State of California
California Regional Water Quality Control Board, Los Angeles Region

RESOLUTION NO. R10-006
July 8, 2010

Amendment to the *Water Quality Control Plan for the Los Angeles Region* to Incorporate a Total Maximum Daily Load for Indicator Bacteria in Santa Clara River Estuary and Reaches 3, 5, 6 and 7

WHEREAS, the California Regional Water Quality Control Board, Los Angeles Region, finds that:

1. The Federal Clean Water Act (CWA) requires the California Regional Water Quality Control Board, Los Angles Region (Regional Board) to establish water quality standards for each waterbody within its region. Water quality standards include beneficial uses, water quality objectives that are established at levels sufficient to protect those beneficial uses, and an antidegradation policy to prevent degrading waters. Waterbodies that do not meet water quality standards are considered impaired.

2. CWA section 303(d)(1) requires each state to identify the waters within its boundaries that do not meet water quality standards. Those waters are placed on the state's "303(d) List" or "Impaired Waters List". For each listed water, the state is required to establish the Total Maximum Daily Load (TMDL) of each pollutant impairing the water quality standards in that waterbody. Both the identification of impaired waters and TMDLs established for those waters must be submitted to the United States Environmental Protection Agency (U.S. EPA) for approval pursuant to CWA section 303(d)(2). For all waters that are not identified as impaired, the states are nevertheless required to create TMDLs pursuant to CWA section 303(d)(3).

3. During the 1996 Water Quality Assessment, the Regional Board evaluated total and fecal coliform monitoring data for beaches and fecal coliform data for inland surface waterbodies. As a result, the Santa Clara River (SCR) Estuary was listed for fecal coliform exceedances, and SCR Reach 6 (EPA 303(d) list Reach 8, West Pier Highway 99 to Bouquet Canyon Road Bridge) was listed for fecal coliform exceedances. The 1998 Water Quality Assessment kept these listings and added Reach 5 (EPA 303(d) list Reach 7, Blue Cut to West Pier Highway 99) and Reach 7 (EPA Reach 9, Bouquet Canyon Road Bridge to above Lang Gaging Station) to the 303(d) list for high coliform count. The SCR Estuary and Reaches 5, 6 and 7 remain on the 2002 and 2006 303(d) lists.

4. A consent decree between U.S. EPA, Heal the Bay, Inc. and Santa Monica BayKeeper, Inc. was approved on March 22, 1999, which resolved litigation between those parties relating to the pace of TMDL development in the Los Angeles Region. The court order directs the U.S. EPA to ensure that TMDLs for all 1998-listed impaired waters in the Los Angeles Region be established within 13 years of the consent decree. The consent decree combined waterbody pollutant combinations in the Los Angeles Region into 92 TMDL analytical units.

Analytical Unit 34 lists the SCR Estuary and SCR Reach 6 with impairments related to coliform bacteria. Based on the consent decree schedule, TMDLs must be approved or established by U.S. EPA by March 2012.

5. Additional data analysis conducted as part of TMDL development demonstrates an impairment for indicator bacteria in SCR Reach 3 as well. This TMDL therefore addresses indicator bacteria impairments in the SCR Estuary and Reaches 3, 5, 6, and 7.

6. The elements of a TMDL are described in 40 CFR 130.2 and 130.7 and section 303(d)(1)(C) and (D) of the CWA, as well as in U.S. EPA guidance documents (Report No. EPA/440/4-91/001). A TMDL is defined as the sum of the individual waste load allocations for point sources, load allocations for non-point sources and natural background (40 CFR 130.2). TMDLs must be set at levels necessary to attain and maintain the applicable narrative and numeric water quality standards with seasonal variations and a margin of safety that takes into account any lack of knowledge concerning the relationship between effluent limitations and water quality (40 CFR 130.7(c)(1)). 40 CFR 130.7 also dictates that TMDLs shall take into account critical conditions for stream flow, loading and water quality parameters. TMDLs typically include one or more numeric "targets", i.e., numerical translations of the existing water quality standards, which represent attainment of those standards, contemplating the TMDL elements described above. Since a TMDL must represent the "total" load, TMDLs must account for all sources of the relevant pollutants, irrespective of whether the pollutant is discharged to impaired or unimpaired upstream reaches.

7. Neither TMDLs nor their targets or other components are water quality objectives, and thus their establishment does not implicate California Water Code section 13241. Rather, under California Law, TMDLs are programs to implement existing standards (including objectives), and are thus established pursuant to Cal. Water Code section 13242. Moreover, they do not create new bases for direct enforcement against dischargers apart from the existing water quality standards they translate. Like most other parts of the Water Quality Control Plan for the Los Angeles Region (Basin Plan), TMDLs are not generally self-implementing. The targets merely establish the bases through which load allocations (LAs) and waste load allocations (WLAs) are calculated. The LAs and WLAs may be implemented in any manner consistent with the Water Quality Control Policy for Addressing Impaired Waters: Regulatory Structure and Options, adopted by the State Water Resources Control Board (State Board) on June 16, 2005 (Resolution 2005-0050). Federal regulations also require that National Pollutant Discharge Elimination System (NPDES) permits be consistent with the assumptions and requirements of available WLAs (40 C.F.R. 122.44(d)(vii)(B)).

