

STATE OF CALIFORNIA
REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

MEETING DATE: July 13, 2022

Item: 4

Executive Officer's Report

Executive Officer's Report July 6, 2022

Items in this Report (Author[s])

Table of Contents

Conserving Our Watersheds: Upgrading Dairies and Ranches Sustainably; Marin Resource Conservation District (Laurie Taul)	2
Guadalupe River Watershed Mercury Total Maximum Daily Load (Carrie Austin)..	3
Caltrain Improves Guadalupe River Bridges in San Jose (Brian Wines)	3
Water Board Staff Leads Urban Water Resources Research Council (Keith Lichten)	5
Groundwater Basin Fact Sheets (David Tanouye and Yemia Hashimoto)	6
Staff Conference Attendance / Development Opportunity	7
Enforcement Actions (Brian Thompson and Jessica Watkins).....	7
401 Water Quality Certification Applications Received (Abigail Smith)	8

Conserving Our Watersheds: Upgrading Dairies and Ranches Sustainably; Marin Resource Conservation District (Laurie Taul)

The Conserving Our Watersheds program was created by the Marin Resource Conservation District (Marin RCD) as a response to the water quality regulation within the Tomales Bay Watershed to address water quality concerns and attainment of the Tomales Bay Pathogen Total Maximum Daily Load by assisting the major land use type in the watershed, small family farms. The program assists ranchers and dairy farmers with the planning and implementation of conservation practices to improve water quality and wildlife habitat. Water Board staff have been assisting Marin RCD in obtaining grant funds and in designing and permitting of all phases of the program.

The most recent phase of the program recently completed six significant management practices on four dairies and two grazing ranches; reducing potential pathogen, sediment and/or nutrient loading to both the Sonoma Creek and Tomales Bay watersheds. This project was funded in part by the State Water Board Nonpoint Source 319(h) grant program with \$687,500. The project also has many cost-share partners, including landowners, that contributed an additional \$340,000.

This program has allowed Marin RCD and partners the ability to offer technical and financial assistance to landowners who voluntarily want to implement pro-active conservation solutions that improve water quality. While the next phase of the program is already underway with treatment sites selected for implementation, Marin RCD has more demand from the agricultural community than funds available. Marin small family farms continue to express interest in undertaking restoration and enhancement projects in partnership with Marin RCD.



Photo collage of high priority management practices implemented through the COW Program, including a manure pump, grade stabilization structures and plantings, upgraded heavy use area to milking barn, and a storm water catchment basin.

Guadalupe River Watershed Mercury Total Maximum Daily Load (Carrie Austin)

The New Almaden Mercury Mining District is located within the Guadalupe River Watershed in the hills above San Jose. The New Almaden Mine was one of the world's largest mercury mines. Past mining practices have heavily polluted reservoirs, creeks, and San Francisco Bay downstream of the mine. Consequently, these waters are posted with "no consumption" advisory signs to protect human health.

To address this pollution, the Board adopted the Guadalupe River Watershed Mercury Total Maximum Daily Load (TMDL) in 2008. Currently, we are writing a status report that will describe measurable progress in TMDL implementation including mine cleanup (mercury source control) and reservoir pilot tests (to reduce methylation of mercury in reservoirs). There are some indications that fish mercury levels have declined in reservoirs, but the signal was not consistent across all water bodies and fish mercury levels remain extremely elevated. Despite measurable progress, TMDL implementation has proceeded more slowly than anticipated, so the implementation timeframe may need to be extended.

We will soon announce availability of the report to stakeholders and post this report to the TMDL website, here:

https://www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/TMDLs/guadalupe/mercury/tmdl.html.

