

**CENTRAL COAST REGIONAL WATER QUALITY CONTROL BOARD**  
**895 Aerovista Place, Suite 101**  
**San Luis Obispo, CA 93401-7906**

**RESOLUTION NO. R3-2015-0004**

**AMENDING THE WATER QUALITY CONTROL PLAN FOR THE CENTRAL COASTAL  
BASIN TO ADOPT TOTAL MAXIMUM DAILY LOADS FOR NITROGEN COMPOUNDS AND  
ORTHOPHOSPHATE IN STREAMS OF THE PAJARO RIVER BASIN**

The Central Coast Regional Water Quality Control Board (Central Coast Water Board) finds:

1. The Central Coast Water Board adopted the Water Quality Control Plan for the Central Coastal Basin (Basin Plan) on March 14, 1975. The Basin Plan designates beneficial uses and water quality objectives, implementation programs for achieving water quality objectives addressing point source and nonpoint source discharges, prohibitions, and incorporates statewide plans and policies. The Basin Plan is periodically reviewed and revised. The Central Coast Water Board has determined that the Basin Plan requires further revision and amendment.
2. The Central Coast Water Board periodically revises and amends the Basin Plan. The Central Coast Water Board has determined the Basin Plan requires further revision and amendment to incorporate Total Maximum Daily Loads (TMDLs) and an implementation plan for nitrogen compounds (nitrate and un-ionized ammonia) and orthophosphate for streams in the Pajaro River basin, which includes the waterbodies Pajaro River, Llagas Creek, San Juan Creek, Furlong Creek, Watsonville Slough, and other tributary surface waterbodies as identified in Table IX T-1 of the attached basin plan amendment.
3. Pursuant to California Water Code section 106,3(a), it is the policy of the State of California that every human being has a right to safe, clean, affordable, and accessible water adequate for human consumption. California Water Code section 106,3(b) requires the Central Coast Water Board to consider how state actions impact the human right to water and creates a state policy that directs the Central Coast Water Board and other state agencies to explicitly consider the human right to water when revising, adopting, or establishing policies, regulations, and grant criteria when those policies, regulations, and grant criteria affect the human right to safe, clean, affordable, and accessible water adequate for human consumption, cooking, and sanitary purposes. This order promotes that policy by establishing nitrate total maximum daily loads for streams in the Pajaro River basin which are designated for protection of human health including municipal and domestic water supply.
4. The geographic scope of these TMDLs encompasses approximately 1,300 square miles of the Pajaro River basin, including parts of Santa Clara, Santa Cruz, San Benito, and Monterey counties. The river basin includes the Pajaro and San Benito rivers, Watsonville Slough, Corralitos, Llagas, Pacheco, San Juan, and Uvas creeks, and all associated tributaries. Agriculture (including irrigated cropland and grazing lands) is the current dominant land use in the Pajaro River basin, with increasing transition to urban use. Urbanized areas account for approximately four percent of the Pajaro River basin's land use. Grassland, chaparral, and oak woodland make up substantial parts of the upland reaches of the watershed.
5. Multiple waterbodies within the Pajaro River basin are listed on California's Clean Water Act Section 303(d) list for water quality impairments due to nitrate, un-ionized ammonia, nutrients,

low dissolved oxygen, and chlorophyll *a* (an algal biomass indicator). Due to the Clean Water Act 303(d) listings, the Central Coast Water Board is required to adopt a TMDL and an associated implementation plan (40 CFR [Code of Federal Regulations] 130.6(c)(1) and 130.7; California Water Code section 13242).

6. Available data indicate: (1) stream water quality violations of the Basin Plan's drinking water standard for nitrate; (2) stream water quality violations of the Basin Plan's un-ionized ammonia general toxicity objective for inland surface waters; and (3) stream water quality violations of the Basin Plan's narrative general objective for biostimulatory substances in inland surface waters and estuaries. In addition, some stream reaches are not meeting non-regulatory recommended guidelines for nitrate in agricultural supply water (AGR) for sensitive crop types, indicating that potential or future designated agricultural supply beneficial uses in these surface waters may be impacted detrimentally.
7. Available data indicate that discharges of nutrients (specifically, nitrogen compounds and orthophosphate) are occurring at levels in surface waters which are impairing a wide range of beneficial uses, including impairments of municipal and domestic drinking water supply beneficial uses, impairments of aquatic habitat beneficial uses, impairments of groundwater recharge beneficial uses, and degradation locally of designated agricultural water supply beneficial uses (irrigation supply for sensitive crops).
8. The Central Coast Water Board's goal for establishing TMDLs in the Pajaro River basin is to rectify the impairment due to un-ionized ammonia, nitrate, and orthophosphate, thereby providing support for the designated beneficial uses of municipal and domestic water supply (MUN), cold and warm fresh water habitat (COLD and WARM), groundwater recharge (GWR), agricultural water supply (AGR), and to support water quality standards attainment with regard to the Basin Plan's general toxicity water quality objective for un-ionized ammonia, and the Basin Plan's water quality objective for biostimulatory substances.
9. The Central Coast Water Board proposes to amend the Basin Plan by inserting amendments into Chapter Four, Section IX (Total Maximum Daily Loads).
10. On May 20, 2004, the State Water Resources Control Board (State Water Board) adopted the Policy for Implementation and Enforcement of the Nonpoint Source Pollution Control Program (NPS Policy). These TMDLs are consistent with the NPS policy. The NPS Policy requires the Regional Water Quality Control Boards to regulate all nonpoint sources of pollution using the administrative permitting authorities provided by the Porter-Cologne Water Quality Control Act (Porter-Cologne Act, Water Code Division 7). Consistent with the NPS Policy and the Porter-Cologne Act, Regional Water Quality Control Boards regulate nonpoint source discharges with waste discharge requirements, waivers of waste discharge requirements, and/or Basin Plan prohibitions.
11. On May 20, 2004, the State Water Board adopted the Water Quality Control Policy for Developing California's Clean Water Act Section 303(d) List (State Water Board Resolution No. 2004-0063), hereafter referred to as the California 303(d) Listing Policy. These TMDLs are consistent with the California 303(d) Listing Policy. The California 303(d) Listing Policy describes the process by which the State Water Board and the Regional Water Quality Control Boards will comply with the listing requirements of the federal Clean Water Act (CWA). The objective of the California 303(d) Listing Policy is to establish a standardized approach for developing California's CWA section 303(d) list and to provide guidance for interpreting data and information to make decisions regarding water quality standards attainment.

12. On June 16, 2005, the State Water Board adopted the Water Quality Control Policy for Addressing Impaired Waters: Regulatory Structure and Options (State Water Board Resolution 2005-0050), hereafter referred to as the Impaired Waters Policy. These TMDLs are consistent with the Impaired Water Policy. The Impaired Waters Policy provides policy and procedures for adopting TMDLs and addressing impaired waters in California. The Impaired Waters Policy states that the Regional Water Quality Control Boards have independent discretion, broad flexibility, numerous options, and some legal constraints that apply when determining how to address impaired waters.
13. The Pajaro River, Carnadero Creek, Furlong Creek, Llagas Creek (below Chesbro Reservoir), San Juan Creek (San Benito County), Beach Road Ditch, and McGowan Ditch are listed on California's 2008-2010 Clean Water Act 303(d) list as impaired due to nitrate. These waterbodies are currently not supporting the municipal and domestic drinking water supply (MUN) beneficial use designated by the Basin Plan.
14. The Pajaro River Estuary and Llagas Creek are not listed on California's 2008-2010 Clean Water Act 303(d) list for un-ionized ammonia impairments, however, newer data indicate these waterbodies are impaired by un-ionized ammonia on the basis of non-attainment of the Basin Plan water quality objective for un-ionized ammonia and on the basis of the listing criteria and methodologies identified in the California 303(d) Listing Policy.
15. The Pajaro River and Llagas Creek (below Chesbro Reservoir) are listed on California's 2008-2010 Clean Water Act 303(d) list as impaired due to nutrients on the basis of non-attainment of the Basin Plan's biostimulatory substances water quality objective. In addition, although not listed on California's 2008-2010 Clean Water Act 303(d) list for nutrients causing biostimulation, available data indicate the following waterbodies are in violation of the Basin Plan's biostimulatory substances objective: Beach Road Ditch, Carnadero Creek, Corralitos Creek, Furlong Creek, Harkins Slough, Llagas Creek, Pajaro River, San Juan Creek, Struve Slough, Tequisquita Slough, Watsonville Slough.
16. A reach of Llagas Creek upstream of Luchessa Avenue at Southside Drive and downstream of Holsclaw Road below Leavesly Road does not meet non-regulatory recommended guidelines for nitrate in agricultural supply water for sensitive crop types, indicating that potential or future designated agricultural supply beneficial uses may be detrimentally impacted.
17. The Pajaro River and Llagas Creek are listed on California's 2008-2010 Clean Water Act 303(d) list as impaired due to nitrate on the basis of non-attainment of the Basin Plan's water quality objective for municipal and domestic drinking water supply (MUN); these waterbodies are also not supporting their designated groundwater recharge (GWR) beneficial use based on the Basin Plan's drinking water objective and specific lines of evidence consistent with the California 303(d) Listing Policy. The stream reaches that do not support designated GWR beneficial uses are: Pajaro River upstream of Watsonville and downstream of Chittenden Gap at Chittenden Road, and lower Llagas Creek upstream of Southside Drive and downstream of Leavesly Road.
18. Low dissolved oxygen is a nutrient-response indicator and represents a primary biological response to excessive nutrient loading in waterbodies which exhibit biostimulatory conditions. The Pajaro River, Carnadero, Llagas, Pacheco, and San Juan creeks, Millers Canal, Beach Road Ditch, and Harkins, Tequisquita, and Watsonville sloughs are on the 2008-2010 Clean Water Act 303(d) list of impaired waters for low dissolved oxygen impairment and are expressing biostimulatory conditions. Reductions in nutrient loading described in the staff report are anticipated to be beneficial in attainment of water quality standards for dissolved

oxygen and restoring the waterbodies to a desired condition. Nutrient concentrations by themselves constitute indirect indicators of biostimulatory conditions and there is an interrelationship between high nutrient loads, excessive algal growth, and the subsequent impacts of excessive algae on dissolved oxygen and aquatic habitat. Further, numeric targets identified for dissolved oxygen in the TMDL will be used as indicator metrics to assess primary biological response to future nutrient water column concentration reductions and compliance with the Basin Plan's biostimulatory substances objective.

