CALIFORNIA Water Boards

# Fact Sheet

# Total Maximum Daily Loads for Nitrogen Compounds and Orthophosphate in Streams of the Pajaro River Basin

**Approved and In Effect as of July 12, 2016**

## What is a Total Maximum Daily Load (TMDL)?

Simply put, TMDLs are plans to improve water quality and are required by the federal Clean Water Act. Section 303(d) of the Clean Water Act requires states to evaluate the water quality of their streams, lakes, and estuaries and to maintain a list of waterbodies that are considered "impaired" because the water does not meet water quality standards. For each waterbody on the central coast's "303(d) List of Impaired Waterbodies" the Central Coast Regional Water Quality Control Board (Central Coast Water Board) must develop and implement a plan to reduce pollutants so that the waterbody is no longer impaired and can be "de-listed."

"Total Maximum Daily Load" (TMDL) is a term used to describe the maximum amount of a pollutant that a waterbody can receive and still meet water quality standards. More broadly, a TMDL report can be described as an action plan to improve water quality. The TMDL report identifies the probable sources of pollution, establishes the maximum amount of pollution a waterbody can receive and still meet water quality standards, and identifies the regulatory and/or non-regulatory actions that must be taken to improve water quality.

## TMDLs Approved and In Effect – July 12, 2016

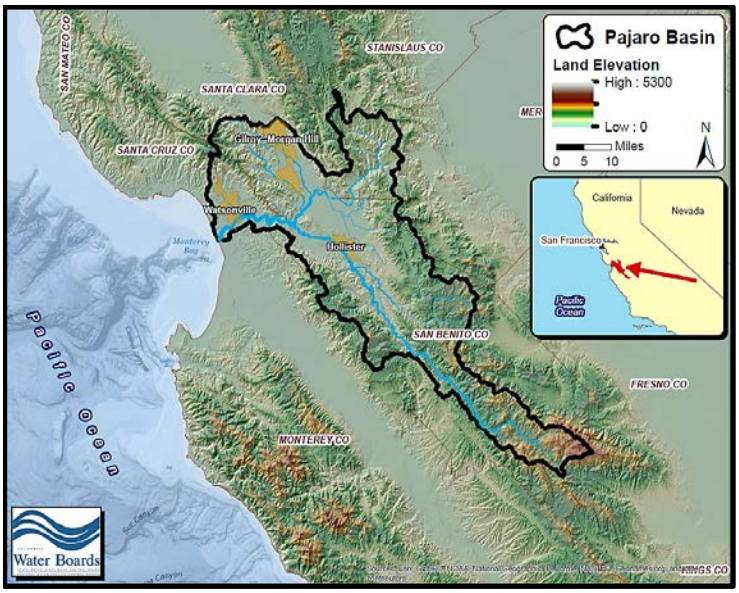
The *Total Maximum Daily Loads for Nitrogen Compounds and Orthophosphate in Streams of the Pajaro River Basin* were adopted by the Central Coast Water Board at the regularly scheduled meeting of June 30, 2015. The TMDLs became effective upon approval by the California Office of Administrative Law on July 12, 2016.

## Description of the Water Quality Problem

Water quality problems in streams of the Pajaro River basin occur, in part, due to nutrient pollution. Nutrient pollution refers to excessive amounts of nitrate and phosphorus in our water resources. Nutrient pollution in surface waters of the Pajaro River basin has long been recognized as a problem. High levels of nutrients can degrade municipal and domestic water supply, and may degrade irrigation water quality for sensitive crops. Nutrient pollution can also result in a cascade of adverse environmental impacts in streams such as excessive nuisance algae, disruption of the natural dissolved oxygen balance, and disruption of the aquatic food web.

## What are the Sources of Nutrients?

Discharges of nitrogen and phosphorus compounds originating from fertilizer application on irrigated cropland, urban areas, stormwater runoff, wastewater treatment facilities, livestock waste, fertilizers applied on golf courses, natural sources, and atmospheric deposition are contributing nutrient loads to streams of the Pajaro River basin. These source categories are assigned allocations for nitrate, un-ionized ammonia, and orthophosphate to restore, and maintain water quality. We estimate that irrigated agriculture contributes the majority of controllable nutrient loads to streams in the Pajaro River basin.




*Map of Pajaro River Basin*

## What Does the TMDL Expect of Growers?

In general, TMDLs can result in additional or new regulatory measures; however this TMDL to date has not resulted in additional regulatory compliance requirements above and beyond what growers of the Pajaro River basin are currently obligated to comply with. Current regulation (Agricultural Order R3-2012-0011) of irrigated agriculture operations and ongoing implementation practices required by existing regulation are anticipated to minimize the risk of controllable nutrient loading and mitigate anthropogenic nutrient loading to streams to the extent feasible. In short, compliance with Order R3-2012-0011 (the "Agricultural Order") is deemed, at this time, to be a sufficient demonstration that owners/operators of irrigated lands are implementing these TMDLs.

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Application of fertilizers or irrigation water which contains elevated levels of nutrients could potentially contribute increased levels of nutrients locally to soils, surficial sediments, and stream waters within the Pajaro River basin. The Agricultural Order requires growers to develop and implement a farm water quality management plan. Growers should update their farm water quality management plan to control or minimize nutrient discharges. It should be noted that the we recognize that there are quite a few growers who are actively improving nutrient control measures, or are investigating the use of constructed wetlands and vegetative treatment systems, and these persons should be commended for taking the initiative to help improve and protect water quality.

