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

MEETING DATE: December 13, 2017

ITEM: **4**

SUBJECT: **EXECUTIVE OFFICER'S REPORT**

CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY
SAN FRANCISCO BAY REGIONAL WATER QUALITY CONTROL BOARD

EXECUTIVE OFFICER'S REPORT: *December 2017*

A Monthly Report to the Board and Public

NEXT MEETING: December 13, 2017 **WEBSITE:** http://www.waterboards.ca.gov/sanfranciscobay/

Items in this Report (Author[s])

North Bay Fire Response Activities (Naomi Feger)

At the November Board meeting, I shared with the Board our on-going and planned fire response activities. That same week we received a Mission Task from the California Office of Emergency Services (CalOES) for the Nuns Fire, asking us to conduct assessments in the Sonoma Creek Watershed to identify emergency measures that would address potential polluted stormwater discharges. The effort began with conducting field assessments in the watershed to make recommendations for best management practices (BMPs), predominantly straw waddle installation, to manage debris from burned structures discharging to sensitive habitat in our creeks. We submitted the field assessment information to CalFIRE who provided resources (equipment and personnel, including California Conservation Corps staff) to install the BMPs (Figure 1). We also inspected some of the work completed by CalFIRE crews out in the field. This has been predominantly a Planning and Watershed divisions' coordinated response effort. Xavier Fernandez led this effort with support from Graham Brown, Michelle Rembaum, Liz Morrison, Agnes Farres, Nicole Fairley, Yan Nusinovich, Maya McInerney, Rene LeClerc and our Watershed Stewards Program (WSP) interns, Elisabeth Beckensten and Sofia Morales-Leon. The Mission Task ended by Thanksgiving and CalFIRE has stepped down its efforts.

We will continue to identify protective work needed in the Sonoma Creek Watershed, working directly with Sonoma County and the County-led Watershed Task Force as well as coordinating with the North Coast Regional Water Board. We are also working with the

County to identify longer-term work needs as part of the County's application to FEMA for resources. One of the other issues we have been advocating for is better coordination with the U.S. Army Corps of Engineers on the prioritization of debris removal; this is critical for ensuring effective use of all our resources. We understand that CalOES is taking the lead on addressing this issue.

Figure 1. *Perimeter controls installed around burnt structures and debris in the Sonoma Creek Watershed*

In a separate effort, we received approval of a request to the State Water Board for $250,000 from the Cleanup and Abatement Account (CAA) for equipment and resources to do high priority protective work. Given the anticipated rains, the threat to water quality from burned structures, and the time it will take for debris removal to be completed, we initiated work with a local watershed partner, the Sonoma Ecology Center, to install BMPs at high priority sites. Kevin Lunde worked with State Board staff to prepare the CAA request and will handle the administrative aspects of its implementation. The CAA resources will pay for equipment and installation costs and offset some of our fire-related water quality monitoring costs. Staff working on the assessments has been and will continue to coordinate with the Sonoma Ecology Center on prioritization of site work and coordination with the County and CalFIRE.

We also reported at the November Board meeting that we are conducting water quality monitoring in both the Sonoma Creek and Napa River watersheds. We have collected monitoring data from two storm events, both of which occurred late in the evening and into the early morning hours. Kevin Lunde has been coordinating this effort and our SWAMP staff, Rebecca Nordenholt, Kristina Yoshida, and Kenneth Norberg, as well as our WSP interns, conducted the sampling. We anticipate conducting at least one more sampling event and are

planning on waiting for a larger storm event to go back out into the field. We will evaluate the data and the utility of using the data to assess BMP effectiveness. Some of the CAA resources can also be used to support monitoring of drinking water reservoirs. We plan on working with the State Board's Division of Drinking Water to support additional monitoring as needed.

As noted at the November meeting, we have been reviewing our regulatory programs to provide appropriate relief to parties impacted by the fires who are subject to Board orders or actions. We are providing additional time for impacted parties subject to the State's Industrial General Stormwater Permit to submit required reports. We have also notified parties required to seek coverage under the Board's general waste discharge requirements for vineyards adopted last July that parties impacted by the fires have additional time to file for coverage and verify their farm plans and that all parties have an additional year to develop their monitoring programs and submit monitoring results.

In addition to the activities discussed, we will continue to coordinate with other affected counties, including Napa County and Solano County, and coordinate with our Central Valley Regional Water Board counterparts and our other watershed partners, including the local resource conservation districts. We are already engaging in providing information about permitting for reconstruction post-fire and will continue that effort. We also anticipate that there will be grant opportunities under the federal nonpoint source program made available to address fire-related water quality impacts. We plan on providing regular updates on all of these activities to the Board. We are proud of our staff members that were able to mobilize quickly and adapt to a constantly changing response environment in order to get all this work accomplished.