19. Chlorophyll *a* is a nutrient-response indicator and represents a primary biological response to excessive nutrient loading in waterbodies which exhibit biostimulatory conditions. Harkins Slough and Millers Canal are on the 2008-2010 Clean Water Act 303(d) list of impaired waters for chlorophyll *a* impairment and are expressing biostimulatory conditions. Reductions in nutrient loading described in the staff report are anticipated to be beneficial in attainment of water quality standards for chlorophyll *a* and restoring the waterbodies to a desired condition. Further, numeric targets identified for chlorophyll *a* in the TMDL will be used as an indicator metric to assess primary biological response to future nutrient water column concentration reductions and compliance with the Basin Plan's biostimulatory substances objective.
20. The U.S. Environmental Protection Agency's (USEPA) published TMDL guidance (Guidance for Water Quality-Based Decisions: The TMDL Process – Chapter 1, Policies and Principles, USEPA 404/4-91-001, April 1991) explicitly states that implementation of TMDLs and water quality-based controls should not be delayed due to lack of information and uncertainties about pollution problems, particularly with respect to nonpoint sources. More information about the spatial extent and nature of water quality impairments can be collected during TMDL implementation. At this time, there is sufficient information to develop and implement total maximum daily loads for nitrogen compounds and orthophosphate in streams of the Pajaro River basin.
21. The elements of a TMDL are described in 40 CFR 130.2 and 130.7, section 303(d) of the Clean Water Act, and USEPA guidance documents. A TMDL is defined as "the sum of individual waste load allocations for point sources and load allocations for nonpoint sources and natural background" (40 CFR 130.2). The Central Coast Water Board has determined that the TMDLs for un-ionized ammonia, nitrate, and orthophosphate in streams of the Pajaro River Basin are set at levels necessary to attain and maintain the applicable numeric water quality objectives, taking into account seasonal variations and any lack of knowledge concerning the relationship between effluent limitations and water quality consistent with 40 CFR 130.7 (c) (1). The regulations in 40 CFR 130.7 also state that TMDLs shall take into account critical conditions for stream flow, loading, and water quality parameters. TMDLs are often expressed as a mass load of the pollutant but can be expressed as a unit of concentration if appropriate (40 CFR 130.2(i)). Expressing these TMDLs as units of concentration is appropriate because an existing concentration-based water quality objective is used as the basis for the TMDL numeric target and attaining that concentration-based water quality objective will result in protection of the beneficial uses.
22. Upon establishment of TMDLs by the state or USEPA, the State is required to incorporate the TMDLs, along with appropriate implementation measures, into the State Water Quality Management Plan (40 CFR 130.6(c)(1) and 130.7 and California Water Code sections 13050(j) and 13242). The Basin Plan and applicable statewide plans serve as the State Water Quality Management Plan governing the watersheds under the jurisdiction of the Central Coast Water Board.
23. The TMDLs and Implementation Program are based on sound scientific knowledge, methods, and practices in accordance with Health and Safety Code section 57004. Health and Safety

Code section 57004 requires external scientific peer review for certain water quality control policies. Scientific portions of these TMDLs are drawn exclusively from the Total Maximum Daily Loads for Nitrogen Compounds and Orthophosphate in the lower Salinas River and Reclamation Canal Basin, and the Moro Cojo Slough Subwatershed (Resolution No. R3-2013-0008), which received independent scientific peer review in the spring of 2012. As a result, the scientific methodologies used in development of these TMDLs have already undergone external, scientific peer review. As a result, the Central Coast Water Board has fulfilled the requirements of Health and Safety Code section 57004, and the proposed amendment does not require further peer review.

24. Central Coast Water Board staff will conduct a review of implementation activities when monitoring and reporting data are submitted as required by the 2012 Conditional Waiver of Waste Discharge Requirements for Irrigated Lands (Agricultural Order) and existing or future NPDES storm water permits, or when other monitoring data and/or reporting data are submitted outside the requirements of existing permits and orders. Central Coast Water Board staff will pursue modification of Agricultural Order conditions, NPDES storm water permit conditions, or other regulatory means, as necessary, to address remaining impairments resulting from nitrogen compounds or orthophosphate during the TMDL implementation phase.
25. Central Coast Water Board staff implemented a process to inform interested persons about the TMDLs. Central Coast Water Board staff's efforts to inform the public and solicit comment included public meetings with interested persons and a public notice and written comment period. Public notice of the proposed Basin Plan amendment provided the public a 45-day public comment period preceding the Central Coast Water Board hearing. Notice of public hearing was given by advertising in a newspaper of general circulation within the Region and by emailing a copy of the notice to all persons requesting such notice and applicable government agencies. Relevant documents and notices were also made available on the Central Coast Water Board website. Central Coast Water Board staff responded to oral and written comments received from the public. All public comments were considered.
26. Adoption of these TMDLs and Basin Plan amendments will not result in any degradation of water quality; in fact, they are designed to improve water quality. As such, these TMDLs and Basin Plan amendments comply with all requirements of both State and federal anti-degradation requirements (State Board Resolution 68-16, "Statement of Policy with Respect to Maintaining High Quality of Waters in California" and 40 CFR 131.12).
27. The Central Coast Water Board recognizes that certain limited resource farmers (as defined by the U.S. Department of Agriculture) may have difficulty achieving compliance with this TMDL. The Central Coast Water Board will prioritize assistance for these farmers, including, but not limited to, technical assistance, grant opportunities, and necessary flexibility to achieve compliance (e.g., adjusted monitoring, reporting, or time schedules).
28. Pursuant to Public Resources Code section 21080.5, the Resources Agency has approved the Regional Water Boards' basin planning process as a "certified regulatory program" that adequately satisfies the California Environmental Quality Act (CEQA) (Public Resources Code, Section 21000 et seq.) requirements for preparing environmental documents (14 Cal. Code Regs. §15251(g); 23 Cal. Code Regs. § 3782). Central Coast Water Board staff has prepared "substitute environmental documents" for this project that contain the required environmental documentation as set forth in the State Water Board's CEQA regulations (23 Cal. Code Regs. § 3777). The substitute environmental documents include the TMDL staff report and several of its attachments, including: (1) this Resolution and the Basin Plan Amendment Language (Attachment 1 of the staff report); (2) *Total Maximum Daily Loads*

*Report for Nitrogen Compounds and Orthophosphate in Streams of the Pajaro River Basin, Santa Cruz, Santa Clara, San Benito, and Monterey counties, California* (Attachment 2 of the staff report); (3) the CEQA Substitute Document with environmental checklist (Attachment 3 of the staff report); and (4) the comments and responses to comments (Attachment 5 of the staff report). The staff report also includes the Notice of Public Hearing/Notice of Filing (Attachment 4 of the staff report). The project itself is the establishment of TMDLs for nitrogen compounds and orthophosphate in streams of the Pajaro River basin. The Central Coast Water Board exercises 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.

29. A CEQA scoping meeting was conducted on December 17, 2013, in the City of Watsonville; a notice of the CEQA scoping meeting was sent to interested persons prior to the scoping meeting on November 21, 2013. The notice included the background of the project, the project purpose, a meeting schedule, and directions for obtaining more detailed information through the Central Coast Water Board website; the notice and project summary were available on the website or by requesting hard copies via telephone.
30. Public Resources Code section 21159 provides that an agency shall perform, at the time of the adoption of a rule or regulation requiring the installation of pollution control equipment or a performance standard or treatment requirement, an environmental analysis of the reasonably foreseeable methods of compliance, and an analysis of the reasonably foreseeable environmental impacts of the methods of compliance, an analysis of reasonably foreseeable mitigation measures to lessen the adverse environmental impacts, and an analysis of reasonably foreseeable alternative means of compliance with the rule or regulation that would have less significant adverse impacts. Section 21159(c) requires that the environmental analysis take into account a reasonable range of environmental, economic, and technical factors; population and geographic areas; and specific sites. The staff report prepared for this Basin Plan amendment, in particular the CEQA Substitute Document Report (Attachment 3), provides the environmental analysis required by Public Resources Code section 21159 and is hereby incorporated as findings in this Resolution.
31. In preparing the substitute environmental documents, the Central Coast Water Board has considered the requirements of Public Resources Code section 21159 and California Code of Regulations, title 14, section 15187, and intends those documents to serve as a Tier 1 environmental review. This analysis is not intended to be an exhaustive analysis of every conceivable impact, but an analysis of the reasonably foreseeable consequences of the adoption of this regulation, from a programmatic perspective. Compliance obligations will be undertaken directly by public agencies that may have their own obligations under CEQA. Project level impacts may need to be considered in any subsequent environmental analysis performed by other public agencies, pursuant to Public Resources Code section 21159.2. To the extent applicable, this Tier 1 substitute environmental document may be used to satisfy subsequent CEQA obligations of those agencies.
32. Consistent with the Water Board's substantive obligations under CEQA, the substitute environmental documents do not engage in speculation or conjecture, and only consider the reasonably foreseeable environmental impacts, including those relating to the methods of compliance, reasonably foreseeable feasible mitigation measures to reduce those impacts, and the reasonably foreseeable alternative means of compliance, that would avoid or reduce the identified impacts.

33. The staff report, the draft Basin Plan Amendment, and the Environmental Checklist and associated analysis provide the necessary information pursuant to state law to conclude that the proposed TMDL, Implementation Plan, and the associated reasonably foreseeable methods of compliance will not have a significant adverse effect on the environment with the exception of potentially significant impacts associated with Biological Resources CEQA Checklist Category IV(a), potentially significant impacts to habitat of fish or wildlife species associated with Mandatory Findings of Significance CEQA Checklist Category XVIII.(a), and potential adverse impacts resulting from construction noise associated with TMDL implementation activities CEQA Checklist Category XIII. This determination is based on best available information in an effort to fully inform the interested public and the decision makers of potential environmental impacts. "Significant effects" on the environment are defined as "a substantial, or potentially substantial, adverse change within the area affected by the project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance" (14 Cal. Code Regs. § 1538). Wide-scale water conservation measures and changing water management practices potentially could result in lower flows to surface waters resulting in potentially substantial adverse changes to aquatic habitat. Reduction in polluted runoff may offset potentially substantial adverse impacts resulting from potential reduced flows. In addition, reduction in tailwater discharge could result in increased groundwater levels that would result in more baseflow to surface waterbodies. Further, maintaining surface flows and circulation may in fact be part of a viable strategy to reduce biostimulatory impacts, since biostimulatory impacts are only partly attributable to elevated nutrients; biostimulatory impacts may be mitigated by increased flow, aeration, and shading of the waterbody. Potential mitigation measures to prevent reduced flows or to reduce the impact of reduced flows include phasing in management practices that could result in reduced flows; and use of riparian buffers and other vegetated treatment systems that will effectively treat the water to remove pollutants, but not necessarily reduce flows. Given the uncertainty associated with evaluating the available information, it is possible that any potentially substantial adverse changes on aquatic habitat associated with the basin plan amendment will be less than significant. When the entities and responsible parties responsible for implementing these TMDLs determine how they will proceed, the agencies responsible for those parts of the project can and should incorporate such alternatives and mitigation into any subsequent projects or project approvals. Feasible alternatives and mitigation measures are described in more detail in the substitute environmental documents (14 Cal. Code Regs. § 15091(a)(2)). Legal considerations may make some of the mitigation measures that could be implemented infeasible.
34. Pursuant to CEQA Guidelines section 15093, the Central Coast Water Board hereby finds that the project's benefits override and outweigh its potential significant adverse impacts, for the reasons more fully set forth in the staff report and attachments thereto. Specific environmental benefits justify the adoption of this TMDL despite the project's potential significant adverse short-term environmental impacts. The Central Coast Water Board has the authority and responsibility to regulate discharges of waste associated with the sources of pollution causing impairment to water quality. Many of those discharges have caused significant widespread degradation and/or pollution of waters of the state as described in the *Total Maximum Daily Loads Report for Nitrogen Compounds and Orthophosphate in Streams of the Pajaro River Basin, Santa Cruz, Santa Clara, San Benito, and Monterey counties, California* and associated reference materials. These TMDLs would result in actions to restore the quality of the waters of the state and protect the beneficial uses, including aquatic habitat. While some impacts could occur due to reduced flows, earth-moving, or from implementing other actions to comply with the TMDLs, the benefits, which include contributing to the present and future restoration of beneficial water uses, and reducing or eliminating pollution, nuisance and contamination, warrant approval of the TMDLs, despite each and every unavoidable impact.

