

**TMDLs For Nitrogen Compounds and Orthophosphate in Streams of the Pajaro River Basin
(Resolution No. R3-2015-0004)**

**SUMMARY OF CHANGES MADE TO THE TMDL DOCUMENTATION
SUBSEQUENT TO THE PUBLIC COMMENT PERIOD OF MARCH 11 – APRIL 24, 2015**

Preface

The purpose of this document is to summarize changes made to the draft TMDL documentation (Resolution No. R3-2015-004) subsequent to the public comment period of March 11 through April 24, 2015, and prior to the regularly scheduled Central Coast Regional Water Quality Control Board meeting of July 30-31, 2015. These changes were made to improve technical information presented in the TMDL documentation, or to improve clarity and provide flexibility in the TMDL implementation language pertaining to municipal wastewater and municipal stormwater discharges. Some of these changes were made to address the comments and concerns of stakeholders.

It is worth noting that existing data already in the TMDL report was used in presenting the improved technical information in the final TMDL documentation – no new data was created or used in making these changes. Some informational material was added to improve the TMDL report (e.g., a reference table of acronym definitions). Further, the aforementioned improved clarity and flexibility added to the TMDL implementation language were made on the basis of existing State Water Resources Control Board policy and guidance, and thus did not result in new regulatory consequences or invoke new substantive regulatory considerations in the context of these proposed TMDLs.

A. Changes to Proposed Basin Plan Amendment Language in Resolution R3-2015-0004 (Attachment 1 to the Staff Report)

Note: all changes made to the proposed basin plan amendment are shown as **red** insertions and **strike-outs** as follows.

A.1. Storm Drain Discharges To Ms4s Implementation Language (page 19 of Basin Plan amendment)

To be consistent with the statewide municipal stormwater general permit (Order No. 2013-0001-DWQ, NPDES No. CAS000004), the following changes were made to the MS4 stormwater implementation language in the proposed basin plan amendment.

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. 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 be submitted within one year of approval of the TMDLs by OAL, or within one year of a stormwater permit renewal, whichever occurs first.~~ 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.2. Determination of Progress And Attainment of Load Allocations Language (page 19 of Basin Plan amendment)

Central Coast Water Board staff corrected the following oversight, in the “Determination of Progress and Attainment of Load Allocations” section of the draft Basin Plan amendment.

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:

B. Changes to TMDL Report (Attachment 2 to the Staff Report)

Note: minor typographical, editorial, or formatting changes to the TMDL report are not summarized herein. Other types of changes made to the TMDL report are outlined below.

B.1. TMDL Report – inserted reference table of acronyms

A reference table for recurring acronyms and recurring terms found in the report was inserted preceding the Table of Contents.

B.2. TMDL Report Figure 5-72 in report Section 5.12

Four new pictures were added to this figure photo documenting algae growth in streams of the Pajaro River basin and were added for informational value. The photos are from published and publically available documents, or were provided to Central Coast Water Board staff by City of Watsonville staff.

B.3. TMDL Report Table 5-21 in report Section 5.15

In Table 5-21 corrected a mistake in the assessment of Carnadero Creek at site 305CAN, by changing the assessment from “no biostimulation”, to the category of “no biostimulation but with downstream nutrient impacts”.

B.4. TMDL Report Section 5.16

This section of the TMDL report was updated with maps illustrating the geographic extent of the identified nutrient-related stream impairments in the Pajaro River basin. These maps were added to improve the TMDL report by adding geographic and visual context of the locations of the water quality impairments..

B.5. TMDL Report Table 5-23 in report Section 5.16.7

Under the column heading “Impairment by Biostimulatory Substances”, changed some text in table cells of the sub-column entitled “Impaired Reach” to be clearer and more descriptive, by adding geographic locations and landmarks.

Staff corrected a mistake by changing the biostimulation assessment table cell for Harkin’s Slough from a “no” to a “yes” in this table. The assessment was originally incorrectly written as “no” in this table; however this slough was correctly identified as exhibiting biostimulation impairments in Table 5-21 of the draft TMDL report.

Staff corrected an oversight by adding a row describing a biostimulation impairment (for downstream impacts) for Salsipuedes Creek. This impairment was correctly identified in biostimulation assessment matrix in Table 5-21 of the draft TMDL report.

B.6. TMDL Report Section 6.3, Figures 6-1 and 6-2.

These figures were added so that the reader could compare nutrient numeric targets being proposed by Central Coast Water Board staff, to nutrient water quality criteria approved in other states and in other watersheds of California. The figures are intended solely for informational value. Published and publically available information about state nutrient criteria were used in the creation of the figures.

