DEVELOPMENT OF TOTAL MAXIMUM DAILY LOADS FOR PESTICIDES:
PAJARO RIVER WATERSHED

What is a Total Maximum Daily Load (TMDL)?

TMDLs are strategies to restore clean water. The federal Clean Water Act requires every state to evaluate its waterbodies and maintain a list of waters that are considered “impaired” either because the water exceeds water quality standards or does not achieve its designated use. For each water on the Central Coast’s “303(d) Impaired Waters List,” the California 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 project is an informational tool to assist the State in creating its plan to implement its water quality standards. The TMDL project identifies the probable sources of pollution, establishes the maximum amount of pollution a waterbody can receive and still meet water quality standards, and allocates that amount to all probable contributing sources.

Location and Watershed Description

The Pajaro River Watershed encompasses approximately 1,300 square miles of Santa Clara, San Benito, Santa Cruz, and Monterey counties. Agriculture, including cropland and grazing lands, is the current dominant land use in the valley floor and lower reaches of the watershed, with increasing transition to urban use. Upland reaches of the watershed are characterized by blue oak and coast oak woodland, grasslands, and locally montane hardwood.

Why Do We Need a Pesticide TMDL for the Pajaro River Watershed?

California’s water quality standards designate beneficial uses for each waterbody (e.g., drinking water supply, aquatic life support, recreation, etc.) and the scientific criteria to support that use. The California Central Coast Water Board is required under both state and federal law to protect and regulate beneficial uses of waters of the state.

Water Board staff is in the initial phases of developing an organophosphate pesticide TMDL (which will include chlorpyrifos, diazinon and malathion) for the Pajaro River Watershed intended to address aquatic habitat impairments.
According to the Central Coast Water Board’s Basin Plan, “No individual pesticide or combination of pesticides shall reach concentrations that adversely affect beneficial uses (III-4).” Additionally, “all waters shall be maintained free of toxic substances in concentrations which are toxic to, or which produce detrimental physiological responses in human, plant, animal, or aquatic life (ibid).”

A TMDL project developed by the Water Board for pesticides will identify pesticide impaired waterbodies in the watershed, identify numeric water quality targets to restore impaired designated beneficial uses, identify probable sources of pesticide loading, and propose an implementation plan outlining effective alternatives to restore water quality. To the extent possible, the TMDL project will leverage existing regulatory programs and permits to minimize cost and maximize effectiveness.

**What are the Sources of Pesticide Pollution?**

Staff has not yet assessed or identified confirmed sources of pesticide loading in the Pajaro River watershed. Source analysis will be a key component of TMDL development. Sources of chlorpyrifos, diazinon and malathion are from crop application.

**The TMDL Process**

A TMDL is developed by Central Coast Water Board staff and must go through a hierarchy of approvals before it can go into effect. Public participation is an element of TMDL development. Water Board staff notify interested parties of opportunities for public participation through public meetings/workshops, we solicit public comments, and we encourage other forms of public participation through correspondence, email, and other informal contacts.

A TMDL must be approved by the Central Coast Water Board and the U.S. Environmental Protection Agency. Should pesticide TMDL development be merited for the Pajaro Watershed, we anticipate developing this TMDL over the next 12 months and having a draft TMDL report ready for public review by May 2013.

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**For More Information**

The Central Coast Water Board encourages interest and involvement in TMDL projects from stakeholders, interested parties, and the general public. Please refer to the Water Board’s TMDL webpage at:

[http://www.waterboards.ca.gov/centralcoast/water_issues/programs/tmdl](http://www.waterboards.ca.gov/centralcoast/water_issues/programs/tmdl)

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