8. As envisioned by Cal. Water Code section 13242, the TMDL contains a "description of surveillance to be undertaken to determine compliance with objectives." The Compliance Monitoring element of the TMDL recognizes that monitoring will be necessary to assess the progress of pollutant load reductions and improvements in water quality in the SCR. The TMDL establishes the types of information that will be necessary to secure. The Regional Board's Executive Officer will ensure that appropriate entities develop and submit monitoring

programs and technical reports necessary to achieve the purposes of the TMDL. The Executive Officer will determine the scope of these programs and reports, taking into account any legal requirements, including this TMDL, and if necessary issue appropriate orders to appropriate entities.

9. Upon establishment of TMDLs by the State or U.S. EPA, the State is required to incorporate, or reference, TMDLs into the State Water Quality Management Plan (40 CFR 130.6(c)(1), 130.7). The Basin Plan and applicable statewide plans serve as the State Water Quality Management Plans governing the watersheds under the jurisdiction of the Los Angeles Regional Board. Attachment A to this resolution contains the language to be incorporated into the Basin Plan for this TMDL.

10. The SCR is the largest river system in Southern California that remains in a relatively natural state. The river originates on the northern slope of the San Gabriel Mountains in Los Angeles County, traverses Ventura County, and flows into the Pacific Ocean between the cities of San Buenaventura (Ventura) and Oxnard. The predominant land uses in the SCR watershed include open space, agriculture, and residential uses. Municipalities within the watershed include Santa Clarita, Fillmore, Santa Paula, and Ventura.

11. The Regional Board's goal in establishing the TMDL for Indicator Bacteria in the SCR Estuary and Reaches 3, 5, 6 and 7 is to protect the water contact recreation (REC-1) and non-contact water recreation (REC-2) beneficial uses of the SCR.

12. Regional Board Staff have prepared a detailed technical document that analyzes and describes the specific necessity and rationale for the development of this TMDL. The technical document entitled "Total Maximum Daily Loads for Indicator Bacteria in Santa Clara River Estuary and Reaches 3, 5, 6 and 7" is an integral part of this Regional Board action and was reviewed, considered, and accepted by the Regional Board before acting. Further, the technical document provides the detailed factual basis and analysis supporting the problem statement, numeric targets (interpretation of the narrative and numeric water quality objectives, used to calculate the waste load and load allocations), source analysis, linkage analysis, waste load allocations (for point sources), load allocations (for non-point sources), margin of safety, and seasonal variations and critical conditions of this TMDL.

13. On July 9, 2010, prior to the Board's action on this resolution, a public hearing was conducted on this TMDL. Notice of the hearing was published in accordance with the requirements of Cal. Water Code Section 13244. This notice was published in the Los Angeles Daily News, the Santa Clarita Signal, and the Ventura County Star.

14. The public has had a reasonable opportunity to participate in the review of the amendment to the Basin Plan. On December 9, 2009, Regional Board staff held a kickoff meeting to receive comments on the development of the TMDL. On February 25, 2010, Regional Board staff attended meetings of two Integrated Regional Water Management Plan groups in the lower and upper SCR watershed to present the TMDL and get stakeholder feedback. On March 2, 2010, an additional stakeholder meeting was conducted to facilitate the

development of the TMDL. A draft of the TMDL was released for public comment on April 21, 2010; a Notice of Hearing and Notice of Filing were published and circulated 45 days preceding Board action; Regional Board staff responded to oral and written comments received from the public; and the Regional Board held a public hearing on July 9, 2010 to consider adoption of the TMDL.

15. In amending the Basin Plan to establish this TMDL, the Regional Board considered the requirements set forth in Sections 13240 and 13242 of the California Water Code.

16. Because the TMDL implements existing narrative and numeric water quality objectives (i.e., water quality objectives in the Basin Plan), the Regional Board (along with the State Board) has determined that adopting a TMDL does not require the Regional Board to consider the factors of Cal. Water Code section 13241. The consideration of the Water Code section 13241 factors, by section 13241's express terms, only applies "in establishing water quality objectives." Here the Regional Board is not establishing water quality objectives, but as required by section 303(d)(1)(C) of the Clean Water Act is adopting a TMDL that will implement the previously established objectives that have not been achieved. In making this determination, the Regional Board has considered and relied upon a legal memorandum from the Office of Chief Counsel to the State Board's basin planning staff detailing why TMDLs cannot be considered water quality objectives. (See Memorandum from Staff Counsel Michael J. Levy, Office of Chief Counsel, to Ken Harris and Paul Lillebo, Division of Water Quality: *The Distinction Between a TMDL's Numeric Targets and Water Quality Standards*, dated June 12, 2002.)

