

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

**RESOLUTION NO. R12-011**  
**December 6, 2012**

**Amendment to the Water Quality Control Plan for the Los Angeles Region to  
Incorporate a Total Maximum Daily Load for Algae, Eutrophic Conditions, and  
Nutrients in Ventura River, including the Estuary, and its Tributaries**

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

1. The Federal Clean Water Act (CWA) requires the 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. Section 303(d)(1) of the CWA 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).
3. A consent decree between U.S. EPA, Heal the Bay, and Santa Monica BayKeeper 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 consent decree 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. In accordance with the consent decree, the Algae, Eutrophic Conditions, and Nutrients TMDL for Ventura River (including the Estuary and its Tributaries) addresses the listing for algae, eutrophic conditions, nitrogen, and low dissolved oxygen in Ventura River Estuary, Ventura River Reaches 1 and 2, San Antonio Creek and Cañada Larga (Analytical Unit 88). In 2010, the consent decree was modified to include an extension for Analytical Unit 88 until March 2013. Based on the consent decree schedule, TMDLs addressing these listings must be approved or established by U.S. EPA by March 2013.

4. The elements of a TMDL are described in sections 130.2 and 130.7 of Title 40 of the Code of Federal Regulation (40 CFR) and section 303(d)(1), subdivisions (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).) Section 130.7 of Title 40 of the Code of Federal Regulations 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 that 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.
5. 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 California Water Code section 13242. Moreover, TMDLs 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 No. 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 CFR § 122.44(d)(vii)(B).)
6. As envisioned by California 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 Ventura River Watershed. The TMDL establishes the types of data and information that will be necessary to obtain. 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.

7. Upon establishment of TMDLs by the State or U.S. EPA, the State is required to incorporate, or reference, the 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.
8. The Ventura River watershed is located in the northwestern portion of Ventura County with a small portion in the southeastern portion of Santa Barbara County. The watershed is characterized by rugged mountains in the upper basins transitioning to less steep areas and valleys. The watershed drains an area of about 220 square miles with an elevation ranging from 6,000 feet to sea level. Major tributaries to the river, include Matilija Creek, North Fork Matilija Creek, San Antonio Creek, Coyote Creek, and Cañada Larga. The river starts at the confluence of Matilija Creek and North Fork Matilija Creek and flows for about 16 miles in a southern direction to the estuary and Pacific Ocean. The river has intermittent direct discharges to the ocean; longshore transport of sand can cause a sand bar to form at the mouth of the estuary in the late summer and early fall obstructing flow.
9. In addition to natural variations in flow, flow regimes in the Ventura River have been altered to support water supply. Lake Casitas and Matilija Reservoir are the two reservoirs within the watershed. Perennial flow occurs from the headwaters to the Robles Diversion Dam, located about two miles downstream from the Matilija Dam. The flow downstream of the Robles Diversion Dam to the confluence with San Antonio Creek is intermittent, particularly during the dry summer months. Flow in the river is disrupted at Foster Park due to subsurface diversions and groundwater extraction. However, the river flow below Foster Park to the estuary increases due to effluent discharges from the Ojai Valley Wastewater Treatment Plant.
10. Eighty-five percent of the land use in the Ventura River watershed is classified as open space and with approximately half of the watershed located within the Los Padres National Forest. Approximately 4.5 percent of the watershed consists of agricultural land with the developed area being small compared to the open space and agriculture. The cities of Ojai and Ventura are the largest urban areas in the watershed and the communities of Casitas Springs, Foster Park, Oak View, Valley Vista, Mira Monte, Meiners Oaks, Upper Ojai, and Live Oak Acres are within the unincorporated Ventura County.
11. The Regional Board's goal in establishing the TMDL for algae, eutrophic conditions, and nutrients in the Ventura River Watershed is to protect the water

contact recreation (REC-1) and non-contact water recreation (REC-2) beneficial uses, as well as uses associated with habitat preservation and protection as applicable including: warm fresh water habitat (WARM), cold fresh water habitat (COLD), estuarine habitat (EST), wetland habitat (WET), marine habitat (MAR), wildlife habitat (WILD), rare, threatened, or endangered species (RARE), migration of aquatic organisms (MIGR), and spawning, reproduction, and/or early development (SPWN).

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 "Algae, Eutrophic Conditions, and Nutrients Total Maximum Daily Loads for Ventura River and its Tributaries" 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 December 6, 2012, prior to the Regional 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 California Water Code section 13244. This notice was published in the Ventura County Star on July 20, 2012.
14. The public has had a reasonable opportunity to participate in the review of this TMDL. A draft of the TMDL was released for public comment on July 20, 2012; a Notice of Hearing was published and circulated 45 days preceding Regional Board action. The draft of the TMDL was also made available on the Regional Board's website. Regional Board staff responded to oral and written comments received from the public; and the Regional Board held a public hearing on December 6, 2012 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 California Water Code section 13241. The consideration of the California 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 California Water Code section 13241, it nonetheless has developed and received significant information pertaining to the California 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 designated beneficial uses in the Ventura River Watershed include aquatic life habitat uses, water contact recreation, and non-water contact recreation, navigation, ground water recharge, agricultural supply, municipal and domestic supply, and industrial service supply. The estuary has the designated use of navigation, commercial and sport fishing, and shellfish harvesting. In addition upstream reaches along with the listed tributaries are also designated for industrial service supply. The past, present and probable future beneficial uses of water have been considered in that the Ventura River Watershed is designated for a number of beneficial uses in the Basin Plan.
18. The environmental characteristics of the watershed 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 that affect water quality in the area have been considered. This TMDL provides several compliance options, including improved nitrification-denitrification at the WWTP, structural best management practices (BMPs) such as constructed wetlands, biofiltration, agricultural BMPs and source reduction BMPs, as well as non-structural BMPs and alternatives such as pollution prevention, inspection and proper servicing of onsite waste treatment systems, and outreach and education. These options provide flexibility for responsible parties to reduce nutrient loading to the river, its tributaries, and the estuary. Attainment of the water quality standards through the compliance options is a reasonably achievable water quality condition for the watershed. However, to the extent that there would be any conflict between the consideration of the factor in California Water Code section 13241(c), if the consideration were required, and the Clean Water Act, the Clean Water Act would prevail.
19. 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 6 to 12 years to meet the load and waste load allocations, depending on the source. 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 6- to 12-year implementation schedule.