35. From a program-level perspective, incorporation of the alternatives and mitigation measures outlined in the substitute environmental documents will reduce potential impacts to no impact, or keep the impact at less-than-significant levels.
36. The CEQA Substitute Document Report (staff report Attachment 3) identifies mitigation approaches that should be considered at the project level.
37. The Central Coast Water Board will request that the State Water Board approve the Basin Plan amendments incorporating TMDLs for nitrogen compounds and orthophosphate in streams of the Pajaro River basin. The TMDLs and Implementation Program for the TMDLs will become effective upon approval by the California Office of Administrative Law. The TMDLs must also be approved by USEPA.
38. The amendments to the Basin Plan may have an effect on fish and wildlife. The Central Coast Water Board will, therefore, forward fee payments to the Department of Fish and Wildlife under the California Fish and Game Code section 711.4.
39. The proposed amendments meet the "Necessity" standard of the Administrative Procedures Act, Government Code, section 11353, subdivision (b). As specified in Finding 22, federal regulations require that TMDLs be incorporated into the Water Quality Management Plan. The Central Coast Water Board's Basin Plan is the Central Coast Water Board's component of the Water Quality Management Plan, and the Basin Plan is how the Central Coast Water Board takes quasi-legislative planning actions. Moreover, these TMDLs are a program of implementation for existing water quality objectives, and is, therefore, appropriately a component of the Basin Plan under the California Water Code, section 13242. The necessity of developing TMDLs is established in the TMDL staff report, the Clean Water Act section 303(d) list, and the data contained in the administrative record documenting the nitrogen compounds and orthophosphate impairments in streams of the Pajaro River basin.
40. Consistent with Water Code section 13141, the amendment includes an estimate of the total cost of implementation of the agricultural related portions of these TMDLs and identifies potential sources of financing.
41. On July 30, 2015, in San Luis Obispo, California, the Central Coast Water Board held a public hearing and heard and considered all public comments and evidence in the record.

THEREFORE, be it resolved that:

1. Pursuant to sections 13240, 13242, 13243, and 13244 of the California Water Code, the Central Coast Water Board, after considering the entire record, including oral testimony at the hearing, hereby adopts the amendment in Attachment A. to Resolution No. R3-2015-0004.
2. The Central Coast Water Board Executive Officer is directed to forward copies of the Basin Plan amendment to the State Water Board in accordance with the requirements of section 13245 of the California Water Code.
3. The Central Coast Water Board requests that the State Water Board approve the Basin Plan amendments in accordance with the requirements of sections 13245 and 13246 of the California Water Code and forward them to the California Office of Administrative Law and the USEPA for approval.



4. The Executive Officer is authorized to sign a Certificate of Fee Exemption or transmit payment of the applicable fee as may be required to the Resources Agency.
5. If, during the approval process, Central Coast Water Board staff, State Water Board staff, the State Water Board, or the California Office of Administrative Law determines that minor, non-substantive corrections to the language of the amendment are needed for clarity or consistency, the Executive Officer may make such changes, and shall inform the Central Coast Water Board of any such changes.
6. The environmental documents prepared by the Central Coast Water Board staff pursuant to Public Resources Code 21080.5 are hereby certified.

I, Kenneth A. Harris Jr., Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of a resolution adopted by the Central Coast Regional Water Quality Control Board on May 28, 2015.

---

Kenneth A. Harris Jr.  
Executive Officer

Attachment: Attachment A to Resolution No. R3-2015-0004: Amendment to the Water Quality Control Plan for the Central Coastal Basin to Incorporate Total Maximum Daily Loads for Nitrogen Compounds and Orthophosphate in Streams of the Pajaro River Basin

**California Environmental Protection Agency  
Central Coast Regional Water Quality Control Board**

**Basin Plan Amendment  
Attachment A to Resolution No. R3-2015-0004**

Amendment to the Water Quality Control Plan for the Central Coastal Basin  
to Incorporate Total Maximum Daily Loads for Nitrogen Compounds and  
Orthophosphate in Streams of the Pajaro River Basin



**ATTACHMENT A TO RESOLUTION NO. R3-2015-0004**

**Revise the September 8, 1994 Basin Plan as follows:**

**AMENDMENT TO THE WATER QUALITY CONTROL PLAN FOR THE CENTRAL COASTAL BASIN TO INCORPORATE TOTAL MAXIMUM DAILY LOADS FOR NITROGEN COMPOUNDS AND ORTHOPHOSPHATE IN STREAMS OF THE PAJARO RIVER BASIN**

Add the following to Chapter 4 after IX. S:

**IX. T. TOTAL MAXIMUM DAILY LOADS FOR NITROGEN COMPOUNDS AND ORTHOPHOSPHATE IN STREAMS OF THE PAJARO RIVER BASIN**

The Regional Water Quality Control Board adopted these TMDLs on July 30, 2015.

These TMDLs were approved by:

The State Water Resources Control Board on: \_\_\_\_\_ (date).

The California Office of Administrative Law on: \_\_\_\_\_ (date).

The U.S. Environmental Protection Agency on: \_\_\_\_\_ (date).

**Acronyms**

BMP: best management practices

MS4: municipal separate storm sewer systems

OAL: Office of Administrative Law

**Problem Statement**

In the Pajaro River Basin, discharges of nitrogen compounds and orthophosphate are occurring in surface waters at levels which are impairing a spectrum of beneficial uses and, therefore, constitute a serious water quality problem. The municipal and domestic drinking water supply (MUN, GWR) beneficial uses and the range of aquatic habitat beneficial uses are not protected. A total of 27 waterbody/pollutant combinations are impaired due to exceedances of nutrient and nutrient-related water quality objectives. The pollutants addressed in these TMDLs are nitrate, un-ionized ammonia, and orthophosphate. Reducing these pollutants will also address several Clean Water Act section 303(d)-listed dissolved oxygen and chlorophyll a impairments in the Pajaro River basin.

The TMDLs protect and restore the municipal and domestic water supply beneficial use (MUN) and aquatic habitat beneficial uses currently being degraded by violations of the toxicity objective and the biostimulatory substances objective. The aquatic habitat beneficial uses currently being degraded include the following: wildlife habitat (WILD), cold fresh water habitat (COLD), warm fresh water habitat (WARM), migration of aquatic organisms (MIGR), spawning, reproduction, and/or early development (SPWN), preservation of biological habitats of special significance (BIOL), and rare, threatened, or endangered species (RARE). In addition, current or potential future beneficial uses of the agricultural water supply beneficial use (AGR) are not being supported. Nitrate can create problems not only for water supplies and aquatic habitat, but also potentially for nitrogen sensitive crops (grapes, avocado, citrus) by detrimentally impacting crop yield or quality.

For waterbodies that are not expressing biostimulatory impairments, the most stringent relevant water quality objective for nitrate (and therefore the one that is protective of the full range of all nitrate-impaired designated beneficial uses) is the numeric Basin Plan objective for nitrate in

municipal and domestic water supply. Reducing nitrate pollution and ultimately achieving the nitrate drinking water quality standard in these waterbodies will therefore restore and be protective of the full range of MUN, GWR, and/or AGR designated beneficial uses of the surface waters which are being currently impaired by excess nitrate.

All waterbodies are required to attain the Basin Plan general toxicity objective for un-ionized ammonia in inland surface waters and estuaries.

For waterbodies that are expressing biostimulatory impairments, the most stringent relevant water quality objective for nitrate-nutrients (and therefore the one that is protective of the full range of all nutrient-impaired designated beneficial uses) is the Basin Plan narrative general objective for biostimulatory substances in inland surface waters and estuaries. These waterbodies must achieve concentration-based TMDLs for nitrate and orthophosphate as identified herein. Reducing nutrient pollution and ultimately achieving the TMDLs for nutrients in these waterbodies will therefore restore and be protective of the full range of aquatic habitat, MUN, GWR, and/or AGR designated beneficial uses of the surface waters which are being currently impaired by excess nutrients.

The following impairments are addressed with these TMDLs:

- Beach Road Ditch: nitrate, low dissolved oxygen, nutrients (biostimulatory substances objective)
- Carnadero Creek: nitrate, low dissolved oxygen, nutrients (biostimulatory substances objective)
- Cassery Creek: nitrate, low dissolved oxygen
- Corralitos Creek: nutrients (biostimulatory substances objective)
- Coward Creek: nitrate
- Furlong Creek: nitrate, nutrients (biostimulatory substances objective)
- Harkins Slough: nitrate, nutrients (biostimulatory substances objective), low dissolved oxygen, chlorophyll a
- Llagas Creek: nitrate, nutrients (biostimulatory substances objective), un-ionized ammonia, low dissolved oxygen
- McGowan Ditch: nitrate, nutrients (biostimulatory substances objective)
- Millers Canal: low dissolved oxygen, chlorophyll a, nutrients (biostimulatory substances objective)
- Pajaro River: nitrate, nutrients (biostimulatory substances objective), low dissolved oxygen
- Pajaro River Estuary: un-ionized ammonia
- Pinto Lake outflow ditch: nitrate
- San Juan Creek: nitrate, low dissolved oxygen
- Struve Slough: low dissolved oxygen, nutrients (biostimulatory substances objective)
- West Branch Struve Slough: low dissolved oxygen
- Tequisquita Slough: low dissolved oxygen, nutrients (biostimulatory substances objective)
- Watsonville Slough: nitrate, nutrients (biostimulatory substances objective), low dissolved oxygen

### **Numeric Targets**

Numeric targets are water quality thresholds developed and used to ascertain when and where water quality objectives are achieved, and hence, when beneficial uses are protected.

➤ Target for Nitrate (MUN-GWR standards)

For impaired stream reaches that are required to support drinking water (MUN) and groundwater recharge (GWR) beneficial uses, the nitrate numeric target is 10 mg/L (nitrate as N) for these

TMDLs, which therefore is equal to the Basin Plan's numeric nitrate water quality objective protective of drinking water beneficial uses and groundwater recharge beneficial uses.