## What Does the TMDL Expect of City & County MS4 Stormwater Entities?

Nutrient discharges from municipal separate storm sewer systems (MS4s) are relatively minor at the scale of the Pajaro River basin, but can potentially have significant localized effects. Waste load allocations will be incorporated into National Pollutant Discharge Elimination System (NPDES) MS4 stormwater permits. Nutrient pollution discharged from MS4s will be addressed by regulating the MS4 entities under the provisions the State Water Resources Control Board General Permit for the Discharges of Storm Water from Small MS4s (General Permit).

MS4 entities that discharge to surface waterbodies that are currently not impaired by nutrients pollution are presumed to be meeting their waste load allocations at this time. 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.

## What Does the TMDL Expect of Permitted Municipal Wastewater Dischargers?

Based on available data, discharges of treated wastewater from municipal wastewater treatment facilities are expected to 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 nutrient load to surface waters of the river basin is zero, therefore all municipal wastewater discharges in the river basin are assigned nutrient waste load allocations.

NPDES permits are the regulatory mechanism for implementing waste load allocations. Information on waste load allocation implementation for municipal wastewater entities are provided in section 9.6 of the TMDL Report, and in the staff responses to public comments.

## What Does the TMDL Expect of Owners/Managers of Livestock?

The water quality data available to us from stream reaches that exclusively drain grazing lands, or lands where livestock and farm animals (including cattle, horses, goats, sheep, lamas, etc.) can be expected to occur, indicate the identified nutrient water quality targets, and thus load allocations, are being met in these reaches. As such, new regulatory requirements are not deemed necessary at this time.

To maintain existing water quality and prevent any further water quality degradation, owners and operators of livestock and domestic animals should continue, or begin, to self-monitor and self-assess consistent with technical guidance from rangeland water quality management plans or manure management strategies.

## What Does the TMDL Expect of Industrial and Construction Stormwater Permitted Entities?

Based on available evidence and information, 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.

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 or the Construction General Permit, or any subsequent NPDES permits.

## What Does the TMDL Expect of Owners/Operators of 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 golf course creeks 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 meet proposed load allocations which are protective of designated beneficial uses in streams of the Pajaro river basin. Thus formal regulatory actions or regulatory oversight of golf courses to implement these TMDLs 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.

## Financial & Technical Assistance

An approved TMDL can expand opportunities for available grant funding to implementing parties, such as growers, to improve nonpoint source pollution control. State and federal water quality grants programs are often directed to watersheds that have approved TMDLs.

Central Coast Water Board grant staff is available to answer questions about the grant application and approval process. Please contact Katie McNeill, Central Coast Water Board environmental scientist at (805) 549-3336, or Katie.McNeill@waterboards.ca.gov with grant related questions.

Resource professionals at local Resource Conservation Districts or at the local U.S. Department of Agriculture Natural Resources Conservation Service center are also available to partner with growers and other implementing parties in providing technical assistance or with obtaining grant funding.

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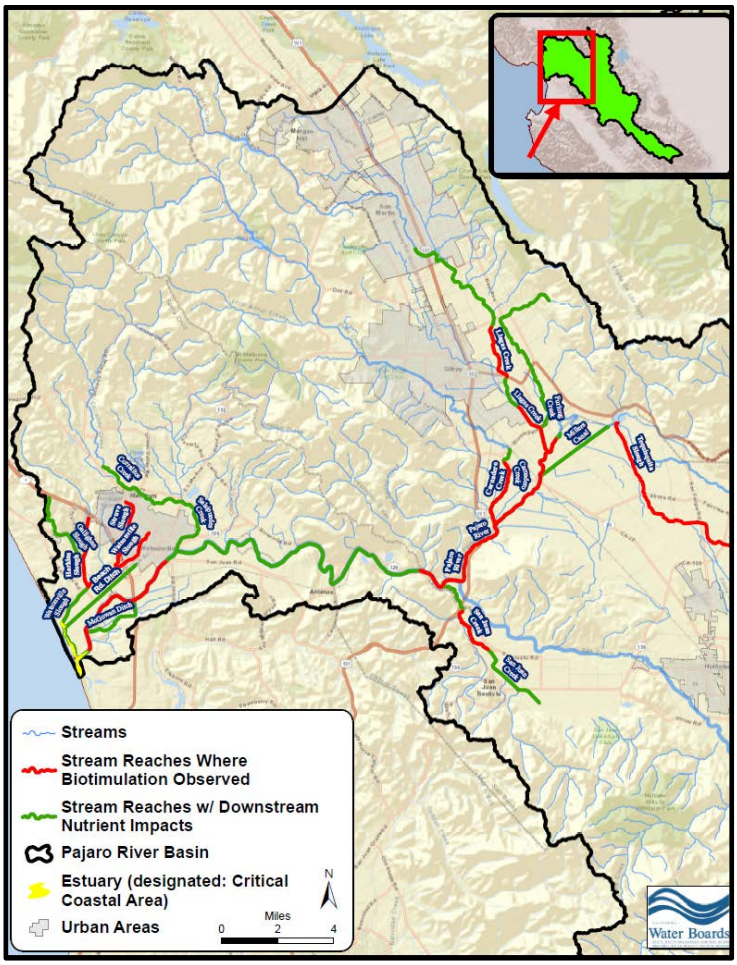
## For More Information

For additional information regarding these TMDLs, please refer to the Water Board's Pajaro River basin Nutrient TMDL webpage by clicking the hyperlink shown below:

Pajaro River basin nutrient TMDLs

**Staff contact**: Peter Osmolovsky
Central Coast Water Board
Watershed Assessment Unit
(805) 549-3699
Pete.Osmolovsky@waterboards.ca.gov

*Algae mats, lower Pajaro River, July 2015 (Photo credit: Robert Ketley)*




*Stream reaches impaired by nutrient pollution (July 2015)*