Amendment to the Water Quality Control Plan – Los Angeles Region to Incorporate an Implementation Plan for the U.S. EPA-Established Malibu Creek Nutrients TMDL and the U.S. EPA-Established Malibu Creek and Lagoon Sedimentation and Nutrients TMDL to Address Benthic Community Impairments

Adopted by the California Regional Water Quality Control Board, Los Angeles Region (Regional Water Board) on [Date]

Amendments:

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List of Figures, Tables, and Inserts
Add:

Chapter 7. Total Maximum Daily Loads (TMDLs) Summaries:
Add: Implementation Plan for the Malibu Creek Nutrients TMDL and the Malibu Creek and Lagoon Sedimentation and Nutrients TMDL to Address Benthic Community Impairments

This Implementation Plan was adopted by:

The Regional Water Board on [date]

This Implementation Plan was approved by:

The State Water Resources Control Board on [date]
The Office of Administrative Law on [date]

This Implementation Plan is effective on [date]

In Chapter 7, add the following summary of the U.S. EPA-established TMDLs and tables. The TMDL Implementation Plan is presented in Table 7-42.1 and the Implementation Schedule in Table 7-42.2.

Summary of the Malibu Creek Nutrients TMDL and the Malibu Creek and Lagoon Sedimentation and Nutrients TMDL to Address Benthic Community Impairments

The United States Environmental Protection Agency (U.S. EPA) established the "Malibu Creek Watershed Nutrients TMDL" (2003 TMDL) on March 21, 2003 to address impairments due to ammonia, nutrients, dissolved oxygen, algae, scum, and odor in Malibu Lagoon, Malibu Creek and its tributaries, and four lakes in the watershed. On July 2, 2013, U.S. EPA established the "Malibu Creek and Lagoon Sedimentation and Nutrients TMDL to Address Benthic Community Impairments" (2013 TMDL) to address impairments of Malibu Creek and Las Virgenes Creek related to impacted benthic macroinvertebrates and sedimentation/siltation and impairments of Malibu Lagoon related to adverse benthic community effects.

The sources of nutrients and/or sediment loading in the Malibu Creek Watershed include point sources, such as discharges from storm drains regulated under municipal separate storm sewer system (MS4) permits, direct discharges from the Tapia Water Reclamation Facility (WRF), and nonpoint sources, such as discharges from onsite wastewater treatment systems (OWTS), Tapia WRF irrigation and sludge disposal, and runoff from golf courses, agriculture, livestock facilities, and open space.

Both TMDLs include a problem statement, numeric targets, source analysis, loading capacity, waste load allocations (WLAs) for point sources, load allocations (LAs) for nonpoint sources, and a margin of safety, but do not include an implementation plan or schedule. The 2003 TMDL sets numeric targets for nutrients, chlorophyll a, dissolved oxygen, and algal cover; and assigns WLAs and LAs for total nitrogen (Nitrite-N + Nitrate-N) and total phosphorus to sources discharging to all waterbodies within the Malibu Creek Watershed. The 2013 TMDL sets numeric targets for nutrients, chlorophyll a, dissolved oxygen, and algal cover as well as sedimentation, benthic community diversity, and benthic community bioscores, and assigns WLAs and LAs for total nitrogen (organic-N + inorganic-N) and total phosphorus to sources discharging to waterbodies in the eastern portion of the Malibu Creek Watershed below Malibou

Lake. These waterbodies include: Malibu Creek, Cold Creek, Stokes Creek, Las Virgenes Creek, and four lakes (Malibou Lake, Lindero Lake, Westlake Lake, and Sherwood Lake). In addition, the 2013 TMDL sets sediment WLAs and LAs based on a 38 percent reduction in the sediment transport capacity of the Malibu Creek Watershed. Sediment WLAs are assigned for point sources below Malibou Lake, and sediment LAs are assigned to discharges from the combined area upstream of Malibou Lake, discharges from protected land below Malibou Lake, and the Ventura County unincorporated area along Las Virgenes Creek. The following tables address implementation of the 2003 TMDL and the 2013 TMDL.

Table 7-42.1. Malibu Creek Nutrients TMDL and Malibu Creek and Lagoon Sedimentation and Nutrients TMDL to Address Benthic Community Impairments: Implementation

<table>
<tr><th>Elements</th><th>Key Findings and Regulatory Provisions</th></tr>
<tr><td>2003 and 2013 TMDL Nutrient Implementation</td><td>
I. Implementation and Determination of Compliance with Nutrient WLAs

<u>Tapia WRF</u>

The nutrient WLAs in the 2013 TMDL will be incorporated into the Tapia WRF NPDES permit and translated into effluent limitations expressed as summer and winter seasonal averages. Compliance with the seasonal averages shall be determined by calculating the sum of all nutrient concentration samples collected during the season divided by the number of samples collected during that season.