➤ Target for Un-ionized ammonia (toxicity)

For un-ionized ammonia (a nitrogen compound), the numeric target is 0.025 mg/L (as N) for these TMDLs, which therefore is equal to the Basin Plan's un-ionized ammonia numeric water quality objective protective against toxicity in surface waters.

➤ Targets for Biostimulatory Substances (nitrate and orthophosphate)

The Basin Plan contains the following narrative water quality objectives for biostimulatory substances:

"Waters shall not contain biostimulatory substances in concentrations that promote aquatic growths to the extent that such growths cause nuisance or adversely affect beneficial uses."

To implement this narrative objective, staff developed scientifically peer reviewed numeric targets, based on established methodologies and approaches. The numeric targets for biostimulatory substances are presented in Table IX T-1.

Table IX T-1. Numeric targets for biostimulatory substances.

<u>Stream Reaches</u>	<u>Nitrate-N (mg/L)</u>	<u>Orthophosphate-P (mg/L)</u>
<u>Pajaro River, all reaches including the Pajaro River Estuary</u>	<u>3.9 Maximum Dry Season Samples (May 1-Oct 31)</u>	<u>0.14 Maximum Dry Season Samples (May 1-Oct 31)</u>
	<u>8.0 Maximum Wet Season Samples (Nov 1-Apr 30)</u>	<u>0.3 Maximum Wet Season Samples (Nov 1-Apr 30)</u>
<u>Corralitos Creek, all reaches</u>	<u>1.8 Maximum Dry Season Samples (May 1-Oct 31)</u>	<u>0.14 Maximum Dry Season Samples (May 1-Oct 31)</u>
<u>Salsipuedes Creek, all reaches</u>	<u>8.0 Maximum Wet Season Samples (Nov 1-Apr 30)</u>	<u>0.3 Maximum Wet Season Samples (Nov 1-Apr 30)</u>
<u>Beach Road Ditch</u>	<u>3.3 Maximum Dry Season Samples (May 1-Oct 31)</u>	<u>0.14 Maximum Dry Season Samples (May 1-Oct 31)</u>
<u>McGowan Ditch</u>	<u>8.0 Maximum Wet Season Samples (Nov 1-Apr 30)</u>	<u>0.3 Maximum Wet Season Samples (Nov 1-Apr 30)</u>

<u>Stream Reaches</u>	<u>Nitrate-N (mg/L)</u>	<u>Orthophosphate-P (mg/L)</u>
<u>Llagas Creek, all reaches downstream of Chesebro Reservoir</u>	1.8 Maximum Dry Season Samples (May 1-Oct 31)	0.05 Maximum Dry Season Samples (May 1-Oct 31)
<u>Carnadero and Uvas Creeks, all reaches</u>	8.0 Maximum Wet Season Samples (Nov 1-Apr 30)	0.3 Maximum Wet Season Samples (Nov 1-Apr 30)
<u>Furlong Creek, all reaches</u>		
<u>San Juan Creek, all reaches</u>	3.3 Maximum Dry Season Samples (May 1-Oct 31)	0.12 Maximum Dry Season Samples (May 1-Oct 31)
<u>West Branch San Juan Creek, all reaches</u>	8.0 Maximum Wet Season Samples (Nov 1-Apr 30)	0.3 Maximum Wet Season Samples (Nov 1-Apr 30)
<u>Tequisquita Slough</u>	2.2 Maximum Dry Season Samples (May 1-Oct 31)	0.12 Maximum Dry Season Samples (May 1-Oct 31)
	8.0 Maximum Wet Season Samples (Nov 1-Apr 30)	0.3 Maximum Wet Season Samples (Nov 1-Apr 30)
<u>Stream Reaches</u>	<u>Total Nitrogen (mg/L)</u>	<u>Orthophosphate-P (mg/L)</u>
<u>Watsonville Slough, all reaches</u>	2.1 Maximum (total nitrogen) Dry Season Samples (May 1-Oct 31)	0.14 Maximum Dry Season (May 1-Oct 31)
<u>Harkins Slough, all reaches</u>		
<u>Gallighan Slough, all reaches</u>	8.0 Maximum (total nitrogen) Wet Season Samples (Nov 1-Apr 30)	0.3 Maximum Wet Season Samples (Nov 1-Apr 30)
<u>Struve Slough, all reaches</u>		
<u>Millers Canal</u>	1.1 Maximum (total nitrogen) Dry Season Samples (May 1-Oct 31)	0.04 Maximum Dry Season (May 1-Oct 31)
	8.0 Maximum (total nitrogen) Wet Season Samples (Nov 1-Apr 30)	0.3 Maximum Wet Season Samples (Nov 1-Apr 30)

➤ Targets for Nutrient-Response Indicators (dissolved oxygen and chlorophyll a and microcystins)

Dissolved oxygen and chlorophyll a numeric targets are identified to ensure that streams do not show evidence of biostimulatory conditions and to provide primary indicator metrics to assess biological response to future nutrient water column concentration reductions.

For waterbodies designated as cold fresh water habitat (COLD) and spawning (SPWN) beneficial uses the dissolved oxygen numeric targets is the same as Basin Plan numeric water quality objective which states that dissolved oxygen concentrations shall not be reduced below 7.0 mg/L at any time.

For water bodies designated as warm fresh water habitat (WARM) beneficial use, the dissolved oxygen numeric targets is the same as Basin Plan numeric water quality objective which states that dissolved oxygen concentrations shall not be reduced below 5.0 mg/L at any time.

Additionally, for all inland surface waters, enclosed bays and estuaries, the dissolved oxygen numeric target is the same as Basin Plan numeric water quality objective which states that the median dissolved oxygen should not fall below 85% saturation as a result of controllable water quality conditions.

For water bodies designated as cold fresh water habitat (COLD) and spawning (SPWN) or warm fresh water habitat (WARM) beneficial uses the numeric water quality target indicative of excessive dissolved oxygen saturation conditions is 13 mg/L (i.e., water column dissolved oxygen concentrations not to exceed 13 mg/L).

The numeric water quality target for chlorophyll a is 15 micrograms per liter ( $\mu\text{g/L}$ ) for all water bodies (i.e., water column chlorophyll a concentrations not to exceed 15  $\mu\text{g/L}$ ).

The numeric water quality target for microcystins is 0.8 micrograms per liter ( $\mu\text{g/L}$ ) for all waterbodies (i.e., microcystins not to exceed 0.8  $\mu\text{g/L}$  (includes microcystin congeners LA, LR, RR, and YR)).

### **Source Analysis**

Discharges of un-ionized ammonia, nitrate, and orthophosphate originating from irrigated agriculture, municipal NPDES-permitted stormwater system discharges, industrial and construction NPDES-permitted stormwater sources, livestock waste associated with grazing lands and rural residential areas, golf courses, and natural sources are contributing loads to receiving waters. Irrigated agriculture is the largest source of controllable water column nutrient loads in the Pajaro River basin and this source category is not currently meeting its proposed load allocation. Municipal NPDES-permitted stormwater sources are a relatively minor source of nitrogen compounds and orthophosphate, but can be locally significant. Livestock waste sources associated with grazing lands and rural residential areas are currently meeting proposed load allocations, as are sources associated with industrial and construction NPDES-permitted sources and golf courses.

### **TMDLs**

The following TMDLs will result in attainment of water quality standards and will rectify impairments described in the Problem Statement.

The un-ionized ammonia TMDL for all streams of the Pajaro River basin is:

- Un-ionized ammonia concentration shall not exceed 0.025 mg/L-N in receiving waters.

The nitrate TMDL for all streams of the Pajaro River basin required to support MUN beneficial uses is:

- Nitrate concentration shall not exceed 10 mg/L-N in receiving waters.

The nitrate and orthophosphate TMDLs for all reaches of the Pajaro River, including the Pajaro River Estuary are:

- For dry season (May 1 to October 31): Nitrate-N concentration shall not exceed 3.9 mg/L in receiving waters; orthophosphate-P concentration shall not exceed 0.14 mg/L in receiving waters, and
- For wet season (November 1 to April 30): Nitrate-N concentration shall not exceed 8.0 mg/L in receiving waters; orthophosphate-P concentration shall not exceed 0.3 mg/L in receiving waters.

The nitrate and orthophosphate TMDLs for Corralitos Creek (all reaches) and Salsipuedes Creek (all reaches) are:

- For dry season (May 1 to October 31): Nitrate-N concentration shall not exceed 1.8 mg/L in receiving waters; orthophosphate-P concentration shall not exceed 0.14 mg/L in receiving waters, and
- For wet season (November 1 to April 30): Nitrate-N concentration shall not exceed 8.0 mg/L in receiving waters; orthophosphate-P concentration shall not exceed 0.3 mg/L in receiving waters.

The nitrate and orthophosphate TMDLs for Beach Road Ditch and McGowan Ditch are:

- For dry season (May 1 to October 31): Nitrate-N concentration shall not exceed 3.3 mg/L in receiving waters; orthophosphate-P concentration shall not exceed 0.14 mg/L in receiving waters, and
- For wet season (November 1 to April 30): Nitrate-N concentration shall not exceed 8.0 mg/L in receiving waters; orthophosphate-P concentration shall not exceed 0.3 mg/L in receiving waters.

The nitrate and orthophosphate TMDLs for all reaches of Llagas Creek (downstream of Chesebro Reservoir), Carnadero Creek, Uvas Creek, and Furlong Creek are:

- For dry season (May 1 to October 31): Nitrate-N concentration shall not exceed 1.8 mg/L in receiving waters; orthophosphate-P concentration shall not exceed 0.05 mg/L in receiving waters, and
- For wet season (November 1 to April 30): Nitrate-N concentration shall not exceed 8.0 mg/L in receiving waters; orthophosphate-P concentration shall not exceed 0.3 mg/L in receiving waters.

The nitrate and orthophosphate TMDLs for all reaches of the San Juan Creek and West Branch of San Juan Creek are:

- For dry season (May 1 to October 31): Nitrate-N concentration shall not exceed 3.3 mg/L in receiving waters; orthophosphate-P concentration shall not exceed 0.12 mg/L in receiving waters, and
- For wet season (November 1 to April 30): Nitrate-N concentration shall not exceed 8.0 mg/L in receiving waters; orthophosphate-P concentration shall not exceed 0.3 mg/L in receiving waters.



The nitrate and orthophosphate TMDLs for Tequisquita Slough are:

- For dry season (May 1 to October 31): Nitrate-N concentration shall not exceed 2.2 mg/L in receiving waters; orthophosphate-P concentration shall not exceed 0.12 mg/L in receiving waters, and
- For wet season (November 1 to April 30): Nitrate-N concentration shall not exceed 8.0 mg/L in receiving waters; orthophosphate-P concentration shall not exceed 0.3 mg/L in receiving waters.