Vapor Intrusion Mitigation for Redevelopment Sites in Milpitas (Nathan King and Jeff White)

Water Board staff are overseeing two large residential redevelopment projects being constructed over groundwater plumes of chlorinated solvents originating from offsite source properties. The redevelopment projects are called Milpitas Station and SummerHill. The contaminant source properties, which are former industrial facilities, are called Jones Chemical and 450 Montague (Figure 2). Due to the threat of chlorinated solvent vapor intrusion from the groundwater plumes, active vapor intrusion mitigation systems (VIMS) are needed to protect future residents as part of both redevelopments.

Jones Chemical operated a chemical packaging and distribution facility at its Milpitas location from the 1960s through 1999. In 1982, an aboveground storage tank containing 4,000 gallons of chlorinated solvent (trichloroethene, also known as TCE) exploded, releasing its contents and contaminating the soil, soil gas, and groundwater of on- and offsite properties. Jones Chemical has completed extensive remediation, including soil excavation, groundwater extraction and remediation, and soil vapor extraction; however, the plume currently extends 1,800 feet to the west, beneath Milpitas Station and its sub-projects, which are in different stages of development (Figure 3). When complete, Milpitas Station is intended to include

approximately 1,100 residences. The contaminant source at the former 450 Montague site occurred from a former chlorinated solvent vapor degreaser. The solvent plume currently extends 300 feet west beneath the planned SummerHill redevelopment, consisting of approximately 720 apartments.

Figure 2. *Jones Chemical and 450 Montague source sites with offsite, contaminated Milpitas Station and SummerHill redevelopment sites*

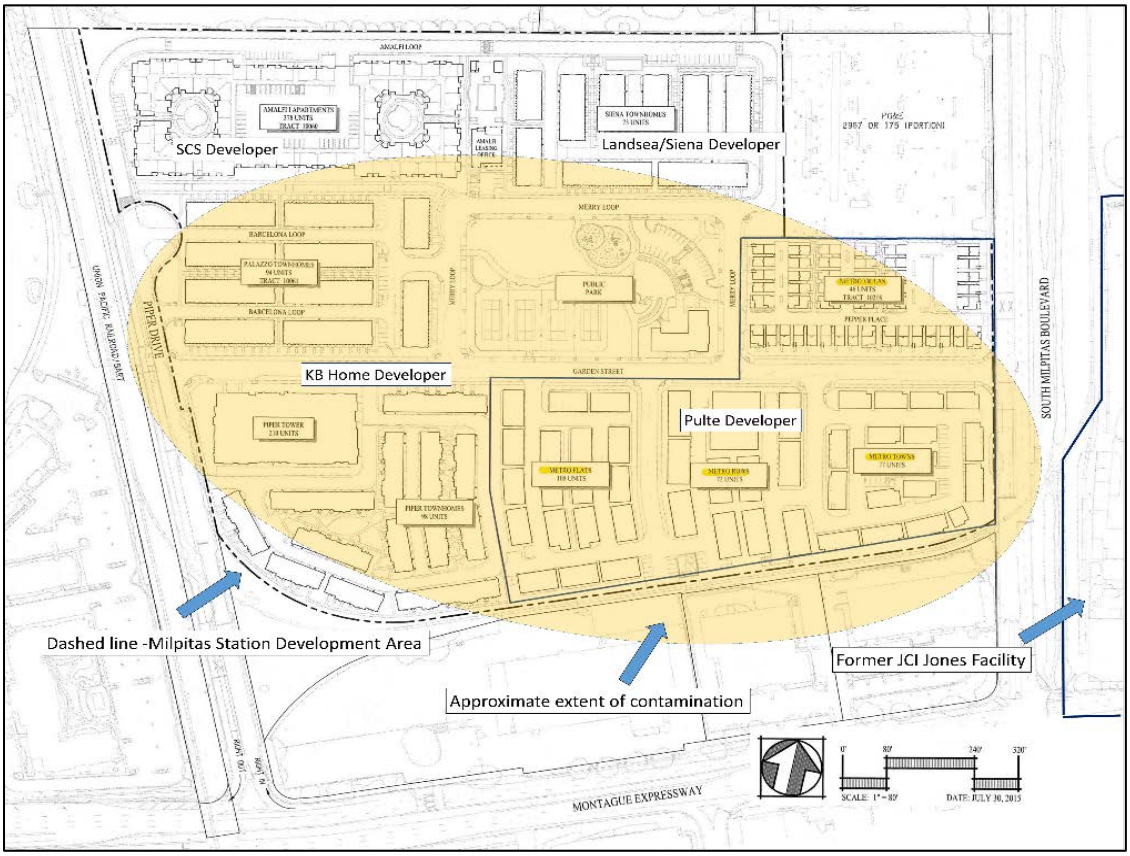

Figure 3. *Milpitas Station showing approximate extent of contamination from Jones Chemical Site*