20. 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.
21. 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. § 3775-3781.) The project itself is the establishment of a TMDL for algae, eutrophic conditions, and nutrients in the Ventura River Watershed. 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.
22. A CEQA Scoping meeting was conducted on May 30, 2012 at the Ventura City Hall Community Meeting Room to solicit input from the public and interested stakeholders in determining the appropriate scope, content, and implementation options of the proposed TMDL. At the meeting, staff presented the regulatory background, description of the project, location of the project, project purpose, and potential implementation alternatives. Staff received input from members of the regulated community, the Ventura River Watershed Council, the environmental community, and other stakeholders regarding reasonably foreseeable methods of compliance, reasonably foreseeable environmental impacts of the methods of compliance, reasonably foreseeable mitigation measures, reasonably foreseeable alternative means of compliance, and alternatives to the project. This meeting fulfilled the requirements under CEQA. (Public Resources Code § 21083.9; 23 Cal. Code Regs. § 3775.5). A notice of the CEQA Scoping meeting was sent to interested parties on May 16, 2012.

23. In preparing the substitute environmental documents, the Regional Board has considered the requirements of Public Resources Code section 21159 and section 15187 of Title 14 of the California Code of Regulations, 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.
24. The reasonably foreseeable methods of compliance for this TMDL include improved nitrification-denitrification at the WWTP; structural BMPs including constructed wetlands, alum injection systems, and biofiltration systems; agricultural BMPs including filter strips, improved irrigation efficiency, manure management, and grazing management; an anaerobic biodigester; onsite wastewater treatment system upgrades; and watershed-wide implementation, including riparian buffer strips and stream bank stabilization. Foreseeable methods of compliance also include non-structural BMPs, such as onsite wastewater treatment system inspections and servicing, manure management plans, illicit discharge ordinances and prevention plans, and outreach and education.
25. Consistent with the Regional Board's substantive obligations under CEQA, the substitute environmental documents do not engage in speculation or conjecture. The substitute environmental documents only consider the reasonably foreseeable environmental impacts, including those relating to the reasonably foreseeable 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.
26. The proposed Basin Plan 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. Such alternatives or mitigation measures are within the responsibility and jurisdiction of other public agencies, and not the Regional Board. California Water Code section 13360 precludes the Regional Board from specifying the design, location, type of construction, or particular manner in which responsible parties comply with Regional Board 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

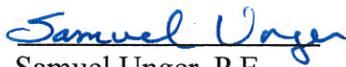
elsewhere in the substitute environmental documents. (14 Cal. Code Regs. § 15091(a)(2).)

27. The substitute environmental 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.
28. 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.)
29. The regulatory action meets the "Necessity" standard of the Administrative Procedures Act. (Gov. Code, section 11353(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 algae, eutrophic conditions, nitrogen, and low dissolved oxygen impairments in the Ventura River Watershed.
30. The Basin Plan amendment incorporating a TMDL and implementation schedule for algae, eutrophic conditions, and nutrients in the Ventura River Watershed must be submitted for review and approval by the State Board, the State Office of Administrative Law (OAL), and pursuant to CWA section 303(d) and/or 303(c) (as appropriate) by the U.S. EPA. The Basin Plan amendment will become effective upon approval by U.S. EPA. Once effective, 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 Regional 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 California 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 section 15187 of Title 14 of the California Code of Regulations, 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 Algae, Eutrophic Conditions, and Nutrients Total Maximum Daily Loads for Ventura River, including the Estuary, and its Tributaries.
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 for review and approval and finally, for review and approval pursuant to CWA sections 303(d) and/or 303(c), as appropriate, to the U.S. EPA.
5. 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 is authorized to make such changes, and shall inform the Regional Board of any such changes.
6. The Executive Officer is authorized to request a "No Effect Determination" from the Department of Fish and Game, and/or transmit payment of the applicable fee as may be required to the Department of Fish and Game.

I, Samuel Unger, 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 December 6, 2012.



Samuel Unger, P.E.  
Executive Officer

12-18-12

Date

**Amendment to the Water Quality Control Plan – Los Angeles Region  
to Incorporate the  
Total Maximum Daily Load for Algae, Eutrophic Conditions, and Nutrients  
In the Ventura River and its Tributaries**

Adopted by the California Regional Water Quality Control Board, Los Angeles Region on **December 6, 2012.**

**Amendments:**

**Table of Contents**

Add:

Chapter 7. Total Maximum Daily Loads (TMDLs)

7-35 Ventura River and Tributaries Algae, Eutrophic Conditions, and Nutrients  
TMDL

**List of Figures, Tables, and Inserts**

Add:

Chapter 7. Total Maximum Daily Loads (TMDLs)

Tables

7-35 Ventura River and Tributaries Algae, Eutrophic Conditions, and Nutrients  
TMDL

7-35.1. Ventura River and Tributaries Algae, Eutrophic Conditions, and Nutrients  
TMDL - Elements

7-35.2. Ventura River and Tributaries Algae, Eutrophic Conditions, and Nutrients  
TMDL - Implementation Schedule

**Chapter 7. Total Maximum Daily Loads (TMDLs) Summaries**

Add:

7-35 Ventura River and Tributaries Algae, Eutrophic Conditions, and Nutrients TMDL

This TMDL was adopted by:

The Regional Water Quality Control Board on December 6, 2012.

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 elements of the TMDL are presented in Table 7-35.1 and the Implementation Plan in Table 7-35.2.

**Table 7-35.1. Ventura River and Tributaries Algae, Eutrophic Conditions, and Nutrients TMDL: Elements**

TMDL Element	Regulatory Provisions
<p><b>Problem Statement</b></p>	<p>The Ventura River Estuary and Reaches 1 and 2 are on the Clean Water Act (CWA) section 303(d) list as impaired for algae and eutrophic conditions. San Antonio Creek and Cañada Larga are on the CWA section 303(d) list as impaired for nitrogen and dissolved oxygen, respectively. Recent data confirm these impairments and demonstrate additional impairments for low dissolved oxygen in the Estuary, San Antonio Creek, and Reaches 1-4. The algae and nutrient-related impairments are caused by excessive loading of nutrients, particularly nitrogen and phosphorus, to Ventura River and its tributaries. The water quality impairments due to eutrophication and increased nutrient loading occur during the dry season when algae growth primarily occurs. For purposes related to this TMDL, the dry season is defined as occurring from May 1 to September 30.</p> <p>The water quality objectives used to assess impairment for this TMDL are the narrative water quality objective for biostimulatory substances and the numeric water quality objectives for dissolved oxygen (DO) and pH contained in Chapter 3.</p> <p>Nutrient loading and the resulting ecological responses in the Ventura River, including the Estuary, and its tributaries result in impairments of beneficial uses associated with recreation activities (water contact and non-contact) and aquatic life (warm and cold freshwater habitat; estuarine and wetland habitat; rare, threatened or endangered species; migration of aquatic organisms; spawning, reproduction, and/or early development). The most sensitive beneficial use is the cold water aquatic habitat use and the associated migratory and spawning and early development uses. The Ventura River and its tributaries are home to the Southern California Steelhead, which is an endangered species.</p>