The 2013 TMDL Summer nutrient WLAs shall be achieved five years from the effective date of this Implementation Plan. The 2013 TMDL Winter nutrient WLAs shall be achieved ten years from the effective date of this Implementation Plan. Interim nutrient WLAs are established based on current performance equal to the maximum effluent concentration from the past three years and shall be updated during each permit renewal with the most current data.

<table>
<tr><th>Implementation Schedule</th><th>Total Nitrogen Summer WLA</th><th>Total Nitrogen Winter WLA</th><th>Total Phosphorus Summer WLA</th><th>Total Phosphorus Winter WLA</th></tr>
<tr><td>Upon effective date of the Implementation Plan</td><td>Current performance</td><td>Current performance</td><td>Current performance</td><td>Current performance</td></tr>
<tr><td>5 years from effective date of Implementation Plan</td><td>1.0 mg/l</td><td>Current performance</td><td>0.10 mg/l</td><td>Current performance</td></tr>
</table>
</td></tr>
</table>

Elements	Key Findings and Regulatory Provisions

10 years from effective date of Implementation Plan	1.0 mg/l	4.0 mg/l	0.10 mg/l	0.20 mg/l
Total Nitrogen = Organic-N + Inorganic-N Summer: April 15-November 15 Winter: November 16-April 14				

MS4 Permits

The 2003 TMDL encompasses the whole Malibu Creek Watershed; therefore, the 2003 TMDL MS4 WLAs will be implemented through NPDES permits that regulate MS4 discharges within the Malibu Creek Watershed, which include but may not be limited to the Los Angeles County MS4 Permit, Ventura County MS4 Permit, and California Department of Transportation (Caltrans) Statewide Storm Water Permit. The 2013 TMDL only addresses the portion of the watershed below Malibou Lake; therefore, the 2013 TMDL MS4 WLAs will be implemented through the Los Angeles County MS4 and Caltrans MS4 permits only.

Additional MS4 discharges within the Malibu Creek Watershed that may be designated in the future under Phase II of the US EPA Stormwater Permitting Program will implement the MS4 WLAs through the applicable NPDES permit. Other discharges may also be required to implement the MS4 WLAs if the State or US EPA exercise their residual designation authority under CWA section 402(p)(2)(E).

The 2003 TMDL nutrient LAs for "runoff from developed areas" and "dry weather urban runoff" are newly interpreted as WLAs for MS4 permittees in this Implementation Plan. The nutrient LAs were summed and apportioned between MS4 permittees based on their relative area above and below Malibou Lake. The newly interpreted WLAs for MS4 permittees below Malibou Lake are superseded by the 2013 TMDL nutrient WLAs.

Los Angeles County and Ventura County

The newly interpreted 2003 TMDL nutrient WLAs above Malibou Lake and the 2013 TMDL nutrient WLAs below Malibou Lake shall be achieved by December 28, 2021 for the Los Angeles County MS4 Permit and within five years of the effective date of the permit renewal for the Ventura County MS4. Interim WLAs are included based on existing permit requirements and current performance.

Elements	Key Findings and Regulatory Provisions

Implementation Schedule	Total Nitrogen Summer	Total Nitrogen Winter	Total Phosphorus Summer	Total Phosphorus Winter
LA County MS4s above Malibou Lake				
December 28, 2017	8.0 lbs/day*	8.0 mg/l*	0.80 lbs/day	N/A
December 28, 2021	1.6 lbs/day*	8.0 mg/l*	0.16 lbs/day	N/A
LA County MS4s below Malibou Lake				
December 28, 2017	8.0 lbs/day*	8.0 mg/l*	0.80 lbs/day	N/A
December 28, 2021	1.0 mg/l**	4.0 mg/l**	0.10 mg/l	0.20 mg/l
Ventura County MS4s				
Effective date of this Implementation Plan	Current performance	8.0 mg/l*	Current performance	N/A
5 years from the effective date of the Ventura County MS4 Permit adoption, renewal, or modification	3.1 lbs/day*	8.0 mg/l*	0.30 lbs/day	N/A

* Total Nitrogen = Nitrate-N + Nitrite-N
** Total Nitrogen = Organic-N + Inorganic-N
Summer: April 15 to November 15
Winter: November 16 to April 14

WLAs shall be incorporated into MS4 permits as water quality-based effluent limitations (WQBELs). The 2003 TMDL summer WLAs shall be incorporated as daily loads and the winter WLA shall be incorporated as a seasonal average. The 2013 TMDL summer and winter WLAs shall be incorporated as seasonal averages. MS4 Permittees may be deemed in compliance with WQBELs if they demonstrate that:

(1) there are no violations of the WQBEL at the Permittee's applicable MS4 outfall(s);

(2) there are no exceedances of the numeric targets in the receiving water downstream of the Permittee's outfalls; or

(3) there is no direct or indirect discharge from the Permittee's MS4 to the receiving water during the time period subject to the WQBEL.