The total nitrogen and orthophosphate TMDLs for all reaches of Watsonville Slough, Harkins Slough, Gallighan Slough, and Struve Slough are:

- For dry season (May 1 to October 31): total Nitrogen-N concentration shall not exceed 2.1 mg/L in receiving waters; orthophosphate-P concentration shall not exceed 0.14 mg/L in receiving waters, and
- For wet season (November 1 to April 30): total Nitrogen-N concentration shall not exceed 8.0 mg/L in receiving waters; orthophosphate-P concentration shall not exceed 0.3 mg/L in receiving waters.

The total nitrogen and orthophosphate TMDLs for all reaches of Millers Canal are:

- For dry season (May 1 to October 31): total Nitrogen-N concentration shall not exceed 1.1 mg/L in receiving waters; orthophosphate-P concentration shall not exceed 0.04 mg/L in receiving waters, and
- For wet season (November 1 to April 30): total Nitrogen-N concentration shall not exceed 8.0 mg/L in receiving waters; orthophosphate-P concentration shall not exceed 0.3 mg/L in receiving waters.

The TMDLs are considered achieved when water quality conditions meet all regulatory and policy requirements necessary for removing the impaired waters from the Clean Water Act section 303(d) list of impaired waters.

### **Final Allocations and Interim Allocations**

Owners and operators of irrigated lands, municipal NPDES-permitted storm water entities, industrial and construction NPDES-permitted stormwater sources natural sources, owners and operators of golf courses, and owners/operators of livestock and domestic animals are assigned un-ionized ammonia, nitrate, and orthophosphate allocations equal to the TMDL and numeric targets.

The final allocations to responsible parties are shown in Table IX T-2. The final allocations are equal to the TMDLs and should be achieved 25-years after the TMDL effective date. Unlike the load-based TMDL method, the concentration-based allocations do not add up to the TMDL because concentrations of individual pollution sources are not additive. Since the TMDLs are concentration-based, the allocations are not additive.

Recognizing that achievement of the more stringent final dry season biostimulatory allocations embedded in Table IX T-2 may require a significant amount of time to achieve, interim allocations are identified. Interim allocations will be used as benchmarks in assessing progress towards the final allocations. Interim allocations are shown in Table IX T-3.

### **Controllable Water Quality Conditions**

In accordance with the Basin Plan, controllable water quality shall be managed to conform or to achieve the water quality objectives and load allocations contained in these TMDLs. The Basin Plan defines controllable water quality conditions as follows: "Controllable water quality conditions are those actions or circumstances resulting from man's activities that may influence the quality of the

waters of the State and that may be reasonably controlled.” – Basin Plan Chapter 3, Water Quality Objectives, page III-2.

### **Compliance with Anti-degradation Requirements**

State and federal anti-degradation policies require, in part, that where surface waters are of higher quality than necessary to protect beneficial uses, the high quality of those waters must be maintained unless otherwise provided by the policies. The federal anti-degradation policy, 40 CFR 131.12(a), states in part, “Where the quality of waters exceed levels necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water, that quality shall be maintained and protected unless the State finds, after full satisfaction of the intergovernmental coordination and public participation provisions of the State’s continuing planning process, that allowing lower water quality is necessary to accommodate important economic or social development in the area in which the waters are located...”

Compliance with anti-degradation requirements may be determined on the basis of trends in declining water quality in applicable waterbodies, consistent with the methodologies and criteria provided in Section 3.10 of the California 303(d) Listing Policy (adopted, September 20, 2004, SWRCB Resolution No. 2004-0063). Section 3.10 of the California 303(d) Listing Policy explicitly addresses the anti-degradation component of water quality standards as defined in 40 CFR 130.2(j), and provides for identifying trends of declining water quality as a metric for assessing compliance with anti-degradation requirements.

Section 3.10 of the California 303(d) Listing Policy states that pollutant-specific water quality objectives need not be exceeded to be considered non-compliant with anti-degradation requirements: “if the water segment exhibits concentrations of pollutants or water body conditions for any listing factor that shows a trend of declining water quality standards attainment”.

Practically speaking, this means that, for example, stream reaches or waterbodies that have a concentration-based TMDL allocation of 10 mg/L nitrate-N, and if current water quality or future water quality assessments in the stream reach indicates nitrate-N well under 10 mg/L nitrate-N, the allocation does not give license for controllable nitrogen sources to degrade the water resource up to the maximum allocation (10 mg/L nitrate-N).

**Table IX T-2. Final Allocations and Responsible Parties**

<b>FINAL WASTE LOAD ALLOCATIONS (WLAs)<sup>AB</sup></b>						
<u>Waterbody<sup>C</sup> the responsible party is discharging to</u>	<u>Party Responsible for Allocation &amp; NPDES/WDR number</u>	<u>Receiving Water Nitrate as N WLA (mg/L)  <u>Aquatic Habitat</u></u>	<u>Receiving Water Nitrate as N WLA (mg/L)  <u>Human Health</u></u>	<u>Receiving Water Orthophosphate as P WLA (mg/L)</u>	<u>Receiving Water Total Nitrogen as N WLA (mg/L)</u>	<u>Receiving Water Un-ionized ammonia as WLA (mg/L)</u>
Pajaro River	City of Watsonville (Storm drain discharges to MS4s) Storm Water Permit NPDES No. CAS000004					
	County of Santa Cruz (Storm drain discharges to MS4s) Storm Water General Permit NPDES No. CAS000004	3.9 Dry season <sup>D</sup>		0.14 Dry season <sup>D</sup>		
	City of Watsonville Wastewater Treatment Facility (Wastewater discharges to surface waterbody) NPDES No. CA0048216	8.0 Wet season <sup>E</sup>	10 Year-round	0.3 Wet season <sup>E</sup>	Not Applicable	0.025 Year-round
	South County Regional Wastewater Authority (Wastewater discharges to surface waterbody) NPDES No. CA0049964					

<b>FINAL WASTE LOAD ALLOCATIONS (WLAs)<sup>AB</sup></b>						
<b><u>Waterbody<sup>C</sup></u> <u>the</u> <u>responsible</u> <u>party is</u> <u>discharging</u> <u>to</u></b>	<b><u>Party</u> <u>Responsible for</u> <u>Allocation</u> <u>&amp;</u> <u>NPDES/WDR</u> <u>number</u></b>	<b><u>Receiving</u> <u>Water Nitrate</u> <u>as N WLA</u> <u>(mg/L)</u>  <u>Aquatic</u> <u>Habitat</u></b>	<b><u>Receiving</u> <u>Water Nitrate</u> <u>as N WLA</u> <u>(mg/L)</u>  <u>Human Health</u></b>	<b><u>Receiving Water</u> <u>Orthophosphate</u> <u>as P WLA</u> <u>(mg/L)</u></b>	<b><u>Receiving</u> <u>Water Total</u> <u>Nitrogen as N</u> <u>WLA (mg/L)</u></b>	<b><u>Receiving Water</u> <u>Un-ionized</u> <u>ammonia as</u> <u>WLA (mg/L)</u></b>
All reaches of: Watsonville Slough, Harkins Slough, Gallighan Slough, Struve Slough	City of Watsonville (Storm drain discharges to MS4s) Storm Water Permit NPDES No. CAS000004  County of Santa Cruz (Storm drain discharges to MS4s) Storm Water General Permit NPDES No. CAS000004	Not Applicable	10 Year-round	0.14 Dry season <sup>D</sup>  0.3 Wet season <sup>E</sup>	2.1 Dry season <sup>D</sup>  8.0 Wet season <sup>E</sup>	0.025 Year-round
Corralitos Creek, Salsipuedes Creek	City of Watsonville (Storm drain discharges to MS4s) Storm Water Permit NPDES No. CAS000004  County of Santa Cruz (Storm drain discharges to MS4s) Storm Water General Permit NPDES No. CAS000004	1.8 Dry season <sup>D</sup>  8.0 Wet season <sup>E</sup>	10 Year-round	0.14 Dry season <sup>D</sup>  0.3 Wet season <sup>E</sup>	Not Applicable	0.025 Year-round
San Juan Creek, all reaches	San Juan Bautista WWTP (Wastewater discharges to surface waterbody) NPDES No. CA0047902	3.3 Dry season <sup>D</sup>  8.0 Wet season <sup>E</sup>	10 Year-round	0.12 Dry season <sup>D</sup>  0.3 Wet season <sup>E</sup>	Not Applicable	0.025 Year-round

<b>FINAL WASTE LOAD ALLOCATIONS (WLAs)<sup>AB</sup></b>						
<u>Waterbody<sup>C</sup> the responsible party is discharging to</u>	<u>Party Responsible for Allocation &amp; NPDES/WDR number</u>	<u>Receiving Water Nitrate as N WLA (mg/L) <i>Aquatic Habitat</i></u>	<u>Receiving Water Nitrate as N WLA (mg/L) <i>Human Health</i></u>	<u>Receiving Water Orthophosphate as P WLA (mg/L)</u>	<u>Receiving Water Total Nitrogen as N WLA (mg/L)</u>	<u>Receiving Water Un-ionized ammonia as WLA (mg/L)</u>
Llagas Creek, Little Llagas Creek	City of Gilroy City of Morgan Hill Urbanized areas (Storm drain discharges to MS4s) Storm Water General Permit NPDES No. CAS000004  County of Santa Clara (Storm drain discharges to MS4s) Storm Water General Permit NPDES No. CAS000004	<u>1.8</u> Dry season <sup>D</sup>  <u>8.0</u> Wet season <sup>E</sup>	<u>10</u> Year-round	<u>0.05</u> Dry season <sup>D</sup>  <u>0.3</u> Wet season <sup>E</sup>	<u>Not Applicable</u>	<u>0.025</u> Year-round
Uvas Creek, Carnadero Creek	City of Gilroy City of Morgan Hill (Storm drain discharges to MS4s) Storm Water General Permit NPDES No. CAS000004	<u>1.8</u> Dry season <sup>D</sup>  <u>8.0</u> Wet season <sup>E</sup>	<u>10</u> Year-round	<u>0.05</u> Dry season <sup>D</sup>  <u>0.3</u> Wet season <sup>E</sup>	<u>Not Applicable</u>	<u>0.025</u> Year-round
San Benito River	City of Hollister (Storm drain discharges to MS4s) Storm Water General Permit NPDES No. CAS000004	<u>Not Applicable</u>	<u>10</u> Year-round	<u>Not Applicable</u>	<u>Not Applicable</u>	<u>0.025</u> Year-round

<b>FINAL WASTE LOAD ALLOCATIONS (WLAs)<sup>AB</sup></b>						
<u>Waterbody<sup>C</sup> the responsible party is discharging to</u>	<u>Party Responsible for Allocation &amp; NPDES/WDR number</u>	<u>Receiving Water Nitrate as N WLA (mg/L) <i>Aquatic Habitat</i></u>	<u>Receiving Water Nitrate as N WLA (mg/L) <i>Human Health</i></u>	<u>Receiving Water Orthophosphate as P WLA (mg/L)</u>	<u>Receiving Water Total Nitrogen as N WLA (mg/L)</u>	<u>Receiving Water Un-ionized ammonia as WLA (mg/L)</u>
<u>Any identified impaired waterbody that receives discharges from NPDES- permitted industrial or construction activities within the Pajaro River Basin</u>	<u>Industrial stormwater general permit (storm drain discharges from industrial facilities) NPDES No. CAS000001</u>  <u>Construction stormwater general permit (storm drain discharges from construction operations) NPDES No. CAS000002</u>	<u>See specific waterbody for specific WLAs</u>	<u>See specific waterbody for specific WLAs</u>	<u>See specific waterbody for specific WLAs</u>	<u>See specific waterbody for specific WLAs</u>	<u>0.025 Year-round</u>