17. While the Regional Board is not required to consider the factors of Cal. Water Code section 13241, it nonetheless has developed and received significant information pertaining to the Cal. Water Code section 13241 factors and has considered that information in developing and adopting this TMDL. Section 13241 at a minimum requires that water quality objectives ensure reasonable protection of beneficial uses. The past, present and probable future beneficial uses of water have been considered in that the SCR is designated for a number of beneficial uses including REC-1 and REC-2 in the Basin Plan. The environmental characteristics of the SCR are spelled out at length in the Basin Plan and in the technical documents supporting this Basin Plan amendment, and have been considered in developing this TMDL. Water quality conditions that reasonably could be achieved through the coordinated control of all factors which affect water quality in the area have been considered. This TMDL provides several compliance options, including structural methods such as various swale and infiltration systems, as well as non-structural alternatives such as outreach and education. These options provide flexibility for responsible parties to reduce loading of indicator bacteria to the SCR. The implementation of the compliance options should ensure that the SCR attains and continues to maintain bacteriarological water quality standards. Attainment of the water quality standards through the compliance options is a reasonably achievable water quality condition for the SCR. However, to the extent that there would be any conflict between the consideration of the factor in Water Code section 13241, subdivision (c), if the consideration were required, and the Clean Water Act, the Clean Water Act would prevail. Economic considerations were considered

throughout the development of the TMDL. Some of these economic considerations arise in the context of Public Resources Code section 21159 and are equally applicable here. The implementation program for this TMDL recognizes the economic limitations on achieving immediate compliance and allows a flexible implementation schedule of 8 years for dry weather and 14 years for wet weather. The need for housing within the region has been considered, but this TMDL is unlikely to affect housing needs. Whatever housing impacts could materialize are ameliorated by the flexible nature of this TMDL and the 14-year implementation schedule.

18. The amendment is consistent with the State Antidegradation Policy (State Board Resolution No. 68-16), and the federal Antidegradation Policy (40 CFR 131.12), in that it does not allow degradation of water quality, but requires restoration of water quality and attainment of water quality standards to fully protect beneficial uses.

19. Pursuant to Public Resources Code section 21080.5, the Resources Agency has approved the Regional Boards' basin planning process as a "certified regulatory program" that adequately satisfies the California Environmental Quality Act (CEQA) (Public Resources Code, § 21000 et seq.) requirements for preparing environmental documents (14 Cal. Code Regs. § 15251(g); 23 Cal. Code Regs. § 3782). The Regional Board staff has prepared "substitute environmental documents" for this project that contain the required environmental documentation under the State Board's CEQA regulations. (23 Cal. Code Regs. § 3777.) The substitute environmental documents include the TMDL staff report entitled "Total Maximum Daily Loads for Indicator Bacteria in Santa Clara River Estuary and Reaches 3, 5, 6 and 7", the environmental checklist, the comments and responses to comments, the Basin Plan amendment language, and this resolution. The project itself is the establishment of a TMDL for Indicator Bacteria in the SCR Estuary and Reaches 3, 5, 6 and 7. While the Regional Board has no discretion to not establish a TMDL (the TMDL is required by federal law), the Board does exercise discretion in assigning waste load allocations and load allocations, determining the program of implementation, and setting various milestones in achieving the water quality standards. The CEQA checklist and other portions of the substitute environmental documents contain significant analysis and numerous findings related to impacts and mitigation measures.

20. A CEQA Scoping meeting was conducted on March 2, 2010 at City of Santa Clarita Council Chambers, 23920 Valencia Blvd., Santa Clarita, CA, to solicit input from the public and interested stakeholders in determining the appropriate scope, content and implementation options of the proposed TMDL. This meeting fulfilled the requirements under CEQA (Public Resources Code, Section 21083.9). A notice of the CEQA Scoping meeting was sent to interested parties on February 11, 2010.

21. In preparing the substitute environmental documents, the Regional Board has considered the requirements of Public Resources Code section 21159 and California Code of Regulations, title 14, section 15187, and intends those documents to serve as a tier 1 environmental review. This analysis is not intended to be an exhaustive analysis of every conceivable impact, but an analysis of the reasonably foreseeable consequences of the adoption of this

regulation, from a programmatic perspective. The "Lead" agencies for tier 2 projects will assure compliance with project-level CEQA analysis of this programmatic project. Project level impacts will need to be considered in any subsequent environmental analysis performed by other public agencies, pursuant to Public Resources Code section 21159.2.

22. The time schedule for this TMDL recognizes the unique economic conditions at the time of the TMDL adoption.

23. The foreseeable methods of compliance for this TMDL entail sub-regional structural best management practices (BMPs) such as vegetated treatment systems and vegetated bioswales, local infiltration systems, local capture systems, equestrian related BMPs, and media filtration, as well as regional structural BMPs such as diversion to stormwater treatment plants, regional infiltration systems, regional detention facilties, and regional natural treatment systems. Foreseeable methods of compliance also include non-structural BMPs, such as administrative controls, outreach and education, street cleaning, and storm drain cleaning.

24. Consistent with the Regional Board's substantive obligations under CEQA, the substitute environmental documents do not engage in speculation or conjecture, and only consider the reasonably foreseeable environmental impacts, including those relating to the methods of compliance, reasonably foreseeable feasible mitigation measures to reduce those impacts, and the reasonably foreseeable alternative means of compliance, which would avoid or reduce the identified impacts.