**Attachment A to Resolution No. R12-011**

TMDL Element	Regulatory Provisions																					
<p><b>Numeric Targets</b></p>	<p>The DO and pH numeric targets are set equal to their numeric water quality objectives in Chapter 3 of the Basin Plan. The numeric targets for algal and phytoplankton biomass and percent cover are established as a numeric interpretation of the water quality condition that will demonstrate attainment of the narrative water quality objective for biostimulatory substances contained in Chapter 3.</p> <p>Numeric targets to interpret narrative water quality objectives are based on the California Nutrient Numeric Endpoints (NNE) approach, developed by USEPA Region 9 and the State and Regional Water Quality Control Boards.</p> <table border="1" data-bbox="435 583 1435 1129"> <thead> <tr> <th>Indicator</th> <th>Numeric Target</th> <th>Water body</th> </tr> </thead> <tbody> <tr> <td>Total Algal Biomass</td> <td>150 mg/m<sup>2</sup> chlorophyll <i>a</i> as seasonal average</td> <td>Ventura River and Tributaries</td> </tr> <tr> <td>Macroalgal Cover (attached &amp; unattached)</td> <td>≤ 30 percent as seasonal average</td> <td>Ventura River and Tributaries</td> </tr> <tr> <td>Phytoplankton Biomass</td> <td>20 µg/L chlorophyll <i>a</i> as seasonal average</td> <td>Estuary (shallow subtidal area)</td> </tr> <tr> <td>Macroalgal Cover</td> <td>≤ 15 percent as seasonal average</td> <td>Estuary (intertidal and shallow subtidal areas)</td> </tr> <tr> <td>Dissolved Oxygen</td> <td>≥ 7 mg/L as a daily minimum</td> <td>Ventura River, Tributaries and Estuary</td> </tr> <tr> <td>pH</td> <td>6.5 – 8.5 (instantaneous value)</td> <td>Ventura River, Tributaries, and Estuary</td> </tr> </tbody> </table> <p>Biomass and percent cover indicator targets apply during the dry season when algae growth primarily occurs. The seasonal averaging period for algal biomass and percent cover is the dry season of May 1 to September 30. River indicators are averaged over a sampling reach as required by the SWAMP monitoring protocol Bioassessment SOP 02. Estuary macroalgal cover is measured using 3 transects and evaluating percent cover at 10 random points along each transect. Results are reported as a transect average. See methods used in the Bight '08 Estuarine Eutrophication Assessment (McLaughlin K et al. Southern California Bight 2008 Regional Monitoring Program: Estuarine Eutrophication Assessment. Southern California Coastal Water Research Project. Costa Mesa, CA).</p>	Indicator	Numeric Target	Water body	Total Algal Biomass	150 mg/m <sup>2</sup> chlorophyll <i>a</i> as seasonal average	Ventura River and Tributaries	Macroalgal Cover (attached & unattached)	≤ 30 percent as seasonal average	Ventura River and Tributaries	Phytoplankton Biomass	20 µg/L chlorophyll <i>a</i> as seasonal average	Estuary (shallow subtidal area)	Macroalgal Cover	≤ 15 percent as seasonal average	Estuary (intertidal and shallow subtidal areas)	Dissolved Oxygen	≥ 7 mg/L as a daily minimum	Ventura River, Tributaries and Estuary	pH	6.5 – 8.5 (instantaneous value)	Ventura River, Tributaries, and Estuary
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<p><b>Source Analysis</b></p>	<p>The source analysis is an estimate of the amount of TN and TP entering the river from point and nonpoint sources based on available information such as discharge nutrient concentration data, land use data, rainfall-runoff models, studies, and literature reviews.</p> <p><u>Point sources:</u></p> <p>Stormwater runoff discharged via the municipal separate storm sewer system (MS4) contributes a large percentage of the nutrients to the Ventura River and its tributaries (21.3% in dry weather and 28.3% in wet weather). The Ojai Valley waste water treatment plant (WWTP) contributes a large portion of nutrient loading in dry weather (37.6%) but a smaller portion in wet weather (1.7%).</p> <p><u>Nonpoint sources:</u></p> <p>Horses/livestock and agricultural land uses contribute significant loading in both dry weather (33.5%) and wet weather (36.1%). Open space loading is a</p>																					

**Attachment A to Resolution No. R12-011**

TMDL Element	Regulatory Provisions
	<p>significant source of nutrients in wet weather (19.1%) and a smaller source of nutrients in dry weather (7.6%). Septic systems are estimated to contribute 4.7% of the annual nutrient load. Groundwater discharge and direct atmospheric deposition to the water surface are responsible for a small portion of the annual load (1.3% and 0.2%, respectively).</p>
<p><b>Linkage Analysis</b></p>	<p>The critical condition is the dry season and the linkage analysis for both the Ventura River and Estuary is for dry-weather conditions. Basing the linkage analysis on <i>dry-weather</i> conditions is a conservative approach to assessing conditions in the <i>dry season</i>. Nutrients are loaded from the watershed to the Ventura River and Estuary in both dry and wet weather, but the nutrients loaded in the dry season are predominately responsible for the algae, eutrophic conditions, and nutrient impairments in the Ventura River and Estuary.</p> <p><u>Linkage analysis for the river</u></p> <p>The linkage analysis for the river is based on the River and Stream Water Quality Model (QUAL2K). QUAL2K predicts the nutrient concentrations and algal biomass in the various reaches of the Ventura River based on an estimate of watershed-based loading. The results of the model are used to determine allowable in-stream nutrient concentrations to meet algal biomass targets and to evaluate various source reduction scenarios to set dry-weather load and waste load allocations.</p> <p><u>Linkage analysis for the Estuary</u></p> <p>The linkage analysis for the Estuary is based on two lines of evidence that establish the relationship between nutrient loading to the Estuary and the resulting nutrient concentrations and algal biomass in the Estuary.</p> <p>The first approach uses the NNE BATHTUB spreadsheet modeling tool to establish the linkage between nutrient loading to the Estuary and the predicted water quality response, assuming that the open water portion of the Estuary, formed by the closing of the berm in the late summer and early fall, acts like a freshwater reservoir. The second approach uses empirical relationships between nutrient loading and algal biomass (peak macroalgae biomass and annual average chlorophyll a) in estuaries developed as part of a 2008 Southern California Bight Regional Monitoring Program study.</p> <p>Both approaches predict that the current nutrient loading to the Estuary will attain the phytoplankton numeric target. Moreover, the watershed loading reductions required to protect the river will reduce nutrient concentrations delivered to the Estuary and ensure attainment of numeric targets and protection of beneficial uses.</p>

