

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

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Executive Officer's Report

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Harmful Algal Bloom in San Francisco Bay (Eileen White)

In late July, a harmful algal bloom (HAB) known as a red tide was observed in parts of San Francisco Bay, including Seaplane Lagoon off Alameda, from Emeryville to Albany and in certain parts of Marin County. The species associated with this bloom, [Heterosigma akashiwo](#), can cause water to take on a reddish-brown color and is the same species that resulted in massive fish kills in San Francisco Bay last summer.

Red tides are known to occur off the coast of California, usually from early spring through late summer. They can last days to months, and it is difficult to predict how long they will last due to sunlight, temperature, tidal action, and suspended solids. By early August, the red tide began to dissipate. The total fish deaths reported related to the red tide was 88. Since there are several months of warm weather ahead, it is possible another bloom may form this year.

Heterosigma akashiwo is not known to cause human illness. Nonetheless, the Department of Public Health and Office of Environmental Health Hazard Assessment recommend that people and their pets avoid water contact during dense blooms or discoloration in the water. People exposed to some algal blooms may experience irritation of their eyes, skin, or respiratory systems. Based on this guidance, various agencies have posted signs near affected waters to caution the public to stay out of the water. We publish bloom reports and caution advisories on the [Harmful Algal Bloom Incident Reports Map](#).

Heterosigma akashiwo grows successfully across a range of conditions (temperature, salinity, and light levels). In San Francisco Bay this species has been detected with moderate frequency over the past 30 years, but generally at low abundance until last summer. San Francisco Bay's elevated nutrient concentrations contributed to the bloom's spread in 2022, but since these concentrations have long been elevated and *Heterosigma akashiwo* is somewhat common here, other factors likely triggered the event. Potential factors contributing to last year's algal bloom were many sunny days, low suspended sediment concentration, potentially periods of little wind, and the swimming behavior of this algal species. Although we are not certain what exactly triggered the HAB last summer, San Francisco Bay's high nutrient loads resulted in the algal bloom spreading. Nutrients were the fuel to allow the algae to spread.

In response to the 2022 algal bloom, the Water Board's Surface Water Ambient Monitoring Program, in collaboration with community scientists and agency partners, measured algal toxins, deployed water quality data loggers, and recorded fish kill observations in Lake Merritt. Rebecca Nordenholt and Kristina Yoshida from the San Francisco Bay Water Board prepared an excellent summary interpreting the monitoring results in the [Final Staff Report](#), which is now available on the Water Board's website.

Our Nutrient Management Strategy, a collaboration between scientists, regulators, and dischargers to study potential impacts of nutrients on San Francisco Bay, is funding the San Francisco Estuary Institute to study what causes major algal blooms, including harmful algal blooms. As required by the San Francisco Bay Nutrient Watershed NPDES Permit, municipal wastewater treatment plants that discharge into San Francisco Bay collectively contribute \$2.2 million dollars per year to fund about 80

percent of the Nutrient Management Strategy budget. Continuing these investments will advance our scientific understanding and inform future decision-making. Over the past several years, these investments have improved our capacity to monitor algal blooms as follows:

- Systematic collection of algal toxin data during recurring channel cruises;
- Development of DNA-sequencing techniques for specific algal species;
- Sampling for algal species of concern and their toxins during mapping surveys; and
- Measurement of algal toxins in bivalves at several locations.

We will continue to monitor San Francisco Bay for harmful algal blooms and related water quality impacts and to characterize HABs response to biological, physical, and chemical factors; and identify the factors that contribute most to their expansion and eventual end. Understanding these factors will be increasingly important with climate change because warming waters could lead to more frequent and severe algal blooms in the future.

Nonpoint Source Grant Program (Morgan Williams)

The State Water Resources Control Board Nonpoint Source (NPS) Grant Program provides federal funding to projects that aim to reduce nonpoint source pollution in runoff that flows to the waters of the state. The program favors projects addressing NPS pollution in impaired watersheds and further prioritizes improvements in watersheds with Total Maximum Daily Load (TMDL) requirements. The grants empower local landowners and organizations to directly mitigate a wide variety of NPS pollution sources and improve the quality of their local water bodies.

Water Board staff routinely help facilitate project proposals and manage 8-10 active grant agreements within the San Francisco Bay Region (the region). Our current grantees have been allocated a total of \$3.85 million in Clean Water Act 319(h) funding and are providing an additional \$2.56 million in match funding. This funding implements a diverse set of projects including post-fire erosion control, streambank stabilizations, riparian habitat enhancements, improving or decommissioning of dirt roads in rural areas, and agricultural management practices for controlling pathogens and sediment.

