



California State Water Resources Control Board
DATA CENTER

Communicating Total Maximum Daily Load (TMDL) Progress Water Quality Report Cards

2022 National Training Workshop on Water Quality Data, Assessment, and Plans | June 3, 2022

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Overview of Water Quality Report Cards

Reporting on Performance at the Waterboard since 2008/09

- **Outputs:** inspections, permits, reports etc
- **Outcomes:** 259 Water Quality Report Cards (TMDL) covering 185 different Projects
 - 6-month process
 - Standard familiar template
 - Concise
 - [Performance Report](#)

Water Quality (Outcome) Report Cards

[View Report Cards](#)

TMDL Projects Adopted

TMDLs in Development

TMDL Implementation and Outcomes



PLAN AND ASSESS: TOTAL MAXIMUM DAILY LOAD

TOTAL MAXIMUM DAILY LOAD - Implementation and Outcomes

Data last updated: September 13, 2021

MESSAGE:

As of June 30, 2020, 228 new TMDL projects have been adopted and 41 have been reconsidered, addressing 2015 impaired waterbody listings. However, 2807 listings from the 2014/2016 303(d) list still need to be addressed statewide.

Implementation of adopted TMDLs is now underway. Implementation outcome status has been evaluated for 67% of adopted TMDLs.

[Report cards](#)

Key Statistics for FY 2020/21

Number of Water Quality Report Cards:	244
New TMDL Projects Adopted:	228
Reconsidered TMDL Projects Adopted:	41
Number of 303(d) Listings Addressed:	2015

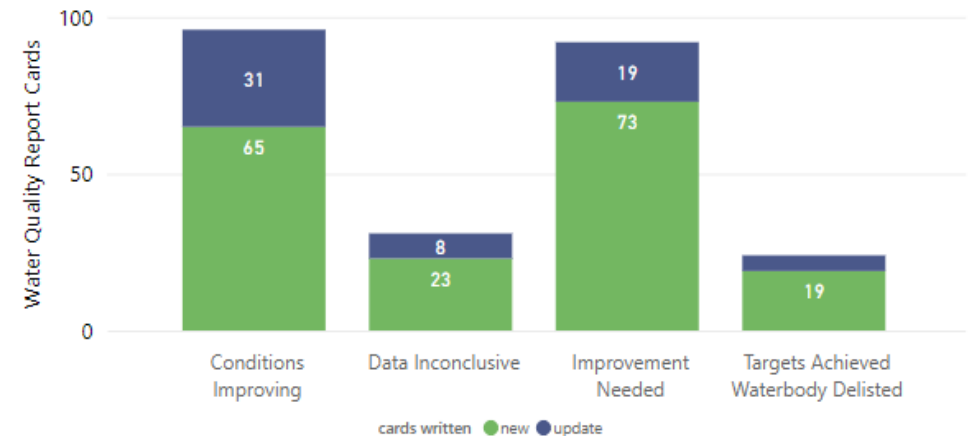
To see cards for a specific year select the FY here.

Fiscal Year

- Select all
- 20/21
- 19/20
- 18/19
- 17/18
- 16/17
- 15/16
- 14/15
- 13/14
- 12/13
- 11/12

Regional Board	Water Quality Report Cards Developed	Conditions Improving	Data Inconclusive	Improvement Needed	Targets Achieved	Waterbody Delisted
1	22	9	4	9	0	
2	26	10	6	6	4	
3	32	12	6	12	2	
4	30	14	1	15	0	
5	26	9	1	6	10	
6	20	8	5	6	1	
7	31	9	3	17	2	
8	21	9	1	8	3	
9	35	16	4	13	2	
Total	244	96	31	92	24	

