



California Regional Water Quality Control Board Central Coast Region



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FACT SHEET

DEVELOPMENT OF A TOTAL MAXIMUM DAILY LOAD FOR CHLORPYRIFOS: SAN ANTONIO CREEK WATERSHED

What is a Total Maximum Daily Load?

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.

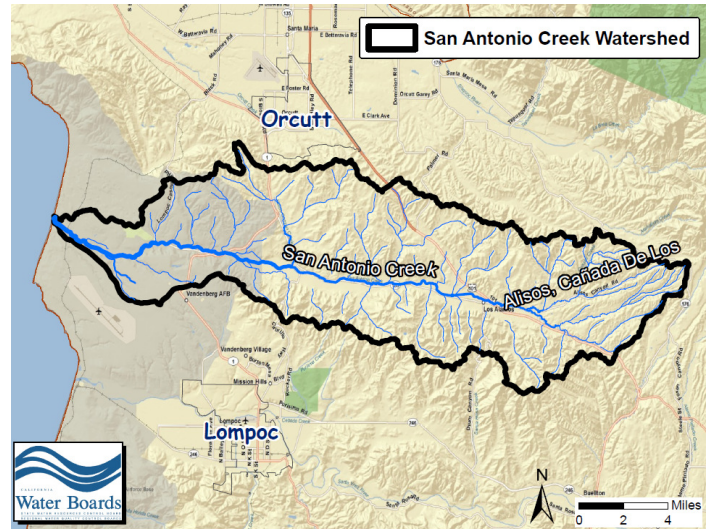
"Total Maximum Daily Load" (TMDL) is a term used to describe the maximum amount of a pollutant that a waterbody can receive and still meet water quality standards. A TMDL study identifies the probable sources of pollution, establishes the maximum amount of pollution a waterbody can receive and still meet water quality standards, and allocates that amount to all probable contributing sources.

Location and Watershed Description

The proposed geographic scope of this TMDL encompasses approximately 153 square miles of the San Antonio Creek watershed in Santa Barbara County.

The watershed is a westerly trending drainage that extends from southeast of the town of Los Alamos and discharges to the San Antonio lagoon at the Pacific Ocean. Estimated mean annual discharge from the San Antonio Creek watershed is approximately 5,497 acre-feet/year (source: National Hydrography Dataset/NHDplus).

Agriculture, including cropland and grazing lands is the current dominant land use in the watershed. According to Farmland Mapping and Monitoring Program (FMMP 2008), vineyard, orchard, and vegetable crops are cultivated in the watershed. The few urban areas within the watershed include Los Alamos and housing within the Vandenberg Air Force Base.



San Antonio Creek watershed

Why Do We Need a Chlorpyrifos TMDL for San Antonio Creek?

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.

Staff has identified chlorpyrifos pollution in surface waters of San Antonio Creek. Water Board staff are in the initial phases of assessing the need for TMDL development for San Antonio Creek. Elevated levels of chlorpyrifos can be toxic to aquatic life in surface waters. Designated beneficial uses of surface waters for San Antonio Creek that pertain to toxicity include cold fresh water habitat (COLD), warm fresh water habitat (WARM), wildlife habitat (WILD), rare threatened or endangered species (RARE), migration of aquatic organisms (MIGR), and spawning reproduction and/or early development uses (SPWN).

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 chlorpyrifos will identify chlorpyrifos impaired waterbodies in the watershed, identify numeric water quality targets to restore impaired designated beneficial uses, identify probable sources of chlorpyrifos 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.

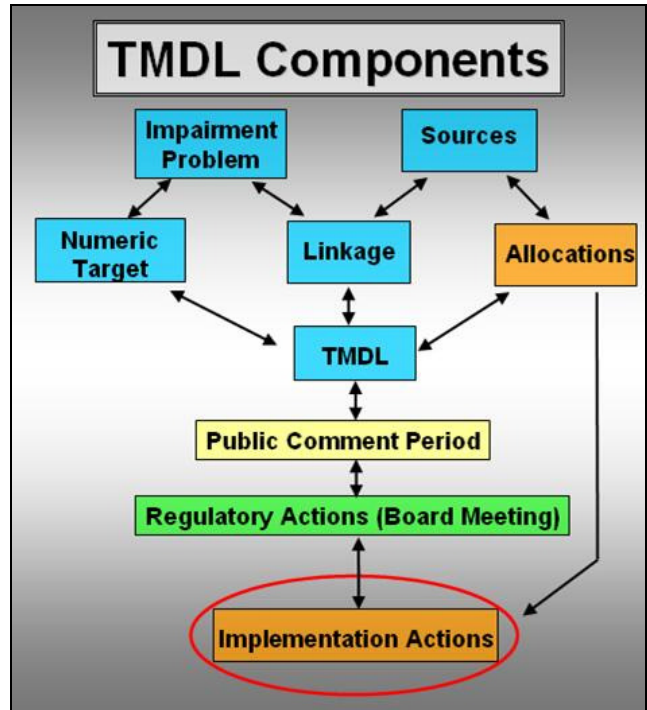
What are the Sources of Chlorpyrifos Pollution?

Staff has not yet assessed or identified confirmed sources of chlorpyrifos loading in the San Antonio Creek watershed. Source analysis will be a key component of TMDL development. However, a likely source of chlorpyrifos in this watershed is 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 TMDL development be merited for San Antonio Creek, we anticipate developing this TMDL over the next 6 months, and potentially bringing it to the Central Coast Water Board for consideration in May 2012.



TMDL Components

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

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