Statewide grant funds are awarded annually and this year, of the eight awarded projects, two will be implemented within the region. Napa County Department of Public Works will focus on replacing water conveyance structures within Campbell Creek providing improved fish passage and reduced erosion and sedimentation. Marin Resource Conservation District will provide continued assistance to the region's local ranchers seeking to implement facility improvements and management practices that protect water quality.



Before (left) and after (right) photos of an improved heavy-use area on a livestock facility. A livestock pathway was upgraded from a dirt walkway to an impermeable concrete path with side walls to prevent pathogen inputs to an adjacent tributary to Laguna Lake in Marin County.



During construction (left) and after (right) photos of a post-fire emergency response installation of an erosion control blanket and willow sprigging within Sugarloaf Regional Park in Sonoma County.

Remediation Progress at SLAC National Accelerator Laboratory (David Tanouye)

In late June, we approved the Final Five-Year Review Report (Five-Year Review) for ongoing remediation efforts at the SLAC National Accelerator Laboratory, which is an accelerator and particle physics, particle astrophysics, and photon science research facility in unincorporated San Mateo County. SLAC is located on property owned by Stanford University and leased to the U.S. Department of Energy.

The Regional Water Board is the primary regulatory agency overseeing soil, groundwater, and soil vapor cleanup at SLAC as prescribed by Site Cleanup Requirements Order R2-2009-0072. This is the second Five-Year Review for SLAC, encompassing monitoring data up to July 2022. The Five-Year Review requirement necessitates a technical assessment that demonstrates the effectiveness of controlling contaminant migration and safeguarding human health and the environment. The Five-Year Review must compare contaminant concentration trends against cleanup standards; assess cost effectiveness; propose additional remedial actions to meet cleanup standards, if necessary; and consider alternative cleanup strategies if cleanup standards are not projected to be met within a reasonable timeframe.

There are four operating units (OUs) at SLAC (see Figure 1), each undergoing a process of environmental investigation, remediation, and monitoring with the goal to make them suitable for unrestricted future uses, including residential. The Five-Year Review documents how groundwater and soil vapor remedies at SLAC continue to remain protective and have effectively reduced contaminant concentrations with several areas already reaching the risk-based remedial goals. Remediation performed during this Five-Year Review period also included soil excavations and installation of a hydrodynamic sedimentation unit to remove residual polychlorinated biphenyl-contaminated sediment from stormwater. We concurred with the Five-Year Review recommendations, which included further remediation and/or monitoring in some investigation areas and status changes to “no further action required” in others.

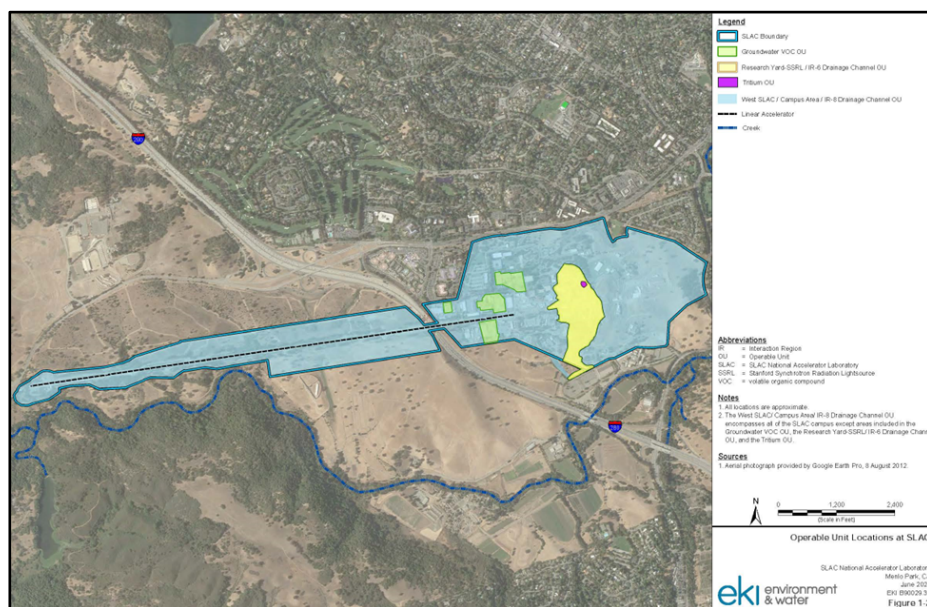


Figure 1. Map of Operable Unit locations at SLAC National Accelerator Laboratory

Inspection of Cargill Facility Ponds (Brian Wines)

Water Board staff recently spent two days in the field with Cargill and San Francisco Bay Conservation and Development District (BCDC) staff inspecting ponds used in Cargill's salt-making operations at facilities in Newark and Fremont. The inspection purpose was to observe the condition of pond berms after the significant rains over last winter and to learn about the activities and maintenance work that are conducted to maintain the integrity of the berms and pond system.

