

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

MEETING DATE: May 8, 2024

ITEM: 5

Executive Officer's Report

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Improving Dissolved Oxygen in Lake Merritt (Tong Yin and Gerardo Martinez)

In 2022, a harmful algae bloom (HAB) of *Heterosigma akashiwo* (red tide) in San Francisco Bay spread into Lake Merritt causing dissolved oxygen levels to crash and killing fish. Following this event, our staff conducted extensive monitoring of the lake and published an [assessment of the fish kill](#). Recently, we transitioned our effort into developing a Total Maximum Daily Load (TMDL) alternative to address the impairment for low dissolved oxygen in the lake. This impairment is based on dissolved oxygen concentrations not always meeting the Basin Plan water quality objective of 5.0 milligrams per liter (mg/L) to support aquatic life in estuarine water.

Beginning in 2023, the City of Oakland (City) and Lake Merritt Institute conducted continuous water quality monitoring at three locations in the lake. This monitoring showed that small algae blooms did not cause substantial reductions in dissolved oxygen. We supported these efforts by providing input and recommendations to their monitoring program and also worked closely with the City, local and state public health agencies, and other experts to monitor harmful algae blooms and suggested signage to warn the public during bloom events. Moving forward, we will continue to provide monitoring support and coordination during bloom events.

We are also working closely with the City to help implement solutions to prevent fish kills, including permitting a pilot-scale oxygenation system and surface aeration fountain. The oxygenation system is designed to maintain a dissolved oxygen concentration greater than 10 mg/L in water at the bottom of the Glen Echo arm of the lake. Further, we initiated the Lake Merritt low dissolved oxygen TMDL alternative project this month. Through this project, we intend to develop a lake Water Quality Improvement Plan containing strategies to address controllable short- and long-term causes of low dissolved oxygen. Stakeholder engagement is key to the success of this TMDL alternative approach. Accordingly, we will work closely with other agencies, environmental groups, community leaders, and the general public in this process.



Figure 1. Glen Echo Arm Oxygenation System Location Near the Yellow Buoy



Figure 2. Lake Tech Consulting Staff Inspecting One of the Monitoring Buoys

Closed Burlingame Landfill – Topgolf Construction Progress (Nate Veale)

During the May 2023 Board meeting, the Board adopted updated waste discharge requirements ([Order R2-2023-0005](#)) for the closed Sanitary Solid Waste Disposal Site in Burlingame. The Order updated requirements to ensure planned construction of a Topgolf commercial/recreational facility on top of the closed landfill does not cause adverse impacts to groundwater quality.

Construction of the new Topgolf facility necessitates excavation into the landfill cap, as well as penetration of concrete piles through the Bay Mud barrier below the waste. These penetrations have the potential to cause or allow migration of landfill leachate into unimpacted groundwater. Therefore, the Order required the City to submit a Pile Installation Work Plan detailing the method of pile installation to be used to ensure adequate protection against waste migration and creation of contaminant pathways resulting from construction activities.

We have reviewed and provided comments on the proposed pile installation techniques. For example, we required additional measures to mitigate concerns about leachate migration, including placement of bentonite at the bottom of each boring prior to pile driving and not allowing borings to be left open for more than one day.

Structural pile installation began in summer 2023, and we have observed work to ensure it is done correctly to protect water quality (see Figures 1 – 3). Each of the 369 structural piles that will support the Topgolf building were installed by driving 16-inch-diameter precast orthogonal concrete piles (Figure 1) into borings pre-drilled by a displacement auger (Figure 2) to the bottom of refuse. We believe that this pile driving technique, combined with the placement of five feet of bentonite at the bottom of each boring where Bay Mud is limited or absent, will form a sufficiently protective seal to prevent leachate migration.

In addition to the building support piles, 27 piles are planned to support the net poles in the driving range outfield. Contrary to the structural piles, however, these are planned to be cast-in-place. About half will not penetrate through the waste mass, and the rest will finish between 1 and 14 feet below the bottom of refuse. On April 17, we observed the installation of a guy anchor for the barrier netting, which is a similar procedure to the net pole installation (Figure 3). We are awaiting a revised net pole pile installation work plan that incorporates our comments from the test installation. The remaining net pole piles should be installed in April 2024. The remaining construction activities include site grading, final cap repair, and landfill gas system upgrades.

The Order also required the City to evaluate and determine if changes to the groundwater monitoring program were needed considering the proposed construction. We approved the City's proposal to install two new groundwater monitoring wells screened in a groundwater zone that was not sufficiently covered by the existing groundwater monitoring well network. The two additional wells were installed earlier this year.



