

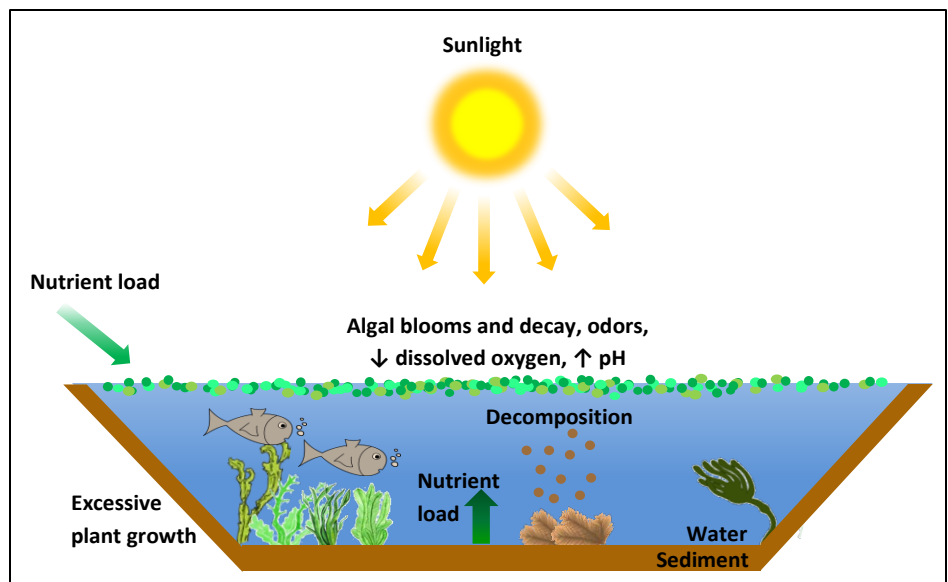
Santa Clara River Lakes Nutrients TMDL

Who We Are

The Los Angeles Regional Water Quality Control Board (Water Board) is a state agency (part of the California Environmental Protection Agency) responsible for implementing the California Water Pollution Control Act and the federal Clean Water Act. Our mission is to preserve and enhance water quality in the Los Angeles Region for the benefit of present and future generations.

The Santa Clara River Lakes

Having a lake in one's community is an asset that provides beauty, recreational opportunities, and wildlife habitat. Lake Hughes, Lake Elizabeth, and Munz Lake have been impacted for many years by water quality problems stemming from excess nutrients (nitrogen and phosphorus) in the lakes. When excess nutrients are available and combined with sunlight, this stimulates excessive algae and plant growth. The algae



and aquatic plants consume carbon dioxide and increase the pH of the lake, which is harmful to fish and other aquatic organisms. As the algae decays and dies, the decomposition process consumes the oxygen from the water, which may lead to fish kills, foul odors, and unsightly conditions. The nutrients from the decaying organic matter are recycled back into the water and the sediments. Over time, this process degrades the ecosystem, and can result in a virtually "dead" lake. Because these are shallow lakes, the impacts of nutrient loading and the biological response is especially apparent.

Development of a TMDL

We are currently developing a plan to restore Lake Hughes, Lake Elizabeth and Munz Lake. This plan is called a Total Maximum Daily Load, or TMDL. A TMDL identifies the allowable amount of pollution (i.e. pollutant load) that a waterbody can safely handle (assimilate) and allocates that load to the various sources of pollution. A TMDL also includes an implementation plan that specifies the actions that those responsible for the various sources of pollution will need to implement in order to restore the lakes. A TMDL also includes a schedule to implement the required load reductions that considers the potential costs and complexity of required actions.

What the TMDL Would Require

- Most of the nutrient loading to Lake Hughes and Lake Elizabeth is from **internal loading**, which means that the lake sediments have accumulated nutrients over many years and are an ongoing source of nutrients to the water in the lakes. The TMDL will require the cooperative parties (U.S. Forest Service, lake owners) to reduce the internal loading from the sediments in Lake Hughes and Lake Elizabeth. The Water Board cannot specify which implementation measures must be used to reduce the loading, but it is likely that the cooperative parties will employ lake management strategies such as dredging the sediments and the installation of vegetated swales, shoreline buffer areas, and/or infiltration areas to restore the lake. State and federal funding is available to help pay for these types of projects.
- In addition, the TMDL will require a reduction in **external** nutrient loading from sources to Lake Elizabeth, Lake Hughes, and Munz Lake, such as septic systems and the Lake Hughes Community Wastewater Treatment Facility. The TMDL will require the County of Los Angeles to conduct a study to identify specific septic systems that are contributing to nutrient loading to the lakes, and determine if those systems need to be upgraded or replaced. The County of Los Angeles will also conduct a study to refine the TMDL's estimate of the nutrient loading from the Lake Hughes Community Wastewater Treatment Facility, and determine if the treatment facility needs to be upgraded.

TMDLs must go through a lengthy approval process before they become effective. Following the anticipated release of the Draft Santa Clara River Lakes Nutrients TMDL in June 2016, written comments will be due to the Water Board in August 2016. The Water Board will then hold a public meeting to consider the matter on September 8, 2016.

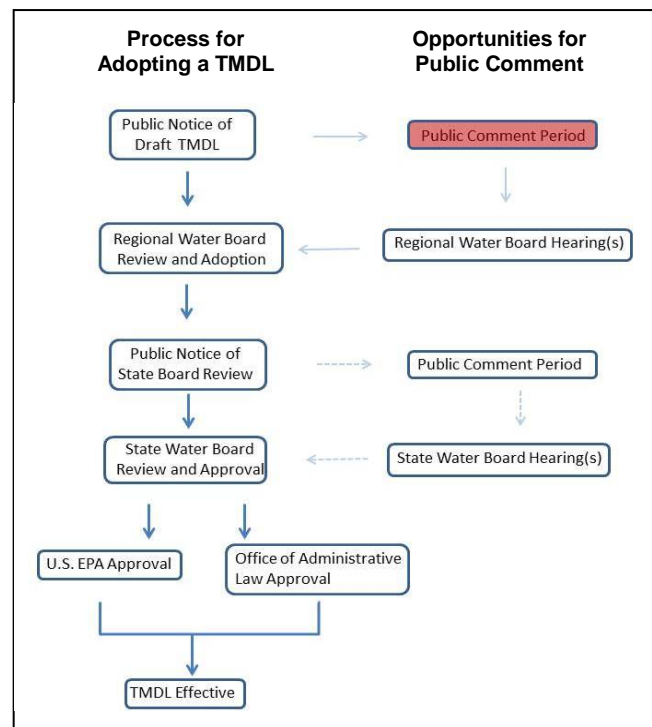
The Water Board will be presenting information regarding the Santa Clara River Lakes Nutrients TMDL at the Lakes Town Council meeting on June 4, 2016.

For technical information regarding the TMDL and submitting comments, please visit our website:

http://www.waterboards.ca.gov/losangeles/water_issues/programs/tmdl/tmdl_list.shtml

To receive updates regarding TMDLs for the Santa Clara River Watershed, please sign up for the email list subscription at the following website:

http://www.waterboards.ca.gov/resources/email_subscriptions/req4_subscribe.shtml



The Regional Board welcomes your participation in this important project for your community. For further questions or concerns, please contact:

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