ATTACHMENT TO TENTATIVE RESOLUTION NO. R8-~~2005-0001-~~2026-0014

Amendment to the Santa Ana Region Basin Plan

Chapter 6 ~~5 - Implementation Plan~~ Total Maximum Daily Loads

[*NOTE: The following language is proposed to be added in Chapter 6, Total Maximum Daily Loads (TMDLs) of the Water Quality Control Plan for the Santa Ana Region (Basin Plan). If the amendments are approved, corresponding changes will be made to the Table of Contents, the List of Tables, page numbers, page headers, and reference numbers in Chapter 6 of the Basin Plan. For formatting purposes, the maps may be redrawn for inclusion in the Basin Plan, and the final layout may differ from that of the draft.*]

Middle Santa Ana River Watershed

The Middle Santa Ana River (MSAR) Watershed ~~covers~~ encompasses approximately 488 square miles and lies largely in the southwestern ~~corner~~ portion of San Bernardino County, and the northwestern ~~corner~~ portion of Riverside County. A small portion ~~part~~ of Los Angeles County, including the ~~(~~Pomona/Claremont area~~),~~ is also included within the watershed boundary. The MSAR watershed is comprised of ~~three~~ four subwatersheds: Chino Creek, Mill-Cucamonga Creek, Santa Ana River Reach 3, and Temescal Creek. Prado Park Lake, which is listed as impaired and subject to the MSAR Total Maximum Daily Loads (TMDLs), has relatively small watershed draining into the lake. ~~The first sub-watershed is t~~The Chino Basin Watershed ~~which~~ includes portions of San Bernardino County, Los Angeles County, and Riverside County. Surface drainage in this area is directed to Chino Creek and Cucamonga/Mill Creek and is generally southward~~,~~ from the San Gabriel Mountains toward the Santa Ana River and the Prado Flood Control Basin. The ~~second sub-watershed, the~~ ~~RiversideWatershed~~ Santa Ana River Reach 3 subwatershed is located in Riverside County. Surface drainage in this area ~~is~~ generally flows westward from the City of Riverside to the Santa Ana River, Reach 3. The ~~third sub-watershed, the Temescal Canyon Watershed~~ Temescal Creek subwatershed, is also located in Riverside County. Surface drainage in this area is generally northward to Temescal Creek. Temescal Creek. Temescal Creek is not listed as impaired and, therefore, is not included in the MSAR TMDLs.

Land uses in the ~~Middle Santa Ana River~~ MSAR watershed include urban, agriculture, and open space areas. ~~Although originally developed as an~~ While the watershed was historically dominated by agricultural ~~uses~~ land uses, it has undergone substantial and ongoing urbanization. Incorporated cities ~~in~~ within the ~~Middle Santa Ana River~~ MSAR watershed include Pomona, Chino Hills, Upland, Montclair, Claremont, Ontario, Rancho Cucamonga, Rialto, Chino, Fontana, Norco, Corona, and Riverside. In addition, there are several pockets of urbanized unincorporated areas within the watershed. Based on 2023 census data, ~~The~~ the current population of the MSAR watershed is approximately 1.74 ~~-~~million people. The principal remaining agricultural area in the watershed is the

area formerly known as the Chino Dairy Preserve. This area is located in the south–central ~~part~~ portion of the Chino Basin subwatershed. ~~and contains approximately 300,000 cows, which generate the waste equivalent of more than two million people~~. As of 2025, the number of animal units has declined significantly from 300,000 in 2005 to less than 30,000, representing a reduction of more than 90%. The number of dairies and cows is expected to continue to decline in the future [Ref. #1]. ~~Recently, the cities of Ontario and Chino~~ Portions of the former Chino Dairy Preserve have been annexed by the ~~San Bernardino County portions of this area.~~ Cities of Ontario and Chino. The remaining portion of the former preserve, which is in Riverside County~~,~~ remains unincorporated. Open space ~~areas~~ lands within the MSAR Watershed include National Forest lands and State Parks lands.

Middle Santa Ana River Watershed Bacterial Indicator Total Maximum Daily Loads (TMDLs)

~~Middle Santa Ana River~~ MSAR Watershed waterbodies listed on the Clean Water Act Section 303(d) list of impaired waters due to violations of ~~REC1~~ REC-1 fecal coliform bacteria objectives are shown in Table ~~5-9w~~ 6-1w.

Table ~~5-9w~~ 6-1w – Middle Santa Ana River Watershed Waterbodies on the 303(d) List Due to Bacterial Contamination

Waterbody, Reach
Santa Ana River, Reach 3
Chino Creek, Reach 1
Chino Creek, Reach 2
Mill Creek (Prado Area)
Cucamonga Creek, Reach 1
Prado Park Lake

During storm events, these waterbodies receive and transport runoff from urban, agricultural, and open space areas. During dry weather, these waterbodies receive and transport nuisance runoff, primarily from urban areas. Based on monitoring results and observed waterbody conditions (fish kills and waste-laden stormflows), the Regional Board placed these waterbodies on the 303(d) list of impaired waters due to levels of bacterial indicators that exceeded established objectives for ~~REC1~~ REC-1 uses. The listings took place from 1988 to 1998.

A 2005 TMDL Technical Report prepared by Regional Board staff describes the bacterial indicator related problems in the ~~Middle Santa Ana River~~ MSAR Watershed waterbodies in greater detail and discusses the technical basis for the TMDLs that follow [Ref. #2]. A 2026 MSAR TMDL Technical Report prepared by GEI Consultants, Inc., further describes the MSAR Watershed waterbodies and studies and technical information prepared and collected since adoption of the 2005 TMDLs. The 2026 MSAR

TMDL Technical Report includes the technical basis for extending the Wet Winter Conditions attainment deadline from December 31, 2025, to December 31, 2035.

A. Middle Santa Ana River Watershed Bacterial Indicator TMDL Numeric Targets

Bacterial indicator numeric targets for the ~~Middle Santa Ana River~~ MSAR Watershed waterbodies shown in Table ~~5-9w~~ 6-1w are based, in part, on the fecal coliform water quality objective specified in Chapter 4 for the protection of body-contact recreation ~~(REC1)~~ (REC-1) in inland surface waters.

Recognizing that, in the future, *Escherichia coli* (*E. coli*) may be incorporated into the Basin Plan as new bacterial water quality objectives for ~~REC1~~ REC-1, alternative numeric targets for *E. coli* are also specified[1]. These targets are based on *E. coli* criteria recommended by the U.S. Environmental Protection Agency [Ref #3]. The *E. coli* levels were chosen to roughly correspond to the health risk level associated with the fecal coliform objectives.

The numeric targets for both bacterial indicators incorporate an explicit 10% margin of safety to address uncertainties recognized in the development of the TMDLs.

These numeric targets are specified as follows:

> **Fecal coliform: log mean less than 200 organisms/100 mL based on five or more samples per 30 day period, and not more than 10% of the samples exceed 400 organisms/100 mL for any 30–day period.**
>
> ***E. coli*: log mean less than 126 organisms/100 mL based on five or more samples per 30–day period, and not more than 10% of the samples exceed 235 organisms/100mL for any 30 day period.**

The fecal coliform numeric targets (and other fecal coliform related provisions of these TMDLs) will become ineffective upon the replacement of the fecal coliform ~~REC1~~ REC-1 objectives in the Basin Plan with ~~REC1~~ REC-1 objectives based on *E. coli.* On February 4, 2019, Part 3 of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California, Bacteria Provisions and a Water Quality Standards Variance Policy (Inland Surface Waters Plan), as adopted by the State Water Resources Control Board, became effective. The Inland

[1] USEPA is requiring the states to evaluate and incorporate more appropriate bacterial indicators, including *E. coli*, as water quality standards based on its Ambient Water Quality Criteria for Bacteria – 1986. The Regional Board is participating in the efforts of the Storm Water Quality Standards Task Force (SWQSTF), which is evaluating USEPA's bacterial indicator recommendations and REC1 beneficial use designations for waterbodies within the Santa Ana Region, including the Middle Santa Ana River watershed waterbodies. This numeric target and resulting TMDLs, WLAs and LAs will be adjusted accordingly when and if recommendations from the SWQSTF are incorporated into the Basin Plan.

Surface Waters Plan adopted statewide Bacteria Water Quality Objectives applicable to all waters with the REC-1 beneficial use. The Bacteria Water Quality Objectives include *E. coli* and Enterococci objectives, depending on the salinity of the receiving water. Under the Bacteria Water Quality Objectives provisions, TMDLs established before February 4, 2019, remain in effect. Incorporation of new *E. coli* objectives will be considered through the Basin Planning process.