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<b>Allocations</b>	<p>Waste load allocations (WLAs) and load allocations (LAs) addressing point and nonpoint sources of nutrients are assigned to discharges to the Ventura River watershed. Because the critical condition for this TMDL is dry weather, and it is the dry-weather loading that results in water quality impairments, the allocations are primarily focused on dry-weather nutrient loading reductions. However, wet-weather WLAs and LAs are assigned as well.</p> <p><u>Dry-weather Allocations</u></p> <p>The dry-weather WLAs for Ojai Valley WWTP are expressed as seasonal loads. The TN WLA is expressed as a summer dry-weather load based on an estimated 153 summer dry-weather days and a winter dry-weather load based on an estimated 178 winter dry-weather days. The TP WLA is expressed as a dry-weather load based on an estimated 331 dry-weather days. Dry-weather WLAs for the Ojai Valley WWTP are as follows:</p> <table border="1" data-bbox="505 747 1362 909"> <thead> <tr> <th>Summer Dry-Weather TN WLA (lb/season)</th> <th>Winter Dry-Weather TN WLA (lb/season)</th> <th>Dry-Weather TP WLA (lb/season)</th> </tr> </thead> <tbody> <tr> <td align="center">8,044</td> <td align="center">12,477</td> <td align="center">5,799</td> </tr> </tbody> </table> <p>At the TMDL reconsideration, the Ojai Valley WWTP allocation may be revised (i.e. increased) if the Ojai WWTP has accepted additional flows from other watershed sources such as septic systems in order to achieve the TMDL. The Ojai WWTP will document and report annually the number, flow and TN load from watershed sources for the Regional Board to consider as part of the TMDL reconsideration.</p> <p>Dry-weather WLAs for Ventura County MS4 and Caltrans are expressed as daily loads based on an estimated 331 dry-weather days per year. Dry-weather WLAs for Ventura County MS4 and Caltrans are as follows:</p> <table border="1" data-bbox="407 1312 1440 1453"> <thead> <tr> <th>Source Type</th> <th>Dry-Weather WLA (lb/day)</th> <th>Dry-Weather TP WLA (lb/day)</th> </tr> </thead> <tbody> <tr> <td>Dry-weather WLAs for Ventura MS4</td> <td align="center">28</td> <td align="center">0.5</td> </tr> <tr> <td>Dry-weather WLAs for Caltrans</td> <td align="center">1.1</td> <td align="center">0.11</td> </tr> </tbody> </table> <p>The dry-weather WLAs for the general industrial and construction stormwater permittees are equal to the in-stream nutrient concentrations required to meet algal biomass numeric targets. Dry-weather WLAs for general industrial and construction stormwater permittees are as follows:</p> <table border="1" data-bbox="407 1652 1107 1879"> <thead> <tr> <th>Permittee</th> <th>TN (mg/L)</th> <th>TP (mg/L)</th> </tr> </thead> <tbody> <tr> <td>General Industrial Stormwater Permittees</td> <td align="center">1.15</td> <td align="center">0.115</td> </tr> <tr> <td>General Construction Stormwater Permittees</td> <td align="center">1.15</td> <td align="center">0.115</td> </tr> <tr> <td colspan="3">Applied as an annual dry-weather average.</td> </tr> </tbody> </table>	Summer Dry-Weather TN WLA (lb/season)	Winter Dry-Weather TN WLA (lb/season)	Dry-Weather TP WLA (lb/season)	8,044	12,477	5,799	Source Type	Dry-Weather WLA (lb/day)	Dry-Weather TP WLA (lb/day)	Dry-weather WLAs for Ventura MS4	28	0.5	Dry-weather WLAs for Caltrans	1.1	0.11	Permittee	TN (mg/L)	TP (mg/L)	General Industrial Stormwater Permittees	1.15	0.115	General Construction Stormwater Permittees	1.15	0.115	Applied as an annual dry-weather average.		
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	<p>Dry-weather LAs for Agriculture are expressed as daily loads based on an estimated 331 dry-weather days per year as follows:</p> <table border="1" data-bbox="407 380 1263 478"> <thead> <tr> <th>Source Type</th> <th>Dry-Weather TN WLA (lb/day)</th> <th>Dry-Weather TP WLA (lb/day)</th> </tr> </thead> <tbody> <tr> <td>Agriculture</td> <td align="center">16</td> <td align="center">0.12</td> </tr> </tbody> </table> <p>Dry-weather LAs for Horse facilities and intensive livestock operations are expressed as daily loads based on an estimated 331 dry-weather days per year as follows:</p> <table border="1" data-bbox="407 646 1128 821"> <thead> <tr> <th>Source Type</th> <th>Dry-Weather TN WLA (lb/day)</th> <th>Dry-Weather TP WLA (lb/day)</th> </tr> </thead> <tbody> <tr> <td>Horse facilities/Intensive Livestock</td> <td align="center">0.6</td> <td align="center">0.14</td> </tr> </tbody> </table> <p>The dry-weather LA for grazing activities is equal to a 10% percent reduction of the existing TN and TP load. The existing load will be quantified as part of management plans required to implement the TMDL.</p> <p><u>Dry- and Wet-weather LAs for OWTS</u></p> <p>LAs for OWTS are equal to 7,478 pounds TN per year based on a required 50% reduction in loading. The LAs apply in dry and wet weather. No LAs are assigned to OWTS for TP.</p> <p><u>Dry- and Wet-weather WLAs for Other NPDES permittees</u></p> <p>Dry-weather WLAs for other NPDES permittees are equal to the in-stream nutrient concentrations required to meet algal biomass numeric targets of 1.15 mg/L TN and 0.115 mg/L TP. Wet-weather allocations are set to attain site-specific nitrogen water quality objectives from Table 3-8. There are no site-specific objectives for Reach 1 or the Estuary, nor are there any “Other NPDES permittees” that discharge to Reach 1 or the Estuary. Thus, there are no wet-weather WLAs assigned to Other NPDES permittees for Reach 1 or the Estuary.</p> <p><u>Wet-weather Allocations</u></p> <p>Wet-weather allocations for stormwater, agriculture, and horse/livestock sources are set to attain site-specific water quality objectives from Table 3-8 of the Basin Plan, provided in the table below. There are no site-specific objectives for Reach 1 or the Estuary. For Reach 1 and the Estuary, Wet-weather WLAs for stormwater sources are equal to existing water quality in stormwater discharges (maximum TN = 7.4 mg/L) and LAs for agriculture and horse/livestock sources are equal to water quality benchmarks of 10 mg/L nitrate-N + nitrite-N in the Agriculture Waiver.</p>	Source Type	Dry-Weather TN WLA (lb/day)	Dry-Weather TP WLA (lb/day)	Agriculture	16	0.12	Source Type	Dry-Weather TN WLA (lb/day)	Dry-Weather TP WLA (lb/day)	Horse facilities/Intensive Livestock	0.6	0.14
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	<p>Wet-weather allocations for stormwater, agriculture, and horse/livestock sources are as follows:</p> <table border="1" data-bbox="683 384 1182 856"> <thead> <tr> <th>Reach</th> <th>Nitrate-N + Nitrite-N (mg/L)</th> </tr> </thead> <tbody> <tr> <td>Estuary</td> <td>*</td> </tr> <tr> <td>Reach 1</td> <td>*</td> </tr> <tr> <td>Reach 2</td> <td>10</td> </tr> <tr> <td>Cañada Larga</td> <td>10</td> </tr> <tr> <td>Reach 3</td> <td>5</td> </tr> <tr> <td>San Antonio Creek</td> <td>5</td> </tr> <tr> <td>Reach 4</td> <td>5</td> </tr> <tr> <td>Reach 5</td> <td>5</td> </tr> </tbody> </table> <p>*WLAs for stormwater are equal to 7.4 mg/ L TN and LAs for agriculture and horse/livestock sources are equal to 10 mg/L nitrate-N + nitrite-N.</p> <p>Wet-weather WLAs for the Ojai Valley WWTP are based on existing performance of the facility. Existing performance was calculated as the 90<sup>th</sup> percentile of the last 12 years of effluent data.</p> <p align="center">Wet-weather WLAs for Ojai Valley WWTP</p> <table border="1" data-bbox="748 1123 1117 1211"> <thead> <tr> <th>TN (mg/L)</th> <th>TP (mg/L)</th> </tr> </thead> <tbody> <tr> <td align="center">7.6</td> <td align="center">2.6</td> </tr> </tbody> </table>	Reach	Nitrate-N + Nitrite-N (mg/L)	Estuary	*	Reach 1	*	Reach 2	10	Cañada Larga	10	Reach 3	5	San Antonio Creek	5	Reach 4	5	Reach 5	5	TN (mg/L)	TP (mg/L)	7.6	2.6
Reach	Nitrate-N + Nitrite-N (mg/L)																						
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<p><b>Margin of Safety</b></p>	<p>The sources of uncertainty in this TMDL are related to the selection of the algal biomass target, the relationship between nutrient concentrations and algal biomass in freshwater river systems and estuaries, the estimate of watershed-based nutrient loading, and the model-predicted water quality conditions in the receiving water. These areas of uncertainty are addressed with both an implicit margin of safety that includes conservative assumptions made when estimating watershed-based nutrient loading and the assignment of dry-weather allocations to address a dry-season impairment, and an explicit margin of safety calculated as the difference between the model-predicted maximum concentration in-stream after implementation of reduction scenarios and the desired in-stream concentrations. The explicit margin of safety was calculated as seven percent.</p>																						
<p><b>Seasonal Variations and Critical Conditions</b></p>	<p>This TMDL addresses impairments that are causing exceedances of the biostimulatory substances water quality objective during the dry season, when algae growth primarily occurs, in the Ventura River, the Estuary and its tributaries. The critical condition is the dry season. Nutrients are loaded from the watershed to the Ventura River and its tributaries, and the Estuary in both dry and wet weather, but the nutrients loaded in the dry season are predominately responsible for the algae, eutrophic conditions, and nutrient impairments. Nutrient</p>																						