<table>
<tr><th>Elements</th><th>Key Findings and Regulatory Provisions</th></tr>
<tr><td></td><td>
The MS4 permittees shall provide an implementation plan to the Regional Water Board outlining how they intend to achieve the WLAs. A Regional Water Board approved Watershed Management Program (WMP) or Enhanced Watershed Management Program (EWMP) developed in accordance with a MS4 permit will satisfy the requirements of an implementation plan where the WMP or EWMP addresses the applicable waterbody-pollutant combinations of the TMDLs consistent with the implementation schedules in Table 7-42.2. MS4 permittees shall modify their WMP/EWMP no later than the next Adaptive Management Process cycle after provisions consistent with the assumptions and requirements of the TMDL WLAs are incorporated into the applicable MS4 permits.

Caltrans

The WLAs assigned to Caltrans will be implemented through the Caltrans statewide stormwater permit (Order No. 2012-0011-DWQ as amended by Order No. 2014-02006-EXEC, Order No. 2011-0077-DWQ, and Order No. 2015-0036-EXEC, or other successor order).

<table>
<tr><th>Implementation Schedule</th><th>Total Nitrogen Summer</th><th>Total Nitrogen Winter</th><th>Total Phosphorus Summer</th><th>Total Phosphorus Winter</th></tr>
<tr><td colspan="5">Caltrans above Malibou Lake</td></tr>
<tr><td>According to the schedule in the revised TMDL Reach Prioritization, but no later than 2032</td><td>0.032 lbs/day*</td><td>8.0 mg/l*</td><td>0.0032 lbs/day</td><td>N/A</td></tr>
<tr><td colspan="5">Caltrans below Malibou Lake</td></tr>
<tr><td>According to the schedule in the revised TMDL Reach Prioritization, but no later than 2032</td><td>1.0 mg/l**</td><td>4.0 mg/l**</td><td>0.10 mg/l</td><td>0.20 mg/l</td></tr>
<tr><td colspan="5">* Total Nitrogen = Nitrate-N + Nitrite-N
** Total Nitrogen= Organic-N + Inorganic-N
Summer: April 15 to November 15
Winter: November 16 to April 14</td></tr>
</table>

Some of the 2013 TMDL nutrient WLAs are currently included Order No. 2012-0011-DWQ, but none of the 2003 TMDL nutrient WLAs are. The Caltrans statewide stormwater permit includes TMDL-specific requirements for the TMDLs incorporated into the permit. Order No. 2012-0011-DWQ requires Caltrans to prioritize impaired reaches subject
</td></tr>
</table>

Elements	Key Findings and Regulatory Provisions
	to TMDLs for implementation by reach, so that all TMDLs are addressed by 2032. In order to reflect this Implementation Plan, the reaches covered by the 2013 TMDL, which were previously not included in Order No. 2012-0011-DWQ, and all of the reaches covered by the 2003 TMDL shall be added to Attachment IV of Order No. 2012-0011-DWQ when it is reopened consistent with provision E.11.b. of the Order. Within a year of the permit reopener, Caltrans shall submit a revised TMDL Reach Prioritization to include the additional reaches. II. Implementation and Determination of Compliance with Nutrient LAs **<u>Tapia WRF</u>** The LAs for irrigation from the Tapia WRF to the Rancho Las Virgenes Farm (also known as the spray field), Pepperdine University, Rancho Las Virgenes Compost Facility, and other recycled water users will be implemented through the Tapia WRF Water Reclamation Requirements. The LAs for sludge applied to the Rancho Las Virgenes Farm will be implemented through the Rancho Las Virgenes Waste Discharge Requirements (WDRs). The nutrient LAs shall be incorporated into these permits as requirements for the application of sludge and reclaimed water for irrigation. The permits shall require that irrigation and sludge be applied in compliance with current regulations and at rates to ensure that the amount of total nitrogen and phosphorus applied does not exceed the vegetative requirements of the crops or landscaping. The nutrient LAs in the 2003 and 2013 TMDL for Tapia WRF sludge and irrigation shall be attained upon the effective date of this Implementation Plan. **<u>Onsite wastewater treatment systems (OWTS)</u>** The 2003 TMDL and 2013 TMDL LAs for OWTS shall be implemented through WDRs or waivers of WDRs and local agency oversight where local agencies have been delegated permitting authority. Commercial and multifamily OWTS are currently regulated by the Regional Water Board through WDRs. Single family residential OWTS are currently regulated by local agencies. The State Water Resources Control Board (State Water Board) adopted a water quality control policy for siting, design, operation, and maintenance of onsite wastewater treatment systems