B. Middle Santa Ana River Watershed Bacterial Indicator TMDLs, Wasteload Allocations, Load Allocations and Compliance Dates

As discussed in the 2005 ~~technical~~ TMDL Technical Report, the bacterial indicator TMDLs are expressed in terms of density since it is the number of organisms in a given volume of water (i.e., their density), and not their mass that is significant with respect to public health and the protection of beneficial uses. Similarly, the wasteload allocations for point source discharges (WLAs) and load allocations for nonpoint source discharges (LAs) are also based on density. The density–based WLAs and LAs do not add up to equal the TMDLs, since this is not scientifically valid. To achieve the density–based TMDLs, each WLA and LA must meet the density–based TMDL. As indicated in Table ~~5-9x~~ 6-1x, the TMDLs, WLAs and LAs also include a 10% margin of safety (see C., below) applied to the existing Basin Plan fecal coliform objective for ~~REC1~~ REC-1 for inland surface waters and to the alternative indicator *E. coli* criteria recommended by the U.S. Environmental Protection Agency. Again, the *E. coli* was chosen to correspond with the health risk level associated with the fecal coliform objectives.

WLAs are specified for urban discharges and discharges from Confined Animal Feeding Operations, including stormwater. LAs are specified for runoff from other types of agriculture and from natural sources (open space/undeveloped forest land). TMDLs, WLAs and LAs are specified for both dry weather discharges and wet weather discharges, with separate compliance schedules. An extended schedule for compliance with the wet weather TMDLs is specified, and supported by the revised MSAR TMDL Technical Report, in light of the expected increased difficulty in achieving compliance under these conditions.

Table ~~5-9x~~ 6-1x – Total Maximum Daily Loads, Waste Load Allocations, and Load Allocations for Bacterial Indicators in Middle Santa Ana River Waterbodies[a,b,c]

Indicator	Total Maximum Daily Loads for Bacterial Indicators	Waste Load Allocation for Bacterial Indicators in Urban Runoff including stormwater discharges	Waste Load Allocation for Bacterial Indicators in Confined Animal Feeding Operations discharges	Load Allocation for Bacterial Indicators in Agricultural runoff discharges	Load Allocation for Bacterial Indicators from Natural Sources
Dry Summer Conditions: April 1 through October 31, as soon as possible, but no later than December 31, 2015					
Fecal coliform	5–sample/30–day Logarithmic Mean less than 180 organisms/100mL, and not more than 10% of the samples exceed 360 organisms/100mL for any 30–day period.	5–sample/30–day Logarithmic Mean less than 180 organisms/100mL, and not more than 10% of the samples exceed 360 organisms/100mL for any 30–day period.	5–sample/30–day Logarithmic Mean less than 180 organisms/100mL, and not more than 10% of the samples exceed 360 organisms/100mL for any 30–day period.	5–sample/30–day Logarithmic Mean less than 180 organisms/100mL, and not more than 10% of the samples exceed 360 organisms/100mL for any 30–day period.	5–sample/30–day Logarithmic Mean less than 180 organisms/100mL, and not more than 10% of the samples exceed 360 organisms/100mL for any 30–day period.
E. coli	5–sample/30–day Logarithmic Mean less than 113 organisms/ 100mL, and not more than 10% of the samples exceed 212 organisms/100mL for any 30–day period.	5–sample/30–day Logarithmic Mean less than 113 organisms/ 100mL, and not more than 10% of the samples exceed 212 organisms/100mL for any 30–day period.	5–sample/30–day Logarithmic Mean less than 113 organisms/ 100mL, and not more than 10% of the samples exceed 212 organisms/100mL for any 30–day period.	5–sample/30–day Logarithmic Mean less than 113 organisms/ 100mL, and not more than 10% of the samples exceed 212 organisms/100mL for any 30–day period.	5–sample/30–day Logarithmic Mean less than 113 organisms/ 100mL, and not more than 10% of the samples exceed 212 organisms/100mL for any 30–day period.
Wet Winter Conditions: November 1 through March 31, as soon as possible, but no later than December 31, ~~2025~~ 2035					
Fecal coliform	5–sample/30–day Logarithmic Mean less than 180 organisms/100ml, and not more than 10% of the samples exceed 360 organisms/100ml for any 30–day period.	5–sample/30–day Logarithmic Mean less than 180 organisms/100ml, and not more than 10% of the samples exceed 360 organisms/100ml for any 30–day period.	5–sample/30–day Logarithmic Mean less than 180 organisms/100ml, and not more than 10% of the samples exceed 360 organisms/100ml for any 30–day period.	5–sample/30–day Logarithmic Mean less than 180 organisms/100ml, and not more than 10% of the samples exceed 360 organisms/100ml for any 30–day period.	5–sample/30–day Logarithmic Mean less than 180 organisms/100ml, and not more than 10% of the samples exceed 360 organisms/100ml for any 30–day period.
E. coli	5–sample/30–day Logarithmic Mean less than 113 organisms/ 100mL, and not more than 10% of the samples exceed 212 organisms/100mL for any 30–day period.	5–sample/30–day Logarithmic Mean less than 113 organisms/ 100mL, and not more than 10% of the samples exceed 212 organisms/100mL for any 30–day period.	5–sample/30–day Logarithmic Mean less than 113 organisms/ 100mL, and not more than 10% of the samples exceed 212 organisms/100mL for any 30–day period.	5–sample/30–day Logarithmic Mean less than 113 organisms/ 100mL, and not more than 10% of the samples exceed 212 organisms/100mL for any 30–day period.	5–sample/30–day Logarithmic Mean less than 113 organisms/ 100mL, and not more than 10% of the samples exceed 212 organisms/100mL for any 30–day period.

[a] To be achieved as soon as possible, but no later than dates specified.
[b] TMDLs, WLAs and LAs, include a 10% Margin of Safety
[c] The fecal coliform TMDLs, WLAs and LAs become ineffective upon the replacement of the ~~REC1~~ REC-1 fecal coliform objectives in the Basin Plan by approved ~~REC1~~ REC-1 objectives based on *E. coli*.

C. Margin of Safety

A 10% margin of safety is explicitly incorporated into the Bacterial Indicator TMDLs for the ~~Middle Santa Ana River~~ MSAR Watershed to account for unknowns, such as bacterial regrowth, bacteria dilution and organism die–off. As additional data on bacterial dynamics in the ~~Middle Santa Ana River watershed~~ MSAR Watershed are developed, the margin of safety can be adjusted accordingly.

D. Seasonal Variations/Critical Conditions

The Basin Plan ~~REC1~~ REC-1 fecal coliform objectives apply year-round~~; no distinctions based on climate or other conditions that may affect actual REC1 use are specified[2]~~. except as otherwise specified in the Basin Plan. As shown in Table ~~5-9x~~ 6-1x, different compliance dates are specified for dry season discharges and wet season discharges. This ensures that dry season recreational beneficial uses are addressed on a priority basis. Additional time is allowed to address complexities associated with the control of wet weather discharges.

E. TMDL Implementation

Implementation is expected to result in compliance with the water quality objectives/numeric targets for fecal coliform and with the numeric targets for *E. coli*. The intent is to ensure protection of the ~~REC1~~ REC-1 beneficial uses of ~~Middle Santa Ana River~~ MSAR Watershed waterbodies. Collection of additional monitoring data is critical to developing long-term solutions for bacterial indicator control, as well as to consider whether changes to the TMDL are appropriate. With that in mind, the requirements for submittal of plans and schedules to implement the TMDLs take into consideration the need to develop and implement effective short-term solutions, as well as allow for the development of long-term solutions once additional data have been generated.

Implementation of Phase 1 tasks and schedules, as specified in Table 5-9y of the 2005 TMDL Technical Report, was expected to achieve compliance with the TMDLs and, thereby, water quality standards. The Phase 1 tasks were generally implemented as described in the 2005 TMDL Technical Report. With the extension of the Wet Winter Conditions attainment date from December 31, 2025, to December 31, 2035 (Revised TMDLs), Phase 2 tasks and schedules replace the Phase 1 tasks in Table 6-1y. The Wet Winter Conditions TMDLs are established and implemented as phased TMDLs because of significant data uncertainty and because the Santa Ana Water Board anticipates that the numeric targets and allocations may be revised as additional information is collected. During Phase 2, implementation of tasks will also consider and be consistent with amendments to "Water Quality Objectives" in Chapter 4 of the Basin Plan that occurred after 2005 via Resolution No. R8-2012-0001.