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	<p>concentrations present in the river during the winter months are sufficient to support algal growth; however, cofactors in the winter, such as greater flow and lower temperatures, mitigate algal growth in the winter. Also, the typical seasonal succession of primary producers generally shifts in the winter to be dominated by aquatic plants. The watershed nutrient wet-weather loads are generally delivered directly to the ocean and thus do not contribute to exceedance of the biostimulatory substances objective in the river or Estuary, which occurs during the dry season when algae growth primarily occurs. Nonetheless, to protect water quality year-round, wet-weather WLAs and LAs are assigned to meet water quality objectives and/or maintain existing discharge quality.</p>
<p><b>Monitoring</b></p>	<p>The TMDL monitoring program consists of three components: 1) receiving water monitoring, 2) discharge monitoring, and 3) optional special studies. All monitoring requirements may be included in subsequent permits or other orders and are subject to Executive Officer approval.</p> <p><u>Receiving Water Monitoring</u></p> <p>Responsible parties (Ojai Valley Sanitary District, Ventura County Watershed Protection District, Ventura County, City of Ojai, City of Ventura, Caltrans, and agricultural dischargers) are responsible for developing and implementing a comprehensive monitoring plan to assess numeric target attainment and measure in-stream nutrient concentrations. Responsible parties are encouraged to work together to submit a joint watershed wide plan. Ten years from the effective date of the TMDL, horse intensive livestock, and grazing activities shall participate in the implementation of the watershed-wide monitoring plan or submit their own plan. The monitoring plan should outline a program to sample for algal biomass, algal percent cover, nutrients (total and dissolved), <i>in situ</i> water quality parameters (dissolved oxygen, pH, temperature, electrical conductivity), and flow for the river and estuary. Monitoring should include visual observations documenting whether the Estuary is open or closed. The monitoring procedures/methods, analysis, and quality assurance shall be SWAMP comparable, where appropriate. The sampling frequency and locations must be adequate to assess beneficial use condition and attainment of applicable water quality objectives. At a minimum, for algal biomass and percent cover, the monitoring frequency shall be once per month in the dry season (May 1<sup>st</sup> to September 30<sup>th</sup>). After two years, if a significant difference between monthly algal biomass measurements is not observed, algal biomass monitoring may be reduced to three times per dry season, during the months of May, July, and September. DO and pH shall be measured continuously for two week periods on a quarterly basis. Continuous monitoring of DO and pH shall occur during the months of May and September in the 2<sup>nd</sup> and 3<sup>rd</sup> quarters. . All other parameters shall be monitored monthly.</p> <p>River indicators shall be averaged over a sampling reach as described in the SWAMP monitoring protocol - Bioassessment SOP 02. Estuary macroalgal cover is measured using three transects and evaluating percent cover at 10 random points along each transect. Results are reported as a transect average. See methods used in the Bight '08 Estuarine Eutrophication Assessment</p>