<b>FINAL LOAD ALLOCATIONS (LAs)<sup>AB</sup></b>						
<b><u>Waterbody<sup>C</sup></u> <u>the</u> <u>responsible</u> <u>party is</u> <u>discharging to</u></b>	<b><u>Party Responsible</u> <u>for Allocation</u> <u>(Source)</u></b>	<b><u>Receiving</u> <u>Water</u> <u>Nitrate as N</u> <u>LA (mg/L)</u>  <b><i><u>Aquatic</u></i> <b><i><u>Habitat</u></i></b></b></b>	<b><u>Receiving</u> <u>Water</u> <u>Nitrate as N</u> <u>LA (mg/L)</u>  <b><i><u>Human</u></i> <b><i><u>Health</u></i></b></b></b>	<b><u>Receiving Water</u> <u>Orthophosphate</u> <u>as P LA (mg/L)</u></b>	<b><u>Receiving</u> <u>Water Total</u> <u>Nitrogen as</u> <u>N LA (mg/L)</u></b>	<b><u>Receiving Water</u> <u>Un-ionized</u> <u>ammonia as N</u> <u>LA (mg/L)</u></b>
Pajaro River, all reaches, including the Pajaro River Estuary	Owners/operators of irrigated agricultural lands (Discharges from irrigated lands)	3.9 Dry season <sup>D</sup>	10 Year-round	0.14 Dry season <sup>D</sup>	Not Applicable	0.025 Year-round
	Owners/operators of land used for/containing domestic animals/livestock (Domestic animals/livestock waste not draining to MS4s)	8.0 Wet season <sup>E</sup>		0.3 Wet season <sup>E</sup>		
	No responsible party (Natural sources)					
Corralitos Creek, all reaches Salsipuedes Creek, all reaches	Owners/operators of irrigated agricultural lands (Discharges from irrigated lands)	1.8 Dry season <sup>D</sup>	10 Year-round	0.14 Dry season <sup>D</sup>	Not Applicable	0.025 Year-round
	Owners/operators of land used for/containing domestic animals/livestock (Domestic animals/livestock waste not draining to MS4s)	8.0 Wet season <sup>E</sup>		0.3 Wet season <sup>E</sup>		
	No responsible party (Natural sources)					
Beach Road Ditch McGowan Ditch	Owners/operators of irrigated agricultural lands (Discharges from irrigated lands)	3.3 Dry season <sup>D</sup>	10 Year-round	0.14 Dry season <sup>D</sup>	Not Applicable	0.025 Year-round
	Owners/operators of land used for/containing domestic animals/livestock (Domestic animals/livestock waste not draining to MS4s)	8.0 Wet season <sup>E</sup>		0.3 Wet season <sup>E</sup>		
	No responsible party (Natural sources)					

<b>FINAL LOAD ALLOCATIONS (LAs)<sup>AB</sup></b>						
<b><u>Waterbody<sup>C</sup></u> <u>the</u> <u>responsible</u> <u>party is</u> <u>discharging to</u></b>	<b><u>Party Responsible</u> <u>for Allocation</u> <u>(Source)</u></b>	<b><u>Receiving</u> <u>Water</u> <u>Nitrate as N</u> <u>LA (mg/L)</u>  <b><i><u>Aquatic</u></i> <b><i><u>Habitat</u></i></b></b></b>	<b><u>Receiving</u> <u>Water</u> <u>Nitrate as N</u> <u>LA (mg/L)</u>  <b><i><u>Human</u></i> <b><i><u>Health</u></i></b></b></b>	<b><u>Receiving Water</u> <u>Orthophosphate</u> <u>as P LA (mg/L)</u></b>	<b><u>Receiving</u> <u>Water Total</u> <u>Nitrogen as</u> <u>N LA (mg/L)</u></b>	<b><u>Receiving Water</u> <u>Un-ionized</u> <u>ammonia as N</u> <u>LA (mg/L)</u></b>
<u>Llagas Creek, all reaches downstream of Chesebro Reservoir, Carnadero Creek, all reaches, Furlong Creek, all reaches</u>	<u>Owners/operators of irrigated agricultural lands (Discharges from irrigated lands)</u>	<u>1.8</u> <u>Dry</u> <u>season<sup>D</sup></u>	<u>10</u> <u>Year-round</u>	<u>0.05</u> <u>Dry season<sup>D</sup></u>	<u>Not</u> <u>Applicable</u>	<u>0.025</u> <u>Year-round</u>
	<u>Owners/operators of land used for/containing domestic animals/livestock (Domestic animals/livestock waste not draining to MS4s)</u>	<u>8.0</u> <u>Wet</u> <u>season<sup>E</sup></u>		<u>0.3</u> <u>Wet season<sup>E</sup></u>		
	<u>No responsible party (Natural sources)</u>					
<u>San Juan Creek, all reaches, West Branch San Juan Creek, all reaches</u>	<u>Owners/operators of irrigated agricultural lands (Discharges from irrigated lands)</u>	<u>3.3</u> <u>Dry</u> <u>season<sup>D</sup></u>	<u>10</u> <u>Year-round</u>	<u>0.12</u> <u>Dry season<sup>D</sup></u>	<u>Not</u> <u>Applicable</u>	<u>0.025</u> <u>Year-round</u>
	<u>Owners/operators of land used for/containing domestic animals/livestock (Domestic animals/livestock waste not draining to MS4s)</u>	<u>8.0</u> <u>Wet</u> <u>season<sup>E</sup></u>		<u>0.3</u> <u>Wet season<sup>E</sup></u>		
	<u>No responsible party (Natural sources)</u>					
<u>Tequisquita Slough</u>	<u>Owners/operators of irrigated agricultural lands (Discharges from irrigated lands)</u>	<u>2.2</u> <u>Dry</u> <u>season<sup>D</sup></u>	<u>10</u> <u>Year-round</u>	<u>0.12</u> <u>Dry season<sup>D</sup></u>	<u>Not</u> <u>Applicable</u>	<u>0.025</u> <u>Year-round</u>
	<u>Owners/operators of land used for/containing domestic animals/livestock (Domestic animals/livestock waste not draining to MS4s)</u>	<u>8.0</u> <u>Wet</u> <u>season<sup>E</sup></u>		<u>0.3</u> <u>Wet season<sup>E</sup></u>		
	<u>No responsible party (Natural sources)</u>					



<b>FINAL LOAD ALLOCATIONS (LAs)<sup>AB</sup></b>						
<u>Waterbody<sup>C</sup></u> <u>the</u> <u>responsible</u> <u>party is</u> <u>discharging to</u>	<u>Party Responsible</u> <u>for Allocation</u> <u>(Source)</u>	<u>Receiving</u> <u>Water</u> <u>Nitrate as N</u> <u>LA (mg/L)</u>  <u>Aquatic</u> <u>Habitat</u>	<u>Receiving</u> <u>Water</u> <u>Nitrate as N</u> <u>LA (mg/L)</u>  <u>Human</u> <u>Health</u>	<u>Receiving Water</u> <u>Orthophosphate</u> <u>as P LA (mg/L)</u>	<u>Receiving</u> <u>Water Total</u> <u>Nitrogen as</u> <u>N LA (mg/L)</u>	<u>Receiving Water</u> <u>Un-ionized</u> <u>ammonia as N</u> <u>LA (mg/L)</u>
<u>San Benito</u> <u>River</u>	<u>Owners/operators of</u> <u>irrigated agricultural</u> <u>lands</u> <u>(Discharges from</u> <u>irrigated lands)</u>	<u>Not</u> <u>Applicable</u>	<u>10</u> <u>Year-</u> <u>round</u>	<u>Not Applicable</u>	<u>Not</u> <u>Applicable</u>	<u>0.025</u> <u>Year-round</u>
	<u>Owners/operators of</u> <u>land used</u> <u>for/containing</u> <u>domestic</u> <u>animals/livestock</u> <u>(Domestic</u> <u>animals/livestock</u> <u>waste not draining</u> <u>to MS4s)</u>					
	<u>No responsible party</u> <u>(Natural sources)</u>					
<u>Tres Pinos</u> <u>Creek</u>	<u>Owners/operators of</u> <u>irrigated agricultural</u> <u>lands</u> <u>(Discharges from</u> <u>irrigated lands)</u>	<u>Not</u> <u>Applicable</u>	<u>10</u> <u>Year-</u> <u>round</u>	<u>Not Applicable</u>	<u>Not</u> <u>Applicable</u>	<u>0.025</u> <u>Year-round</u>
	<u>Owners/operators of</u> <u>land used</u> <u>for/containing</u> <u>domestic</u> <u>animals/livestock</u> <u>(Domestic</u> <u>animals/livestock</u> <u>waste not draining</u> <u>to MS4s)</u>					
	<u>No responsible party</u> <u>(Natural sources)</u>					
<u>Pacheco</u> <u>Creek</u>	<u>Owners/operators of</u> <u>irrigated agricultural</u> <u>lands</u> <u>(Discharges from</u> <u>irrigated lands)</u>	<u>Not</u> <u>Applicable</u>	<u>10</u> <u>Year-</u> <u>round</u>	<u>Not Applicable</u>	<u>Not</u> <u>Applicable</u>	<u>0.025</u> <u>Year-round</u>
	<u>Owners/operators of</u> <u>land used</u> <u>for/containing</u> <u>domestic</u> <u>animals/livestock</u> <u>(Domestic</u> <u>animals/livestock</u> <u>waste not draining</u> <u>to MS4s)</u>					
	<u>No responsible party</u> <u>(Natural sources)</u>					

<b>FINAL LOAD ALLOCATIONS (LAs)<sup>AB</sup></b>						
<b>Waterbody<sup>C</sup> the responsible party is discharging to</b>	<b>Party Responsible for Allocation (Source)</b>	<b>Receiving Water Nitrate as N LA (mg/L) <i>Aquatic Habitat</i></b>	<b>Receiving Water Nitrate as N LA (mg/L) <i>Human Health</i></b>	<b>Receiving Water Orthophosphate as P LA (mg/L)</b>	<b>Receiving Water Total Nitrogen as N LA (mg/L)</b>	<b>Receiving Water Un-ionized ammonia as N LA (mg/L)</b>
All reaches of: Watsonville Slough, Harkins Slough, Gallighan Slough, Struve Slough	Owners/operators of irrigated agricultural lands (Discharges from irrigated lands)	Not Applicable	10 Year-round	0.14 Dry season <sup>D</sup>	2.1 Dry season <sup>D</sup>	0.025 Year-round
	Owners/operators of land used for/containing domestic animals/livestock (Domestic animals/livestock waste not draining to MS4s)			0.3 Wet season <sup>E</sup>	8.0 Wet season <sup>E</sup>	
	No responsible party (Natural sources)					
Any identified impaired waterbody that could receive nutrient discharges from fertilizer applications on golf courses within the Pajaro River Basin	Public and Private golf courses in the Pajaro River basin	See specific waterbody for specific LAs	See specific waterbody for specific LAs	See specific waterbody for specific LAs	See specific waterbody for specific LAs	0.025 Year-round
Millers Canal	Owners/operators of irrigated agricultural lands (Discharges from irrigated lands)	Not Applicable	10 Year-round	0.04 Dry season <sup>D</sup>	1.1 Dry season <sup>D</sup>	0.025 Year-round
	Owners/operators of land used for/containing domestic animals/livestock (Domestic animals/livestock waste not draining to MS4s)			0.3 Wet season <sup>E</sup>	8.0 Wet season <sup>E</sup>	
	No responsible party (Natural sources)					

<sup>A</sup> Federal and state anti-degradation requirements apply to all waste load and load allocations.