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[2] ~~The SWQSTF may recommend changes to the REC1 objectives to reflect conditions, such as high flows, that affect REC1 use. Any such changes will be considered through the Basin Planning process.~~

Table ~~5-9y~~ 6-1y – Middle Santa Ana River Watershed Bacterial Indicator TMDL Phase 2 Implementation Plan/Schedule Due Dates

Task	Description	Compliance Date As Soon As Possible but No Later Than
TMDL Phase 2		
Task 1	Stakeholder Coordination	Ongoing throughout Phase 2
Task 2	Revise Permits and Other Regulatory Actions	As appropriate, when needed, at the discretion of the regulatory agency.
Task 3	Revise Existing Watershed Implementation Plans (Comprehensive Bacteria Reduction Plans (CBRPs)) for the Dry Summer Conditions TMDLs.	Phase 1 MS4s submit revised CBRP (or equivalent watershed management plan) to the Regional Board within two (2) years of revised TMDLs being incorporated into permit or other order, as applicable; Phase II/Small MS4s submit revised FBRPs to the Santa Ana Water Board within two (2) years of revised TMDLs being incorporated into permit or other order, as applicable. Continue to implement existing CBRP or FBRP, as applicable, until revised CBRP/FBRP (or equivalent watershed management plan) is approved by the Santa Ana Water Board or the Executive Officer of the Santa Ana Water Board.
Task 4	Develop and Implement Preliminary Wet Weather Controls	Within two (2) years of revised TMDLs effective date, submit Work Plan to the Santa Ana Water Board.
Task 5	Study: Application of High Flow Suspension to TMDLs	Within one (1) year of revised TMDLs effective date, submit Study to the Santa Ana Water Board.
Task 6	Study: Evaluate Controllable Sources of Bacteria Indicators in Wet Weather Conditions	Within one (1) year of revised TMDLs effective date, submit workplan to the Santa Ana Water Board's Executive Officer for review and approval. Within two (2) years from Santa Ana Water Board Executive Officer's approval of the Work Plan, submit completed study to Santa Ana Water Board's Executive Officer.
Task 7	Develop Wet Weather Source Prioritization Strategy	Within four (4) years of revised TMDLs effective date, or within one (1) year of submittal of the Study in Task 6, whichever is later, submit Wet Weather Source Prioritization Strategy to Santa Ana Water Board Executive Officer.
Task 8	Evaluate Options to Mitigate Controllable Sources of Bacterial Indicators in Wet Weather Conditions – Develop Wet Weather CBRP	Within five (5) years of revised TMDLs effective date, or within one (1) year of submittal of the Strategy in Task 7, whichever is later, submit wet weather CBRP to Santa Ana Water Board for Santa Ana Water Board Executive Officer or Santa Ana Water Board approval.
Task 9	Implement Wet Weather CBRP	Within six (6) months of Santa Ana Water Board or Santa Ana Water Board's Executive Officer approval of the Wet Weather CBRP, submit Work Plan for Implementation of Wet Weather CBRP.

Task	**Description**	**Compliance Date As Soon As Possible but No Later Than**
		Implement Wet Weather CBRP upon approval of the Work Plan by the Santa Ana Water Board's Executive Officer.
Task 10	Reopen and Revise MSAR TMDLs	No later than within two (2) years of the effective date of the revised TMDLs, begin process to reopen and revise MSAR TMDLs in their entirety. Within six (6) years of the effective date of the revised TMDLs, complete MSAR TMDL Revisions.
Task 11	Evaluate Progress and Status of Attainment of Milestones and TMDLs	By February 1 of every third year from the effective date of the revised TMDLs, submit Triennial Report that evaluates the progress and status of attainment of TMDLs to the Santa Ana Water Board's Executive Officer.
Task 12	Implement Watershed-wide TMDL Compliance Monitoring Program	Within one (1) year of revised TMDLs effective date, submit a revised monitoring program to the Santa Ana Water Board Executive Officer for review and approval. Implement revised monitoring program upon approval by the Santa Ana Water Board Executive Officer.
Task 13	Annual Water Quality Reports	By July 1 each year, after the effective date of the revised TMDLs, submit an Annual Water Quality Report to the Santa Ana Water Board based on the currently approved program.

~~**Task**~~	~~**Description**~~	~~**Compliance Date As soon As Possible but No Later Than**~~
~~***TMDL Phase 1***~~		
~~Task 1~~	~~Revise Existing Waste Discharge Requirements~~	~~February 28, 2008~~
~~Task 2~~	~~Identify Agricultural Operators~~	~~June 30, 2007~~
~~Task 3~~	~~Develop Watershed-Wide Bacterial Indicator Water Quality Monitoring Program~~ ~~Implement Watershed-Wide Bacterial Indicator Water Quality Monitoring Program~~	~~November 30, 2007~~ ~~Upon Regional Board approval~~ ~~Seasonal reports due May 31 and December 31 of each year~~ ~~Triennial reports due every 3 years beginning with first report due February 15, 2010.~~
~~Task 4~~	~~Urban Discharges~~ ~~4.1 Develop and Implement Bacterial Indicator Urban Source Evaluation Plan~~	~~Plan/schedule due~~ ~~4.1 November 30, 2007~~

~~Task~~	~~Description~~	~~Compliance Date-As soon As Possible but No Later Than~~
	~~4.2 San Bernardino County MS4: Revise Municipal Storm Water Management Program (MSWMP)~~ ~~4.3 Riverside County MS4: Revise Drainage Area Management Plan (DAMP)~~ ~~4.4 San Bernardino County MS4: Revise Water Quality Management Plan (WQMP)~~ ~~4.5 Riverside County MS4: Revise Water Quality Management Plan (WQMP)~~	~~4.2 Dependent on Task 4.1 results (see text)~~ ~~4.3 Dependent on Task 4.1 results (see text)~~ ~~4.4 Dependent on Task 4.1 results (see text)~~ ~~4.5 Dependent on Task 4.1 results (see text)~~
~~Task 5~~	~~Agricultural Discharges~~ ~~5.1 Develop and Implement Bacterial Indicator Agricultural Source Evaluation Plan~~ ~~5.2 Develop and Implement Bacterial Indicator Agricultural Source Management Plan~~	~~Plan/schedule due~~ ~~5.1 November 30, 2007~~ ~~5.2 Dependent on Task 5.1 results (see text)~~
~~Task 6~~	~~Review of TMDLs/WLAs/LAs~~	~~Once every 3 years to coincide with the Regional Board's triennial review, or more frequently as warranted~~

Task 1: Stakeholder Coordination

Santa Ana Water Board staff worked with stakeholders during development of the TMDLs through a TMDL Workgroup (facilitated and administered by SAWPA) established in August 2001. Subsequently, the MSAR Task Force was established in January 2006. Administered by SAWPA, the MSAR Task Force included many of the same entities that participated in the original TMDL Workgroup.

Since its inception in 2006, the MSAR Task Force and its members have worked collaboratively to implement elements of the Phase 1 TMDL Implementation Plan, including collaboration on numerous studies that have supported efforts to understand bacterial indicator sources in the MSAR watershed. Recognizing the success of the MSAR Task Force and its efforts to date, the Santa Ana Water Board supports continuation of the MSAR Task Force and its collaborative efforts for implementation of the Phase 2 TMDL Implementation Plan.

During Phase 2, the Santa Ana Water Board encourages continued stakeholder coordination through the MSAR Task Force and recommends that the MSAR Task Force meet routinely through Phase 2 of TMDL implementation. Further, where identified, it is expected that certain Phase 2 TMDLs tasks may be implemented by

the MSAR Task Force on behalf of its members. However, ultimate responsibility for implementation of various tasks falls on the individual agencies and/or entities identified as such tasks are incorporated into permits or other regulatory actions.

Task 2: Revise Permits and Other Regulatory Actions

The Santa Ana Water Board will update existing permits or other pertinent orders, as appropriate, to incorporate provisions of the Phase 2 TMDL Implementation Plan and actions to be completed based on deliverables approved by the Santa Ana Water Board during Phase 2 implementation.

Existing permits (and current order/permit number) that may require updates include:

- Riverside County MS4 Permit (Order R8-2010-0033);
- San Bernardino County MS4 Permit (Order R8-2010-0036);
- Dairy General Order (Order R8-2018-0001).

At the discretion of the Santa Ana Water Board, to support compliance with the MSAR TMDLs, additional regulatory actions may be taken to facilitate implementation of the Phase 2 Implementation Plan, including but not limited to the following regulatory actions:

- Notifications to other entities in the MSAR watershed that are responsible for compliance with WLAs or LAs;
- Reauthorizations of the General Waste Discharge Requirements for Discharges to Surface Waters that Pose an Insignificant (De Minimis) Threat to Water Quality (R8-2020-0006) (Santa Ana Water Board 2020);
- Adoption of Orders pursuant to Water Code section 13267; and
- Other General Orders or Waivers.