B.7. TMDL Report Section 7.2

Based on guidance from the USEPA and the State Water Resources Control Board, staff added some clarifying language, noting that all identified NPDES discharges in a TMDL watershed must be given a waste load allocation, even if their current load to receiving waters is zero (see TMDL report Section 9.2.4 for further information and explanation).

B.8. TMDL Report Section 9.4

Some additional narrative was added to this section of the TMDL report to improve clarity regarding the development of Waste Load Allocation Attainment Programs (WAAPs). In summary, municipal stormwater (MS4) entities that discharge to surface waterbodies that are currently *not* impaired by nutrients and biostimulation are presumed to be meeting their waste load allocations at this time, and thus would not be required to develop a WAAP for nutrients. However, because anti-degradation is an element of all water quality standards these entities should continue to implement their stormwater programs, and comply with the General Permit or any subsequent permits with the goal of maintaining existing nutrient water quality and helping to prevent any further water quality degradation.

B.9. TMDL Report Section 9.6

The changes described below were in response to comments received by Central Coast Water Board staff from Mr. Saeid Vaziry, Environmental Program Manager, Sough County Wastewater Authority. Some additional narrative was added to this section of the TMDL report to improve clarity, and to provide some flexibility to wastewater treatment facilities, regarding the nexus between waste load allocations identified in a TMDL, and effluent limits in an NPDES permit. It should be noted that legal guidance from the State Water Resources Control Board's Office of Chief Counsel contemplates flexibility in the context of translating waste load allocations identified in a TMDL, to effluent limits in an NPDES permit – see the text box below:

*While the EPA might have required WQBELs [water quality based effluent limitations] to be identical to a discharger's wasteload allocation, it did **not** do so. The EPA instead opted to **provide the states the latitude** to determine how to achieve the end results dictated by the TMDL. Accordingly, the regulations require that the WQBELs be "**consistent with the assumptions and requirements of**" rather than "**identical to**" or "**not less stringent than**" wasteload allocations.*

*From: State Water Resources Control Board, Office of Chief Counsel, January 26, 2001, Memo entitled: **Guidance Regarding the Extent to Which Effluent Limitations Set Forth in NPDES Permits Can Be Relaxed in Conjunction with a TMDL***

emphasis, and parenthetical clarification in brackets added by Central Coast Water Board staff

The above legal guidance is noteworthy in that effluent limits in an NPDES permit need to be "consistent with the assumptions" of a waste load allocation, but are not necessarily required to be "identical to" the waste load allocation. Thus, in the context of NPDES effluent limits, the states have some latitude in determining how to achieve the end results of the TMDL and its associated waste

load allocations. Based on discussions between the Central Coast Water Board's NPDES unit and TMDL staff, orthophosphate waste load allocations can potentially be implemented by actions, and numeric limitations in an NPDES permit, without necessarily requiring numeric effluent limits for orthophosphate, where warranted and appropriate.¹

B.10. TMDL Report Section 9.12

Staff added an additional citation to supporting literature highlighting that nutrient concentration data in agricultural watershed creeks may not always accurately reflect the progress individual farmers are making towards achieving water quality goals².

B.11. TMDL Report Section 9.17.1

This subsection was added to the "*Sources of Funding*" section of the TMDL report to incorporate some new, [publicly available information](#) from the U.S. Department of Agriculture regarding funding available to landowners through the Regional Conservation Partnership Program, newly created in the 2014 federal Farm Bill.

¹ For example, the existing South County Regional Wastewater Authority NPDES permit contains numeric effluent and/or receiving water limits for nitrogen compounds, dissolved oxygen, and biostimulatory substances. Collectively these effluent and receiving water limits are expected, at this time, to minimize biostimulation, protect beneficial uses, and meet the intent of the TMDLs, without necessarily requiring a numeric orthophosphate effluent limit. As noted previously in this TMDL report, existing research indicates that biostimulation in California central coast streams is largely being driven by excess nitrogen. However, USEPA recommends dual nutrient criteria for both nitrogen and phosphorus in nutrient TMDLs, as a way to provide additional assurance against the risk of biostimulation. Therefore, while phosphorus reduction is a secondary goal of the proposed TMDLs, Central Coast Water Board staff recommends at this time that implementation, regulatory efforts, and permit requirements treat nitrogen as the priority pollutant in the context of the proposed TMDLs.

² See: Cahn and Hartz (2010). Load vs. concentration: implications for reaching water quality goals. Monterey County Crop Notes – September/October 2010.