Elements	Key Findings and Regulatory Provisions
	(OWTS Policy) as Resolution No. 2012-0032 to comply with Water Code sections 13290 and 13291. The policy emphasizes local management of OWTS. The policy requires an Advanced Protection Management Program (APMP) for OWTS near impaired waterbodies. Local agencies are authorized to implement APMPs in conjunction with their existing programs and in collaboration with the Regional Water Board through a Local Agency Management Program (LAMP). The U.S.EPA-established TMDLs assign load allocations generally to all OWTS in the watershed, but do not specify which, if any, specific OWTS must reduce discharges to meet the load allocations. Local agencies may conduct a special study to determine which existing OWTS are contributing to the nutrient loading to any waterbody within the Malibu Creek Watershed. The study may build upon previous studies completed according to the Malibu Creek Bacteria TMDL (Resolution No. 2004-019). The systems identified in the study would then be included in the APMP of the local agencies' LAMP. Existing OWTS, as well as any new or replacement OWTS, included in an APMP are required to be upgraded or modified to meet the supplemental treatment requirements for nitrogen per Tier 3 of the OWTS Policy and any other requirements of the APMP. If a local agency chooses to develop a LAMP, the LAMP shall include a schedule for upgrades or modifications based on the results of the study. Existing OWTS shall remain regulated by the existing MOU and LAMP until the above determination is made, the LAMP is revised, and subsequent OWTS upgrades are required. The Regional Water Board will evaluate existing MOUs and any future submittal of a LAMP under the OWTS Policy to determine if additional changes are needed to implement the LAs. All OWTS discharges within the APMP shall achieve compliance with LAs as soon as possible, but no later than 15 years after the effective date of this Implementation Plan. The owners of OWTS are ultimately responsible for achieving the LAs. **<u>Golf Courses</u>** The LAs for nutrients for golf courses in the 2003 and 2013 TMDLs will be implemented through WDRs or conditional waivers of WDRs consistent with the State's Nonpoint Source Implementation and Enforcement Policy. WDRs or conditional waivers of WDRs may include requirements that golf courses submit fertilizer application plans and implement designated types of BMPs to comply with the TMDLs. Golf courses shall attain the nutrient LAs within five years of the effective date of this Implementation Plan.

Elements	Key Findings and Regulatory Provisions
	Agriculture Sources The nutrients LAs for agriculture in the 2003 and 2013 TMDLs will be implemented through the Conditional Waiver of Waste Discharge Requirements for Discharges from Irrigated Agricultural Lands (Order No. R4-2016-0143) (Agriculture Waiver) or other appropriate Regional Water Board order. The existing Agriculture Waiver includes the 2003 and 2013 TMDL LAs as benchmarks. Agricultural lands shall achieve the LAs in the 2003 and 2013 TMDLs by October 14, 2022. This compliance date shall be updated in the waiver when it is renewed or replaced with another order in 2022. **Livestock Sources** The nutrient LAs for livestock in the 2003 and the 2013 TMDLs, including horse facilities and grazing, will be regulated by WDRs, conditional waivers of WDRs, or other regulatory mechanisms in accordance with the Nonpoint Source Implementation and Enforcement Policy. The Regional Water Board will determine which horse/livestock facilities and grazing operations shall be subject to the WDRs, waivers of WDRs or other regulatory mechanisms during the development of these regulatory mechanisms based on factors that may include, but are not limited to, type of operation, density of animals, and risk to water quality. As part of the regulatory mechanism, horse/livestock facilities and grazing operations shall be required to develop management plans for Executive Officer approval and implement management measures identified in management plans to attain LAs. Horse/livestock facilities and grazing operations shall achieve compliance with the nutrient LAs in the 2003 and 2013 TMDLs within 10 years of the effective date of this Implementation Plan. **Lakes** The nutrient LAs in the 2013 TMDL for lake overflow from Malibou Lake, Lindero Lake, Westlake Lake, and Sherwood Lake will be implemented through WDRs, conditional waivers of WDRs, or other regulatory mechanisms in accordance with the Nonpoint Source Implementation and Enforcement Policy. The LAs will apply at the outlet of the lake or dam and are shared among the cities, counties, state, and federal lands in the subwatersheds draining to each lake, and the owners/operators of each lake. Cooperative parties for the lake nutrient LAs are identified, not as responsible parties or as dischargers, but as landowners and lake operators who have an interest in source