25. The proposed amendment could have a potentially significant adverse effect on the environment. However, there are feasible alternatives, feasible mitigation measures, or both, that if employed, would substantially lessen the potentially significant adverse impacts identified in the substitute environmental documents; however, such alternatives or mitigation measures are within the responsibility and jurisdiction of other public agencies, and not the Regional Board. Cal. Water Code section 13360 precludes the Regional Board from dictating the manner in which responsible parties comply with any of the Regional Board's regulations or orders. When the parties responsible for implementing this TMDL determine how they will proceed, the parties responsible for those parts of the project can and should incorporate such alternatives and mitigation into any subsequent projects or project approvals. These feasible alternatives and mitigation measures are described in more detail elsewhere in the substitute environmental documents. (14 Cal. Code Regs. § 15091(a)(2).)

26. The substitute documents for this TMDL, and in particular the Environmental Checklist and staff's responses to comments, identify broad mitigation approaches that should be considered at the project level.

27. To the extent significant adverse environmental effects could occur, the Regional Board has balanced the economic, legal, social, technological, and other benefits of the TMDL against the unavoidable environmental risks and finds that specific economic, legal, social, technological, and other benefits of the TMDL outweigh the unavoidable adverse environmental effects, such that those effects are

considered acceptable. The basis for this finding is set forth in the substitute environmental documents. (14 Cal. Code Regs. § 15093.)

28. Health and Safety Code section 57004 requires external scientific peer review for certain water quality control policies. Scientific portions of this TMDL are drawn from the previously adopted bacteria TMDLs in the region, including the Santa Monica Bay Beaches Bacteria TMDL. As a result, the scientific portions of this TMDL have already undergone external, scientific peer review. Remaining portions of the TMDL, such as the implementation strategy, are not scientifically based, and therefore, not subject to the peer review requirements of section 57004. As a result, the Regional Board has fulfilled the requirements of Health and Safety Code section 57004, and the proposed amendment does not require further peer review.

29. The regulatory action meets the "Necessity" standard of the Administrative Procedures Act, Government Code, section 11353, subdivision (b). As specified above, federal law and regulations require that TMDLs be incorporated, or referenced, in the state's water quality management plan. The Regional Board's Basin Plan is the Regional Board's component of the water quality management plan, and the Basin Plan is how the Regional Board takes quasi-legislative, planning actions. Moreover, the TMDL is a program of implementation for existing water quality objectives, and is, therefore, appropriately a component of the Basin Plan under Water Code section 13242. The necessity of developing a TMDL is established in the TMDL staff report, the section 303(d) list, and the data contained in the administrative record documenting the indicator bacteria impairments of the SCR Estuary and Reaches 3, 5, 6, and 7.

30. The Basin Plan amendment incorporating a TMDL for bacteria in the SCR Estuary and Reaches 3, 5, 6 and 7 must be submitted for review and approval by the State Board, the State Office of Administrative Law (OAL), and the U.S. EPA. The Basin Plan amendment will become effective upon approval by OAL and U.S. EPA. A Notice of Decision will be filed with the Resources Agency.

31. If during the State Board's approval process Regional Board staff, the State Board or State Board staff, or OAL determine that minor, non-substantive modifications to the language of the amendment are needed for clarity or consistency, the Executive Officer should make such changes consistent with the Regional Board's intent in adopting this TMDL, and should inform the Board of any such changes.

32. Considering the record as a whole, this Basin Plan amendment is expected to result in an effect, either individually or cumulatively, on wildlife resources.

THEREFORE, be it resolved that pursuant to sections 13240 and 13242 of the Cal. Water Code, the Regional Board hereby amends the Basin Plan as follows:

1. The Regional Board hereby approves and adopts the CEQA substitute environmental documentation, which was prepared in accordance with Public Resources Code section 21159 and California Code of Regulations, title 14, section 15187, and directs the Executive Officer to sign the environmental checklist.

2. Pursuant to Sections 13240 and 13242 of the California Water Code, the Regional Board, after considering the entire record, including oral testimony at the hearing, hereby adopts the amendments to Chapter 7 of the Water Quality Control Plan for the Los Angeles Region, as set forth in Attachment A hereto, to incorporate the elements and implementation schedule of the TMDL for indicator bacteria in the SCR Estuary and Reaches 3, 5, 6 and 7.

3. The Executive Officer is directed to forward copies of the Basin Plan amendment to the State Board in accordance with the requirements of section 13245 of the California Water Code.

4. The Regional Board requests that the State Board approve the Basin Plan amendment in accordance with the requirements of sections 13245 and 13246 of the California Water Code and forward it to the OAL and the U.S. EPA.

5. If during the State Board's approval process, Regional Board staff, the State Board or State Board staff, or the OAL determine that minor, non-substantive modifications to the language of the amendment are needed for clarity or consistency, the Executive Officer may make such changes, and shall inform the Board of any such changes.

6. The Executive Officer is authorized to request a "No Effect Determination" from the Department of Fish and Game, or transmit payment of the applicable fee as may be required to the Department of Fish and Game.

I, Sam Unger, Interim Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of a resolution adopted by the California Regional Water Quality Control Board, Los Angeles Region, on July 8, 2010.

Sam Unger
Interim Executive Officer

8-30-10
Date

Attachment A to Resolution No. R10-006

Amendment to the Water Quality Control Plan – Los Angeles Region to incorporate the TMDL for Indicator Bacteria in the Santa Clara River Estuary and Reaches 3, 5, 6, and 7

Adopted by the California Regional Water Quality Control Board, Los Angeles Region on July 8, 2010.