We have had fruitful discussions with the developers of Milpitas Station and SummerHill about the necessity of active VIMS to address vapor intrusion risks. The developers, while at first hesitant, have agreed that active VIMS would not be burdensome to future homeowners and would provide better protection for residents. Staff has also engaged the City of Milpitas Building Department to inform them of our requirements for active VIMS. The City of Milpitas Building Department approves and certifies the design of mitigation systems, and ultimately issues the Certificate of Occupancy.

Active VIMS rely on mechanical means, such as fans and blowers to pull accumulated vapors from beneath a building foundation or slab before the vapor can enter the building, whereas passive systems, which are often the starting point for vapor intrusion mitigation discussions, do not use force, but instead rely on an open conduit to the outside air for sub-slab ventilation. In our experience, the performance of passive sub-slab mitigation systems installed to prevent vapor intrusion into overlying residences has a high degree of uncertainty. This is because some passive systems, consisting of vented gravel with a plastic vapor barrier beneath the foundation, are subject to puncturing and short-circuiting during installation or future home remodeling, potentially allowing vapors to intrude into the living space. As a result, passive systems require ongoing contaminant sampling and analysis to demonstrate protectiveness. Active VIMS reduce uncertainty and provide the greatest degree of protectiveness. Active VIMS may even be less expensive over the long term due to the need for ongoing analytical sampling and analysis with passive systems.

In an active VIMS, the measurement of the pressure difference between the slab and the structure above is used to demonstrate effectiveness. After preoccupancy indoor air testing is complete and residences are shown to be safe to occupy, continued monitoring is required, which consists of monitoring the pressure difference between the slab and the structure above, to demonstrate continued protectiveness. This can easily be accomplished by future homeowner associations or property management companies and does not require ongoing analytical sampling and analysis.

Moving forward, we are coordinating with the dischargers responsible for cleanup at the source properties that have impacted the offsite developments. Our intent is to bring updated cleanup orders to the Board to require Jones Chemical and 450 Montague to accelerate cleanup beneath the developments and conduct soil-gas monitoring to measure effectiveness. Ultimately, reducing soil gas concentrations below cleanup levels could trigger active VIMS deactivation at the development sites and provide an additional cleanup incentive to the dischargers who may ultimately be financing the vapor-intrusion mitigation systems.

Fairfield Dry Cleaners Joint Cleanup (Bill Cook)

As a followup to my November EO Report item on this topic, I am happy to report that the dischargers at a trio of dry cleaner sites in downtown Fairfield recently signed a proposed settlement agreement that will allow a unified cleanup approach. This action was taken following our September 29 Water Board staff letter that approved the unified cleanup plan, rescinded the Water Board's 2012 investigation orders, and included a "no enforcement" statement requested by the parties. The unified cleanup plan includes three methods to address solvent contamination in soil and groundwater. The dischargers will implement the cleanup plan over a five-year period, which will be followed by two years of verification monitoring. Signing the settlement agreement starts the clock on the cleanup schedule.

At the November Board meeting, Board members asked if anyone is currently being exposed to contaminants at the trio of sites, and we indicated they are not. At our direction, the dischargers prepared risk assessments for all three sites, as summarized in the table below:

Media (concern)	**Status**
Soil (direct exposure to humans)	No exposure since land use is commercial and soil contamination is not on surface
Soil vapor (vapor intrusion into buildings)	Prior exposure has been eliminated by active mitigation using increased building ventilation
Groundwater (ingestion of well water)	No exposure since there are no supply wells in the area of groundwater contamination
Groundwater (migration to surface water)	No exposure since groundwater contamination does not reach any surface water bodies

We will monitor the parties' implementation of the approved cleanup plan. We retain the authority to issue cleanup orders if the parties fail to implement the cleanup plan and schedule. We will update you if there are any significant developments at this trio of sites.

Update on Harmful Algae Blooms in San Francisco Bay Area (Carrie Austin)

Cyanobacteria and other harmful algae blooms (HABs) have become more frequent across the State and in freshwaters in our region. Carrie Austin, our HABs Coordinator, is responsible for coordinating notification of water body and recreational managers, local public health agencies, and drinking water purveyors when a cyanobacteria bloom is reported.

