

# Water Quality Report Card

## Nitrogen and Phosphorous in Canyon Lake

**Regional Water Board:** Santa Ana, Region 8

**Beneficial Uses Affected:** MUN, AGR, GWR, REC-1, REC-2, WARM, WILD

**Implemented Through:**

Caltrans Statewide Stormwater Permit, CWC §13267, Riverside County MS4 Permit, Elsinore Valley Municipal Water District Regional Water Reclamation Facility NPDES Permit, Conditional Waiver of Waste Discharge Requirements for Agricultural Discharges, CAFO Permit

**Effective Date:** September 30, 2005

**Attainment Date:** December 31, 2020

**STATUS** Conditions Improving

**Pollutant Type:** ✓ Point Source ✓ Nonpoint Source Legacy

**Pollutant Source:** Construction/Land development, Confined Animal Facilities, Irrigated Crop Production, Naturally Occurring, Onsite Wastewater treatment Systems, Non-point Source Runoff, Urban Stormwater Runoff, Wastewater Discharges

### Water Quality Improvement Strategy

#### TMDL Summary

Canyon Lake, located approximately 5 miles upstream of Lake Elsinore, is a manmade lake created in 1928 by the construction of Railroad Canyon Dam. Approximately 94% of the 782 mi<sup>2</sup> San Jacinto River watershed drains into Canyon Lake. Most years, runoff from the watershed terminates at Canyon Lake, resulting in the buildup of nutrients that leads to excessive algae growth, low dissolved oxygen levels and periodic fish kills. To address nutrient impairments the Santa Ana Regional Water Quality Control Board developed the [Canyon Lake Nutrient TMDLs](#) for total nitrogen and total phosphorus, which was approved by the U.S. EPA in September 2005. The Canyon Lake Nutrient TMDL is currently under revision and a draft version was submitted for peer review. Responses to the peer review comments are in development and staff are moving forward with the 2020 Revision to the Nutrient TMDLs for Canyon Lake.

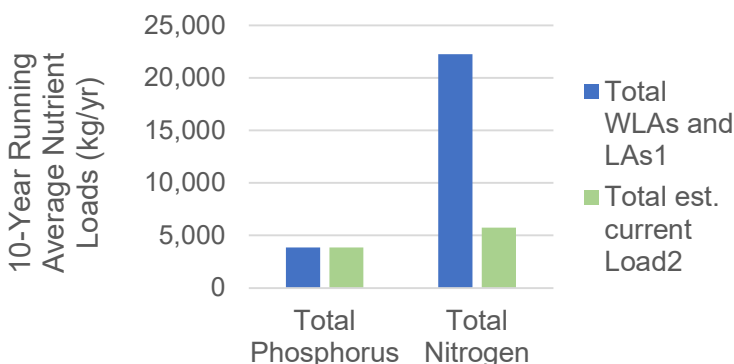
The TMDLs established an implementation plan to address point source and nonpoint source discharge nutrient loads by incorporating waste load allocations/load allocations into existing permits. The TMDL calls for total nitrogen (TN), total phosphorus (TP) allocations, (specified as a 10-year averages), dissolved oxygen (DO), and chlorophyll-a numeric targets to be achieved by December 31, 2020.



#### Water Quality Outcomes

- Water Quality data shows Total Phosphorous and Total Nitrogen loads based on a 10-year rolling average are meeting Total Maximum Daily Loads
- In-lake Total Nitrogen concentrations remain above Canyon Lake Nutrient TMDL Numeric Targets
- The alum mitigation project has reduced available phosphorous
- Draft revised water quality targets are being considered as part of the 2004 TMDL update which are site-specific and reflective of natural conditions in the lake
- Responsible parties are implementing Comprehensive Nutrient Reduction Plans or Agricultural Nutrient Management Plans

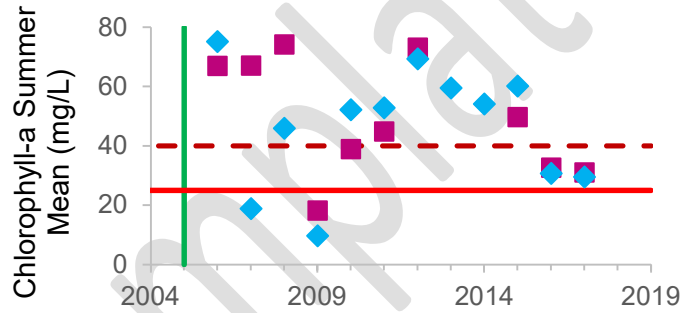
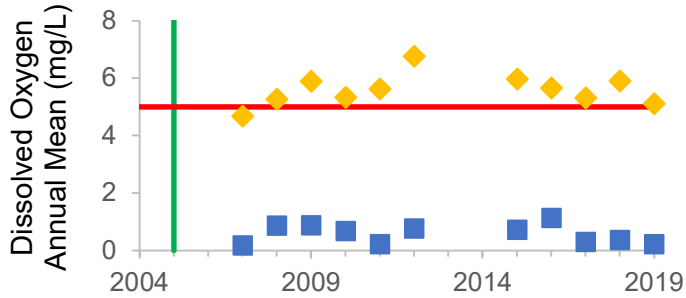
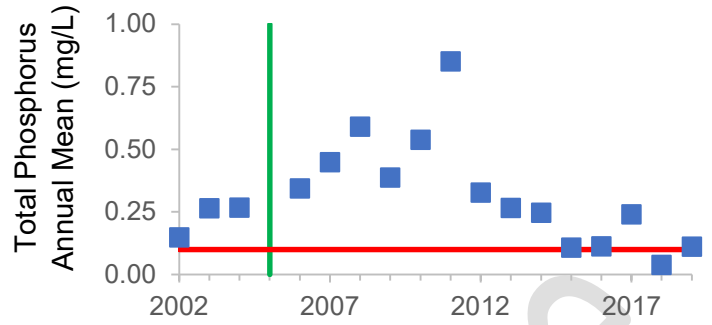
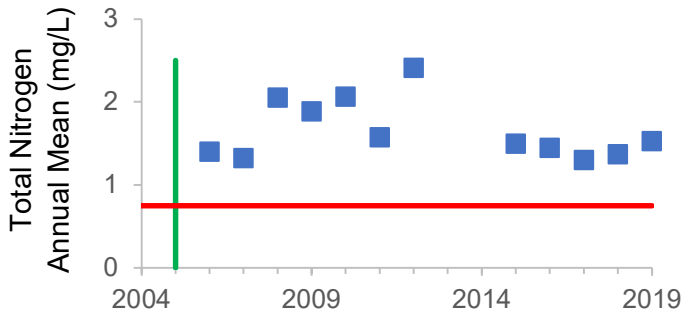
#### TMDL Waste Load Allocations/Load Allocations



<sup>1</sup>Excludes atmospheric deposition or internal sediment

<sup>2</sup>Does not take into consideration alum offsets for Phosphorous

### Water Quality



- Annual Mean (Depth Integrated)
- ◆ Annual Mean (1m Above Lake Bed)
- Summer Average (Surface)
- ◆ Summer Mean (Depth Integrated)
- Interim TMDL Numeric Targets
- Final TMDL Numeric Targets
- TMDL Adoption Date

FY 19-20