Elements	Key Findings and Regulatory Provisions
	identification of nutrient pollutants entering and exiting the lakes with Malibu Creek Watershed. The LAs will be implemented in stages. First, the Regional Water Board will issue investigative orders to the cooperative parties for each lake that will require them to submit a monitoring plan to the Regional Water Board within one year of the effective date of this Implementation Plan. The monitoring plan shall be designed to determine the impact of lake overflows on nutrient loading downstream. The monitoring plan shall include sufficient samples to characterize overflows from the lake during both dry- and wet-weather conditions. Then, if monitoring results show an impact on nutrient loading downstream, the Regional Water Board will revise this Implementation Plan within three years of its effective date. The revised Implementation Plan will include implementation methods to reduce the external loading to the lakes and/or internal loading within the lakes and a schedule to meet the LAs. Cooperative parties may propose their own approaches for the revised Implementation Plan that the Regional Water Board may consider.
2013 TMDL Sedimentation Implementation	Compliance with the sedimentation WLAs and LAs in the 2013 TMDL can be achieved through an individual compliance alternative or as part of a watershed-wide implementation alternative. I. Individual Compliance Alternative **<u>Los Angeles County MS4 and Caltrans MS4 Permits</u>** The sedimentation WLAs shall be incorporated into the Los Angeles County and Caltrans MS4 permits as receiving water limits. To determine compliance, the annual sediment load at the F-130 gage shall be multiplied by the allocation fractions (17.4% for Los Angeles County and 0.8% for Caltrans) and compared to the respective WLAs. Due to the annual variability of sediment transport, which is linked to wet-weather events, compliance shall be averaged over a three-year period. The Los Angeles County MS4 permittees shall provide an implementation plan to the Regional Water Board outlining how they intend to achieve the sedimentation WLAs. The plan shall include implementation methods, proposed interim milestones, and proposed receiving water monitoring to determine compliance. A Regional Water Board approved WMP or EWMP developed in accordance with a MS4 permit that explicitly addresses the sedimentation WLAs will satisfy the requirements of an implementation plan. Caltrans shall implement Order No. 2012-0011-DWQ as discussed in the

Elements	Key Findings and Regulatory Provisions
	Nutrients Implementation section in order to meet the sediment WLAs. In order to reflect this Implementation Plan, additional TMDL specific monitoring requirements shall be added to Attachment IV of Order No. 2012-0011-DWQ when it is reopened consistent with provision E.11.b. of the Order. The Los Angeles County MS4 permittees and the Caltrans MS4 below Malibou Lake shall attain the sedimentation WLAs by December 2025. **Protected Land Below Malibou Lake** The LA in the 2013 TMDL for the protected land below Malibou Lake will be implemented through WDRs, conditional waivers of WDRs, or other regulatory mechanisms assigned to State Parks and National Park Service lands in accordance with the Nonpoint Source Implementation and Enforcement Policy. The LAs may be incorporated into the regulatory mechanisms as water quality benchmarks or receiving water limits. To determine compliance, the annual sediment load at the F-130 gage will be multiplied by the allocation fraction of 13.7% and compared to the respective LAs. Due to the annual variability of sediment transport, which is linked to wet-weather events, compliance will be averaged over a three-year period. If the LAs are not being achieved, the responsible entities will be required to submit a plan(s) for riparian/stream bank restoration and/or improved operation and management of impervious areas, including roads. The LA for protected land below Malibou Lake shall be attained by December 2025. **Combined Area Upstream Malibou Lake** The parties responsible for implementing the sedimentation LA in the 2013 TMDL for the area above Malibou Lake are the same as the cooperative parties identified for the nutrient LA in the 2013 TMDL for lake overflow. The LA applies at a point below Malibou Lake. Within one year of the effective date of the Implementation Plan, the Regional Water Board intends to issue an investigative order to the cooperative parties to install a new gage below Malibou Lake to collect TSS and flow data to determine the annual sediment load from the area above Malibou Lake. If monitoring results show that the sediment discharged is greater than the LA of 3,950 tons/year, the Regional Water Board will revise this Implementation Plan within three years of its effective date to identify applicable WLAs for specific jurisdictions upstream of Malibou Lake.

