

Total Maximum Daily Load Progress Report

Regional Water Board	Santa Ana, Region 8
Beneficial uses affected:	MUN, REC-1, REC-2, WARM, WILD
Pollutant(s) addressed:	Total Nitrogen, Total Phosphorus
Implemented through:	Caltrans Statewide Stormwater Permit, CWC §13267, MS4 Permits, NPDES Permits
Approval date:	September 1, 2005

Canyon Lake Nutrient TMDL

STATUS

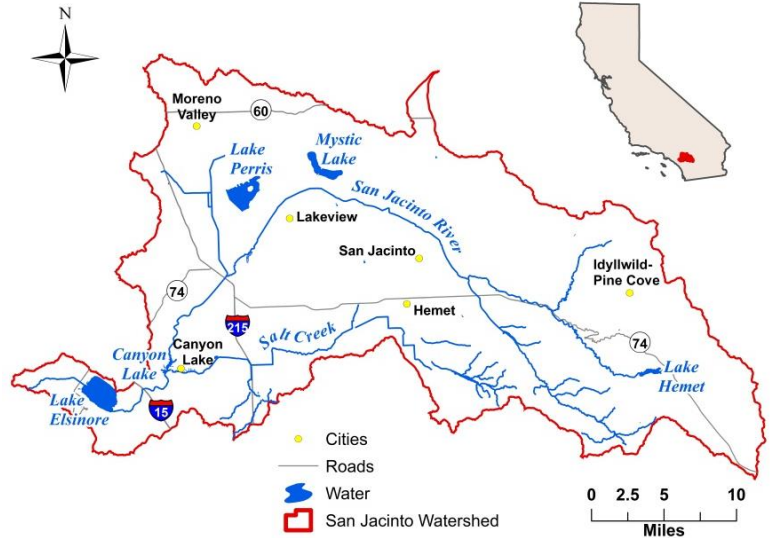
- Conditions Improving
- Data Inconclusive
- Improvement Needed**
- TMDL Achieved/Waterbody Delisted

TMDL Summary

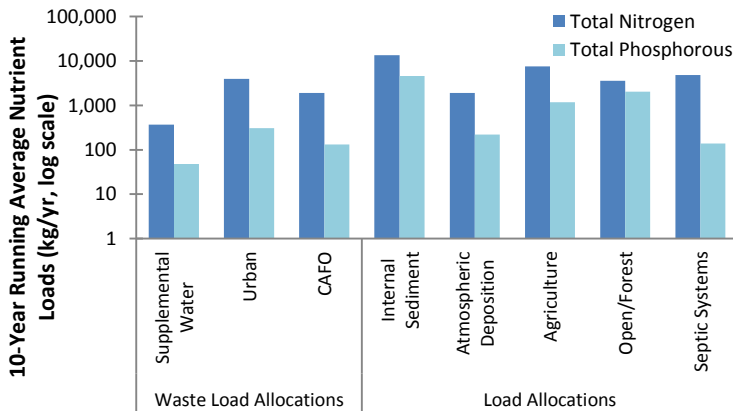
Canyon Lake, located approximately 5 miles upstream of Lake Elsinore, is a manmade lake created in 1928 by the construction of Railroad Canyon Dam. Approximately 94% of the 782 mi² San Jacinto River watershed drains into Canyon Lake. Most years, runoff from the watershed terminates at Canyon Lake, resulting 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 TMDL 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.

San Jacinto Watershed



TMDL Waste Load Allocations/Load Allocations



Total final allocations are 37,735 kg total nitrogen/year and 8,691 kg total phosphorus/year.

Water Quality Outcomes

- Canyon Lake conditions have not improved over a 10-year period.
- Water quality data show no change in TN and TP levels; both nutrients exceed their respective TMDL targets.
- Water quality data show no change in DO levels; achievement of TMDL targets is depth dependent.
- Water quality data show Chlorophyll-a levels continue to exceed TMDL targets; depth integrated levels have been on the rise since 2008.
- The Santa Ana Regional Water Board adopted the [Septic System Prohibition in Quail Valley](#), the [MS4 Comprehensive Nutrient Reduction Plan](#), the [Dairy CAFO permit](#) and the [Agricultural Nutrient Management Plan](#).

Canyon Lake Water Quality