On June 7, staff visited the Cargill ponds that store bittern, or mixed sea salts. Bittern is the mostly unusable end product of the salt making process and has been accumulating for years in the bittern ponds. Cargill is currently evaluating and planning a project to dispose of accumulated bittern from the ponds by transferring it over time to the East Bay Dischargers Authority outfall. The bittern ponds are surrounded by tidal marshes on three sides, which are well vegetated with pickleweed and provide at least 100 feet of buffer between the pond berms and the open waters of San Francisco Bay. During the rainy season Cargill implements a rain management plan that results in routing water, using weirs and gravity flow, to maintain a minimum freeboard in the bittern ponds of 1.5 to 2.0 feet. Staff observed locations where berm repairs and maintenance have been made over the years and learned about the types of conditions that make maintenance necessary, such as the need to reinforce berm sections where seeps have developed or where wave action has caused berm erosion. Based on conditions observed during the site visit, the ponds appear stable and well-maintained. We concur with a recent BCDC request for Cargill to perform geotechnical investigations to evaluate the stability of the bittern pond berms in a major seismic event. The photos below show the bittern ponds and berms.



On August 2, staff participated in an inspection of the outer berms of the Cargill Salt Ponds at Plant 1, between the Dumbarton Bridge and the mouth of the Lower Alameda Creek Flood Control Channel. During the inspection staff observed the Bay-side berms of the Plant 1 salt ponds are bordered by remnant salt marshes that are actively eroding into the Bay. The intact surfaces of the salt marshes are well vegetated with pickleweed,

but at some locations, the marshes have completely eroded and the berms are exposed to wave action. The remaining portions of tidal marsh have remnants of rock riprap along their outer edges, but staff observed areas of active erosion between the outer remnant riprap and the salt pond berms in the remaining marshes. The operation and maintenance of these berms is authorized under a Clean Water Act section 401 water quality certification, which staff and Cargill are currently working to reissue. Ongoing coordination with Cargill, BCDC, and our partner agencies will continue to ensure appropriate maintenance activities and mitigation are proposed to minimize and compensate for impacts to the bay and tidal marshes due to ongoing work needed to ensure berm stability.

Staff Introductions (Eileen White)



A warm welcome to Paola Castellanos, Division Manager for the Management Services Division. Paola has a Bachelor's Degree in French and International Studies from Saint Mary's College of California and a Master of Business Administration from U.C. Davis. Her leadership experience includes work with *Fair Trade USA*, the *Rising Sun Center for Opportunity* in Oakland where she led the recruitment efforts for the *Climate Careers Youth Program*, the Diversity Internship Program at *Peralta Community College* and the Oakland Chamber of Commerce and Pacific Community Ventures where she matched underserved entrepreneurs with small business loans and pro bono business mentors to expand operations, create jobs and expand economic development. Paola grew up in Mexico City and has lived in the Bay Area for the past fifteen years.



We are excited that Deirdre Ryan has joined the Enforcement Section in the NPDES Wastewater and Enforcement Division. She has experience and three science-based degrees that will help serve the Water Board's regulatory programs in many ways. She's worked in the horse industry and earned a Bachelors of Science in Animal Science from Cal Poly; she worked in the wine industry as an environmental compliance manager and obtained a Masters of Science in environmental science from the University of Wollongong, Australia. Deirdre has also conducted research on sea level change at various locations around the world and has completed a Doctorate of Philosophy (PhD) in coastal geomorphology at the University of Wollongong. Deirdre comes to the Water Board after spending years abroad in Australia, Germany, and Italy, and is excited to start this new stage of her career getting reacquainted with her home state, where she loves to learn about and cultivate native plants.



Joannie Wang joined the North Bay Section of the Toxics Cleanup Division as a Water Resource Control Engineer. She graduated this past year with a Bachelors of Science in Environmental Engineering at the University of Delaware. During her time in her undergraduate studies, she conducted research on wastewater toxicity and completed a groundwater remediation capstone project. She recently moved to the Bay Area after living in Delaware her whole life and is excited for what both her new position and location have to offer. In her free time, Joannie enjoys thrifting, cooking, and yoga.



Welcome Kristina Femal to the Water Board. She joins the NPDES Wastewater and Enforcement Division as a Scientific Aid. Kristina has previously worked in water regulation with the city of Houston and the State of Wisconsin. She received a Bachelor's of Science in Hydrogeology from the University of Wisconsin-Stevens Point. Kristina will be helping out with administrative and technical projects. She's originally from Wisconsin and lived in Texas for 18 months

before moving to San Francisco last year. Kristina enjoys exploring the area, weightlifting, visiting her relatives in Iceland, and making zero-waste, plant-based meals.