Caltrain Improves Guadalupe River Bridges in San Jose (Brian Wines)

In May, we issued a 401 certification to Caltrain for a project to improve two bridge crossings over the Guadalupe River just south of downtown San Jose. The bridge design is the product of a successful years-long collaboration between Caltrain, Water Board staff, agency partners, and project stakeholders. The project design will correct erosional problems associated with two existing railroad bridges. It appropriately accounts for streamflow and sediment dynamics, and is expected to improve channel stability, widen the channel and floodplain through the project reach, and enhance and increase riparian habitat along the river. The bridges are located along a sharp meander of the Guadalupe River, about 300 feet downstream of the State Route 87 overpass in San Jose's Willow Glen neighborhood. Four projects since 2008 have been implemented to control bank erosion and scour at the abutments and piers of the existing bridges, demonstrating the need for a long-term fix.

Geomorphic instability in the project reach affects the safety of the railroad bridges because bank erosion is undermining the bridge abutments. The downstream (northerly) MT1 bridge is a wooden trestle bridge constructed in 1935, and the upstream MT2 bridge is a concrete bridge constructed in 1990 as part of a Caltrans Highway 87 project. The MT1 bridge does not meet current railroad structural design standards and is vulnerable to seismic damage or to bank erosion during large storms, so must be fully replaced. The timber structure of MT1 has been further damaged by multiple fires, most recently a large fire in November 2017, as shown in the photo below. The MT2 bridge meets structural design standards, but has been the likely cause of eroded banks under the abutments due to misalignment of the bridge piers with the channel. To be in

alignment with the MT1 bridge piers, the MT2 bridge piers were constructed at a 45-degree skew to the track alignment. However, because the MT2 bridge is located in a different part of the River's meander bend, the MT2 piers are not in alignment with the river channel. The misalignment has likely produced erosive eddies that have eroded the banks under the abutments. Comparison of river cross sections and channel surveys over time shows that the channel was relatively stable between 1935 and 1990, with the majority of the observed degradation occurring after 1990.



MT1 Bridge on Fire in 2017



MT2 Bridge – Rock Riprap Stabilization 2017

The bridge designs and associated channel improvements will improve riparian habitat and reduce erosive forces. MT1 will be fully replaced with a longer bridge, and MT2 will be lengthened over the widened channel, alleviating scour and erosion caused by MT1's misaligned piers. The expanded floodplain in the project reach will connect to the floodplain created 250 feet downstream of the railroad bridges by Valley Water's Upper Guadalupe River Flood Control Project (Reach 6). This will result in improved hydraulics around the bridge piers by lowering water surface elevations and reducing the potential for bank erosion and scour at the piers. In addition to the geomorphic benefits of channel widening, the Project will increase the total area of riparian habitat.

Water Board Staff Leads Urban Water Resources Research Council (Keith Lichten)

In early June, Watershed Management Division Chief Keith Lichten began a two-year term as Chair of the American Society of Civil Engineers' (ASCE's) Urban Water Resources Research Council. The Council, founded in 1962, and part of ASCE's Environmental and Water Resources Institute, seeks to advance engineering knowledge and practice in the field of urban water resources by stimulating and guiding water resources research and disseminating knowledge, research results, and other significant project outcomes to water resource professionals.

The Council develops information, such as technical reports and engineering standards and guidance, for use by policy makers, practitioners, and the public. The Council also organizes a popular longstanding biannual international low impact development Conference and an annual Urban Water Resources Symposium, and coordinates on a biannual conference on the operation and maintenance of stormwater control measures. The Council's journal, the Journal of Sustainable Water in the Built Environment, publishes seminal research in the field. The Council has produced or help originate projects and work including the International Stormwater BMP Database—which now houses more than 790 stormwater best management practice data sets—safety and design guidance handbooks for urban stormwater BMPs, and ASCE manuals of practice, including the Manual of Practice for the Design and Construction of Urban Stormwater Management Systems. Current products include guidance on tools that model urban hydrology and recommendations on future work to address resilience and climate change adaptation.