This year 18 blooms were reported directly to us or through a web-based portal entitled "Are Harmful Algal Bloom Affecting Our Waters?" This was greater than the number of reports we received last year (10). The web portal provides information on how to report a bloom, where blooms are occurring in the State, and resources on how to identify a bloom and how to protect public health while recreating in waters with visible algae. In addition, for those interested in sampling, the portal provides information on how to develop a monitoring plan and identify labs for sample analysis, as well as training material from webinars and presentations. The portal can be accessed at: http://www.mywaterquality.ca.gov/habs/

The East Bay Regional Park District (EBRPD) has been a leader in monitoring for HABs. The graphic below summarizes "caution" and "danger" postings in 2017 at its swim beaches and popular dog-walking locations where water contact recreation is not permitted. EBRPD treated Lake Temescal in October by harvesting algae and aquatic plants, applying alum treatment to lock up phosphorus in bottom sediments, and dredging above-reservoir sediment basins. The Water Board supported EBRPD with water quality monitoring equipment to look for possible changes in pH as a result of alum treatment. EBRPD plans additional alum treatment in Temescal in spring 2018.

Postings for CyanoHABs at EBRPD Open-Water Swim Beaches (2017)											
Swim Area	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**
Crown (beach on SF Bay)											
Cull Canyon											
Miller/Knox (Keller beach on SF Bay)											
Quarry (Horseshoe Lake)											
Temescal											
Tilden (Lake Anza)											

Postings at EBRPD Lakes without Water Contact (2017)											
Swim Area	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**
Lake Chabot											

Shadow Cliffs Arroyo											

Legend
Caution
Danger, closed to contact

The table below summarizes the confirmed and suspected cyanobacteria blooms reported in the San Francisco Bay Region in 2017, through November (excluding EBRPD – see above):

Bloom Duration	Report Name	Bloom Status
Department of Fish and Wildlife (CDFW)		
June – current	#1577: Napa-Sonoma Wildlife Marshes; Napa Huichica Creek Unit, Pond #8	New bloom; two dog deaths in late June; these were the only dog deaths reported in our Region in 2017. Water Board sampled for toxins in July; CDFW posted danger sign; we are coordinating with CDFW and re-sampled, but toxins and algal mats were still present in November.
City of San Jose		
January – current	#1549: Lake Cunningham	On-going, long-term bacteria and bloom problem in Lake Cunningham. City samples regularly for bacteria and toxins and posts "caution" or "lake closed" signs.
August – current	#1640: Lake Almaden	Lake Almaden has for many years been closed to fishing due to high levels of mercury in fish and closed to wading and swimming due to high bacteria levels. In August, it was closed to paddle boating due to toxins.
City of Novato		
August – current	#1661: Scottsdale Pond	Similar situations occur every few years at Scottsdale Pond, typically during periods of drought or particularly warm summers. City sampled for toxins, posted caution signs, installed two aeration pumps, and announced bloom through social media.
Suspected blooms were reported in several other locations; staff sampled for toxins in some, and, in others, we relied on visual assessment to determine a low risk of toxin-producing HABs.		

In-house Training

Our next in-house training topic is effective negotiation and will be held in January 2018. Brownbag seminars this month included a presentation from staff on groundwater monitoring efforts in California. This presentation covered a range of topics including the Groundwater Ambient Monitoring and Assessment Program status and updates, as well as the Source Water Protection group's efforts at the Water Boards throughout the State.

Staff Presentations

On November 2, Tamarin Austin, Kevin Brown, Celina Hernandez, Ron Goloubow, Cheryl Prowell, Michael Rochette, John Wolfenden, and Ralph Lambert participated in a one-day Groundwater Resources Association (GRA) symposium in Concord that focused on the investigation and remediation of chemical releases from dry cleaner sites. Consultants, attorneys, and regulators gave presentations with an emphasis on updates to assessment and remediation technologies since the last GRA dry cleaner symposium in 2012. There were also sessions on vapor intrusion and mitigation; the role of leaking sanitary sewer lines; legal issues and funding mechanisms, including a keynote presentation on the Site Cleanup Subaccount Program from Kathryn Dominic of the State Water Board; and a closing panel discussion. Cheryl co-presented with Claudio Sorrentino of the Department of Toxic Substances Control on the creation of new joint guidance to evaluate vapor intrusion. Kevin was an integral part of the planning committee and moderated the legal issues and funding mechanism session where Tamarin gave an excellent talk entitled *Who is a Discharger?* Over 150 attendees, numerous sponsors, and exhibitors helped to make the event very successful!