Amendments:

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Add:

Chapter 7. Total Maximum Daily Loads (TMDLs) Summaries
7-36 Santa Clara River Estuary and Reaches 3, 5, 6, and 7 Indicator Bacteria TMDL

List of Figures, Tables, and Inserts

Add:

Chapter 7. Total Maximum Daily Loads (TMDLs)
Tables

7-36 Santa Clara River Estuary and Reaches 3, 5, 6, and 7 Indicator Bacteria TMDL
7-36.1 Santa Clara River Estuary and Reaches 3, 5, 6, and 7 Indicator Bacteria TMDL: Elements
7-36.2. Santa Clara River Estuary and Reaches 3, 5, 6, and 7 Indicator Bacteria TMDL: Allowable Exceedance Days
7-36.3. Santa Clara River Estuary and Reaches 3, 5, 6, and 7 Indicator Bacteria TMDL: Interim Allowable Exceedance Days
7-36.4. Santa Clara River Estuary and Reaches 3, 5, 6, and 7 Indicator Bacteria TMDL: Implementation Schedule

Chapter 7. Total Maximum Daily Loads (TMDLs)
Santa Clara River Estuary and Reaches 3, 5, 6, and 7 Indicator Bacteria TMDL

This TMDL was adopted by the Regional Water Quality Control Board on July 8, 2010.

This TMDL was approved by:

The State Water Resources Control Board on [Insert Date].
The Office of Administrative Law on [Insert Date].
The U.S. Environmental Protection Agency on [Insert Date].

This TMDL is effective on [Insert Date].

The following tables include the elements of this TMDL.

Table 7-36.1. Santa Clara River Estuary and Reaches 3, 5, 6, and 7 Indicator Bacteria TMDL: Elements

<table>
<tr><th>Element</th><th>Key Findings and Regulatory Provisions</th></tr>
<tr><td>Problem Statement</td><td>Elevated bacterial indicator densities are causing impairment of the water contact recreation (REC-1) beneficial use designated for the Santa Clara River (SCR) Estuary and Reaches 3, 5, 6, and 7. Recreating in waters with elevated bacterial indicator densities has long been associated with adverse human health effects. Specifically, local and national epidemiological studies demonstrate that there is a causal relationship between adverse health effects and recreational water quality, as measured by bacterial indicator densities.</td></tr>
<tr><td>Numeric Target

(Interpretation of the numeric water quality objective, used to calculate the waste load and load allocations)</td><td>The TMDL will have multi-part numeric targets based on the bacteria water quality objectives for marine and fresh waters designated for water contact recreation (REC-1) set forth in Chapter 3. Both single-sample and geometric mean objectives apply.
<table>
<tr><th>Numeric Targets</th><th>SCR Estuary (Marine REC-1)</th><th>SCR Reaches 3, 5, 6 and 7 (Freshwater REC-1)</th></tr>
<tr><td>Single Sample</td><td></td><td></td></tr>
<tr><td>E. coli</td><td>NA</td><td>235/100ml</td></tr>
<tr><td>Fecal coliform</td><td>400/100ml</td><td>NA</td></tr>
<tr><td>Enterococcus</td><td>104/100ml</td><td>NA</td></tr>
<tr><td>Total coliform*</td><td>10,000/100ml</td><td>NA</td></tr>
<tr><td>Geometric mean</td><td></td><td></td></tr>
<tr><td>E. coli</td><td>NA</td><td>126/100ml</td></tr>
<tr><td>Fecal coliform</td><td>200/100ml</td><td>NA</td></tr>
<tr><td>Enterococcus</td><td>35/100ml</td><td>NA</td></tr>
<tr><td>Total coliform</td><td>1,000/100ml</td><td>NA</td></tr>
</table>
*Total coliform density shall not exceed 1,000/100 ml, if the ratio of fecal-to-total coliform exceeds 0.1.
NA: not applicable.

The Basin Plan objectives and these targets are based on an acceptable health risk for recreational waters of 8-19 illnesses per 1,000 exposed individuals, as recommended by the US EPA (USEPA, 1986).

To implement the single sample bacteria objectives for waters designated REC-1, and to set allocations based on the single sample targets, an allowable number of exceedance days is set for marine and fresh waters. The numeric targets in the TMDL are expressed as ‘allowable exceedance days’ since bacterial density and the frequency of exceedances is most relevant to public health.