Task 3: Revise Existing Watershed Implmentation Plans (CBRPs) for the Dry Summer Conditions TMDLs

Since adoption of the TMDLs in 2005, the Santa Ana Water Board has required submittal of the following Watershed Implementation Plans to comply with the WLAs/LAs applicable to Dry Summer Conditions, including the following:

- The 2010 MS4 permits authorizing the discharge of stormwater in Riverside and San Bernardino Counties required entities responsible for compliance with the WLAs applicable to urban runoff including stormwater to submit a CBRP to comply with the Dry Summer Condition WLAs. These CBRPs, which are BMP-based compliance plans, were approved in 2012. Upon approval they became the final WQBEL for the Dry Summer Condition WLAs. In 2018, the Santa Ana Water Board completed a compliance audit for the Riverside and San Bernardino County MS4 CBRPs. While the MS4s were found to be in compliance with their CBRPs, it was

recommended that the CBRPs be updated to incorporate the most recent understandings regarding water quality conditions and status of water quality management activities in the watershed. However, it was also recommended that an update not be prepared until after planned revisions to the TMDLs have occurred.

- The 2012 Los Angeles Region MS4 permit authorizing the discharge of stormwater in Los Angeles County required the Cities of Claremont and Pomona to submit CBRPs to comply with the MSAR TMDLs WLAs applicable to urban runoff including stormwater for the portions of the MSAR watershed located within their respective jurisdictions. These CBRPs, which are BMP-based compliance plans, were approved in 2014. Upon approval they became the final WQBEL for the Dry Summer Condition WLAs.

- The 2013 Santa Ana Region CAFO permit required the submittal of a Bacterial Indicator Agricultural Source Management Plan (BASMP) to comply with the Dry Summer Condition WLAs applicable to CAFO dischargers. Most of the MSAR watershed's non-CAFO agricultural operators subject to the TMDL's LAs worked in collaboration with the CAFO dischargers to submit a BASMP to the Santa Ana Water Board in 2014.

- The 2017 State Water Board's Phase II Small MS4 permit required four entities within the MSAR watershed to submit Facility-Specific Bacteria Reduction Plans (FBRPs) to comply with the Dry Summer Conditions WLAs applicable to urban runoff, including stormwater. As of January 2026, only UC Riverside has submitted a FBRP to the Santa Ana Water Board (UC Riverside 2022).

Under this task, the referenced existing Watershed Implementation Plans (CBRPs, FBRP) will be updated, as needed or upon the Santa Ana Water Board's request, during the Phase 2 TMDL Implementation Plan. All revisions will be submitted to the Santa Ana Water Board's Executive Officer within two (2) years of the effective date of the revised TMDLs being incorporated into a permit or other orders. All entities responsible for the implementation of the existing Watershed Implementation Plans must continue to implement their existing plans until the revised plans are approved by the Santa Ana Water Board. The BASMP submitted in 2014 will continue to apply to CAFOs and non-CAFO agricultural sources as the Santa Ana Water Board determines appropriate and will be updated on an as needed basis.

Task 4: Develop and Implement Preliminary Wet Weather Controls

At the beginning of Phase 2, based on existing data and the best available information, the entities responsible for compliance with the MSAR TMDLs will identify, evaluate and select early projects for implementation to initiate efforts to attain the Wet Winter Conditions WLAs/LAs. Within two years of the effective date of the Revised TMDLs, the stakeholders will prepare a Work Plan for submittal to the Santa Ana Water Board's Executive Officer. The Work Plan will describe the projects selected for implementation,

expected water quality benefits and stakeholder(s) responsible for implementation of each project(s), and the schedule for implementation. Upon approval of the Work Plan by the Executive Officer, the responsible agencies will begin implementation of the Work Plan.

Based on the findings from Tasks 5. 6 and 7 below, under Task 8 of this Phase 2 Implementation Plan, the Work Plan prepared under this task may be updated, or if more appropriate, replaced by a new Work Plan that incorporates new or modified projects, and updates the schedule of implementation (see Task 8 discussion below).

Task 5: Study: Application of High Flow Suspension to TMDLs

The Basin Plan was amended in 2012 to include a high flow suspension provision to temporarily suspend recreational uses under specified conditions and identified inland waters where the high flow suspension may be applied [Ref. #4]. The high flow suspension provision may be applied to some or all of portions of several waterbodies included in the MSAR TMDLs. Although the Basin Plan allows for application of a high flow suspension under specific conditions, the Basin Plan does not provide direction with respect to evaluating attainment with WLAs or LAs in the MSAR TMDLs. Better understanding this issue will be critical to the development and implementation of water quality controls to mitigate sources of bacterial indicators during wet weather flow.

The purpose of this study is to develop a methodology for use in the MSAR watershed to support assessments of attainment with the MSAR TMDLs when the high flow suspension conditions apply. Elements of this study may include: (a) establishment of the conditions under which a high flow suspension would apply to MSAR TMDLs waterbodies (spatially and temporally, including definition of the pre-storm condition); (b) evaluation of the default high flow suspension triggers in the Basin Plan to determine if any site-specific adjustments should be considered when the high flow suspension applies; (c) consideration of how a high flow suspension could be implemented in conjunction with design criteria for downstream structural controls; and (d) other factors that could affect TMDLs attainment assessments in conjunction with implementation of the high flow suspension.

Within one (1) year of the revised TMDLs effective date, the entities responsible for implementation of this Phase 2 implementation plan will submit to the Santa Ana Water Board Executive Officer a High Flow Suspension Study. The Work Plan will be implemented as approved by the Santa Ana Water Board.

Task 6: Study: Evaluate Controllable Sources of Bacteria Indicators in Wet Weather Conditions

During TMDL development, bacterial indicator data collection under wet weather flow conditions was limited to samples collected at locations in the Chino Basin in 1993 (1 event) and in 1996-1998 (11 events). Additional data collection occurred from 2002-2004 to gather data during both dry and wet weather, but due to dry conditions, no

storm event data was collected. For early data collection activities, bacterial analyses were limited to fecal coliform and total coliform. Laboratory analyses did not include *E. coli* [Ref. #5]).

As noted in the 2005 Technical Report, the sources of bacterial indicators during dry or wet weather were largely unknown [Ref. #6]. Accordingly, the Phase 1 TMDL Implementation Plan included a task (Task 4.1) to develop and implement an Urban Source Evaluation Plan (USEP) to provide information on urban sources of bacterial indicators in the watershed. The USEP was later replaced by the CBRPs, which supported efforts to understand urban sources of bacterial indicators during dry weather conditions. The Phase 1 TMDL Implementation Plan also included a requirement to develop and implement an Agricultural Source Evaluation Plan (AgSEP) (Task 5.1). Implementation of the approved AgSEP resulted in some additional wet weather data collection during the wet season of 2009-2010 in selected locations within the Chino Basin [Ref. #7].

The MSAR TMDLs Phase 1 implementation purposefully focused on identifying and mitigating sources of bacterial indicators during dry weather when recreational use was most likely to occur in impaired waterbodies. Accordingly, wet weather data collection since the TMDLs became effective in 2007 has been limited to one storm event/year (as required by the TMDLs Watershed-wide Monitoring Program). The purpose of the data collection was to understand variability in *E. coli* concentrations during and immediately after the storm event. Information on urban sources of bacterial indicators during wet weather has not been developed.

The purpose of this study is to collect bacteria-related data (including appropriate bacterial indicators, human markers and pathogens) during wet weather to identify specific activities, operations, and processes in urban or agricultural areas that contribute controllable sources of bacterial indicators. This study should be conducted over two to three wet seasons to (a) increase the number of samples collected across the multiple MSAR subwatersheds; (b) provide data needed to understand the degree of variability in *E. coli* concentrations both spatially and temporally; and (c) provide data regarding degree to which human sources of bacterial indicators or viruses are present in wet weather flows. As appropriate, the Task 8 study design should consider how this data will be evaluated to determine whether identified sources of bacterial indicators pose a significant risk to human health (and thus should be considered a priority for mitigation).

Within one (1) year of the effective date of the Revised TMDLs, the entities responsible for the implementation of the revised TMDLs will prepare and submit a Study Plan (consistent with existing
watershed Monitoring Plan and Quality Assurance Project Plan (QAPP)) that identifies sample locations, constituents to be sampled, sampling protocols/frequency, data analysis procedures, source tracking, prioritization and risk assessment protocols, etc. The Study Plan will be submitted to the Santa Ana Water Board's Executive Officer for approval. Within two (2) years after the approval of the Study Plan, the entities

responsible for implementation of revised TMDLs will complete this study and submit a Wet Weather Controllable Sources Report to the Santa Ana Water Board Executive Officer.

