

Total Maximum Daily Load Progress Report

Regional Water Board	San Diego, Region 9
Beneficial uses affected:	COLD, REC-1, REC-2, WARM, WILD
Pollutant(s) addressed:	Total Nitrogen, Total Phosphorus
Implemented through:	BMP, Monitoring and Assessment
Approval date:	March 22, 2006

Rainbow Creek Total Nitrogen and Total Phosphorus TMDLs

STATUS

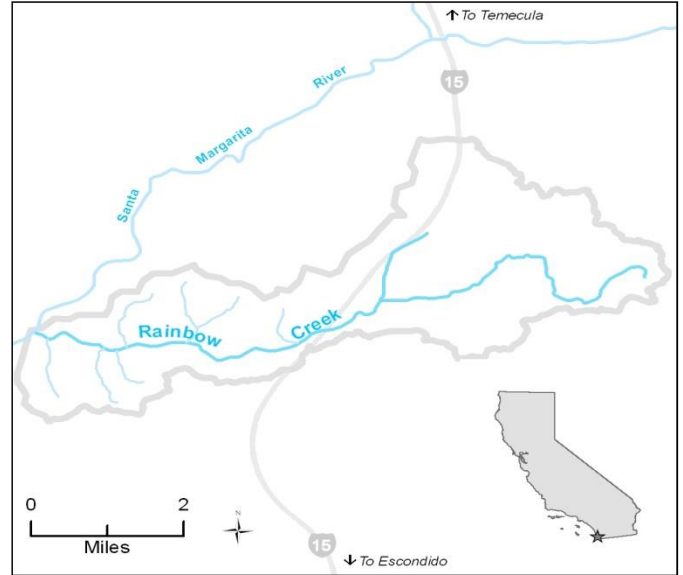
- Conditions Improving
- Data Inconclusive
- Improvement Needed
- TMDL Achieved/Waterbody Delisted

TMDL Summary

Rainbow Creek was first listed in 1996 as an impaired waterbody due to eutrophication. The listing was modified in 2002 to reflect impairment due to total nitrogen (TN) and total phosphorus (TP). These nutrients exceeded the water quality objective for biostimulatory substances, threatening aquatic life beneficial uses (WARM, COLD, and WILD). Excessive algal growth and nuisance condition also threatened contact and non-contact water recreation beneficial uses (REC-1 and REC-2). To address these impairments, the San Diego Regional Water Board developed the [Rainbow Creek TN and TP TMDLs](#), which were approved by the U.S. EPA in March 2006.

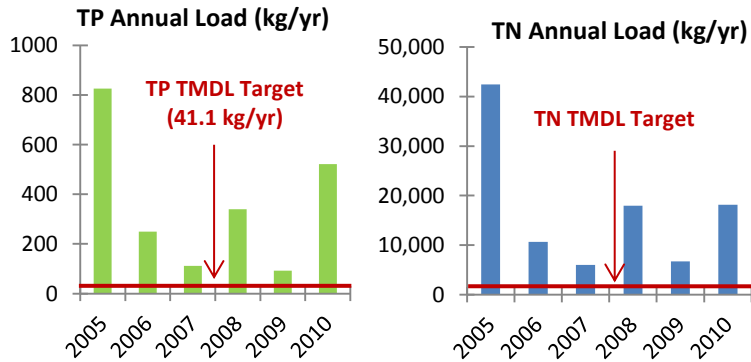
Major sources of excess nutrients in Rainbow Creek include stormwater runoff from agricultural, residential and urban areas; commercial nursery irrigation return flows; and septic tank disposal systems. The TMDL sets annual load allocations and waste load allocations for TN and TP, as well as a compliance schedule by December 31, 2021.

Rainbow Creek Watershed



TMDL Waste Load Allocations/Load Allocations

Station RBC06



Water Quality Outcomes

- Water quality data indicate that conditions are improving, as concentrations of both TN and TP show a decreasing trend.*
- Annual loads of both TN and TP have decreased since 2005, but are still above their respective allocations.*
- IBI scores based on bioassessment data show slight improvement, but indicate the condition of the benthic community is very poor. [IBI scores are on a scale of 0-100, with 0-20 Very Poor, 21-40 Poor, 41-60 Fair, 61-80 Good, and 81-100 Very Good.]
- Further improvement is needed in order to delist Rainbow Creek from the 303(d) List.

* Data shown are from a downstream station (Station RBC06), close to the USGS flow gauging station.

Rainbow Creek Receiving Water Quality