Report Cards Written





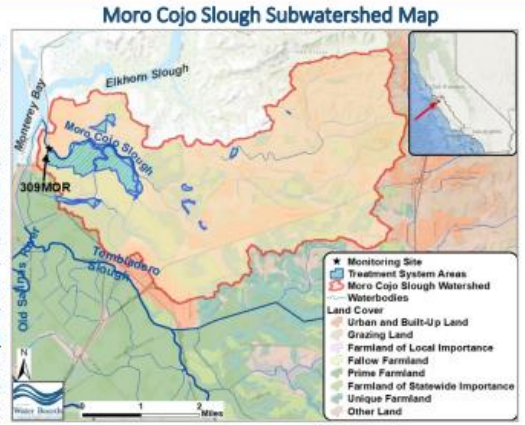
Classic template

- built in Microsoft Word
- easy to save and send around
- single page printed

Water Quality Report Card		Nutrients in Moro Cojo Slough – Lower Salinas River Watershed		
Regional Water Board:	Central Coast, Region 3	STATUS	<input checked="" type="checkbox"/> Conditions Improving	
Beneficial Uses Affected:	COLD, SPWN, WARM		Pollutant Type:	<input checked="" type="checkbox"/> Point Source <input checked="" type="checkbox"/> Nonpoint Source
Implemented Through:	Conditional Waiver of WDRs			Pollutant Source:
Effective Date:	May 7, 2014 (TMDL)			
Attainment Date:	2026			

Water Quality Improvement Strategy

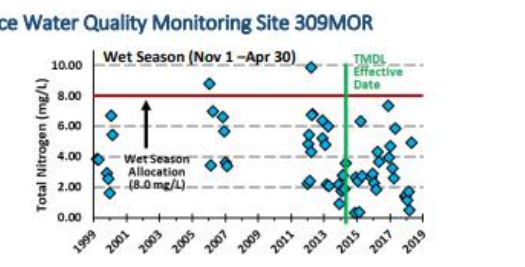
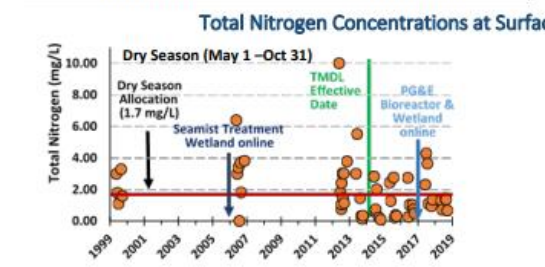
The Moro Cojo Slough subwatershed encompasses approximately 9,836 acres in the Lower Salinas Valley and drains directly into Moss Landing Harbor at the center of Monterey Bay. Agriculture (including irrigated cropland and grazing lands) is the current, dominant land use in the Lower Salinas Valley, with increasing transition to urban use. Moro Cojo Slough is on the [Clean Water Act Section 303\(d\) List](#) for nutrient or potential nutrient-related impairments including low dissolved oxygen and un-ionized ammonia. Several additional waterbodies in the Lower Salinas Valley exceed water quality criteria for nitrate, un-ionized ammonia, and experience associated nutrient-related problems such as increased algal growth and other biostimulatory conditions. [The Lower Salinas River Watershed Nutrient TMDL](#) was approved in May 2014 to address the impairments. Discharges from irrigated agriculture were established as the primary controllable source of nutrient pollution within this watershed, however tidal mixing of waters from adjacent waterbodies also contribute to nutrient loading in the slough. The [2017 Conditional Waiver of Waste Discharge Requirements for Discharges from Irrigated Lands](#) (Agricultural Order) implements the TMDL which calls for achieving TMDL numeric targets for nitrogen compounds by 2026. This report card evaluates total nitrogen since nitrate tends to measure only a small fraction of the total nitrogen in this system (likely because sloughs and wetlands are areas of high primary productivity, causing nitrate to be bound up in organic phases and biomass).