Figure 1. Structural piles in the foreground and pile-driving apparatus in background.



Figure 2. Construction site with displacement auger drill and borings.



Figure 3. Guy anchors for the net poles that hold the barrier netting, waiting to be dropped into an open boring. Tensioned wires run from the corner net poles to these anchors.

Community Engagement for Vallejo Cleanup Sites (Michelle Thompson)

On April 17, 2024, Water Board staff in the Toxics Cleanup Division met with a community group to discuss cleanup sites in Vallejo that we oversee. The group, [All Positives Possible](#), is a grassroots non-profit organization based in Richmond, California, founded in 2009 to support low-income disadvantaged communities and promote positive community and environmental health through social and environmental engagement. All Positives Possible has a longstanding partnership with the California Department of Toxic Substances Control. Several years ago, we began coordinating with the Department of Toxic Substances Control on environmental justice issues related to hazardous waste sites in Bayview, Hunters Point, and Treasure Island. In 2022, the Department of Toxic Substances Control referred the All Positives Possible's Program Director, LaDonna Williams, to our Toxics Cleanup Division for assistance with the Vallejo cleanup sites.

During the meeting, staff presented the investigation and cleanup status of 6 sites we oversee located along Springs Road in Vallejo. The sites comprise former dry cleaner and former gas station properties that are currently used for other commercial purposes. Each presentation focused on the type of contamination, the risks and threats to site occupants and surrounding properties, the regulatory status and next steps, and if the responsible parties had applied for funding assistance through the State Water Board's Site Cleanup subAccount Program. At the end of each presentation, staff answered questions and agreed on follow-up actions for the next quarterly update.

Since early 2023, the Toxics Cleanup Division Staff have engaged with All Positives Possible on various environmental and regulatory topics, introduced them to other agency contacts, provided Site Cleanup subAccount Program grant applications, and empowered them to share updates and outreach within their community. Staff helped All Positives Possible evaluate the significance of tap water sample results from homes in Vallejo, Concord, Richmond, and Rodeo collected through collaboration with the San Francisco Estuary Project. Staff have also worked with the Office of Environmental Health Hazard Assessment to help All Positives Possible interpret CalEnviroseen maps that identify California communities that are disproportionately burdened by multiple sources of pollution.

Our public participation efforts align with [State Water Board's Racial Equity Plan](#) (January 2023) Strategic Direction #3 and the actions in our Strategic Workplan and Racial Equity and Environmental Justice Action Plan. We continue to prioritize community engagement through outreach and collaboration with communities like All Positives Possible. We find this collaborative approach benefits Environmental Justice groups and the communities they serve. This relationship serves as a model for future engagement with other communities to drive positive change and advance environmental justice goals throughout our region.

East Bay Consent Decree Stipulated Penalties (Sam Plummer)

In April 2024, U.S. EPA and the Water Board assessed stipulated penalties totaling \$372,876 from East Bay Municipal Utility District (EBMUD), Stege Sanitary District, and the cities of Alameda, Albany, Berkeley, Oakland, and Piedmont. These penalties enforce a Consent Decree that the U.S. District Court entered on September 22, 2014, reached by the Regional Water Board, State Water Board, U.S. EPA, EBMUD, and “Satellites” (i.e., the Cities of Alameda, Albany, Berkeley, Emeryville, Oakland, and Piedmont and the Stege Sanitary District). The Consent Decree set forth various work obligations to address discharges from EBMUD’s three Wet Weather Facilities and sanitary sewer overflows from the Satellites’ collection systems. The Consent Decree also established stipulated penalties for effluent limit violations at EBMUD’s Wet Weather Facilities, sanitary sewer overflows that reach waters of the United States, and any missed sewer rehabilitation work commitments.

The Satellites and EBMUD have generally met the work requirements established by the Consent Decree with one exception noted below, but sanitary sewer overflows continue. U.S. EPA and the Water Board recently assessed penalties, as detailed in the table below, for untreated sewage discharges to San Francisco Bay from July 1, 2021, through June 30, 2023.