The allowable number of exceedance days is based on the more stringent of two criteria (1) exceedance days in the designated reference system and (2) exceedance days based on historical bacteriological data in the subject reach. This ensures that bacteriological water quality is at</td></tr>
</table>

Element	Key Findings and Regulatory Provisions
	least as good as that of a largely undeveloped system and that there is no degradation of existing water quality. This approach recognizes that there are natural sources of bacteria that may cause or contribute to exceedances of the single sample objectives and that it is not the intent of the Regional Board to require treatment or diversion of natural creeks or to require treatment of natural sources of bacteria from undeveloped areas. For the single sample targets, the Estuary and Reaches 3, 5, 6, and 7 are assigned an allowable number of exceedance days for dry weather and wet weather (defined as days with 0.1 inch of rain or greater and the three days following the rain event) as set forth in Table 7-36.2 The geometric mean targets may not be exceeded at any time.
Source Analysis	The significant contributors of bacteria loading to the SCR and Estuary are dry- and wet-weather urban runoff discharges from the storm water conveyance system. Mass emission data collected by MS4 Permittees show elevated levels of bacteria in the river. Data from natural landscapes in the region indicate that open space loading is not a significant source of bacteria. Data from storm drains and channels draining urban areas show elevated levels of bacteria, indicating that urban areas are a source. Data from throughout the Los Angeles Region further demonstrate that bacteria concentrations are significantly greater in developed areas. Based on this information, staff concludes that runoff from urban areas served by the storm drain system is a significant source of bacteria. Other point and nonpoint sources were analyzed and found to be less significant or there were not enough data to quantify their contribution. However, all sources are considered potential sources and are assigned allocations accordingly.
Waste Load Allocations (for point sources)	MS4 permittees are assigned wasteload allocations (WLAs) equal to allowable exceedances days listed in Table 7-36.2 and interim WLAs equal to allowable exceedance days listed in Table 7-36.3. Compliance with interim WLAs will be assessed using in-stream monitoring. Compliance with final WLAs will be assessed using both in-stream monitoring and outfall monitoring as described in the monitoring section. Permittees that discharge to Reaches 1 and 2 have WLAs based on allowable exceedance days for the Estuary. Permittees that discharge to Reach 3 or above have WLAs based on allowable exceedance days for Reaches 3, 5, 6, and 7. The WLAs for the Saugus water reclamation plant (WRP), Valencia WRP, Fillmore wastewater treatment plant (WTP), Santa Paula water reclamation facility (WRF), and Newhall WRP are set equal to a 7-day

Element	Key Findings and Regulatory Provisions
	median of 2.2 MPN/100 mL of *E. coli* and a daily max of 235 MPN/100 mL of *E. coli* to ensure zero (0) allowable exceedance days. No exceedances of the geometric mean targets shall be permitted. The WLAs for the Ventura WRF are set equal to a 7-day median of 2.2 MPN/100 mL of total coliform to ensure zero (0) allowable exceedance days. No exceedances of the geometric mean targets shall be permitted. General NPDES permits, individual NPDES permits, the Statewide Industrial Stormwater General Permit, the Statewide Construction Activity Stormwater General Permit, and the Statewide Stormwater Permit for Caltrans Activities are assigned WLAs of zero (0) allowable exceedance days of the single sample targets for both dry and wet weather and no exceedances of the geometric mean targets. Compliance with an effluent limit based on the bacteria water quality objectives will be used to demonstrate compliance with the WLA.
Load Allocations (for nonpoint sources)	Load allocations (LAs) are equal to allowable exceedance days listed in Table 7-36.2. Interim LAs are equal to allowable exceedance days listed in Table 7-36.3. Sources that discharge to Reaches 1 and 2 have LAs based on allowable exceedance days for the Estuary. Sources that discharge to Reach 3 or above have LAs based on allowable exceedance days for Reaches 3, 5, 6, and 7.
Margin of Safety	An implicit margin of safety was assumed by directly applying the water quality standards and implementation procedures as WLAs and LAs. This ensures that there is little uncertainty about whether meeting the TMDLs will result in meeting the water quality standards. An implicit margin of safety is incorporated in the allocations through the use of a conservative assumption of no (0) bacterial decay in discharges from storm drain to the receiving water when determining compliance with allocations.
Seasonal Variations and Critical Conditions	Seasonal variations are addressed by developing separate allocations for dry weather and wet weather based on public health concerns and observed natural background levels of exceedance of bacterial indicators. The critical condition for bacteria loading is during wet weather. This is because intermittent or episodic loading from sources such as urban runoff can have maximal impacts at high (i.e. storm) flows. Local and Bight-wide shoreline monitoring data show a higher percentage of daily exceedance of the single sample targets during wet weather, as well as more severe bacteriological impairments indicated by higher magnitude exceedances and exceedances of multiple indicators. Based on monitoring, this also appears to be the case for the SCR Estuary and