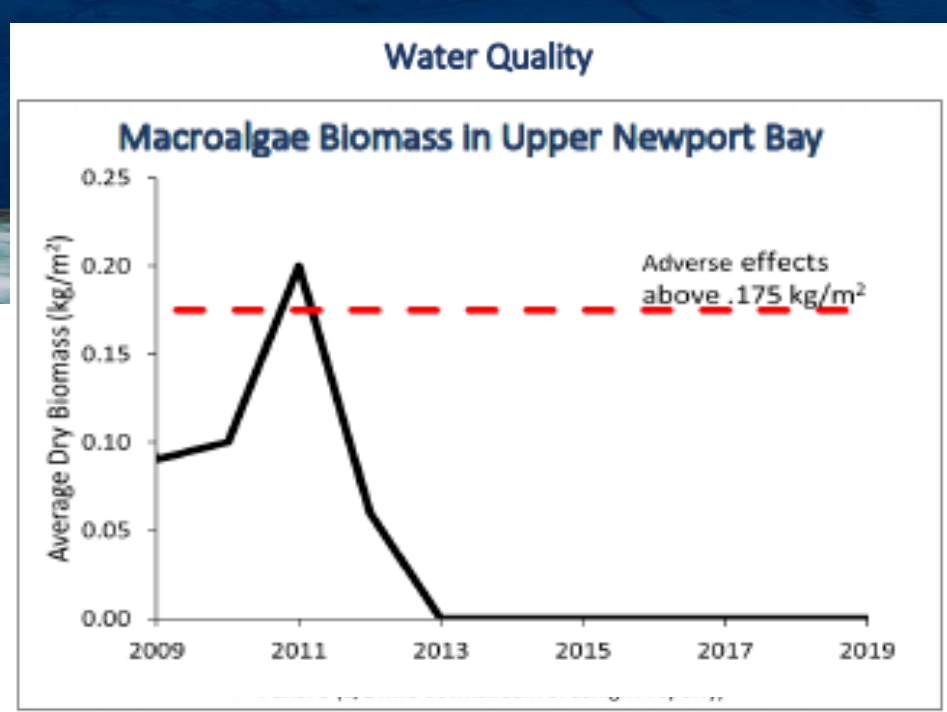
TMDL Allocations – Receiving Water Concentrations

Dry season (May 1-Oct. 31)	Wet season (Nov. 1-Apr. 30)
1.7 mg/L	8.0 mg/L
Total Nitrogen	Total Nitrogen
0.025 mg/L Un-ionized Ammonia as N	0.025 mg/L Un-ionized Ammonia as N

- ### Water Quality Outcomes
- Growers in Moro Cojo Slough watershed worked with the Central Coast Wetlands Group (CCWG) and their partners to implement nutrient treatment systems over the past 20 years. Eight installed systems now treat runoff from 1,527 acres in the watershed.
 - Growers have employed management practices and technologies on their farms to more effectively manage nutrient inputs to improve water quality.
 - Dry season (May 1 - Oct. 31) total nitrogen concentrations have dropped below the target of 1.7 mg/L in recent years. Sampling from summer 2018 resulted in zero exceedances.
 - Wet season (Nov. 1 – Apr. 30) total nitrogen concentrations have been below the numeric target of 8 mg/L.
 - Tidal influence likely contributes to nutrient loading and mixing of polluted waters from nearby waterbodies.