Elements	Key Findings and Regulatory Provisions
	Unincorporated Area along Las Virgenes Creek To meet the sediment LA in the 2013 TMDL for the unincorporated area along Las Virgenes Creek, within one year of the effective date of this Implementation Plan, Ventura County shall submit a monitoring plan to collect sediment data at the county line or at an appropriate downstream site in order to determine the annual sediment load for the unincorporated area along Las Virgenes Creek. If monitoring results show sediment has discharged is greater than the LA of 16 tons/year, the Regional Water Board will revise this Implementation Plan within three years of its effective date to identify potential WLAs and/or LAs for specific jurisdictions in the unincorporated area along Las Virgenes Creek. II. Watershed-wide approach The responsible parties in the Malibu Creek Watershed may work collaboratively to develop a comprehensive implementation approach to reduce sediment transport capacity watershed-wide. This compliance alternative is a hybrid of the implementation options described above and would ensure long-term compliance with the 2013 TMDL and attainment the required 38% reduction in sediment transport capacity at gage F-130. This approach would include a combination of (1) projects to reduce work on the stream caused by elevated flows in the upper urbanized portion of the watershed and (2) stream restoration projects on eroding stream channels in the lower watershed caused by the elevated work on the stream. A watershed-based approach implemented collectively by the responsible parties should focus on reducing effective work because effective work is what controls sediment transport capacity. Effective work is based on excess shear stress and stream velocity. Compliance will be assessed by demonstrating a reduction in the 2-year and 10-year peak flows to achieve a 38 percent reduction in effective work at gage F-130. The 2013 TMDL report identifies the required peak flows at gage F-130 for the two storm sizes (1,180 cfs for the 2-year interval and 5,370 cfs for the 10-year interval) and calculation of change in effective work. Compliance monitoring for this alternative shall include monitoring at gage F-130 and additional monitoring throughout the impaired reaches and areas downstream of LID projects, regional BMP facilities, and channel restoration projects. These data should be collected to ensure accurate calculation of effective work and 2-year and 10-year peak flows at gage F-130.

Elements	Key Findings and Regulatory Provisions
	Compliance with the watershed-wide approach would be required within 15 years from the effective date of this Implementation Plan. If this watershed-wide compliance strategy is chosen, responsible parties will work collaboratively, but their responsibilities and requirements will be included in their individual regulatory mechanisms.
Monitoring	The TMDL monitoring program shall consist of two components: (1) receiving water monitoring to assess implementation progress and attainment of numeric targets, and (2) discharge monitoring to determine compliance with the WLAs and LAs. Monitoring requirements shall be included in subsequent permits or other orders. **<u>Receiving Water Monitoring</u>** Responsible entities are responsible for developing and implementing a comprehensive receiving water monitoring plan to assess numeric target attainment and to determine the effectiveness of implementation actions on water quality. Responsible entities include the Las Virgenes-Triunfo JPA, the Ventura County Watershed Protection District, the County of Ventura, the County of Los Angeles, the County of Los Angeles Flood Control District, Caltrans, the City of Thousand Oaks, the City of Westlake Village, the City of Agoura Hills, the City of Calabasas, the City of Hidden Hills, the City of Malibu, and the City of Simi Valley. 1. Nutrient Receiving Water Monitoring Within the receiving water monitoring plan, responsible parties shall outline a nutrient monitoring program for total nitrogen, total phosphorus, dissolved oxygen, pH, temperature, and chlorophyll a. Monitoring shall also include field observations for percent algae cover, the presence of scum/foam, the presence of odors, and whether Malibu Lagoon is open or closed to the ocean. The sampling frequency and locations must be adequate to assess beneficial use conditions and attainment of nutrient related water quality objectives. Monitoring locations should target downstream areas with more developed land use and collect samples at the upstream and downstream ends of nutrient impaired 303(d) listed streams and upstream hydrologically-connected segments. At a minimum, nutrient receiving water monitoring shall be conducted monthly in Malibu Lagoon, the Malibu Lagoon inlet, Malibu Creek, Las Virgenes Creek, Medea Creek Reach 1 and Reach 2, and Lindero Creek Reach 1 and Reach 2. In addition, nutrient receiving water monitoring shall be conducted quarterly in Hidden Valley Creek, Potrero Valley Creek, Triunfo Creek Reach 1 and Reach 2, Palo Comado Creek,

	Chesebooro Canyon Creek, Stokes Creek, and Cold Creek. To account for the critical condition for dissolved oxygen, dissolved oxygen shall be monitored at pre-dawn. Nutrient receiving water sampling shall commence by December 28, 2021. Responsible entities may request a reduction in the frequency of sampling after two years of sampling has been conducted. 2. Benthic Receiving Water Monitoring Within the receiving water monitoring plan, responsible parties shall include a benthic monitoring program to collect invertebrate and physical habitat data for benthic community evaluations and stream health assessments using the SC-IBI bioscore and the CSCI, pMMI, and CA-O/E scores. The sampling frequency and locations must be adequate to assess the beneficial use condition and attainment of benthic-related water quality objectives. Monitoring locations should target downstream areas with more developed land use and collect samples at the upstream and downstream ends of benthic impaired 303(d) listed streams. At a minimum, benthic receiving water monitoring shall be conducted annually in Las Virgenes Creek, Middle Malibu Creek, the Malibu Lagoon inlet, and Malibu Lagoon. Compliance with the benthic community diversity numeric targets will be calculated as an annual average. SC-IBI, CSCI, pMMI, CA-O/E compliance will be calculated as a median of four years of data to account for year-to-year variability. Responsible parties may build upon existing monitoring programs in the Malibu Creek Watershed when developing the receiving water quality monitoring plans. Receiving water monitoring requirements shall be incorporated into the regulatory mechanisms for each responsible party upon issuance, renewal, or modification or through separate investigatory orders. Monitoring procedures, analysis, and quality assurance shall be SWAMP comparable and shall continue beyond the final implementation date of the TMDL unless the Executive Officer approves a reduction or elimination of such monitoring. Any exceedances of the biological response numeric targets (percent algae cover, benthic community diversity, or biological scores) will trigger additional receiving water monitoring and additional preventative activities to reduce nutrient pollutant loads to the watershed and nutrient and sediment loads to Malibu Lagoon **<u>Discharge Monitoring</u>** To assess attainment of the nutrient and sedimentation WLAs and LAs,