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	<p>(McLaughlin K et al. Southern California Bight 2008 Regional Monitoring Program: Estuarine Eutrophication Assessment. Southern California Coastal Water Research Project. Costa Mesa, CA).</p> <p>Existing receiving water monitoring conducted under other programs can be leveraged to assist in meeting these monitoring requirements. Responsible parties may build upon existing monitoring programs in the Ventura River watershed when developing the receiving water quality monitoring plan for this TMDL. Receiving water monitoring requirements shall be incorporated into the permit, waste discharge requirements (WDRs), or waiver for each responsible party upon issuance, renewal, or modification. The responsible parties may continue to coordinate a watershed-wide monitoring program to meet this requirement in order to fulfill individual permit, WDR, or waiver requirements. Receiving water monitoring shall continue beyond the final implementation date of the TMDL unless the Executive Officer approves a reduction or elimination of such monitoring.</p> <p><u>Discharge Monitoring</u></p> <p>Discharge monitoring will assess attainment of the WLAs and LAs. Discharge monitoring shall be required by regulatory mechanisms used to implement the WLAs and LAs. The monitoring to determine compliance with WLAs and LAs shall be conducted as specified in the Implementation Plan in the following section. The monitoring procedures/methods, analysis, and quality assurance shall be Surface Water Ambient Monitoring Program (SWAMP) comparable, where appropriate, and are subject to Executive Officer Approval.</p> <p><u>Special Studies</u></p> <p>Responsible parties within the watershed may conduct optional special studies designed to refine WLAs, LAs, and/or numeric targets. The results of special studies and monitoring may be used to revise numeric targets and allocations, if supported, when the TMDL is reconsidered. The following are potential special studies.</p> <ul style="list-style-type: none"> <li>▪ Build upon the algal biomass and total nitrogen relationship established in the 2008 UCSB Study (UCSB, 2009) and collect data to support the establishment of reach-specific relationships.</li> <li>▪ Confirm the conclusion that an algal biomass target of 150 mg/m<sup>2</sup> is fully protective of aquatic life and minimizes the risk of low DO events.</li> <li>▪ Collect additional source assessment information and model input data to refine model-predicted relationships between watershed loading and in-stream nutrient concentrations.</li> <li>▪ Investigate the influence of OWTS on surface water quality.</li> <li>▪ Collect data to support development of an estuary model, which takes into account tidal influence, the dynamics of macroalgae and phytoplankton growth, residence time, and breaching conditions.</li> </ul>

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<p><b>Implementation Plan</b></p>	<p><u>WLA Implementation</u></p> <p>The regulatory mechanisms used to implement the WLAs include the Ojai Valley WWTP NPDES permit, the Ventura County MS4 permit, the Caltrans MS4 permit, the general industrial storm water permits, the general construction storm water permits, and other NPDES permits. Effluent limits consistent with the assumptions and requirements of the WLAs shall be incorporated into each permit, following the effective date of this TMDL, at the time of permit issuance, modification, or renewal.</p> <p><u>Ojai Valley WWTP</u></p> <p>The dry-weather TN WLAs for the Ojai WWTP shall be incorporated into the permit as seasonal numeric effluent limitations. The summer effluent limitation shall be equal to the summer dry-weather WLA of 8,044 lbs/season (May 1 to September 30). Compliance with the summer effluent limitation shall be determined by calculating the sum of the products of the average monthly TN concentration, a conversion factor, and the daily flow for each dry-weather day, over the summer season. The winter dry-weather WLA and wet-weather WLA shall be combined into a single concentration-based winter season effluent limitation, calculated as the weighted average of 4 mg/L (the allowable winter dry-weather concentration) and 7.6 (the allowable wet-weather concentration), based on the assumption that there are 178 winter dry-weather days and 34 wet-weather days in a year. The resulting concentration of 4.6 mg/L shall be expressed as a monthly effluent limitation from October 1 to April 30. This calculation is consistent with the assumptions and requirements of the winter dry-weather and wet-weather WLAs.</p> <p>For TP, compliance with the dry-weather WLA-based effluent limitation shall be determined by calculating the sum of the products of the monthly average TP concentration and the daily flow for each dry-weather day, over an annual period. Wet-weather days shall be excluded from the dry-weather WLA compliance determination. The wet-weather TP WLAs shall be incorporated as effluent limitations, expressed as a daily maximum concentration, to be assessed at a minimum with monthly sampling during months when rain occurs.</p> <p>Ojai WWTP shall achieve compliance with wet-weather TP WLAs upon incorporation into the permit and shall achieve compliance with dry-weather TP WLAs, winter season TN limits, and summer season TN limits within 10 years of the effective date of the TMDL. Ojai Valley WWTP shall have interim WLAs based on current plant performance.</p> <p>Ojai Valley WWTP interim dry-weather WLAs (monthly average)</p> <table border="1" data-bbox="407 1690 1008 1795"> <thead> <tr> <th data-bbox="407 1690 708 1759">TN (mg/L)</th> <th data-bbox="708 1690 1008 1759">TP (mg/L)</th> </tr> </thead> <tbody> <tr> <td data-bbox="407 1759 708 1795">7.6</td> <td data-bbox="708 1759 1008 1795">2.6</td> </tr> </tbody> </table>	TN (mg/L)	TP (mg/L)	7.6	2.6
TN (mg/L)	TP (mg/L)				
7.6	2.6				

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	<p><u>Ventura County MS4 and Caltrans</u></p> <p>The WLAs for the Ventura County MS4 permittees and Caltrans shall be incorporated into the permits as numeric water quality-based effluent limitations. Permittees may be deemed in compliance with water-quality based effluent limitations if they demonstrate that (1) there are no violations of the water quality-based effluent limitation at the Permittee’s applicable MS4 outfall(s); or (2) there is no direct or indirect discharge from the Permittee’s MS4 to the receiving water during the time period subject to the water quality-based effluent limitation.</p> <p>Wet-weather numeric effluent limitations shall be expressed as event mean concentrations and shall apply immediately upon issuance, modification, or renewal of the permits. Compliance with wet-weather WLAs shall be assessed at a minimum with two wet-weather sampling events per year. If permittees provide a quantitative demonstration that watershed control measures and BMPs will achieve wet-weather water quality-based effluent limitations, then compliance with wet-weather water quality-based effluent limitations can be determined by implementing those actions, subject to Executive Officer approval.</p> <p>Dry-weather numeric effluent limitations shall be assessed at a minimum with quarterly sampling and shall be attained within 6 years of the effective date of the TMDL. Compliance will only be assessed on the day of sampling. Dry-weather sampling may occur 72 hours after a storm event. Consistent with the assumptions of the dry-weather waste load allocations, compliance with water quality-based effluent limitations may be demonstrated with area-weighted effluent limitations. Area-weighted effluent limitations shall be 0.0025 lb/day/acre TN and 0.0025 lb/acre/day TP for the Ventura County MS4, and 0.0042 lb/acre/day TN and <math>4.2 \times 10^{-4}</math> lb/acre/day TP for Caltrans, derived by dividing the daily loads by the total land use area in the watershed covered by their respective permits (11,085 acres for the Ventura County MS4 and 251 acres for Caltrans, excluding the Coyote Creek subwatershed).</p> <p>Ventura County MS4 permittees and Caltrans shall provide an implementation plan to the Regional Board outlining how they intend to achieve compliance with the WLAs. The report shall include implementation methods and a quantitative analysis of the expected water quality outcomes of the implementation methods, an implementation schedule, proposed interim milestones, and compliance points. The report shall provide reasonable assurance that implementation methods will be sufficient to achieve the WLAs.</p> <p><u>General Industrial and Construction Stormwater Permittees</u></p> <p>The dry- and wet-weather WLAs for the general and industrial stormwater permittees shall apply immediately upon permit issuance, modification, or renewal and shall be incorporated into permits as numeric water quality-based effluent limitations. Wet-weather effluent limitations shall be expressed as event mean concentrations and dry-weather effluent limitations shall be expressed as instantaneous maximums. Compliance with wet-weather WLAs shall be assessed</p>