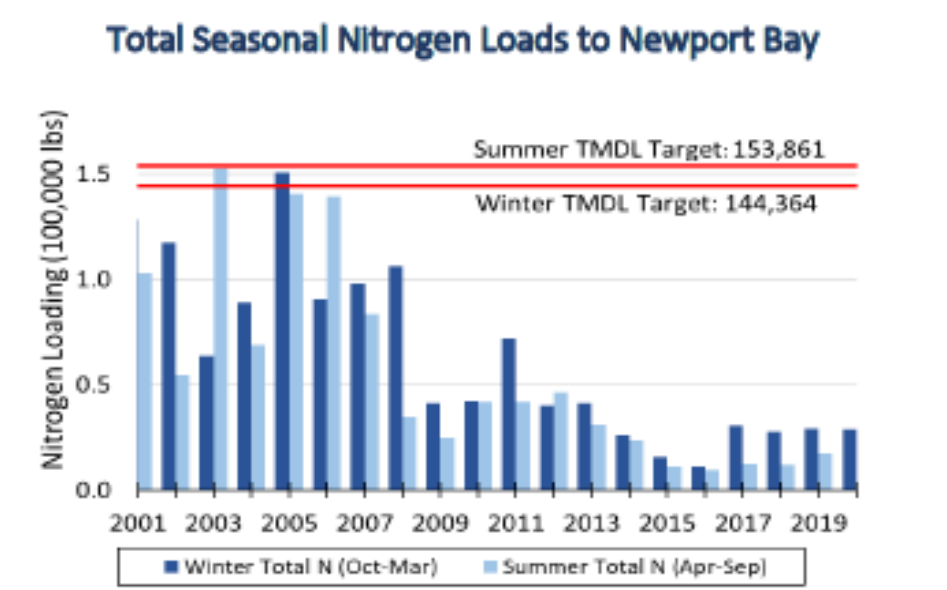
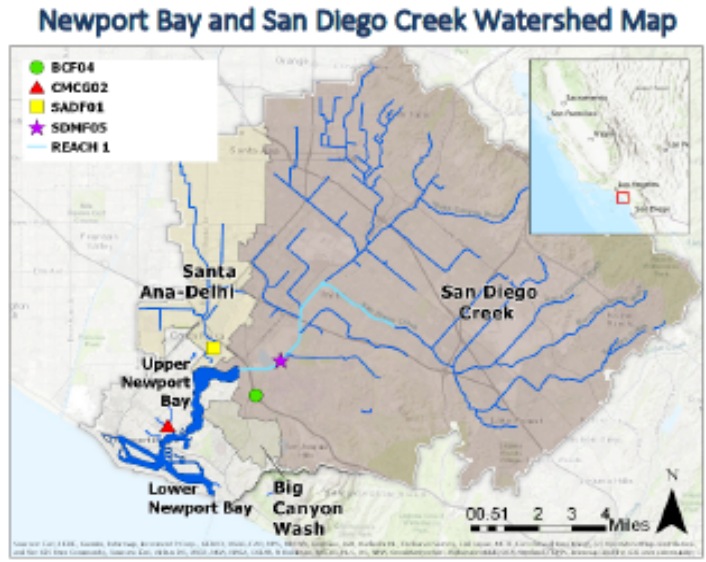


Water Quality Report Card		Nutrients in Newport Bay and San Diego Creek	
Regional Water Board:	Santa Ana, Region 8	STATUS	Targets Achieved
Beneficial Uses Affected:	REC-1, REC-2, WARM, WILD, EST, COMM, RARE, SPWN, MAR, SHEL		
Implemented Through:	NPDES permits, WDRs, Nonpoint Source Programs, Cooperative Stakeholder Projects	Pollutant Type:	Point Source, Nonpoint Source, Legacy
Effective Date:	April 1999 (TMDL)	Pollutant Source:	Non-point Source Runoff Urban Stormwater Runoff Irrigated Crop Production Erosion/Siltation
Attainment Date:	2012		