Keith also participated in a one-day national workshop, Engineering for Climate Resilience. The workshop focused on how the engineering community should address climate-related changes to precipitation patterns, impacts to water supply, flooding, infrastructure design, operation, and maintenance, and how climate change should lead to different approaches to thinking about risk in project design. Workshop participants considered data needs to address a changing climate, needed guidance on how to use those data, and the relative roles of different actors (e.g., governmental, private, non-profit, and other actors). The workshop is expected to lead to future coordination between NOAA as an authoritative source of climate data, and the ASCE, as an authoritative non-profit source of engineering guidance, with the goal of developing infrastructure and adaptation strategies that are more resilient to projected climate change.

Groundwater Basin Fact Sheets (David Tanouye and Yemia Hashimoto)

Our Sustainable Groundwater Management team recently finalized fact sheets for 14 of our region's 35 groundwater basins. Each fact sheet summarizes how groundwater is managed in the basin under the Sustainable Groundwater Management Act known as SGMA. The fact sheets also summarize if and how groundwater is used for municipal, domestic, or agriculture supply, the overall water quality in the basin, and if local water agencies recharge the groundwater.

The fact sheets are posted on our [Groundwater webpage](#) and can be found by navigating to the "Groundwater Basins" Tab that links to a map and table of all of the basins.

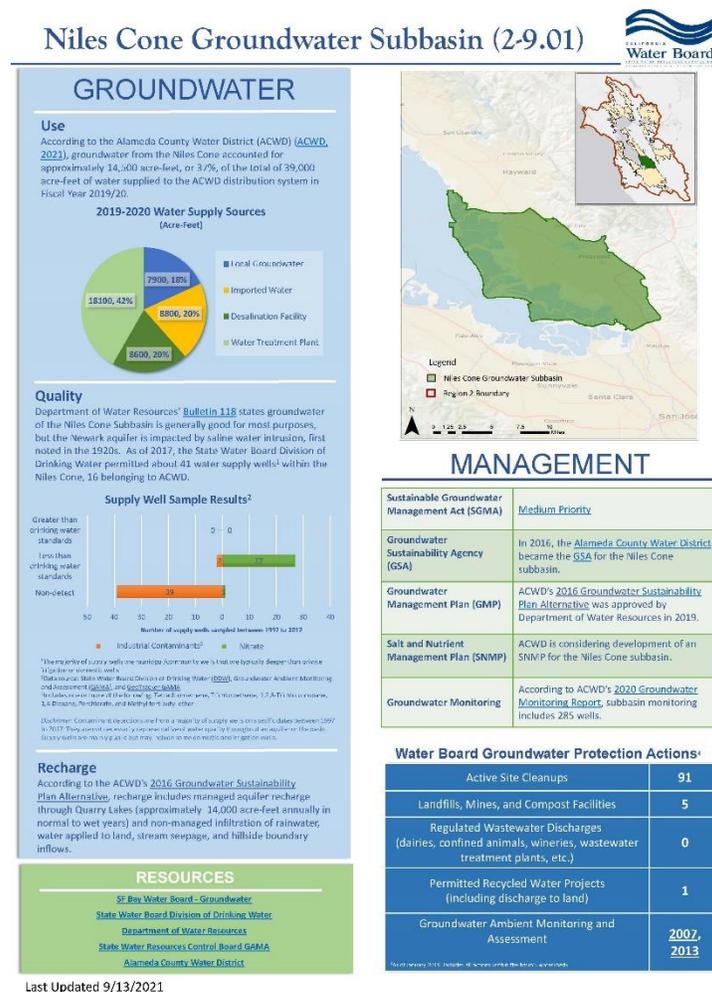


Figure 1. Example fact sheet of the Niles Cone groundwater basin.

The team began these efforts in 2017, starting with our highest priority groundwater basins as identified by SGMA and our knowledge of municipal and community groundwater use. The intent is to produce a concise resource to inform our programmatic decisions, including waste discharge permitting, cleanup, evaluation of salt and nitrate impacts, and protection of public and private supply wells. Fact sheets

have been reviewed by the local water management agencies for each basin. The team is currently working on fact sheets for the remaining basins and will upload them to our webpage as they are finalized. The fact sheets are a work in progress and will be periodically updated as we learn more about water quality threats and local management plans.