Table 1: Stipulated Penalties for Sanitary Sewer Overflows to San Francisco Bay

	Alameda	Albany	Berkeley	EBMUD	Oakland	Stege Sanitary District
# of SSOs	1	1	3	1	67	1
Penalty	\$200	\$25,000	\$600	\$25,000	\$278,200	\$25,000

U.S. EPA and the Water Board also assessed two other stipulated penalties. The first was a stipulated penalty of \$3,000 for one total coliform effluent limit violation at EBMUD’s Point Isabel Wet Weather Facility that occurred during the extreme storm event the San Francisco Bay Area experienced on December 27, 2022, through the New Year. The second was a stipulated penalty of \$15,876 for the City of Piedmont because it missed the Consent Decree’s sewer line rehabilitation requirement by about 10 percent.

Staff Introductions (Eileen White)



Please welcome back David Elias! David retired from the Water Board in 2022 after 22 years of service. David previously worked in: 1) the Land Disposal section of the Groundwater Protection Division regulating landfills and refineries, including soil and groundwater investigation and cleanup; 2) the Watershed Division overseeing construction, industrial, and municipal stormwater permits, completing 401 water quality certifications, and responding to major oil spills as the Water Board lead; 3) the Enforcement Section completing administrative civil liability complaints and orders for all the region's programs, including NPDES wastewater and Caltrans stormwater; and 4) 12 years as the Department of Defense (DoD) section of the Groundwater Protection Division as a Section Leader and Program Manager overseeing staff working on environmental impacts at highly polluted former DoD bases, including every sort of soil, soil vapor, and groundwater cleanup project. David is a wealth of information and experience and we are excited to have him back.

Enforcement Action (Brian Thompson and James Parrish)

The following is a proposed settlement since last month's report. As the proposed settlement is pending and could come before the Board, ex parte communications are not allowed. Please refer to the [Pending Enforcement Liabilities and Penalties](#) webpage for more information on the details of the alleged violations and proposed settlement.

This proposed settlement is currently noticed for a 30-day public comment period. If no significant comments are received by the deadline, the Executive Officer will sign the order implementing this settlement.

Discharger	Violation(s)	Proposed Penalty	Comment Deadline
City of Burlingame and North Bayside System Unit	Discharge limit violations	\$15,000 ¹	May 20, 2024

¹ The penalty would supplement Regional Monitoring Program studies. The Regional Monitoring Program is managed by the San Francisco Estuary Institute to collect water quality information in support of management decisions to restore and protect beneficial uses of the Region's waters.

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 March 14 through April 10, 2024. A check mark in the right-hand column indicates a project with work that may be in the San Francisco Bay Conservation and Development Commission (BCDC) jurisdiction.

Project Name	City/Location	County	May have BCDC Jurisdiction
4018 Sonoma Boulevard Property	Vallejo	Sonoma	
Newell Road Bridge Replacement Project	Palo Alto	Multiple	
Tiburon Main Street Bridge Protection Plan Project	Tiburon	Marin	✓
State Route 12 Major Pavement Rehabilitation Project PM 7.71 to 14.1	Unincorporated	Solano	
Well Wagenet 5 Restoration Project	Unincorporated	Solano	✓
Zone 5 – Embankment Restoration Along Line F-1, 210 Feet Downstream Of Sycamore Street In Newark	Newark	Alameda	
PG&E Boardwalk Access Program	Multiple	Multiple	✓
Belmont Creek Culvert Debris and Sediment Removal Project	Belmont	San Mateo	
East Bay Regional Park District Regional Maintenance and Restoration Activities	Multiple	Alameda, Contra Costa	
Butano Creek Habitat Enhancement at Camp Butano Project	Unincorporated	San Mateo	
Moyers Storm Damage Repair Between 22435 And 22438 Moyers St	Castro Valley	Alameda	
Calero Reserve Pond 17 Desedimentation and Restoration Project	San Jose	Santa Clara	
Interim Corrective Measures to Sea Scout Base Dock	San Francisco	San Francisco	✓
San Gregorio Creek Habitat Enhancement Phase III	Unincorporated	San Mateo	
Marin Water Phase 3 of The Culvert Maintenance and Replacement Project	Multiple	Marin	
Ignacio-Alto-Sausalito 60 kV 07/54 Tower Replacement Project	San Rafael	Marin	✓
San Gregorio Creek Habitat Enhancement at Apple Orchard, Phase 2	Unincorporated	San Mateo	
SFPUC Yosemite Creek Daylighting Project	San Francisco	San Francisco	
Shadow Cliffs Gully Stabilization Project	Pleasanton	Alameda	

Project Name	City/Location	County	May have BCDC Jurisdiction
Valley Oaks	Novato	Marin	
Capwell Bridge Superstructure Replacement Project	Walnut Creek	Contra Costa	
King Street Wingwall Repair	Larkspur	Marin	