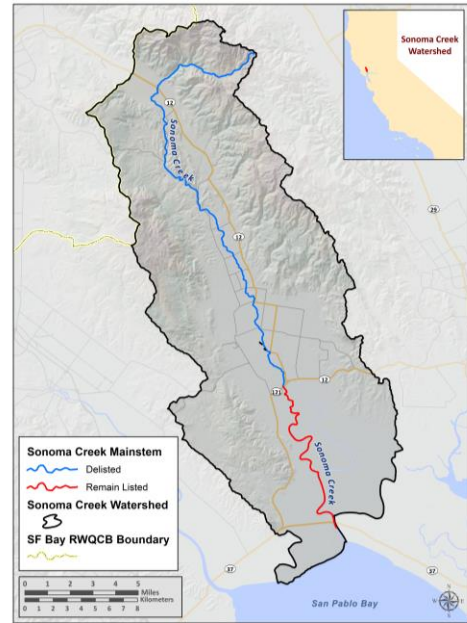


Water Quality Report Card		Nutrients in Sonoma Creek	
Regional Water Board:	San Francisco Bay, Region 2	STATUS	<input type="checkbox"/> Conditions Improving
Beneficial Uses Affected:	REC-1, REC-2, COLD, WARM, AGR, MUN		<input type="checkbox"/> Data Inconclusive
Implemented Through:	319 Grant , NPDES Permit , Waiver of WDR , WDR		<input type="checkbox"/> Improvement Needed
Effective Date:	February 12, 2014		<input checked="" type="checkbox"/> Targets Achieved/Waterbody Delisted
Attainment Date:	2014		Pollutant Type: <input checked="" type="checkbox"/> Point Source <input checked="" type="checkbox"/> Nonpoint Source <input type="checkbox"/> Legacy

Water Quality Improvement Strategy

The Sonoma Creek Watershed is located north of, and drains into San Francisco Bay. The creek was deemed to be impaired by nutrients in the 1975 Regional [Basin Plan](#). High levels of nutrients (nitrogen and phosphorous) can be toxic to humans or wildlife, and can cause eutrophication, a condition of excessive algal growth associated with dissolved oxygen and pH conditions harmful to fish, other aquatic life, and wildlife. The primary, historical sources of these nutrients included wastewater treatment plants, confined cattle facilities, grazing animals, and agriculture. Since the 1970s, Region 2 has implemented point and nonpoint source control measures to reduce [nutrient loads in Sonoma Creek](#). To evaluate whether these measures had been successful, or if a TMDL was necessary, Region 2 monitored water quality between 2002 and 2012, and assessed multiple nutrient water quality indicators using a [weight-of-evidence approach](#). The analysis demonstrated that the non-tidal portion of the creek is no longer impaired by nutrients. Therefore, in February 2014, Region 2 recommended that 23 miles of the non-tidal portion of the creek be removed from the 303(d) list for nutrients.

Sonoma Creek Watershed



Water Quality Condition Summary, 2011-2012

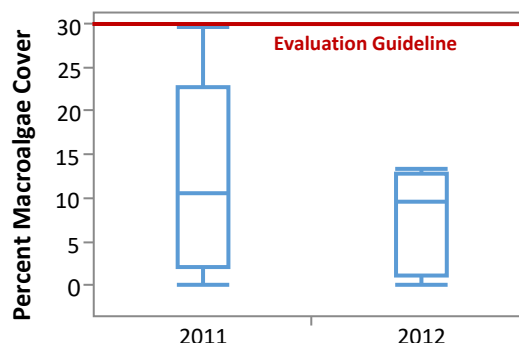
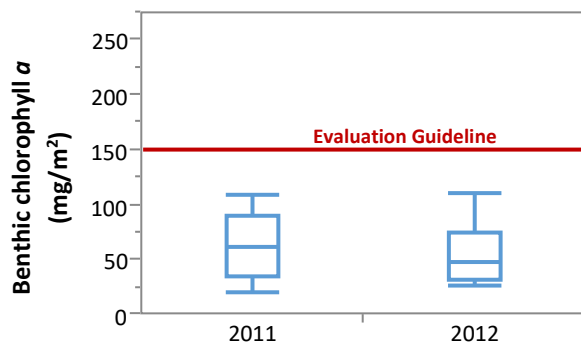
Analyte	Numeric Evaluation Guideline	Number of Exceedances
Benthic biomass chlorophyll <i>a</i>	< 150 mg/m ²	1/18
Percent macroalgae cover	30%	0/18
Water column chlorophyll <i>a</i>	15 µg/L	0/25
pH	6.5-8.5 units	0/27
Nitrite	1 mg/L	0/86
Nitrite + Nitrate	10 mg/L	0/86
Un-ionized ammonia	0.025 mg/L	0/6
Total ammonia	0.1-2.8 mg/L	0/86

Data are available on the Region 2 [website](#).

Water Quality Outcomes

- The nutrient listings for 23 miles of the non-tidal portion of Sonoma Creek have been removed from the 303(d) list.
- Monitoring data show that benthic chlorophyll *a* and percent macroalgae cover (the best direct indicators of eutrophication in streams) consistently achieve their respective evaluation guideline.
- NPDES permit dry season discharge prohibitions, and increased water recycling, for on-site irrigation or agricultural users have reduced wastewater nutrient loads.
- A reduction in grazed rangeland and confined animal facilities, and conversion to other less nutrient intense land uses, was followed by improved management at remaining properties.
- Waivers of WDR and restoration efforts will continue to reduce nutrient loads and improve riparian habitat in the watershed.

Sonoma Creek Water Quality, 2011-2012



Box plots represent the 25th to 75th percentiles, and the whiskers represent the 10th and 90th percentiles. The line in the middle of the box shows the median observed value.

Data are available on the Region 2 [website](#).