<sup>B</sup> Achievement of final waste load and load allocations to be determined on the basis of the number of measured exceedances and/or other criteria set forth in Section 4 of the *Water Quality Control Policy for Developing California's Clean Water Act Section 303(d) List* (the "Listing Policy" – State Water Resources Control Board, Resolution No. 2004-0063, adopted September 2004) or as consistent with any relevant revisions of the Listing Policy promulgated in the future pursuant to Government Code section 11353.

C Waterbody name includes all reaches of named waterbody and tributaries to the named waterbody.

D Dry season is May 1st – October 31<sup>st</sup>.

E Wet season is November 1st – April 30<sup>th</sup>.

The parties responsible for the allocation to controllable sources are not responsible for the allocation to natural sources.

Table IX T-3. Interim Allocations

<b>INTERIM WASTE LOAD ALLOCATIONS (WLAs)</b>			
<u>Waterbody</u>	<u>Party Responsible for Achieving Waste Load Allocation (Source)</u>	<u>First Interim WLA</u>	<u>Second Interim WLA</u>
<u>All waterbodies given waste load allocations (WLAs) as identified in Final Waste Load Allocations Table</u>	<u>City of Gilroy</u> <u>City of Morgan Hill Urbanized areas (Storm drain discharges to MS4s)</u> <u>Storm Water General Permit</u> <u>NPDES No. CAS000004</u>	<u>Achieve <b>MUN standard-based and Un-ionized ammonia objective-based</b> allocations:</u>  <u>Allocation-5</u> <u>Allocation-9</u>  <u><b>10 years after effective date of the TMDLs</b></u>	<u>Achieve <b>Wet Season (Nov. 1 to Apr. 30) Biostimulatory target-based TMDL allocations:</b></u>  <u>Wet Season Allocation/Waterbody combinations as identified in Final Waste Load Allocations Table</u>  <u><b>15 years after effective date of the TMDLs</b></u>
	<u>City of Watsonville</u> <u>(Storm drain discharges to MS4s)</u> <u>Storm Water Permit</u> <u>NPDES No. CAS000004</u>		
	<u>County of Santa Cruz</u> <u>(Storm drain discharges to MS4s)</u> <u>Storm Water General Permit</u> <u>NPDES No. CAS000004</u>		
	<u>County of Santa Clara</u> <u>(Storm drain discharges to MS4s)</u> <u>Storm Water General Permit</u> <u>NPDES No. CAS000004</u>		
	<u>San Juan Bautista WWTP</u> <u>(Wastewater discharges to surface waterbody)</u> <u>NPDES No. CA0047902</u>		
<u>South County Regional Wastewater Authority (Wastewater discharges to surface waterbody)</u> <u>NPDES No. CA0049964</u>			

<b>INTERIM LOAD ALLOCATIONS (LAs)</b>			
<b>Waterbody</b>	<b>Party Responsible for Achieving Load Allocation (Source)</b>	<b>First Interim LA</b>	<b>Second Interim LA</b>
<p>All waterbodies given load allocations (LAs) as identified in Final Load Allocations Table <b>Error! Reference source not found.</b></p>	<p>Owners/operators of irrigated agricultural lands (Discharges from irrigated lands)</p>	<p>Achieve <b>MUN standard-based and Un-ionized ammonia objective-based</b> allocations:  Allocation-5 Allocation-9  <b>10 years after effective date of the TMDLs</b></p>	<p>Achieve <b>Wet Season</b> (Nov. 1 to Apr. 30) <b>Biostimulatory target-based TMDL allocations:</b>  Wet Season Allocation/Waterbody combinations as identified in Final Load Allocations Table <b>Error! Reference source not found.</b>  <b>15 years after effective date of the TMDLs</b></p>

**Margin of Safety**

A margin of safety is incorporated implicitly in the TMDLs through conservative model assumptions and statistical analysis. In addition, an explicit margin of safety is incorporated by reserving 20% of the load, calculated on a concentration basis, from wet season allocations.

**Implementation**

**DISCHARGES FROM IRRIGATED AGRICULTURAL LANDS:**

Owners and operators of irrigated agricultural land must comply with the Conditional Waiver of Waste Discharge Requirements for Irrigated Lands (Order R3-2012-0011; the “Agricultural Order”) and the Monitoring and Reporting Programs in accordance with Orders R3-2012-0011-01, R3-2012-0011-02, and R3-2012-0011-03, or their renewals or replacements, to meet load allocations and achieve the TMDLs. The requirements in these orders, and their renewals or replacements in the future, will implement the TMDLs and rectify the impairments addressed in the TMDLs.

Current requirements in the Agricultural Order that will achieve the load allocations include:

- A. Implement, and update as necessary, management practices to reduce nutrient loading.
- B. Maintain existing, naturally occurring riparian vegetative cover in aquatic habitat areas.
- C. Develop/update and implement Farm Plans.
- D. Properly destroy abandoned groundwater wells.
- E. Develop and initiate implementation of an Irrigation and Nutrient Management Plan (INMP) or alternative certified by a Professional Soil Scientist, Professional Agronomist, or Crop Advisor certified by the American Society of Agronomy, or similarly qualified professional.

The current Agricultural Order provides the requirements necessary to implement this TMDL. Therefore, no new requirements are proposed as part of this TMDL.

*Monitoring*

Owners and operators of irrigated agricultural lands must perform monitoring and reporting in accordance with Monitoring and Reporting Program Orders R3-2012-0011-01, R3-2012-0011-02, and R3-2012-0011-03, as applicable, or their renewals or replacements,

Determination of Progress and Attainment of Load Allocations

Load allocations will be achieved through a combination of implementation of management practices and strategies to reduce nitrogen compound and orthophosphate loading, and water quality monitoring. Flexibility to allow owners/operators of irrigated lands to demonstrate progress towards and attainment of load allocations is a consideration. Additionally, staff is aware that not all implementing parties are necessarily contributing to or causing a surface water impairment. However, it is important to recognize that impacting shallow groundwater with nutrient pollution may also impact surface water quality via baseflow loading contributions to the surface waterbodies.

To allow for flexibility, Central Coast Water Board staff will assess progress towards and attainment of load allocations using one or a combination of the following:

- A. Attaining the load allocations in the receiving water;
- B. Attaining receiving water TMDL numeric targets for nutrient-response indicators (i.e., dissolved oxygen water quality objectives, chlorophyll a targets and microcystin targets) and mitigation of downstream nutrient impacts to receiving waterbodies may constitute a demonstration of attainment of the nitrate, nitrogen and orthophosphate-based seasonal biostimulatory load allocations. Note that implementing parties are strongly encouraged to maximize overhead riparian canopy, where and if appropriate, using riparian vegetation, because doing so could result in achieving nutrient-response indicator targets before allocations are achieved (resulting in a less stringent allocation);
- C. Demonstrating quantifiable receiving water mass load reductions;
- D. Owners/operators of irrigated lands may be deemed in compliance with load allocations by implementing management practices that are capable of achieving interim and final load allocations identified in these TMDLs;
- E. Owners/operators of irrigated lands may provide sufficient evidence to demonstrate that they are and will continue to be in compliance with the load allocations. Such evidence could include documentation submitted by the owner/operator to the Executive Officer that the owner/operator is not causing waste to be discharged to impaired waterbodies resulting or contributing to violations of the load allocations.

STORM DRAIN DISCHARGES TO MS4s:

MS4 entities in the Pajaro River basin are required to implement and comply with the General Permit for Stormwater Discharges from Small Municipal Separate Storm Sewer Systems (Order No. 2013-0001-DWQ, NPDES No. CAS000004). Consistent with the provisions of the General Permit for Stormwater Discharges from Small Municipal Separate Storm Sewer Systems, or any subsequent General Permits, the Central Coast Water Board will require MS4 entities discharging to receiving waters impaired by nutrient-related pollution in the Pajaro River basin to develop and submit for Executive Officer approval a Waste Load Allocation Attainment Program (WAAP). The Central Coast Water Board will require MS4 entities to develop and submit for Executive Officer approval a Waste Load Allocation Attainment Program consistent with the requirements of the General Permit, or with any subsequent General Permits. The WAAP shall include descriptions of the actions that will be taken by the MS4 entity to attain the TMDL waste load allocations, and shall specifically address:

- A. Development of an assessment and implementation strategy;
- B. Source identification and prioritization;
- C. BMP identification, prioritization, implementation schedule, analysis, and effectiveness assessment;
- D. Monitoring and reporting program development and implementation. Monitoring program goals shall address: (1) assessment of stormwater discharge and/or receiving water quality; (2) assessment of BMP effectiveness; and (3) demonstration and progress towards achieving interim goals and waste load allocations.

- E. Coordination with stakeholders; and
- F. Other pertinent factors.

*Determination of Progress and Attainment of Waste Load Allocations*

Waste load allocations will be achieved through a combination of implementation of management practices and strategies to reduce nitrogen compound and orthophosphate loading, and water quality monitoring.

To allow for flexibility, Central Coast Water Board staff will assess progress towards and attainment of waste load allocations using one or a combination of the following:

- A. Attaining the waste load allocations in the receiving water;
- B. Attaining receiving water TMDL numeric targets for nutrient-response indicators (i.e., dissolved oxygen water quality objectives, chlorophyll a targets and microcystin targets) and mitigation of downstream nutrient impacts to receiving waterbodies may constitute a demonstration of the attainment of the nitrate, nitrogen, and orthophosphate-based seasonal biostimulatory waste load allocations. Note that implementing parties are strongly encouraged to maximize overhead riparian canopy using riparian vegetation, where and if appropriate, because doing so could result in achieving nutrient-response indicator targets before allocations are achieved (resulting in a less stringent allocation);
- C. Demonstrate compliance by measuring concentrations in stormdrain outfalls;
- D. Demonstrate compliance by demonstrating load reductions on mass basis at stormdrain outfalls;
- E. MS4s may be deemed in compliance with waste load allocations through implementation and assessment of pollutant loading reduction projects and assessment of BMPs capable of achieving interim and final waste load allocations identified in this TMDL in combination with water quality monitoring for a balanced approach to determining program effectiveness; and
- F. Any other effluent limitations and conditions which are consistent with the assumptions and requirements of the waste load allocations.