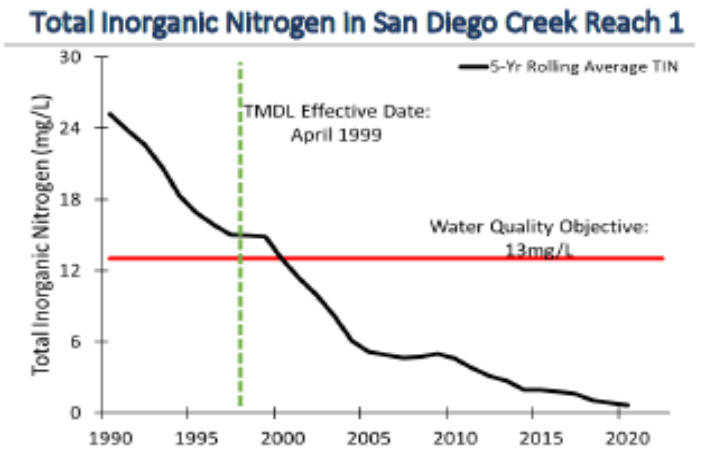


Watershed Improvement Strategy

San Diego Creek, in Orange County, discharges into Upper Newport Bay where nutrient loading has led to significant algae blooms since the 1980s. Both San Diego Creek and Upper Newport Bay were listed on the Federal Clean Water Act 303(d) list as impaired for nutrients. To address the impairment, a [Nutrient Total Maximum Daily Load \(TMDL\)](#) was developed requiring a 50 percent reduction in nutrient loading (nitrogen and phosphorus) to Newport Bay with the intent of reducing algae biomass. Compared with pre-TMDL annual Total Nitrogen (TN) loads (1,087,000 lbs.), significant reductions have been achieved over time. These reductions are the result of the conversion of irrigated agriculture to urban land use, closure of the remaining commercial nurseries, and development of a regional natural treatment system, most notably the San Joaquin Marsh treatment ponds. Stakeholders continue to monitor San Diego Creek and Upper Newport Bay and report collected data annually.



- ### Water Quality Outcomes
- Nitrogen loads to Newport Bay are below TMDL targets.
 - Nitrogen concentrations in Reach 1 of San Diego Creek are below the water quality objective.
 - Algae biomass has not been detected at the Upper Newport Bay mudflat monitoring stations since 2012.



Water Quality Report Card - Algae in the Ventura River

Regional Water Board:	Los Angeles, Region 4	STATUS <input type="checkbox"/> Conditions Improving <input type="checkbox"/> Data Inconclusive <input checked="" type="checkbox"/> Improvement Needed <input type="checkbox"/> Targets Achieved/Water Body Delisted
Beneficial Uses Affected:	REC-1, REC-2, WARM, COLD, EST, WILD, RARE, MIGR, SPWN, WET, MUN	
Implemented Through:	NDPES Permits, MS4 Permits, Conditional Waivers	Pollutant Type: <input checked="" type="checkbox"/> Point Source <input checked="" type="checkbox"/> Nonpoint Source <input type="checkbox"/> Legacy
Effective Date:	June 28, 2013	Pollutant Source: Urban Storm Water Runoff Irrigated Crop Production Onsite Wastewater Treatment Systems Wastewater Discharges Horses and Livestock Non-Point Source Runoff
Attainment Date:	2023	

Water Quality Improvement Strategy

The Ventura River watershed is in Ventura and Santa Barbara Counties in Southern California. The Ventura River, including its estuary and tributaries, is impaired due to algae, eutrophic conditions, low dissolved oxygen, and elevated nitrogen. The primary sources of these impairments are nutrients discharged from the municipal separate storm sewer system (MS4), agriculture operations, livestock facilities, onsite wastewater treatment systems (OWTS), and the Ojai Valley Waste Water Treatment Plant (WWTP). In 2013, USEPA approved the [TMDL for Algae, Eutrophic Conditions, and Nutrients in the Ventura River and Its Tributaries](#) to restore water quality. The TMDL includes numeric targets for algal biomass, dissolved oxygen, and pH, and load allocations (LAs) and waste load allocations (WLAs) for total nitrogen and total phosphorus. The TMDL assigns more stringent nitrogen and phosphorus allocations for dry weather than wet weather because dry weather (May 1 to September 30) is the growing season. The TMDL allows the Ojai WWTP 12 years, MS4 permittees six years, agriculture operations six years, livestock facilities 10 years, and OWTS 10 years to attain allocations. The Ojai WWTP intends to attain WLAs by upgrading its nutrient removal processes. Agriculture operations will implement iterative management practices to control nutrients in their discharges. The MS4 permittees' compliance approach is to eliminate dry-weather discharges by implementing best management practices (BMPs). Horse facilities will implement manure management plans. Individual responsible parties are monitoring their discharges to demonstrate compliance with allocations and multiple responsible parties are jointly monitoring algal biomass, nutrients, and other constituents in receiving waters to assess watershed-wide conditions. The Board intends to adopt a Conditional Waiver for horse facilities in FY 18-19. Agriculture operations will implement nutrient management as required by the Conditional Waiver.