Task 7: Develop Wet Weather Source Prioritization Strategy

Considering the findings from Tasks 5 and 6, and other available or relevant information developed under this Phase 2 TMDL Implementation Plan, the entities responsible for attainment with the TMDLs will develop a prioritization strategy for the implementation of additional water quality controls to facilitate attainment of the Wet Winter Conditions TMDLs. This prioritization strategy will focus on ensuring that mitigation of bacterial indicator sources in wet weather conditions targets controllable sources of bacterial indicators in the MSAR watersheds. Within four (4) years of the revised TMDLs effective date, or within one (1) year of submittal of the Study in Task 6, whichever is later, the entities responsible for implementation of revised TMDLs will submit a Wet Weather Source Prioritization Strategy to Santa Ana Water Board's Executive Officer.

Task 8: Evaluate Options to Mitigate Controllable Sources of Bacterial Indicators in Wet Weather Conditions – Develop Wet Weather CBRP

Based on the findings from Tasks 5 and 6, and consistent with the Prioritization Strategy prepared under Task 7, the entities responsible for attaining the MSAR TMDLs will update the Preliminary Wet Weather Water Quality Controls Work Plan prepared under Task 4. This update will identify and evaluate feasible water quality control options, including structural BMPs or source treatment options, that may be implemented to reduce or eliminate controllable sources of bacteria and improve water quality in the MSAR watershed to protect REC-1 beneficial uses. Multiple control options may be evaluated to identify what option (or options) may provide the highest level of improved water quality that is both technically and economically feasible, consistent with the requirement to manage controllable sources of bacterial indicators to the maximum extent practicable. The assessment of potential water quality control options should consider and evaluate potential impacts to overall use and management of water in the Santa Ana River watershed, e.g., considering instream flow needs to protect habitat and aquatic species, legal requirements to deliver water to downstream water users, and cost of implementing the control option(s).

Based on the evaluation of water quality control options to mitigate controllable sources of bacterial indicators in wet weather sources, entities responsible for attainment of the Wet Winter Conditions TMDLs will submit a wet weather CBRP to the Santa Ana Water Board's Executive Officer. Within five (5) years of the revised TMDLs effective date, or within one (1) year of submittal of the Strategy in Task 7, whichever is later, entities responsible for attainment of the wet winter condition TMDLs will submit a wet weather CBRP(s) to the Santa Ana Water Board Executive Officer or Santa Ana Water Board for approval. The wet weather CBRP will (a) identify preferred options or set of options for responsible entities to implement to attain the Wet Winter Conditions WLAs and LAs; (b)

a preliminary implementation schedule; and (c) identify potential funding that may be available to support implementation.

Task 9: Implement Wet Weather CBRP

Based on written direction provided by the Santa Ana Water Board from review of the Wet Weather CBRP (Task 8), the responsible entities will work to implement the preferred option or set of options. To facilitate implementation, the responsible entities will prepare a Work Plan for submittal to the Santa Ana Water Board's Executive Officer within six (6) months after written directions are provided. The Work Plan will include a schedule with milestones to implement the preferred option of the set of options in Task 8 CBRP (taking into consideration available funding). Upon approval by the Executive Officer, responsible entities will begin implementation of the Work Plan.

Task 10: Reopen and Revise the MSAR TMDLs

The revised TMDLs are phased TMDLs and the Santa Ana Water Board will reconsider these revised TMDLs in their entirety. During Phase 3 of the revised TMDLs, the Santa Ana Water Board intends to reopen and fully revise the MSAR TMDLs. The Santa Ana Water Board will complete the full revision of the MSAR TMDLs to address planned changes that are not included in the proposed limited revision of the TMDLs that includes:

- Clarify where the REC-1 use now applies in the Cucamonga Creek and Mill-Cucamonga Creek watersheds given a previous approval of a Use Attainability Analysis;
- Clarify that the existing Dry Summer Conditions and Wet Winter Conditions compliance schedules should be based on "weather" conditions rather than "seasons;"
- Incorporate definition of "dry weather" into TMDLs;
- Make consistent distinctions between wet and dry weather. Remove references to warm and cool season, as appropriate;
- Incorporate the Inland Surface Waters, Enclosed Bays, and Estuaries (ISWEBE) Bacteria Provisions to establish updated water quality objectives for the protection of waterbodies with REC-1 use; and
- Update baseline land use characteristics since 2005 adoption of the MSAR TMDLs.

Findings and recommendations from early studies in the Phase 2 program of implementation could support additional revisions to the MSAR TMDLs. Specifically, the following special studies are intended to generate data and analysis to support future TMDLs revisions:

- Develop methodology to apply existing high flow suspension provisions to the MSAR watershed and clarify impact of such provisions as they relate to attainment of TMDLs taken into account: (a) applicability of the provision to waterbody types as defined in the Basin Plan and their location; (b) varying

flow regimes in channel segments; (c) spatial variability in rainfall; and (d) other considerations, as appropriate.

- Develop methods to demonstrate attainment of the WLA/LAs that account for high flow suspension provisions and new scientific understanding of controllability.

- Employ results of the Phase 2 studies to create a Phase 3 framework to implement the wet weather source prioritization strategy, wet weather CBRPs, and other preferred options identified as appropriate. The Phase 3 program will also involve a collaboration through the MSAR Task Force to evaluate the feasibility of meeting the Wet Winter Conditions WLAs and LAs, and the time and resources necessary for achieving TMDLs attainment.

Studies and efforts necessary to develop Phase 3 and identify additional revisions to the MSAR TMDLs shall start no later than two (2) years after the effective date of the revised MSAR TMDLs, and revised TMDLs should be available for consideration by the Santa Ana Water Board no later than six (6) years after the revised TMDLs effective date.

Task 11: Evaluate Progress and Status of Attainment of Milestones and TMDLs

The MSAR Task Force, on behalf of the entities responsible for attainment of the WLAs and LAs, has prepared Triennial Reports to evaluate attainment with the WLAs and LAs based on the preceding 3-year period approximately every three years since 2010.

By February 1 of every third year from the effective date of these TMDLs, responsible entities must submit a report on status of TMDLs attainment (i.e., progress towards achieving Dry Summer Conditions and Wet Winter Conditions WLAs and LAs) to the Santa Ana Water Board's Executive Officer. The responsible entities shall continue to coordinate development and submittal of these triennial reports through the MSAR Task Force. These reports will provide a means to assess progress towards attainment of the TMDLs, facilitate review, and update the numeric targets and/or the TMDLs, WLAs, and LAs, as needed.

Task 12: Implement Watershed-wide TMDL Compliance Monitoring Program

Most entities responsible for attaining the MSAR TMDLs WLAs/LAs have been collaboratively implementing a TMDLs Watershed-wide Monitoring Program since 2007. This monitoring program is implemented as part of the larger Santa Ana Region's Regional Bacteria Monitoring Program (RBMP). Under this task, the responsible entities will update the portion of the RBMP that addresses MSAR TMDLs monitoring requirements. Elements to be updated include:

- Incorporation of the collection of other pathogen indicator data (e.g., human marker and viruses), to support attainment of the MSAR TMDLs and demonstrate protection of recreational beneficial uses;

- Enhance collection of wet weather water quality data for bacterial indicators, where needed, to support implementation of the revised TMDLs (consistent with other regional monitoring requirements and consistent with statewide bacteria provisions);

- Where appropriate and if an entity requests to participate in the RBMP, incorporate additional entities responsible for WLAs and LAs that are not currently participating in the existing TMDLs monitoring requirements. (Entities seeking incorporation into the RBMP may be subject to certain requirements as a condition thereof, including financial support, as determined by the MSAR Task Force administrator. The Santa Ana Water Board does not have control of conditions and/or requirements to participate in the (optional) MSAR Task Force).

Within six (6) months of the effective date of the revised TMDLs, entities implementing the existing monitoring program will submit an updated Monitoring Plan and QAPP to the Santa Ana Water Board's Executive Officer for approval (this may be submitted as an updated RBMP and QAPP if the TMDLs Watershed-wide Monitoring program remains a part of the RBMP). Until the Executive Officer approves the updated Monitoring Plan and QAPP, the existing TMDLs monitoring program will continue to be implemented.

After the revised TMDLs effective date, the Santa Ana Water Board's Executive Officer shall make reasonable efforts to notify entities required to attain the WLAs or LAs in the revised TMDLs but not participating in the existing TMDLs Watershed-wide Monitoring Program of their responsibility to comply with the surveillance and monitoring requirements of the revised TMDLs. Within a reasonable time-period after receiving this notification, as determined appropriate by the Santa Ana Water Board, the notified entities must either begin participating in the existing TMDLs Watershed-wide Monitoring Program being implemented by the MSAR Task Force or submit their own MSAR TMDL Watershed-wide Monitoring program with Monitoring Plan and QAPP to the Santa Ana Water Board's Executive Officer for approval. The approved Monitoring Plan and QAPP submitted separately by any of these entities shall be implemented immediately upon Executive Officer approval.