Element	Key Findings and Regulatory Provisions
	Reaches 3, 5, 6, and 7. The 90th percentile storm year in terms of wet days at a rain gage in the SCR watershed was used as the reference year. The 90th percentile year was selected for several reasons. First, selecting the 90th percentile year avoids an untenable situation where the reference system is frequently out of compliance. Second, selecting the 90th percentile year allows responsible jurisdictions and responsible agencies to plan for a 'worst-case scenario', as a critical condition is intended to do.
Implementation	The regulatory mechanisms used to implement the TMDL will include general NPDES permits, individual NPDES permits, MS4 Permits covering jurisdictions within the SCR watershed, the Statewide Industrial Storm Water General Permit, the Statewide Construction Activity Storm Water General Permit, the Statewide Stormwater Permit for Caltrans Activities, the Conditional Waiver for Irrigated Lands, WDRs, waivers of WDRs, the authority contained in Sections 13263, 13267, and 13269 of the Cal. Water Code, and other appropriate mechanisms. WLAs for point sources will be implemented through NPDES permits. Each NPDES permit assigned a WLA shall be reopened or amended at re-issuance, in accordance with applicable laws, to incorporate the assumptions and requirements of applicable WLAs as permit requirements. **MS4 Permittees** The cities of Santa Clarita, Fillmore, Santa Paula, and Ventura, and the Counties of Los Angeles and Ventura are responsible for MS4 WLAs. Cities and counties that have co-mingled storm water are jointly and severally responsible for meeting the WLAs assigned to MS4 discharges, unless the dischargers demonstrate that their discharges did not cause or contribute to the exceedances. Responsible parties must provide an Implementation Plan to the Regional Board outlining how each intends to individually or cooperatively achieve compliance with the WLAs. The report shall include implementation methods, an implementation schedule, proposed milestones, and proposed outfall monitoring to determine compliance. Proposed milestones will be considered by the Regional Board as potential permit conditions when the MS4 is reopened or reissued. For responsible jurisdictions and agencies who will be proposing wet-weather load-based compliance at MS4 outfalls, the plan shall include an estimate of existing load and the allowable load from MS4 outfalls to attain the allowable number of exceedance days in-stream. The plan shall include a technically defensible quantitative linkage to the WLAs. The plan shall include quantitative estimates of the water quality benefits provided by the proposed implementation approach.

Element	Key Findings and Regulatory Provisions
	Non-MS4 Permittees Other dischargers are individually responsible for their WLAs. **Nonpoint Sources** LAs for irrigated agricultural lands will be implemented through requirements in the Conditional Waiver for Irrigated Lands (Order No. R4-2005-0080) or other order that are consistent with the LAs. LAs for onsite wastewater treatment systems will be implemented through WDRs or waivers of WDRs. LAs for other nonpoint sources, such as horses/livestock, aquaculture, onsite wastewater treatment systems, and golf courses, will be implemented through the Nonpoint Source Implementation and Enforcement Policy. The LAs for irrigated agricultural lands can be achieved by the implementation of on-farm best management practices (BMPs), which may include buffer crops, filter strips and sedimentation basins. The estimated costs for buffer crops, filter strips, and sedimentation basins are $373/acre, $1002/acre, and $10,000/acre, respectively. There may be funding available through the Natural Resources Conservation Service for the BMPs listed and others developed for the region, as well as technical advice for implementation. There is also funding available through CWA Section 319h grants. For the LAs issued to horses/livestock, land managers can use various incentives and regulatory approaches to encourage riders to use and abide by local restrictions and regulations.
Monitoring	**MS4 Permittees** Responsible jurisdictions and agencies for the MS4 WLAs are jointly responsible for developing and implementing a comprehensive in-stream monitoring plan. The monitoring plan should include all applicable bacteria water quality objectives and the sampling frequency must be adequate to assess compliance with the 30-day geometric mean objectives. Responsible jurisdictions and agencies may build upon existing monitoring programs in the SCR watershed when developing the bacteria water quality monitoring plan. At a minimum, at least one sampling station shall be located in each impaired reach. Responsible jurisdictions and agencies for the MS4 WLAs shall submit an outfall monitoring plan as part of their implementation plan. The outfall monitoring plan shall propose an adequate number of representative outfalls to be sampled, a sampling frequency, and protocol for enhanced outfall monitoring as a result of an in-stream exceedance. Responsible jurisdictions and agencies can use existing outfall monitoring station in the Ventura MS4 permit, where appropriate for both the permit and TMDL objectives.

Element	Key Findings and Regulatory Provisions
	Monitoring to Determine Compliance Responsible jurisdictions and agencies shall assess compliance at the outfall monitoring sites identified in the implementation plan. Compliance shall be based on the allowable number of exceedance days, except in wet-weather, compliance can alternatively be based on an allowable load. Responsible jurisdictions and agencies must also assess compliance at in-stream monitoring sites. If the number of exceedance days is greater than the allowable number of exceedance days, then the responsible jurisdictions and agencies shall conduct additional outfall monitoring, beyond the routine outfall monitoring proposed in the implementation plan. If the collective outfall monitoring shows attainment of WLAs, then MS4 discharges shall not be held responsible for in-stream exceedances for this time period. **Non-MS4 Permittees** NPDES Permittees other than MS4 dischargers shall conduct monitoring for all applicable bacteria water quality objectives to ensure that they are attaining WLAs and water quality objectives are being met. NPDES permits for the Saugus and Valencia WRPs shall include effluent monitoring for *E. coli* and the NPDES permit for the Ventura WRF shall include effluent monitoring for total coliform, fecal coliform, and enterococcus. **Nonpoint Sources** The Conditional Waiver for Irrigated Lands shall require bacteria monitoring for discharges from irrigated agricultural lands. Monitoring shall be implemented as part of WDR and waiver requirements, and through implementation of the Nonpoint Source Implementation and Enforcement Policy, for other nonpoint sources.

Table 7-36.2 Santa Clara River Estuary and Reaches 3, 5, 6, and 7 Indicator Bacteria TMDL: Allowable Exceedance Days[1,2,3].