	discharge monitoring shall include monitoring for total nitrogen (as defined by the 2003 TMDL or the 2013 TMDL), total phosphorus, TSS, and flow. The monitoring frequencies to comply with the nutrient WLAs and LAs are as follows: o To comply with the WLAs for the Tapia WRF, nutrient monitoring shall be conducted monthly at the Tapia WRF discharge points. o To comply with the LAs for the Tapia WRF nonpoint source discharges, quarterly groundwater monitoring shall be incorporated into the WDRs for the Rancho Las Virgenes Farm spray fields to evaluate the quantity and quality of reclaimed water that re-enters the system through groundwater. o To comply with the nutrient WLAs for MS4 discharges, monitoring will be conducted three times within the year during stormwater events and four times during non-stormwater events, with a minimum of two non-stormwater samples within the summer season. Stormwater monitoring will target the first significant rain event of the storm year. During dry weather, sampling shall occur a minimum of 72 hours after a storm event. MS4 permittees may address the TMDL monitoring requirements through an integrated monitoring program (IMP) or coordinated integrated monitoring program (CIMP), where available. Where approved IMPs and CIMPs are already in place, such programs shall be modified as necessary consistent with these requirements. IMPs and CIMPs, and modifications to these programs, must be approved by the Executive Officer. Upon approval, monitoring shall commence within six months. o To comply with the sedimentation WLAs for Los Angeles County MS4 discharges, monitoring shall include flow and TSS during dry and wet weather to calculate the annual sediment load moving past gage F-130. Dischargers shall modify their IMPs/CIMPs to include sufficient sampling to accurately calculate the sediment load. Additional parameters that are more cost-effective or continuous may be useful to collect, such as turbidity. With a robust dataset, these can be used to develop statistical relationships and expand the extent of data. Upon approval by the Executive Officer, alternative parameters (based on statistical analyses) could be used to document compliance with the sedimentation WLAs. In addition, existing monitoring at gage F-130 conducted under other programs can be leveraged to assist in meeting these monitoring requirements. o To comply with the nutrient and sediment WLAs for Caltrans MS4 discharges, Caltrans will monitor according to the

	requirements of State Water Board Order No. 2012-0011-DWQ. o To comply with the nutrient LAs for lake overflow, cooperative parties shall conduct monitoring as described above. o To comply with the sedimentation LA for the area above Malibou Lake, responsible parties shall conduct monitoring as described above. o To comply with the nutrient LAs for agriculture, dischargers shall monitor according to the requirements of Order No. R4-2016-0143 or other appropriate Regional Water Board order. o To comply with the nutrient LAs for horse/livestock facilities, grazing operations, and golf courses, monitoring may consist of documentation of BMP implementation, and may include water quality monitoring as needed to determine the effectiveness of the BMPs in reducing nutrient loadings. o To determine compliance with the nutrient LAs for OWTS, monitoring will be conducted in accordance with the local agencies' LAMPs. Discharge monitoring shall be required through the regulatory mechanisms used to implement the WLAs and LAs. The monitoring procedures/methods, analysis, and quality assurance shall be SWAMP comparable where appropriate.

Table 7-41.2. Malibu Creek Nutrients TMDL and Malibu Creek and Lagoon Sedimentation and Nutrients TMDL to Address Benthic Community Impairments: Implementation Schedule

Task	**Date***
The Regional Water Board will reconsider this Implementation Plan within three years of its effective date based on the results of any new information or data, including the impact of lakes on nutrient loading and sedimentation downstream	3 years from the effective date of this Implementation Plan
Tapia WRF	
Tapia WRF shall attain nutrient LAs	Upon the effective date of this Implementation Plan
Tapia WRF shall attain interim 2013 TMDL nutrient winter WLAs and final 2013 TMDL nutrient summer WLAs	Five years from the effective date of this Implementation Plan
Tapia WRF shall attain final 2013 TMDL nutrient winter WLAs	10 years from the effective date of this Implementation Plan
Los Angeles County MS4-whole Malibu Creek Watershed	
Los Angeles County MS4 permittees within the whole Malibu Creek Watershed shall submit a nutrient implementation plan or modify existing WMP or EWMP	By the next adaptive management process cycle after WLAs are incorporated into MS4 permit
Los Angeles County MS4-above Malibou Lake	
Los Angeles County MS4 permittees above Malibou Lake shall attain interim nutrient WLAs	December 28, 2017
Los Angeles County MS4 permittees above Malibou Lake shall attain newly interpreted 2003 nutrient WLAs	December 28, 2021
Los Angeles County MS4-below Malibou Lake	
Los Angeles County MS4 permittees below Malibou Lake shall attain interim nutrient WLAs	December 28, 2017
Los Angeles County MS4 permittees below Malibou Lake shall attain 2013 nutrient WLAs	December 28, 2021
Los Angeles County MS4 permittees below Malibou Lake shall attain 2013 sedimentation WLAs (if watershed-wide approach is not chosen)	December 28, 2025