Task 13: Annual Water Quality Reports

Annual dry and wet weather monitoring results from MSAR TMDLs Watershed-wide Monitoring program sites under the Phase 1 Implementation Plan are reported annually in the RBMP's Annual Water Quality Report, which is required as a final report submission to the Santa Ana Water Board by July 1 of each year. Under the Phase 2 TMDL Implementation Plan program, annual reporting of water quality results from sites sampled under the approved Watershed-wide TMDLs Monitoring Program's Monitoring

Plan and QAPP (see Task 12) will continue. Submittal of Annual Water Quality results shall be reported as part of the RBMP's Annual Water Quality Report or they may be submitted separately. Such results and the annual report must be submitted by July 1 of each year.

Entities that are responsible for implementation of the Watershed-wide TMDLs Monitoring Program but have opted to implement their own monitoring program rather than as part of the program implemented by the MSAR Task Force (see Task 12) shall submit an Annual Water Quality Report to the Santa Ana Water Board by July 1 of each year.

~~Task 1: Review and/or Revise Existing Waste Discharge Requirements~~

~~There are three Waste Discharge Requirements (WDRs) issued by the Regional Board regulating discharge of various types of wastes in the watershed. On or before **February 28, 2008**, each of these WDRs shall be reviewed and revised as necessary to implement the TMDLs, including the appropriate wasteload allocations, compliance schedules and/or monitoring program requirements.~~

~~1.1 Waste Discharge Requirements for the San Bernardino County Flood Control and Transportation District, the County of San Bernardino and the Incorporated Cities of San Bernardino County within the Santa Ana Region, Areawide Urban Runoff, NPDES No. CAS 618036 (Regional Board Order No. R8-2002-0012). The current Order has provisions to address TMDL issues (see Task 4, below). In light of these provisions, revision of the Order may not be necessary to address TMDL requirements.~~

~~1.2 Waste Discharge Requirements for the Riverside County Flood Control and Water Conservation District, the County of Riverside and the Incorporated Cities of Riverside County within the Santa Ana Region, Areawide Urban Runoff, NPDES No. CAS 618033 (Regional Board Order No. R8-2002-0011). The current Order has provisions to address TMDL issues (see Task 4, below). In light of these provisions, revision of the Order may not be necessary to address TMDL requirements.~~

~~1.3 General Waste Discharge Requirements for Concentrated Animal Feeding Operations (Dairies and Related Facilities) within the Santa Ana Region, NPDES No. CAG018001 (Regional Board Order No. 99-11). Updated waste discharge requirements for Concentrated Animal Feeding Operations are expected to be considered by the Regional Board in 2005. These requirements will include appropriate TMDL requirements.~~

~~Other waste discharge requirements may be reviewed and/or revised to address bacterial indicator discharges as appropriate.~~

~~Task 2: Identify Agricultural Operators~~

~~On or before **June 30, 2007**, the Regional Board shall develop a list of all known agricultural owners/operators in the Middle Santa Ana River watershed that will be responsible for implementing requirements of these TMDLs. The Regional Board will send a notice to these operators informing them of their TMDL responsibility and alerting them to the potential regulatory consequences of failure to comply.~~

~~To implement the agricultural load allocations for non-Concentrated Animal Feeding Operations, monitoring program requirements specified in Task 3 and the agricultural source evaluation studies (Task 5), the Regional Board may issue waste discharge requirements or a waiver of such waste discharge requirements that is conditioned on satisfactory compliance with these TMDL elements.~~

~~Task 3: Watershed-Wide Bacterial Indicator Water Quality Monitoring Program~~

~~No later than **November 30, 2007**, the US Forest Service, the County of San Bernardino, the County of Riverside, the cities of Ontario, Chino, Chino Hills, Montclair, Rancho Cucamonga, Upland, Rialto, Fontana, Norco, Riverside, and Corona, Pomona and Claremont and agricultural~~

~~operators in the watershed, shall as a group, submit to the Regional Board for approval a proposed watershed-wide monitoring program that will provide data necessary to review and update the TMDLs. Data to be collected and analyzed shall address, at a minimum, determination of compliance with the TMDLs, WLAs and LAs.~~

~~At a minimum, the stations specified in Tables 5-9z and 5-9aa and shown in Figure 5-6, at the frequency specified in Tables 5-9z and 5-9aa, shall be considered for inclusion in the proposed monitoring plan. If one or more of these monitoring stations are not included, the rationale shall be provided and proposed alternative monitoring locations shall be identified in the proposed monitoring plan. The proposed monitoring plan shall also include a plan to compile streamflow measurements at existing USGS stream gauging stations.~~

~~At a minimum, samples shall be analyzed for the following constituents:~~

- ~~Fecal Coliform~~
- ~~Escherichia Coliform (*E. coli*)~~
- ~~Total Suspended Solids~~
- ~~pH~~
- ~~Temperature~~
- ~~Electrical Conductivity~~
- ~~Dissolved Oxygen~~
- ~~Turbidity~~

~~The proposed monitoring plan shall be implemented upon Regional Board approval at a duly noticed public meeting. Seasonal reports summarizing and including copies of the data collected during the dry season and wet season monitoring periods shall be submitted by May 31 and December 31 of each year. In order to facilitate review and update of the numeric targets and/or the TMDLs, WLAs, LAs, a triennial report summarizing the data collected for the preceding 3 year period and evaluating compliance with the WLAs/LAs shall be submitted every three years, beginning with the first report due **February 15, 2010**.~~

~~In lieu of this coordinated monitoring plan, one or more of the parties identified above may submit a proposed individual or group monitoring plan for Regional Board approval. Any such individual or group monitoring plan is due no later than **November 30, 2007** and shall be implemented upon Regional Board approval at a duly noticed public meeting. Seasonal reports summarizing and including copies of the data collected during the dry season and wet season monitoring periods shall be submitted by May 31 and December 31 of each year. In order to facilitate review and update of the numeric targets and/or the TMDLs, WLAs, LAs, a triennial report summarizing the data collected for the preceding 3 year period and evaluating compliance with the WLAs/LAs shall be submitted every three years, beginning with the first report due **February 15, 2010**.~~

~~It may be that implementation of these monitoring requirements will be required through the issuance of Water Code Section 13267 letters to the affected parties. The monitoring plan(s) will be considered by the Regional Board and shall be implemented upon the Regional Board's approval.~~

~~Table 5-9z – Watershed Minimum Required Weekly Sampling Station Locations~~

~~Station Number~~	**~~Station Description~~**
~~C1~~	~~Icehouse Canyon Creek~~
~~C2~~	~~Chino Creek at Schaeffer Avenue~~

~~C3~~	~~Prado Park Lake at lake outlet~~
~~C7~~	~~Chino Creek at Central Avenue~~
~~C8~~	~~Chino Creek at Prado Golf Course~~
~~M2~~	~~Cucamonga Creek at Regional Plant No. 1~~
~~M5~~	~~Mill Creek at Chino-Corona Road~~
~~S1~~	~~Santa Ana River at MWD Crossing~~
~~S3~~	~~Santa Ana River at Hamner Avenue~~
~~T1~~	~~Temescal Wash at Lincoln Avenue~~
~~TQ1~~	~~Tequesquite Arroyo at Palm Avenue~~

~~Frequency of sampling:~~
~~dry season: weekly~~
~~wet season: two 30-day sampling periods during which a minimum of 5 samples are to be collected (at least one sample weekly) and if possible, a minimum of 5 of those samples must be from storm events.~~

~~Table 5-9a-a --Additional Watershed Storm Event Sampling Locations~~

~~Station Number~~	~~Station Description~~
~~M3~~	~~Bon View Avenue @ Merrill Avenue~~
~~M4~~	~~Archibald Avenue @ Cloverdale Avenue~~
~~G1~~	~~Grove Channel @ Pine Avenue~~
~~E1~~	~~Euclid Avenue Channel @ Pine Avenue~~

~~Frequency of sampling: wet weather – one sample/storm event for 5 storm events/year; dry weather – none.~~