Staff Conference Attendance / Development Opportunity

In May 2022, Emma Hoffman-Davies, Sherry Gamboa, and Rachelle Lim of the Toxics Cleanup Division attended the 12th Annual International Conference on Remediation of Chlorinated and Recalcitrant Compounds organized by Battelle. The Battelle Chlorinated Conference is a highly regarded technical venue for site cleanup topics that has occurred every two years since 1998. There were over 1,200 platform and poster presentations and 6 panel discussions on technical issues related to emerging remediation technologies, large, commingled plume case studies, expedited site closure, per- and polyfluoroalkyl substances (PFAS) investigation methods, risk communication and stakeholder engagement, and adaptive site management.

In addition to attending platform sessions and poster presentations, Emma, Sherry, and Rachelle attended two short courses: *Introduction to Groundwater Remediation Geochemistry* and *Discovering Biodegradation of Emerging Contaminants for Site Management via Bioremediation*. These short courses focused on geochemical processes to facilitate successful remediation of chlorinated solvents and emerging contaminants, including PFAS and 1,4-dioxane.

Emma, Sherry, and Rachelle also heard about effective strategies for stakeholder engagement from a variety of agencies and consultants and acquired knowledge on how to optimize site cleanup.

Staff are excited to apply their new-found knowledge to their cleanup cases and share with other cleanup program staff. Conference attendance is vital to our staff's development and helps keep our region's cleanup program at the forefront of new and innovative research and application.

Enforcement Actions (Brian Thompson and Jessica Watkins)

There were no proposed or settled enforcement actions since the June Executive Officer's Report.

401 Water Quality Certification Applications Received (Abigail Smith)

The table below lists those applications received for Clean Water Act section 401 water quality certification from May 13 through June 17, 2022. A check mark in the right-hand column indicates a project with work that may be in BCDC jurisdiction.

Project Name	City/Location	County	May have BCDC Jurisdiction
Retaining Wall Construction at Crow Canyon Road between mile markers 6.10 to 6.25, walls A and B	Castro Valley	Alameda	
San Lorenzo Creek Embankment Repairs	Hayward	Alameda	
R-992 L-153, MP 16.83–16.87 Pipeline Replacement	San Leandro	Alameda	
Briones Reservoir Boat Ramp Replacement	Orinda	Contra Costa	
2006 San Miguel Drive	Walnut Creek	Contra Costa	
Irish Canyon Culvert Repairs	Unincorporated	Contra Costa	
Waterview House Gangway Replacement	Greenbrae	Marin	Yes
Reef Design Innovations for Living Shorelines	Unincorporated	Marin	Yes
Waitte Napa River Riverbank Revegetation and Stabilization	Napa	Napa	
Silverado Trail Over Bell Canyon Creek Scour Repair	Unincorporated	Napa	
San Francisco Living Seawall Pilot Project	San Francisco	San Francisco	Yes
Johnson Pier Expansion and Dock Replacement	El Granada	San Mateo	
Pulgas Creek Bank Stabilization Project, Handisides Property Reach	San Carlos	San Mateo	

Project Name	City/Location	County	May have BCDC Jurisdiction
Oyster Point Marina Dock Replacement	South San Francisco	San Mateo	Yes
Shoreline Protection System Urgent Maintenance	Unincorporated	San Mateo	Yes
1266 Montclair Way Storm Drain Repair	Los Altos	Santa Clara	
Felt Reservoir Geotechnical Core Sampling	Portola Valley	Santa Clara	
Outfall Channel and Instrumentation Improvements	San Jose	Santa Clara	Yes
Port of Benicia Dock Emergency Repairs	Benicia	Solano	Yes
Jewett Road PM 10.08 Culvert Replacement	Petaluma	Sonoma	
Hudeman Slough Boat Ramp	Unincorporated	Sonoma	Yes
State Route 116-121 Intersection Improvement Project, Caltrans EA 04-3G900, Project No. 0415005571	Unincorporated	Sonoma	