Time Period	Santa Clara River Reaches 3, 5, 6, & 7	Santa Clara River Estuary
Dry Weather	5 allowable exceedance days of single sample objectives 0 allowable exceedances of geometric mean objectives	Not Applicable
Wet Weather	16 allowable exceedance days of single sample objectives 0 allowable exceedances of geometric mean objectives	25 allowable exceedance days of single sample objectives 0 allowable exceedances of geometric mean objectives
Summer Dry Weather (April 1 – October 31)	Not Applicable	10 allowable exceedance days of single sample objectives 0 allowable exceedances of geometric mean objectives
Winter Dry Weather (November 1 – March 31)	Not Applicable	12 allowable exceedance days of single sample objectives 0 allowable exceedances of geometric mean objectives

[1] Allowable exceedance days calculated by the following equation: Allowable Exceedance Days = WQO Exceedance Probability in Reference System(s) x Number of Days during 1995.

[2] Consistent with the Santa Monica Bay Beaches TMDL, where the fractional remainder for the calculated allowable exceedance days exceeds 1/10th then the number of days are rounded up (e.g., 4.12 is rounded up to 5). In instances where the tenth decimal place for the allowable exceedance days (or weeks or months) is lower than 1/10th then the number of days are rounded down (e.g., 4.02 is rounded down to 4).

[3] The calculated number of exceedance days assumes that daily sampling is conducted. To determine the number of allowable exceedances for less frequent sampling, a ratio is used.

Table 7-36.3 Santa Clara River Estuary and Reaches 3, 5, 6, and 7 Indicator Bacteria TMDL: Interim Allowable Exceedance Days[1,2,3].

Time Period	Santa Clara River Reaches 3, 5, 6, & 7	Santa Clara River Estuary
Dry Weather	17 allowable exceedance days of single sample objectives	Not Applicable
Wet Weather	61 allowable exceedance days of single sample objectives	62 allowable exceedance days of single sample objectives
Summer Dry Weather (April 1 – October 31)	Not Applicable	150 allowable exceedance days of single sample objectives
Winter Dry Weather (November 1 – March 31)	Not Applicable	49 allowable exceedance days of single sample objectives

[1] Allowable exceedance days calculated by the following equation: Allowable Exceedance Days = Current WQO Exceedance Probability x Number of Days during 1995.

[2] Consistent with the Santa Monica Bay Beaches TMDL, where the fractional remainder for the calculated allowable exceedance days exceeds 1/10th then the number of days are rounded up (e.g., 4.12 is rounded up to 5). In instances where the tenth decimal place for the allowable exceedance days (or weeks or months) is lower than 1/10th then the number of days are rounded down (e.g., 4.02 is rounded down to 4).

[3] The calculated number of exceedance days assumes that daily sampling is conducted. To determine the number of allowable exceedances for less frequent sampling, a ratio is used.

Table 7-36.4 Santa Clara River Estuary and Reaches 3, 5, 6, and 7 Indicator Bacteria TMDL: Implementation Schedule

Deadline	Task
Effective date of the TMDL	WLAs assigned to non-MS4 point sources must be attained.
1 year after the effective date of the TMDL	Responsible jurisdictions and agencies for the MS4 WLAs must submit a comprehensive in-stream bacteria water quality monitoring plan for the SCR Watershed. The plan must be approved by the Executive Officer before the monitoring data can be considered during the implementation of the TMDL. Once the coordinated monitoring plan is approved by the Executive Officer, monitoring shall commence within 6 months.
3 years after the effective date of this TMDL	Responsible jurisdictions and agencies for the MS4 WLAs shall submit a draft Implementation Plan to the Regional Board outlining how each intends to cooperatively or individually achieve compliance with the WLAs. The report shall include implementation methods, an implementation schedule, proposed milestones, and outfall monitoring.
4 years after the effective date of this TMDL	Interim LAs and MS4 WLAs apply.
No longer than 4 years after the effective date of this TMDL	The Regional Board shall reconsider this TMDL if: (1) monitoring and any voluntary local reference system studies justify a revision, or (2) US EPA publishes revised recommended bacteria criteria, or (3) the Regional Board adopts a separate Basin Plan amendment, suspending recreational uses during high flows.
5 years after the effective date of this TMDL	Responsible jurisdictions and agencies for the MS4 WLAs shall provide a verbal update to the Regional Board on the progress of TMDL implementation.
6 months after receipt of Regional Board comments on the draft Implementation Plan	Responsible jurisdictions and agencies for the MS4 WLAs shall submit a final Implementation Plan and begin additional outfall monitoring.
11 years after effective date of this	For SCR Estuary: Achieve compliance with the applicable

TMDL	LAs and MS4 WLAs, expressed in terms of geometric mean objectives and allowable exceedance days of the single sample objectives for summer dry weather (April 1 to October 31) and winter dry weather (November 1 to March 31). For SCR Reaches 3, 5, 6, and 7: Achieve compliance with the applicable LAs and MS4 WLAs, expressed in terms of geometric mean objectives and allowable exceedance days of the single sample objectives and for dry weather.
17 years after the effective date of this TMDL	For SCR Estuary and Reaches 3, 5, 6, and 7: Achieve compliance with the applicable LAs and MS4 WLAs, expressed in terms of geometric mean objectives and allowable exceedance days of the single sample objectives for wet weather.