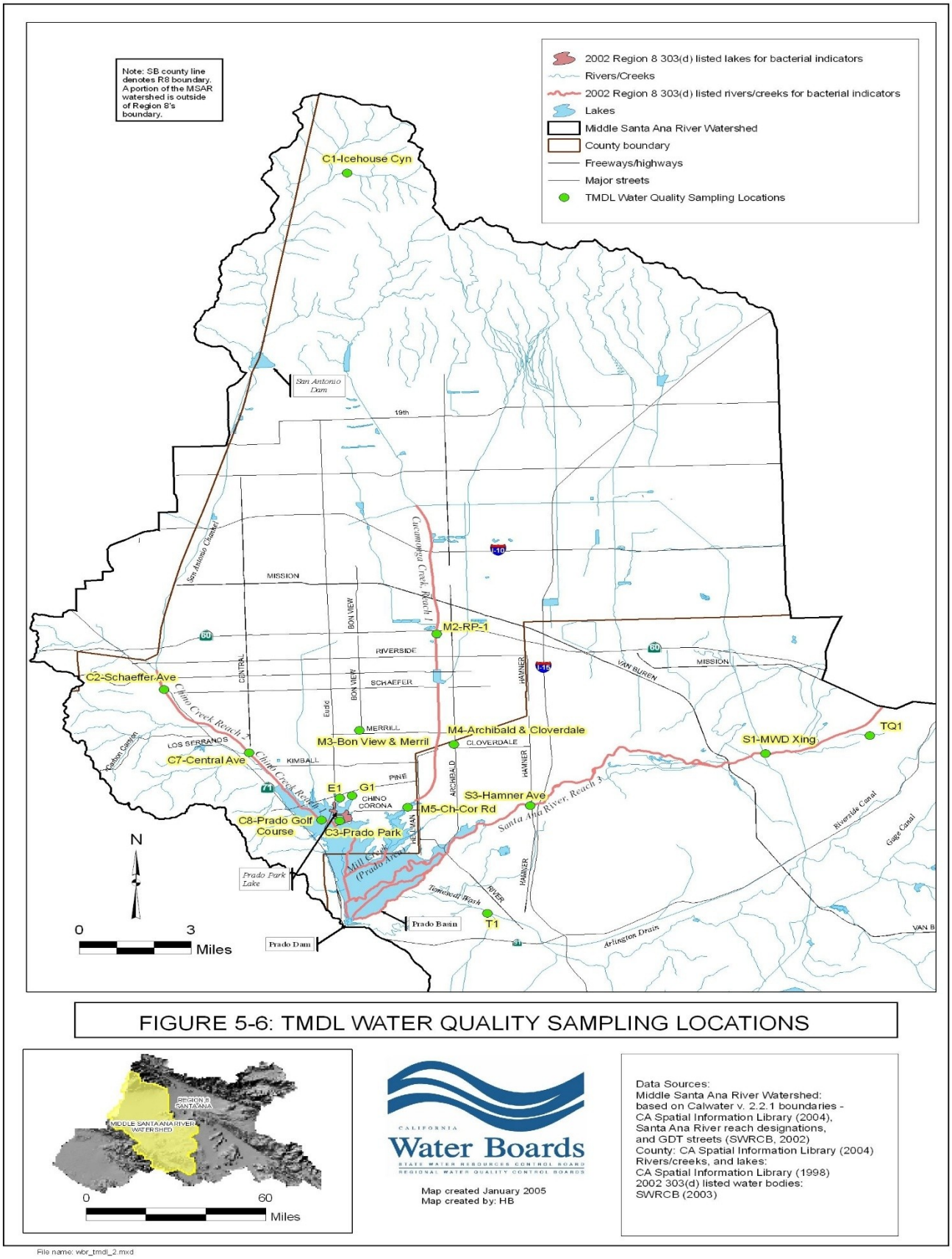

FIGURE 5-6: TMDL WATER QUALITY SAMPLING LOCATIONS

CALIFORNIA Water Boards
STATE WATER RESOURCES CONTROL BOARD
REGIONAL WATER QUALITY CONTROL BOARDS

Map created January 2005
Map created by: HB

Data Sources:
Middle Santa Ana River Watershed:
based on Calwater v. 2.2.1 boundaries -
CA Spatial Information Library (2004),
Santa Ana River reach designations,
and GDT streets (SWRCB, 2002)
County: CA Spatial Information Library (2004)
Rivers/creeks, and lakes:
CA Spatial Information Library (1998)
2002 303(d) listed water bodies:
SWRCB (2003)

File name: wbr_tmdl_2.mxd

~~Task 4: Urban Discharges~~

~~Phase I urban discharges, including stormwater runoff, include those from the cities and unincorporated communities in the Middle Santa Ana River Watershed. These discharges are regulated under the MS4 NPDES permits identified in Tasks 1.1 and 1.2 (Review and Revise Existing Waste Discharge Requirements), above. The requirements of these NPDES permits differ somewhat and therefore the TMDL implementation requirements that pertain to the permittees under each permit also vary slightly, as shown below[3].~~

~~4.1 Develop and Implement Bacterial Indicator Urban Source Evaluation Plans~~

~~On or before **November 30, 2007**, the County of San Bernardino, the County of Riverside, the cities of Ontario, Chino, Chino Hills, Montclair, Rancho Cucamonga, Upland, Rialto, Fontana, Norco, Riverside, and Corona, Pomona and Claremont shall develop a Bacterial Indicator Urban Source Evaluation Plan(s) (USEP). This plan shall include steps needed to identify specific activities, operations, and processes in urban areas that contribute bacterial indicators to Middle Santa Ana River Watershed waterbodies. The plan shall also include a proposed schedule for completion of each of the steps identified. The proposed schedules can include contingency provisions that reflect uncertainty concerning the schedule for completion of the SWQSTF work and/or other investigations that may affect the steps that are proposed. The USEP shall be implemented upon Regional Board approval at a duly noticed public meeting.~~

~~4.2 Revise the San Bernardino County Municipal Storm Water Management Program (MSWMP)~~

~~Provision XVI.3. of Order No. R8-2002-0012 (see 1.1, above) requires the permittees to revise their Municipal Storm Water Management Program (MSWMP) to include TMDL requirements. Revisions to the MSWMP may be necessary based on the results of Task 4.1, Basin Plan amendments to address recommendations of the SWQSTF, or other investigations. Because of uncertainties regarding the timing of completion of these studies, it is not feasible to identify an explicit date whereby the revision of the MSWMP is to be accomplished. Instead, the Executive Officer shall notify the permittees of the need to revise the MSWMP. Within 90 days of notification by the Executive Officer, the permittees shall submit for Regional Board approval, a plan and schedule to review and revise the MSWMP as necessary to incorporate measures to address the results of the USEP and/or other studies. Further review and revision of the MSWMP needed to address these TMDLs shall be completed in accordance with the requirements of Order No. R8-2002-0012 or amendments thereto that are adopted by the Regional Board at a public hearing. The MSWMP revisions shall include schedules for meeting the bacterial indicator wasteload allocations based on the schedule established in these TMDLs. In order to facilitate any needed update of the numeric targets and/or the TMDLs and urban discharge WLAs, the proposed schedule shall take into consideration the Regional Board's triennial review schedule. The permittees shall also provide a proposal and schedule for 1) evaluating the effectiveness of BMPs and other control actions implemented and 2) evaluating compliance with the bacterial indicator waste load allocations for urban runoff. The plan and schedule to review the MSWMP must be implemented upon approval by the Regional Board after public notice and public~~

[3] ~~The San Bernardino MS4 permit requires the development and implementation of a Municipal Stormwater Management Program (MSWMP) to address stormwater discharges from existing urban activities. For the Riverside County MS4 permit, the Drainage Area Management Plan (DAMP) addresses stormwater discharges from existing urban activities.~~

~~hearing, or upon approval by the Executive Officer if no significant comments are received during the public notice period.~~

~~4.3 Revise the Riverside County Drainage Area Management Plan (DAMP)~~

~~Provision XIII.B. of Order No. R8-2002-0011 (see 1.2, above) requires the permittees to revise their Drainage Area Management Plan (DAMP) to include TMDL requirements. Revisions to the DAMP may be necessary based on the results of Task 4.1, Basin Plan amendments to address recommendations of the SWQSTF, or other investigations. Because of uncertainties regarding the timing of completion of these studies, it is not feasible to identify an explicit date whereby the revision of the DAMP is to be accomplished. Instead, the Executive Officer shall notify the permittees of the need to revise the DAMP. Within 90 days of notification by the Executive Officer, the permittees shall submit for Regional Board approval, a plan and schedule to review and revise the DAMP as necessary to incorporate measures to address the results of the USEP and/or other studies. Further review and revision of the DAMP needed to address these TMDLs shall be completed in accordance with the requirements of Order No. R8-2002-0011 or amendments/updates thereto that are adopted by the Regional Board at a public hearing. The DAMP revisions shall include schedules for meeting the bacterial indicator wasteload allocations based on the schedule established in these TMDLs. In order to facilitate review and update of the numeric targets and/or the TMDLs and urban discharge WLAs, the proposed schedule shall take into consideration the Regional Board's triennial review schedule. The revised DAMP shall also include a proposal and schedule for 1) evaluating the effectiveness of BMPs and other control actions implemented and 2) evaluating compliance with the bacterial indicator waste load allocations for urban runoff. The plan and schedule to review and revise the DAMP must be implemented upon approval by the Regional Board after public notice and public hearing, or upon approval by the Executive Officer if no significant comments are received during the public notice period.~~