We are excited to re-introduce D'Andre "DJ" Alejandro. DJ previously worked in our Planning and TMDL Division as a Graduate Student Assistant. He now joins our NPDES Wastewater and Enforcement Division as a Scientific Aid, where he will assist in implementing our NPDES, Pollution Prevention, Pretreatment, and Enforcement programs. He is experienced in organizing and analyzing large data sets, conducting field surveys, and researching

contaminants of emerging concern. As such, DJ has managed multiple projects, including creating a climate impact reference library for our staff, and analyzing microplastics in coastal fish species for his master's thesis. That thesis is helping him earn a Master of Science degree in Interdisciplinary Marine & Estuarine Science from San Francisco State University. He is interested in learning more about wastewater regulations, permitting, and exploring how we can manage contaminants of emerging concern. Outside of work, DJ enjoys spending time with his 5-year-old Australian Shepherd, playing ultimate frisbee, and being a professional eSports caster for the Pokémon Company — one of the biggest entertainment industries in the world!

Enforcement Actions (Brian Thompson and James Parrish)

The following table shows a proposed enforcement action since last month's report. Because the proposed settlement is pending and could come before the Regional Water 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 settlements.

Proposed Settlement

The following has been noticed for a 30-day public comment period. If no significant comments are received by the deadlines, the Executive Officer will sign an order implementing this settlement.

Discharger	Violations	Proposed Penalty	Comment Deadline
Lehigh Southwest Cement Company	Potable Water Spill	\$600,310 ¹	September 21, 2023

¹ Includes \$300,000 for a Supplemental Environmental Project to restore a segment of Permanente Creek to its natural condition by removing a historical in-stream concrete retention dam.

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 July 15 through August 16, 2023. 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
Old Canyon Road Bridge (Stanley Bridge) and downstream creek embankment on Alameda Creek	Fremont	Alameda	
San Lorenzo Creek (Zone 2 Line B) Emergency Bank Repair Behind 1976 Wingate Way	Hayward	Alameda	
Lake Del Valle Spillway Vegetation Removal	Livermore	Alameda	
Roadway Edge Stabilization for Golf Links Road	Oakland	Alameda	
Alameda Creek Diversion Dam Recovery, Repair, and Restoration	Unincorporated	Alameda	
Dagnino Pond One Desedimentation and Restoration	Unincorporated	Alameda	
Dagnino Pond Three Desedimentation and Restoration	Unincorporated	Alameda	
Dagnino Pond Two Desedimentation and Restoration	Unincorporated	Alameda	
Pleasanton Ridge Pond 026 (PRPND026) Restoration	Unincorporated	Alameda	
Pleasanton Ridge Pond 029 (PRPND029) Restoration	Unincorporated	Alameda	
Vine Hill Levee Repair	Martinez	Contra Costa	
City of Pittsburg Riverview Park Breakwater Rip-Rap Maintenance	Pittsburg	Contra Costa	✓
City of Pittsburg Riverview Park Fishing Pier Repair	Pittsburg	Contra Costa	✓

Project Name	City/Location	County	May have BCDC Jurisdiction
Village West Homeowners Association Emergency Creek Bank Stabilization	Fairfax	Marin	
Ignacio-Alto Tower Relocation	Larkspur	Marin	✓
Larkspur Marina Maintenance Dredging (Episode 2)	Larkspur	Marin	✓
SLP 340 Removal	Mill Valley	Marin	
Zone IV Pile Replacement	Mill Valley	Marin	✓
Ahmann River Front Parcel	Napa	Napa	✓
Geotechnical Borings for the Hyde Street Pier Rehabilitation	San Francisco	San Francisco	✓
1550 Bernal Avenue Emergency Creek and Structure Foundation Stabilization	Burlingame	San Mateo	✓
Pilarcitos culvert replacement	Half Moon Bay	San Mateo	
San Carlos Sediment Removal	San Carlos	San Mateo	✓
Canada Road Emergency Road Slip-Out and Culvert Repair	Unincorporated	San Mateo	
Los Gatos Creek Watershed Maintenance Program Update	Los Gatos	Santa Clara	
San Francisquito Creek Bridge Bank Stabilization	Palo Alto	Santa Clara	
Emergency Mockingbird Lane Outfall Repair at Stevens Creek	Sunnyvale	Santa Clara	
445 West I Street Dock Piling Repairs	Benecia	Solano	✓
Green Valley III Apartments	Fairfield	Solano	
Suisun Marsh Salinity Control Gates Refurbishment Project-Suction Dredging Activities	Unincorporated	Solano	✓
Van Sickle Island Emergency Levee Repair	Van Sickle Island	Solano	✓
Twin Vista Levee Emergency Repair	Unincorporated	Sonoma	✓