*Monitoring*

MS4 entities with operations and storm water conveyance systems discharging to receiving waters impaired by nutrient-related pollution in the Pajaro River basin – specifically the cities of Watsonville and Gilroy, and the counties of Santa Cruz and Santa Clara – are required to develop and submit monitoring programs as part of their WAAP. The goals of the monitoring programs are described in the requirements of the WAAP.

Staff encourages these MS4 entities to develop and submit creative and meaningful monitoring and implementation programs. Monitoring strategies can use a phased approach, for example, whereby outfall or receiving water monitoring is phased in after BMPs have been implemented and assessed for effectiveness. Pilot projects, where BMPs are implemented in well-defined areas covering a fraction of the MS4, may facilitate accurate assessment of how well the BMPs control pollution sources. Successful practices would then be implemented in other or larger parts of the MS4.

INDUSTRIAL AND CONSTRUCTION STORMWATER DISCHARGES:

Based on evidence and information provided in the TMDL report (attachment 2 to the staff report), NPDES stormwater-permitted industrial facilities and construction sites in the Pajaro River basin would not be expected to be a significant risk or cause of the observed nutrient water quality impairments, and these types of facilities are generally expected to be currently meeting proposed waste load allocations. Therefore, at this time, additional regulatory measures for this source category are not warranted. However, according to the U.S. Environmental Protection Agency and

the State Water Resources Control Board, all NPDES-permitted point sources identified in a TMDL must be given a waste load allocation, even if their current load to receiving waters is zero.

To maintain existing water quality and prevent any further water quality degradation, these permitted industrial facilities and construction operators shall continue to implement and comply with the requirements of the statewide Industrial General Permit (Order No. 97-03-DWQ, NPDES No. CAS000001 or Order No. 2014-0057-DWQ, NPDES No. CAS000001) or the Construction General Permit (Order No. 2012-0006-DWQ, NPDES No. CAS000002, or any subsequent Construction General Permit), respectively.

Available information does not conclusively demonstrate that stormwater from all industrial facilities and construction sites are meeting waste load allocations. More information may be obtained during the implementation phase of these TMDLs to further assess the level of nutrient contributions to surface waters from these source categories, and to identify any actions needed to reduce nutrient loading.

#### MUNICIPAL WASTEWATER TREATMENT FACILITIES:

Based on available data, discharges of treated wastewater from municipal wastewater treatment facilities are expected to generally be a relatively minor source of nutrient pollution to surface waters of the Pajaro River basin. However, according to the U.S. Environmental Protection Agency and the State Water Resources Control Board, all NPDES-permitted point sources identified in a TMDL must be given a waste load allocation, even if their current load to receiving waters is zero.

Watsonville Wastewater Treatment Facility's (Order No. R3-2014-0006 NPDES No. CA0048216) uses an ocean discharge point in Monterey Bay and these coastal marine waters are outside the scope of these TMDLs. Further regulatory measures in the context of these TMDLs for this facility is not warranted. However, this facility will be given a generic waste load allocation, to reserve discharge capacity if there is a need for future discharge points for this facility in surface waters of the Pajaro Valley (for example, as part of a recycled water program). As noted above, all NPDES-permitted point sources identified in a TMDL must be given a waste load allocation, even if their current load to receiving waters is zero, otherwise their allocation is assumed to be zero and no discharges of the identified pollutant(s) are allowed now or in the future.

The South County Wastewater Treatment Facility (Order No. R3-2010-0009, NPDES No. CA0049964), is permitted to discharge treated wastewater to the Pajaro River, but only under certain flow conditions. Based on available information, the existing effluent limitations and conditions in Order No. R3-2010-0009 would be expected to be capable of implementing and attaining the proposed waste load allocations identified in these TMDLs. The available information does not conclusively demonstrate that the permitted treated wastewater discharge to the Pajaro River poses no threats to aquatic habitat, and thus during the TMDL implementation phase the Central Coast Water Board may use its Water Code section 13267 authorities to have the South County Regional Wastewater Authority estimate their current or future nutrient loading contribution to the Pajaro River, and the Central Coast Water Board may subsequently assess what, if any, modifications to the nutrient effluent limitations are needed to those currently specified in Order No. R3-2010-0009.

The City of San Juan Bautista Wastewater Treatment Facility (Order No. R3-2009-0019 NPDES No. CA0047902), is permitted to discharge treated wastewater to an unnamed drainage ditch that is tributary to the San Juan Creek. At this time, the hydraulic connectivity of this ditch with other creeks and drainages of the San Juan Valley is uncertain; however, elevated nutrient concentrations on the treated wastewater discharged to the ditch appear to be generally exceeding water quality numeric targets identified in these TMDLs. Central Coast Water Board may use its Water Code section 13267 authorities to have the City of San Juan Bautista estimate their nutrient loading contribution, and nutrient-related water quality impacts to downstream receiving waters. On the basis of this, and other information collected during TMDL implementation, the Central Coast Water Board will

incorporate effluent and receiving water limitations for the surface water discharge at the San Juan Bautista Wastewater Treatment Facility.

#### DOMESTIC ANIMAL AND LIVESTOCK WASTE DISCHARGES:

The water quality data available from stream reaches that exclusively drain grazing lands, or lands where grazed animals and farm animals can be expected to be present, indicate the nitrogen compounds and orthophosphate proposed water quality targets, and thus load allocations, are being met in these reaches. Based on available data, this source category appears to be meeting their load allocation. As such, no new regulatory requirements are deemed necessary or are being proposed.

It is important to note that the Pajaro River basin is subject to a Domestic Animal Waste Discharge Prohibition (Resolution No. R3-2009-0008) and are subject to compliance with an approved indicator bacteria TMDL load allocation. Implementation efforts by responsible parties to comply with this prohibition and with indicator bacteria load allocations will, as a practical matter, also reduce the risk of nitrogen and phosphorus loading to surface waters from domestic animal waste.

While this source category is expected to be currently meeting load allocations, the existing data does not conclusively establish that all unpermitted confined animal facilities, grazing animal operations, or equestrian facilities are meeting load allocations. For this reason, the Central Coast Water Board is not proposing new regulatory measures for this source category at this time, but more information will be obtained during the implementation phase of the TMDLs to further assess the level of nutrient contribution from these source categories, and to identify any actions, if necessary, to reduce loading.

#### PUBLIC AND PRIVATE GOLF COURSES:

Use of fertilizer on golf courses could conceivably be a source of nutrients to surface waters in any given watershed. Available data from creeks adjacent to golf courses in the Pajaro River basin, as well as information on regional and national golf course water quality data, suggest that golf courses would be expected to be meeting load allocations protective of designated beneficial uses in streams of the Pajaro river basin. Formal regulatory actions or regulatory oversight of golf courses to implement these TMDLs, therefore, is unwarranted at this time. Because anti-degradation is an element of all water quality standards, owners and operators of public and private golf courses should continue to implement turf management practices, which help to protect and maintain existing water quality, and to prevent any further surface water quality degradation.

While this source category is expected to be currently meeting load allocations, the existing data does not conclusively establish that all public and private golf courses in the Pajaro River basin are meeting load allocations. For this reason, the Central Coast Water Board is not proposing new regulatory measures for this source category at this time, but more information will be obtained during the implementation phase of the TMDLs to further assess the level of nutrient contribution from these source categories, and to identify any actions, if necessary, to reduce loading.

#### **Tracking and Evaluation**

After the TMDLs are approved by OAL, the Central Coast Water Board periodically will perform a review of implementation actions, monitoring results, and evaluations submitted by responsible parties of their progress toward achieving their allocations, dependent upon staff availability and priorities. The Central Coast Water Board will use annual reports, nonpoint source pollution control implementation programs, evaluations submitted by responsible parties, and other available information to determine progress toward implementing required actions and achieving the allocations and the numeric goal.



Responsible parties may also demonstrate that although water quality objectives are not being achieved in receiving waters, controllable sources of nitrogen compounds and orthophosphate are not contributing to the exceedance. If this is the case, the Central Coast Water Board may re-evaluate the numeric goal and allocations. For example, the Central Coast Water Board may pursue and approve a site-specific objective. The site-specific objective would be based on evidence that natural conditions or background sources alone were the cause of exceedances of the Basin Plan water quality objectives.

Periodic reviews will continue until the water quality objectives are achieved. The implementation schedule for achieving this TMDL is 25 years after the date of approval by OAL.

### **Optional Special Studies and Reconsideration of the TMDLs**

Additional monitoring and voluntary optional special studies would be useful to evaluate the uncertainties and assumptions made in the development of these TMDLs. The results of special studies may be used to reevaluate waste load allocations and load allocations in these TMDLs. Implementing parties may submit work plans for optional special studies (if implementing parties choose to conduct special studies) for approval by the Executive Officer. Special studies completed and final reports shall be submitted for Executive Officer approval. Additionally, eutrophication is an active area of research. Consequently, ongoing scientific research on eutrophication and biostimulation may further inform the Water Board regarding waste load or load allocations that are protective against biostimulatory impairments, implementation timelines, and/or downstream impacts. At this time, staff maintains there is sufficient information to begin to implement these TMDLs and make progress towards attainment of water quality standards and the proposed allocations. However, in recognition of the uncertainties regarding nutrient pollution and biostimulatory impairments, staff proposes that the Water Board reconsider the waste load and load allocations, if merited by optional special studies and new research, ten years after the effective date of the TMDLs, which is upon approval by the OAL. A time schedule for optional studies and Central Coast Water Board reconsideration of the TMDL is presented in Table IX T-4.

Further, the Central Coast Water Board may also reconsider these TMDLs, the nutrient water quality criteria, or other TMDL elements on the basis of potential future promulgation of a statewide nutrient policy for inland surface waters in the State of California.

Table IX T-4. Time schedule for optional studies and Water Board reconsideration of waste load allocations and load allocations

<u>Proposed Actions</u>	<u>Description</u>	<u>Time Schedule-Milestones</u>
<u>Optional studies work plans</u>	<u>Implementing parties shall submit work plans for optional special studies (if implementing parties choose to conduct special studies) for approval by the Executive Officer</u>	<u>By four years after the effective date of the TMDL</u>
<u>Final optional studies</u>	<u>Optional studies completed and final report submitted for Executive Officer approval.</u>	<u>By six years after the effective date of the TMDL</u>
<u>Reconsideration of TMDL</u>	<u>If merited by optional special studies or information from ongoing research into eutrophication issues, the Water Board will reconsider the waste load allocations and load allocations and/or implementation timelines adopted pursuant to this TMDL.</u>	<u>By eight years after the effective date of the TMDL</u>