~~4.4 Revise the San Bernardino County Water Quality Management Plan (WQMP)~~

~~Provision XII.B. 1. of Order No. R8-2002-0012 requires the permittees to develop and submit a WQMP for new developments and significant redevelopments by January 2004 for the Executive Officer's approval. Revisions to the WQMP may be necessary based on the results of Task 4.1, Basin Plan amendments to address recommendations of the SWQSTF, or other investigations. Because of uncertainties regarding the timing of completion of these studies, it is not feasible to identify an explicit date whereby the revision of the WQMP is to be accomplished. Instead, the Executive Officer shall notify the permittees of the need to revise the WQMP. Within 90 days of notification by the Executive Officer, the permittees shall submit for Regional Board approval a plan and schedule to review and revise the WQMP that addresses the bacterial indicator input from new developments and significant redevelopments to assure compliance with the bacterial indicator wasteload allocations for urban runoff. Further review and revision of the WQMP necessary to address TMDL requirements, shall be completed in accordance with the requirements of Order No. R8-2002-0012 or amendments/updates thereto that are adopted by the Regional Board at a public hearing.~~

~~4.5 Revise the Riverside County Water Quality Management Plan (WQMP)~~

~~Provision VIII.B. of Order No. R8-2002-0011 (see 1.2, above) requires the permittees to develop and submit a WQMP for new developments and significant redevelopments by June 2004 for approval. On September 17, 2004, the Board approved a WQMP developed by the permittees. The approved WQMP includes source control BMPs,~~

~~design BMPs and treatment control BMPs. Further revisions to the WQMP may be necessary to meet the WLA for urban runoff. Such revisions may be necessary based on the results of Task 4.1, Basin Plan amendments to address recommendations of the SWQSTF, or other investigations. Because of uncertainties regarding the timing of completion of these studies, it is not feasible to identify an explicit date whereby the revision of the WQMP is to be accomplished. Instead, the Executive Officer shall notify the permittees of the need to revise the WQMP. Within 90 days of notification by the Executive Officer, the permittees shall submit for Regional Board approval a plan and schedule for review and revision of the WQMP that addresses the bacterial indicator input from new developments and significant redevelopments to assure compliance with the bacterial indicator wasteload allocations for urban runoff. Further review and revision of the WQMP necessary to address TMDL requirements, shall be completed in accordance with the requirements of Order No. R8-2002-0011 or amendments/updates thereto that are adopted by the Regional Board at a public hearing.~~

~~If the results of studies conducted pursuant to Tasks 3 and 4.1 above demonstrate that either the Phase II non-traditional small MS4 discharges covered under the statewide Waste Discharge Requirements for Stormwater Discharges from Small Municipal Separate Storm Systems (Order No. 2003-0005-DWQ) or industrial discharges from facilities covered by the statewide Industrial Stormwater General Permit (Order 97-03-DWQ) or any Regional Board individual industrial permit, are responsible, to a significant degree, for exceedances of the urban WLAs, the Regional Board will take the appropriate regulatory steps to address these discharges.~~

~~Task 5: Agricultural Discharges~~

~~Agricultural discharges include stormwater runoff, wastewater release and tailwater runoff from agricultural land uses. Tailwater runoff is irrigation water that runs off of agricultural land. Agricultural land uses include concentrated animal feeding operations and irrigated and dry-land farming in the Middle Santa Ana River Watershed. Concentrated animal feeding operations are regulated under WDRs (see Task 1.3,above); irrigated agriculture and dry-land farming are not currently regulated.~~

~~5.1 Develop and Implement Bacterial Indicator Agricultural Source Evaluation Plans~~

~~On or before **November 30, 2007**, concentrated animal feeding facility operators and agricultural operators in the Middle Santa Ana River Watershed shall develop and implement Bacterial Source Agricultural Source Evaluation Plans (AGSEP). These plans shall include steps needed to identify specific activities, operations, and processes in agricultural areas that contribute bacterial indicators to Middle Santa Ana River Watershed waterbodies. The plan shall also include a proposed schedule for completion of each of the steps identified. The proposed schedules can include contingency provisions that reflect uncertainty concerning the schedule for completion of the SWQSTF work and/or other investigations that may affect the steps that are proposed. The AGSEP shall be implemented upon Regional Board approval at a duly noticed public meeting.~~

~~The Regional Board expects that the AGSEP will be submitted and implemented pursuant to these TMDL requirements. Where and when necessary to implement these requirements, the Regional Board will utilize appropriate waste discharge requirements including those for concentrated animal feeding operations (see 1.3, above), or other Water Code authorities.~~

~~In lieu of a coordinated source evaluation plan, one or more of the parties identified above may submit a proposed individual or group AGSEP to conduct the above studies for areas within their jurisdiction. Any such individual or group plan shall also be submitted for Regional Board approval no later than. **November 30, 2007**. This AGSEP shall be implemented upon Regional Board approval at a duly noticed public meeting.~~

~~Develop and Implement a Bacterial Indicator Agricultural Source Management Plan~~

~~Based on the results of Task 5.1 or other studies conducted in the watershed, concentrated animal feeding operators and agricultural operators within the Middle Santa Ana River Watershed shall, as a group, submit a proposed Bacterial Indicator Agricultural Source Management Plan (BASMP). Because of uncertainties regarding the timing of completion of these studies and in recognition that readily identifiable steps may be taken to reduce bacterial discharges from agricultural lands, it is not feasible to identify an explicit date whereby the development and implementation of the BASMP is to be accomplished. Instead, the Executive Officer shall notify agricultural operators of the need to submit the proposed BASMP in whole or to submit plans and schedule to address a subset of tasks identified in the AGSEP. Within 90 days of notification by the Executive Officer, the proposed BASMP, or a subset thereof, shall be submitted. The BASMP, or subset thereof, shall be implemented upon Regional Board approval at a duly noticed public meeting. At a minimum, the BASMP shall include, plans and schedules for the following:~~

~~A. implementation of bacterial indicator controls, BMPs and reduction strategies designed to meet load allocations;~~
~~B. evaluation of effectiveness of BMPs; and~~
~~C. development and implementation of compliance monitoring program(s).~~

~~The Regional Board expects that the BASMP will be submitted and implemented pursuant to these TMDL requirements. Where and when necessary to implement these requirements, the Regional Board will utilize appropriate waste discharge requirements or other Water Code authorities.~~

~~In lieu of a coordinated plan, one or more of the parties identified above may submit a proposed individual or group BASMP to develop and implement the above plan for areas within their jurisdiction. Any such individual or group plan shall also be submitted for Regional Board approval. Because of uncertainties regarding the timing of completion of these studies and in recognition that readily identifiable steps may be taken to reduce bacterial discharges from agricultural lands, it is not feasible to identify an explicit date whereby the development and implementation of the BASMP is to be accomplished. Instead, the Executive Officer shall notify agricultural operators of the need to submit the proposed BASMP in whole or to submit plans and schedule to address a subset of tasks identified in the AGSEP. Within 90 days of notification by the Executive Officer, the proposed BASMP, or a subset therefore, shall be submitted. This BASMP, or a subset thereof, shall be implemented upon Regional Board approval at a duly noticed public meeting.~~

~~Task 6: Review/Revision of the Bacterial Indicator TMDL (TMDL "Re-opener")~~

The basis for the TMDLs and implementation schedule will be re-evaluated at least once every three years[4] to determine the need for modifying the load and wasteload allocations, numeric targets and TMDLs. Regional Board staff will continue to review all data and information generated pursuant to the TMDL requirements on an ongoing basis. Based on results generated through the monitoring programs, special studies, modeling analysis, efforts of the Storm Water Quality Standards Task Force[5] and/or special studies by one or more responsible parties, changes to the TMDLs, including revisions to the numeric targets, WLAs and LAs, may be warranted. Such changes would be considered through the Basin Plan Amendment process.

The Regional Board is committed to the review of this TMDL every three years, or more frequently if warranted by the results of monitoring and/or other relevant studies

References

1. California Regional Water Quality Control Board, Total Maximum Daily Load for Bacterial Indicators in the Middle Santa Ana River Watershed, February 3, 2005

2. US Environmental Protection Agency (USEPA), Ambient Water Quality Criteria for Bacteria, 1986

[4] The three-year schedule will coincide with the Regional Board's triennial review schedule.

[5] Stakeholders formed the Storm Water Quality Standards Task Force (Task Force) in 2002 to support review and update of the bacterial quality objectives for REC1 waters and to review the REC1 designations themselves to assure their accuracy. Participants include representatives from the Santa Ana Watershed Project Authority, (SAWPA) flood control agencies from the 3 counties within the Santa Ana Region, POTW dischargers and stormwater staff from various municipalities in the watershed. Environmental groups, Regional Board staff and USEPA staff are also participants. SAWPA staff serve as facilitators for the Task Force.