Task	Date*
Ventura County	
Ventura County shall submit a monitoring plan for the area along Los Virgenes Creek to determine the annual sediment load	One year from the effective date of this Implementation Plan
Ventura County MS4	
Ventura County MS4 permittees shall attain 2003 nutrient winter WLAs for MS4	Upon the effective date of this Implementation Plan
Ventura County MS4 permittees shall submit an MS4 nutrient implementation plan or WMP or EWMP	One year from the effective date of this Implementation Plan
Ventura County MS4 permittees shall attain newly interpreted 2003 nutrient summer WLAs for MS4	5 years from the effective date of the Ventura County MS4 Permit adoption, renewal, or modification
Caltrans-entire Malibu Creek Watershed	
Additional reaches subject to the 2003 and 2013 nutrients TMDLs shall be added to Attachment IV of Order No. 2012-0011-DWQ	Upon reopener of Order No. 2012-0011-DWQ consistent with provision E.11.b. of the Order
Caltrans shall submit a revised TMDL Reach Prioritization to include the 2013 TMDL impaired reaches that were omitted from the prioritization and to add the 2003 TMDL impaired reaches	Within a year of reopener of Order No. 2012-0011-DWQ
Caltrans-above Malibu Creek Watershed	
Caltrans above Malibou Lake shall attain newly interpreted 2003 nutrient WLAs	According to the schedule in the revised TMDL Reach Prioritization, but no later than 2032
Caltrans-below Malibu Creek Watershed	
Caltrans below Malibou Lake shall attain final 2013 nutrient WLAs	According to the schedule in the revised TMDL Reach Prioritization, but no later than 2032
The area of the Caltrans MS4 below Malibou Lake shall attain 2013 sedimentation WLAs (if watershed-wide approach is not chosen)	December 28, 2025
Onsite Wastewater Treatment Systems	

Task	**Date***
Local agencies (city and county health departments and/or building departments) may submit a work plan for a study to determine which existing OWTS are contributing to the nutrient loading to any waterbody within the Malibu Creek Watershed for approval by the Executive Officer.	Three years from the effective date of the Implementation Plan
Local agencies(city and county health departments and/or building departments) may complete the OWTS study and submit a final report to the Regional Water Board.	Five years from the effective date of the Implementation Plan
Owners of OWTS shall attain 2003 or 2013 nutrient LAs, depending on OWTS location	Fifteen years from the effective date of the Implementation Plan
Golf Courses	
Owners of golf courses shall attain 2003 or 2013 nutrient LAs	Five years from the effective date of the Implementation Plan
Agriculture	
Owners and/or operators of irrigated agricultural land shall attain 2003 and 2013 nutrient LAs	October 14, 2022
Horse/Livestock and Grazing	
Owners and/or operators of horse/livestock facilities and grazing operations shall attain 2003 and 2013 nutrient LAs	Ten years from the effective date of the Implementation Plan
Lakes	
Cooperative parties(as defined in section III.c.6.) for each lake shall submit a monitoring plan to determine the impact of lake overflows on nutrient loading downstream	One year from the effective date of the Implementation Plan
Cooperative parties (as defined in section III.c.6.) for the combined area upstream of Malibou Lake shall submit a monitoring plan to determine the annual sediment load from the area above Malibou Lake	One year from the effective date of the Implementation Plan
Protected Land below Malibou Lake	
State Parks and National Park Service shall attain 2013 sedimentation LAs (if watershed-wide approach is not chosen)	December 2025
2013 Sedimentation TMDL - All Responsible Parties	

Task	**Date***
If a watershed-wide approach is chosen all responsible parties for the sedimentation TMDL shall submit an implementation plan for a comprehensive approach to reduce sediment transport capacity by 38% watershed-wide	Two years from the effective date of this Implementation Plan
If a watershed-wide approach is chosen all responsible parties for the sedimentation TMDL shall attain a 38% reduction in sediment transport capacity at gage F-130	15 years from the effective date of this Implementation Plan