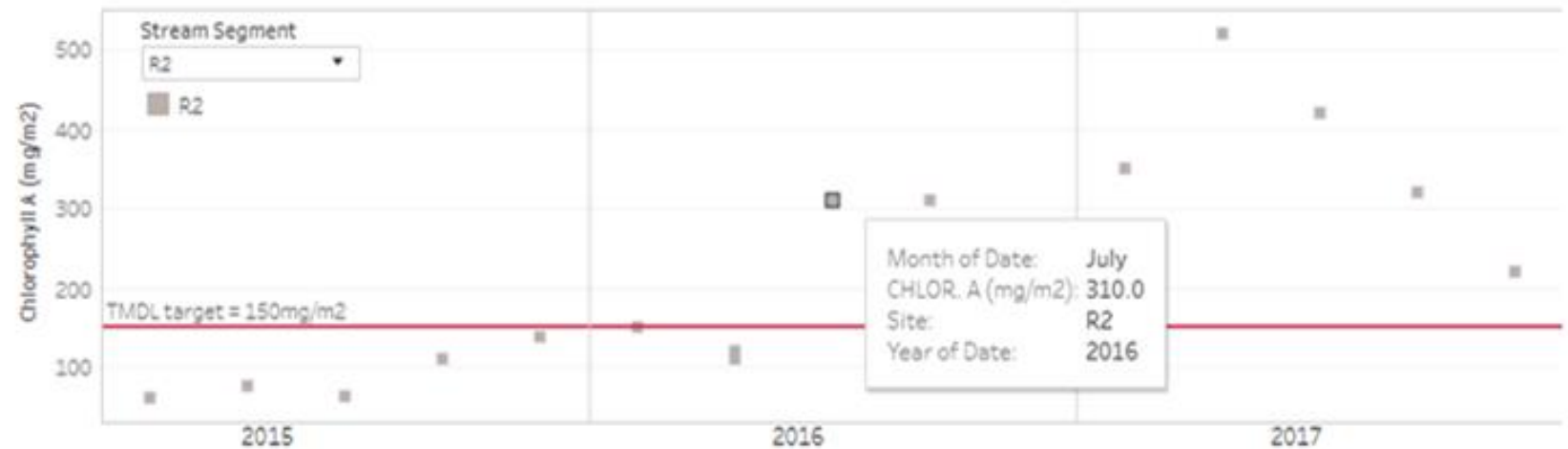
Comparison of MS4 Effluent to Dry Weather WLA



Blank Total Nitrogen values, as seen for Happy Valley outfall after 2012, are due to zero flow and represent WLA attainment.

Water Quality Outcomes

- Monitoring data show that algal biomass continues to exceed the numeric target. Total nitrogen in MS4 outfalls exceeds the WLA when there is sufficient flow to sample. However, no flow and no sample in the outfalls amounts to WLA attainment.
- WLAs have not been incorporated into the MS4 permits, but permittees are implementing BMPs, including a bioswale at the Happy Valley outfall in Reach 4, which has reduced dry-weather flow.
- The Ojai WWTP is on schedule to implement the nitrogen removal upgrades required by its permit to attain the WLAs. Ventura County is studying which OWTS will be upgraded to advanced treatment. The agriculture LAs are incorporated into a Conditional Waiver.
- The TMDL is still in the early stages of implementation. The multiple sources, complex interaction between groundwater and surface water, and variable flow make this a complicated TMDL.
- Responsible parties will continue implementation actions.





West Fork Carson River - Vision Project

Water Quality Report Card

Regional Water Board: Lahontan Region 6 | October 20, 2021





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Thank you!

Performance report

https://www.waterboards.ca.gov/about_us/performance_report_2021/plan_assess/111_tmdl_projects.html

Report Cards

https://www.waterboards.ca.gov/about_us/performance_report_2021/plan_assess/11112_tmdl_outcomes.html

