Total Maximum Daily Load Progress Report		Laguna de Santa Rosa Nutrient TMDL
Regional Water Board	**North Coast, Region 1**	
Beneficial uses affected:	COLD, WARM, and others	
Pollutants addressed:	Ammonia & Total Nitrogen	
Implemented through:	NPDES Permits and 319(h) Grants	
Approval date:	May 4, 1995	

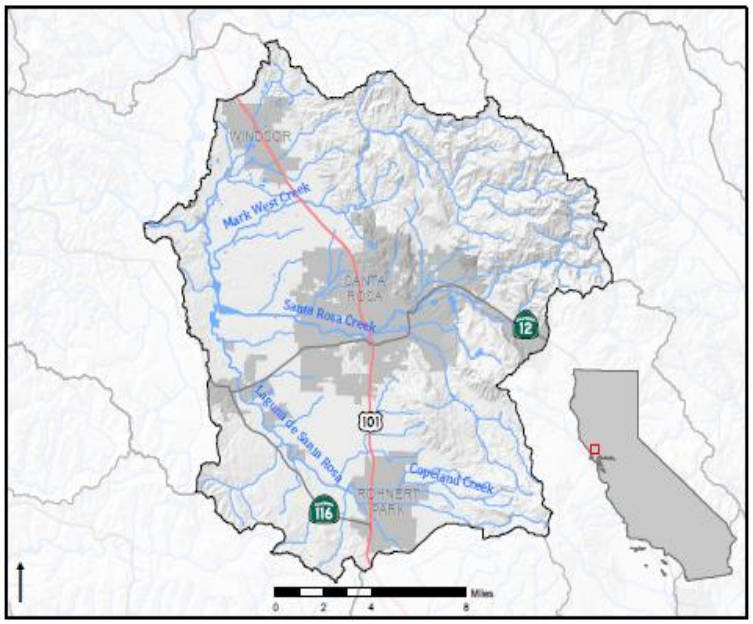
STATUS

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

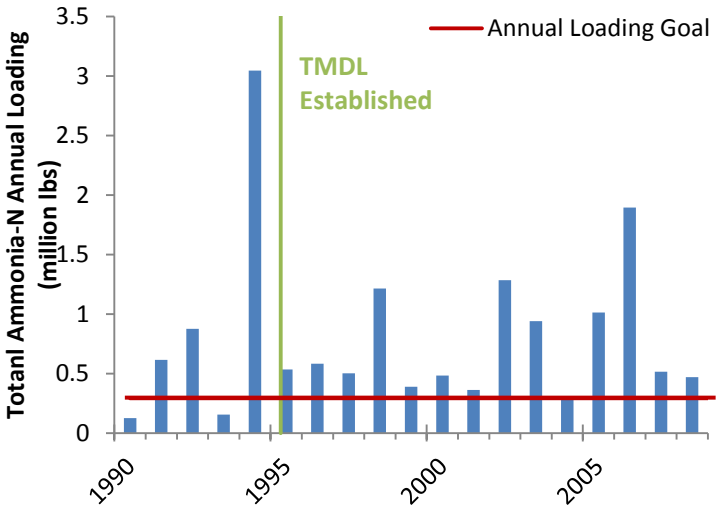
TMDL Summary

The Laguna de Santa Rosa watershed encompasses a 254 mi^2 basin that drains to the Russian River. The mainstem Laguna is one of the largest freshwater wetland systems in California, is eutrophic in the summer, and is impaired by nitrogen, phosphorus, and low dissolved oxygen levels. TMDLs for nitrogen and ammonia were established in 1995 in the Waste Reduction Strategy to reduce ammonia toxicity to aquatic life and raise levels of dissolved oxygen. Ammonia and nitrogen were identified as coming from the Laguna Wastewater Treatment Plant, runoff from dairies, urban runoff, non-irrigated agriculture, septic systems, and open space stormwater runoff. The Strategy established seasonal goals for total nitrogen and total ammonia at four locations, expressed as total loads and as concentrations. The goals were to be attained primarily by implementing 319(h) Grants for dairy infrastructure improvements, revisions to NPDES wastewater permits and treatment plant upgrades, implementing the NPDES stormwater program, and working with a task force to encourage voluntary improvements.

Laguna de Santa Rosa Watershed



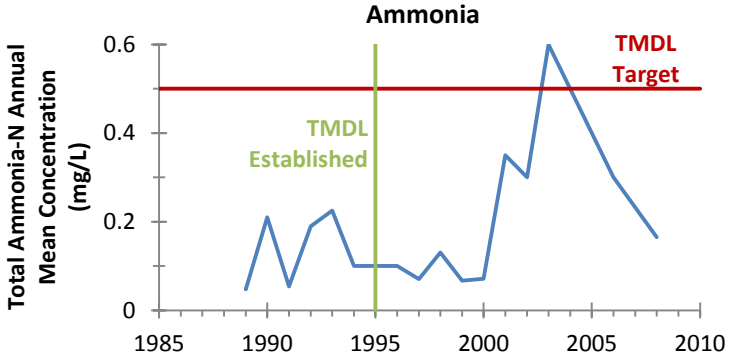
TMDL Loading Goal Attainment

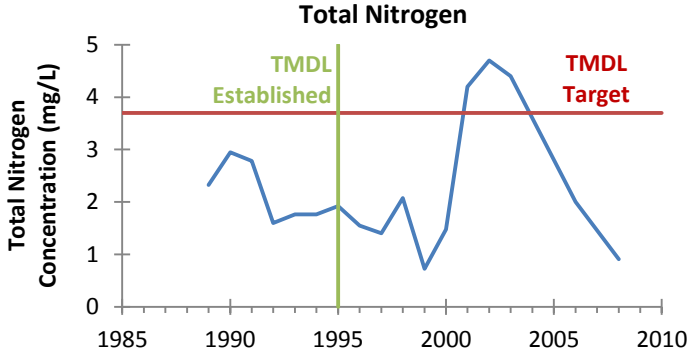


Water Quality Outcomes

- *Nitrogen sources to the Laguna were reduced as a result of operational improvements at the City of Santa Rosa's Laguna Wastewater Treatment Plant and improvements in waste storage and disposal activities at dairies.*
- *TMDL goals for Ammonia and Total Nitrogen concentrations have been generally met.*
- *TMDL goals for total loads have not been met; total ammonia-n annual loads currently exceed the annual loading goal.*
- *Measured loads from 1995 to 2000 were relatively higher due to higher stream flows.*
- *Reductions of phosphorus are needed to control eutrophication.*
- *High sediment oxygen demand in the substrate of the Laguna continues to cause low dissolved oxygen levels.*
- *In 2002, phosphorus and nitrogen were added as impairments in the Laguna due to continued water quality problems from eutrophication. A new TMDL is currently under development.*

Laguna de Santa Rosa Water Quality





Updated September 2012