The week of November 6, Keith Lichten chaired the inaugural national conference on the operation and maintenance of stormwater control measures, sponsored by the Environmental and Water Resources Institute of the American Society of Civil Engineers. The conference attracted more than 250 participants and addressed issues relating to the operation and maintenance of green and gray infrastructure, including life cycle cost analysis, asset management, design with maintenance in mind, management of accumulated pollutants, and the developing National Green Infrastructure Certification Program. Participants included municipal staff, academics, consultants, and regulators, as well as the leads for the City of Philadelphia's green infrastructure program and representatives from New York, Los Angeles, San Francisco, and the Chinese Sponge City initiative.

On November 10, I gave a talk to SPUR's Urban Infrastructure Council - Silicon Valley (UIC-SV) in San Jose entitled, "Rebuilding Infrastructure while Protecting and Restoring the Bay." UIC-SV is a select group of SPUR business members who meet monthly to discuss and promote investments in high efficiency infrastructure for the Bay Area. I discussed the Water Board's regulatory programs that interact with infrastructure projects, described our efforts to support green infrastructure development, encourage multi-benefit project development, and develop permitting efficiencies that accelerate project implementation while ensuring water quality protection. I encouraged all entities involved in building and maintaining infrastructure to engage with regulatory and resource agencies early in their project planning process.

On November 13, Naomi Feger participated on a panel at a Bay Planning Coalition workshop to discuss dredged material reuse and sea level rise. She presented information on the threat of sea level rise, the need for adequate planning, our efforts working with the San Francisco Estuary Institute to identify shoreline adaptation strategies, and opportunities for beneficial reuse of dredged sediments. She also discussed opportunities to engage the Water Board on policy changes needed to address the impacts of climate change. The workshop included

updates on sites appropriate for the beneficial reuse of dredged material, an update from the Coastal Conservancy on Measure AA, and a panel discussion of permitting hurdles.

On November 14, Keith Lichten presented at the Permeable Pavements Road Map Workshop 2017, a national workshop organized by the UC Davis Pavement Research Center and the National Center for Sustainable Transportation. He spoke on the role of stormwater regulation and water quality goals in influencing permeable pavement design and implementation and joined speakers including Mike Carlson of Contra Costa County and Janet Attarian, the current Deputy Planning Director for the City of Detroit and former lead for the City of Chicago's green infrastructure program.

Enforcement Actions (Mary Boyd and Brian Thompson)

The following table shows settled penalty actions since last month's report. In addition, proposed and settled actions are available on our website at:

http://www.waterboards.ca.gov/sanfranciscobay/public_notices/pending_enforcement.shtml

Settled Actions
On behalf of the Board, the Executive Officer approved the following:

Discharger	Violation(s)	Imposed Penalty	Supplemental Environmental Project
Vallejo Sanitation and Flood Control District	Effluent limit violations	$6,000	$3,000
Hibiscus Properties, LLC	Effluent limit violation	$3,000	
Hanover R.S. Construction	Effluent limit violations	$12,000	
SMI Holding, LLC	Effluent limit violations	$12,000	$6,000
East Bay Municipal Utility District	Unauthorized discharge of chlorinated potable water resulting in fish kill	$893,190	$382,095
Browning Ferris Industries	Effluent limit violations	$9,000	$4,500

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 October 11 through November 7, 2017. 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
Encinal Boat Launch Ramp Rehabilitation	Alameda	Alameda	✓

Concord Bridge Repairs	Concord	Contra Costa	
Derelict Barge Removal	Martinez		✓
Lower Walnut Creek Restoration	Martinez		✓
Canyon Road Bridge	Moraga		
7299 Lucas Valley Rd. Debris Removal	Nicasio	Marin	
North Slough Lombard Crossing Creek Maintenance	American Canyon	Napa	
Mission Bay Ferry Improvements and Dredging	San Francisco	San Francisco	✓
Atherton Creek Bank Stabilization	Atherton	San Mateo	
Oyster Point Development Phase 1C	South San Francisco		✓
Palo Alto Baylands Raising the Boardwalk	Palo Alto	Santa Clara	✓
Cunningham Flood Detention Facility Flood Control Construction	San Jose		
Chevron Pipe Line Repair	Birds Landing	Solano	✓
I-80 Express Lane Road Improvements	Fairfield		
OEA Aerospace Drilling Project - Potrero Hills Facility	Fairfield		✓
Vallejo Yacht Club Channel Dredging	Vallejo		✓
Vallejo Yacht Club Maintenance Dredging	Vallejo		✓