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	<p>at a minimum with one wet-weather sampling event. Compliance with dry-weather WLAs shall be assessed at a minimum by averaging the results of two grab samples.</p> <p><u>Other NPDES Permittees</u></p> <p>The dry- and wet-weather WLAs for other NPDES permittees shall apply immediately upon permit issuance, modification, or renewal of applicable permits and shall be incorporated into permits as numeric effluent limitations. Wet-weather effluent limitations shall be expressed as event mean concentrations and dry-weather effluent limitations shall be expressed as instantaneous maximums. Compliance with wet-weather WLAs shall be assessed at a minimum with one wet-weather sampling event. Compliance with dry-weather WLAs shall be assessed at a minimum with two grab samples.</p> <p><u>LA Implementation</u></p> <p>The regulatory mechanisms that will be used to implement the LAs include Basin Plan discharge prohibitions, WDRs, and waivers of WDRs.</p> <p><u>Agricultural Discharges</u></p> <p>The LAs for irrigated agricultural lands shall be implemented through the Conditional Waiver of Waste Discharge Requirements for Discharges from Irrigated Lands or other appropriate Regional Board order. Agricultural lands shall achieve compliance with dry- and wet-weather LAs within 6 years of the effective date of the TMDL.</p> <p>To implement the LAs in this TMDL, the monitoring program shall be revised to add representative sites in the lower watershed to monitor runoff from other crop types. In addition, VCAILG shall work with the Regional Board staff to relocate monitoring sites in the upper watershed to better assess potential dry-weather runoff from agriculture. The existing monitoring program for the Agriculture Waiver requires two dry-weather and two wet-weather sampling events. In order to implement the dry-weather LAs, dry-weather sampling may occur 72 hours after a storm event. The revised monitoring program shall be subject to approval by the Executive Officer.</p> <p>To assist in implementation of LAs, area-weighted benchmarks can be applied; if used, they shall be 0.008 lb/day/acre TN and 0.008 lb/acre/day TP, derived by dividing the daily loads by the total agriculture area in the watershed (1971 acres, excluding orchards and the Coyote Creek subwatershed).</p> <p>Order No. 2010-0186 states, "It is expected that source control management practices, such as improved irrigation efficiency and fertilizer management, employed by Dischargers to attain surface Water Quality Benchmarks will reduce loading to groundwater as well." To implement this TMDL, the VCAILG water quality management plan shall specify that all growers in the Ventura River watershed shall implement nutrient-related source control BMPs. If the LAs are</p>

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	<p>implemented in another Regional Board order in the future, then that order shall require growers in the Ventura River watershed to implement nutrient-related source control BMPs.</p> <p>The estimated costs for BMPs to control agricultural discharges such as filter strips, mulching, improved irrigation efficiency, nutrient management, manure management, and grazing management are approximately \$1031 per acre, \$808 per acre, \$1784 per acre, \$55 per acre-year, \$4,500 (average cost of manure bunker), and \$1,356 (average cost of a typical watering facility), respectively. Potential sources of financing for these implementation alternatives, such as Clean Water Act section 319(h) grant funding, are discussed in Chapter 4. As discussed in Chapter 4, the U.S. Department of Agriculture Soil Conservation Service and the Resource Conservation Districts provide information on, and assistance in, implementing BMPs.</p> <p><u>OWTS</u></p> <p>The LAs for OWTS shall be implemented through discharge prohibitions, WDRs, or waivers of WDRs. Commercial and multifamily OWTS are currently regulated by the Regional Board through WDRs. Single family residential OWTS are currently regulated by the City of Ojai, the City of Ventura, and the County of Ventura, as specified in memorandums of understanding (MOUs) with the Regional Board, in order to implement a waiver of WDRs for single family residential OWTS adopted by the Regional Board in 2004. The MOUs require the Regional Board to evaluate the local agency every five years to ensure their municipal plumbing code and OWTS program is substantially equivalent to any statewide standards adopted pursuant to California Water Code sections 13290 and 13291.</p> <p>The State Water Resources Control Board (State Board) Water Quality Control Policy for Siting, Design, Operation, and Maintenance of Onsite Wastewater Treatment Systems (OWTS Policy) was adopted by the State Board to comply with California Water Code sections 13290 and 13291 on June 19, 2012. The OWTS Policy must be approved by the Office of Administrative Law before it becomes final and in effect. The OWTS in the Ventura River watershed fall under Tier 3 of the OWTS policy and this TMDL establishes the Advanced Protection Management Program for the watershed. The geographic area for the Advanced Protection Management Programs to implement this TMDL shall initially be the entire Ventura River watershed. The Regional Board will work with local agencies to determine which existing OWTS or areas of OWTS are contributing to the overall loading from OWTS to the Ventura River and its tributaries. Areas found not to be contributing to the overall loading may be removed from the Advanced Protection Management Program as approved in a Local Agency Management Program.</p> <p>Existing OWTS are required to be upgraded or modified to enhance their nitrogen removal or meet other requirements of the Advanced Protection Management Program if it is determined they are contributing to the impairment, and are subsequently covered under approved special provisions of a Local Agency</p>

