2011) 673-F.3d 880, 897. See also, State Water Board Order WQ 2015-0075, pp. 10-16

[10] See footnote 7 above.

g) Demonstrating that there is an alternative source of the pollutant that caused the exceedance; that the pollutant is not typically associated with the MS4 discharges; or that the pollutant was not discharged from the Permittee's MS4.

h) Providing objective evidence, acceptable to the Executive Officer, that there is a trend indicating that the relevant pollutant loads, or concentrations are decreasing and that the applicable water quality standard(s) are expected to be satisfied without further intervention.

6. In instances where discharges from the MS4 for which the permittee is responsible (1) causes an exceedance of any applicable water quality standard per Part XX.2; (2) the receiving water is not subject to an approved TMDL that is in effect for the constituent(s) involved; (3) the constituent(s) associated with the discharge is otherwise not specifically addressed by a provision of this Order, and (4) the Permittee is not demonstrating compliance through the provisions in Part XX (Implementation Plans) the Permittee shall comply with the following iterative procedure:

a. Submit a report to the Water Board that describes describe the BMPs that are currently being implemented by the Permittee and additional BMPs, including modifications to current BMPs that will be implemented to prevent or reduce any pollutants that are causing or contributing to the exceedances of receiving water limitations. The Report shall include an implementation schedule. The report may be submitted in conjunction with the Annual Report, unless the Water Board directs an earlier submittal.

b. Submit any modifications to the report required by the Regional Water Board within 60 days of notification. The report is deemed approved within 60 days of its submission if no response is received from the Regional Water Board.

c. Implement the actions specified in the report in accordance with the acceptance or approval, including the implementation schedule and any modifications to this Order.

d. As long as the Permittee has complied with the procedure set forth above and is implementing the actions, 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 Regional Water Board to develop additional BMPs.

7. For Receiving Water Limitations associated with waterbody-pollutant combinations addressed in an adopted TMDL that is in effect and that has been incorporated in this Order, the Permittees shall achieve compliance as outlined in Part XX (Total Maximum Daily Load Provisions) of this Order.

8. If a Permittee is found to have discharges from its MS4 causing an exceedance of an applicable water quality standard in the receiving water, the Permittee shall be deemed in compliance with Parts XX.1 and XX.2 above, unless it fails to implement the requirements provided in Parts XX.3 and XX.4 or as otherwise covered by a provision of this order specifically addressing the constituent in question, as applicable.

Permittees will not be in violation of the Receiving Water Limitations so long as they are in compliance with the requirements set forth in Section XX.

Modification #5: Compliance Pathway(s) for TMDLs

The Permittees demonstrate compliance with the TMDLs through the pathways included within the Permit [may require a TMDL-by-TMDL assessment], including the following compliance pathway:

- *A Permittee is implementing an approved [Implementation Plan], consistent with the actions and schedules therein, to address the interim and final TMDL limitations pursuant to Part XX (Implementation Plan) of this Order*.

Modification #6: Implementation Plan Components

The principles outlined in State Board Order WQ 2015-0075 are addressed in Part XX (Implementation Plan).