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TMDL Element	Regulatory Provisions
	<p>Management Program, or the Regional Board issues subsequent orders requiring upgrades or modifications. Existing OWTS will remain regulated by existing MOUs and future Local Agency Management Programs until the above determination is made and subsequent upgrades are required.</p> <p>New or replacement OWTS installations, as defined by the OWTS Policy upon its becoming effective, that are within the Advanced Protection Management Program area, shall meet the supplemental treatment requirements for nitrogen per Tier 3 of the OWTS Policy.</p> <p>The Regional Board will evaluate the existing MOUs and any future submittal of a Local Agency Management Program under the OWTS Policy with the City of Ventura, the City of Ojai, and the County of Ventura to determine if their OWTS programs need to be updated to reflect the OWTS Policy, or if additional changes are needed to implement the LAs. OWTS dischargers shall achieve compliance with dry- and wet-weather LAs within 10 years of the effective date of the TMDL.</p> <p><u>Horse and Intensive Livestock Activities</u></p> <p>The LAs for horse and intensive livestock activities shall be regulated by WDRs, waivers of WDRs, or other regulatory mechanisms in accordance with the Nonpoint Source Implementation and Enforcement Policy (NPS Policy). The Regional Board will determine which horse and intensive livestock activities shall be subject to the WDRs, waivers of WDRs or other regulatory mechanisms during their development based on factors that may include, but are not limited to, type of operation, density of animals, and risk to water quality. Horse and intensive livestock activities shall be required to develop management plans for Executive Officer approval and implement management measures identified in management plans to attain LAs.</p> <p>Compliance with LAs will be demonstrated with monitoring approved by the Executive Officer of the Regional Board through the monitoring program developed as part of the waiver, WDR, or other regulatory mechanism. Monitoring may consist of documentation of BMP implementation, and may include water quality monitoring as needed. Horse and intensive livestock activities shall achieve compliance with dry- and wet-weather LAs within 10 years of the effective date of the TMDL.</p> <p><u>Grazing Activities</u></p> <p>The LAs for grazing activities shall be regulated by WDRs, waivers of WDRs, or other regulatory mechanisms in accordance with the NPS Policy. Because the dry-weather load from grazing activities has not been quantified as of the effective date of this TMDL, and dry-weather LAs are based on a 10% reduction of existing dry-weather load, grazing activities shall be required to either conduct monitoring or utilize other acceptable data or studies as approved by the Executive Officer to determine baseline dry-weather pollutant load caused by grazing activities, unless the Regional Board has already quantified the existing dry-weather pollutant load. In addition, grazing activities may conduct baseline</p>

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TMDL Element	Regulatory Provisions
	<p>monitoring to confirm wet-weather pollutant loading. Baseline monitoring shall be required by WDRs, waivers of WDRs, or other regulatory mechanism, if necessary. Baseline monitoring may consist of water quality monitoring of sites impacted by grazing and compared to water quality monitoring from unimpacted natural background sites. If it is determined that there are no water quality impacts due to dry- and/or wet-weather pollutant loading from grazing in the Ventura River watershed, then the TMDL may be revised to adjust the source assessment and allocation scenario when the TMDL is reconsidered. If it is determined that there are water quality impacts due to dry- and/or wet-weather pollutant loading from grazing in the Ventura River watershed, then grazing activities shall develop management plans for approval by the Executive Officer and implement management measures identified in management plans to attain LAs.</p> <p>Compliance with LAs will be demonstrated with monitoring approved by the Executive Officer of the Regional Board through the monitoring program developed as part of the waiver, WDR, or other regulatory mechanism. Monitoring may consist of documentation of no discharge due to BMP implementation, and may include water quality monitoring during conditions under which discharge may occur, including wet weather. Grazing activities shall achieve compliance with dry- and wet-weather LAs within 10 years of the effective date of the TMDL.</p>

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**Table 7-35.2.** Ventura River, Ventura River Estuary, and Tributaries Algae, Eutrophic Conditions and Nutrients TMDL: Implementation Schedule

<b>Task</b>	<b>Due Date</b>
Submit results of optional special studies	4 years after effective date of TMDL
Reconsider TMDL to revise numeric targets and allocations if supported by special studies or other changes in the watershed.	5 years after effective date of TMDL
<b>Ojai Valley Sanitary District</b>	
Wet-weather and interim dry-weather WLAs apply	Effective date of TMDL
Submit receiving water monitoring plan to assess numeric target attainment and measure in-stream nutrient concentrations	1 year after effective date of TMDL
Initiate receiving water monitoring plan	90 days after approval of monitoring plan
Discharge monitoring plan incorporated into permit	Upon permit adoption, renewal, or modification
Dry-weather WLA apply	No later than 12 years after effective date of TMDL*
<b>Ventura County MS4 Permittees and Caltrans</b>	
Wet-weather WLAs apply	Effective date of TMDL
Discharge monitoring plan incorporated into permit	Upon permit adoption, renewal, or modification
Submit monitoring plan to assess numeric target attainment and measure in-stream nutrient concentrations.	1 year after effective date of TMDL
Initiate receiving water monitoring plan	90 days after approval of monitoring plan
Submit implementation plan to achieve compliance with the WLAs. The plan shall include implementation methods, an implementation schedule, proposed interim milestones, and compliance points.	2 years after effective date of TMDL
Dry-weather WLAs apply	6 years after effective date of TMDL
<b>General Industrial and Construction Stormwater Permittees</b>	
Wet-weather and dry-weather WLAs apply	Effective date of TMDL
Discharge monitoring plan incorporated into permit	Upon permit adoption, renewal, or modification
<b>Other NPDES Permittees</b>	
Wet-weather and dry-weather WLAs apply	Effective date of TMDL
Discharge monitoring plan incorporated into permit	Upon permit adoption, renewal, or modification

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<b>Task</b>	<b>Due Date</b>
<b>Agricultural Discharges</b>	
Discharge monitoring plan incorporated into Agriculture Waiver or other order or waiver	Upon adoption, renewal, or modification
Submit monitoring plan to assess numeric target attainment and measure in-stream nutrient concentrations.	1 year after effective date of TMDL
Initiate receiving water monitoring plan	90 days after approval of monitoring plan
Wet-weather and dry-weather LAs apply	6 years after effective date of TMDL
<b>Onsite Waste Water Treatment Systems</b>	
Regional Board staff and Ventura County will work to determine areas of OWTS to be included in an Advanced Protection Management Program area and a plan for a 50 percent reduction of loading from OWTS in these areas	3 years from the effective date of the TMDL
Wet-weather and dry-weather LAs apply	10 years after effective date of TMDL
<b>Horse/ Intensive Livestock Activities</b>	
Discharge monitoring plan submitted as part of waiver, WDR, or other regulatory mechanism requirement or in response to Regional Board order	5 years after effective date of TMDL
Conduct receiving water monitoring to assess numeric target attainment and measure in-stream nutrient concentrations	10 years after effective date of TMDL
Wet-weather and dry-weather LAs apply	10 years after effective date of TMDL
<b>Grazing Activities</b>	
Baseline monitoring plan or acceptable existing data or studies to determine baseline dry-weather pollutant load submitted as part of waiver or WDR requirement or in response to Regional Board order, unless the Regional Board has quantified the existing pollutant load	2 years after effective date of TMDL
Results of baseline monitoring submitted, if necessary	18 months after approval of baseline monitoring plan
Discharge monitoring plan submitted as part of waiver, WDR, or other regulatory mechanism requirement or in response to Regional Board order	5 years after effective date of TMDL
Conduct receiving water monitoring to assess numeric target attainment and measure in-stream nutrient concentrations	10 years after effective date of TMDL
Wet-weather and dry-weather LAs apply	10 years after effective date of TMDL

\* If TMDL reconsideration results in more stringent WLAs, then the implementation schedule for OVSD may be extended, if necessary, by only the amount of time required to upgrade treatment processes to meet the more stringent WLAs.