

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

MEETING DATE: March 14, 2018

ITEM: **4**

SUBJECT: **EXECUTIVE OFFICER'S REPORT**

EXECUTIVE OFFICER'S REPORT: *March 2018*

A Monthly Report to the Board and Public

NEXT MEETING: March 14, 2018

WEBSITE: <http://www.waterboards.ca.gov/sanfranciscobay/>

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Removal of Unauthorized Dam in the Coyote Creek Watershed (Jack Gregg)

The Board, through its cleanup and abatement authority, has successfully directed the removal of an unauthorized dam from private property surrounded by Henry Coe State Park, east of Morgan Hill, in coordination with the State Department of Fish and Wildlife and the State Board's Division of Water Rights.

The Department of Fish and Wildlife notified Board staff about the dam construction on an unnamed tributary of the East Fork of Coyote Creek in July 2013. Staff inspected the site in August 2013 and documented the unauthorized excavation of at least 3,500 cubic yards of soil and bedrock and in-progress construction of a dam about 120 feet long, 80 feet wide, and 10 feet high (Figure 1).

Board staff coordinated its response with the Division of Water Rights and issued a Cleanup and Abatement Order (CAO) to the landowners in October 2013. The CAO required stabilization of the fill material for the pending wet season, removal of the unauthorized fill, and restoration of the creek channel, which included red-legged frog habitat. Since the landowners had "no dam permit," it took time for them to obtain a biological opinion and permit approvals from the agencies overseeing the instream work (including water quality certification from the Board). To address delays and looming CAO deadlines, the Board amended the CAO in 2015 to include deadlines tied to the first viable construction season. Dam removal and restoration started in 2016.



Figure 1. Approximate extent of excavation (dashed area shaded yellow) to generate material for dam construction (solid area shaded orange).

Staff inspected the site on November 1, 2017, and confirmed that the dam had been removed and that restoration was in progress, which included installing erosion controls to stabilize the soil, planting juvenile trees, and spreading native plant seeds to revegetate disturbed areas. Figure 2 shows the former footprint of the dam after removal. Restoration work is scheduled to continue for the next five years. Monitoring is needed to confirm that the slopes become vegetated, native tree plantings survive, and the creek bed functions adequately.



Figure 2. Location of unauthorized dam after removal, as seen during November 1, 2017, site inspection. The dashed yellow line shows the approximate height of the dam prior to removal.

Petroleum Impacts at Yerba Buena Island (Myriam Zech and Katrina Kaiser)

Treasure Island Site YF3 is on the north shore of Yerba Buena Island (YBI) directly across from the Treasure Island marina within Clipper Cove (Figure 3). YBI is a 147-acre island connected to Treasure Island (TI) by a causeway and is the place where the east and west spans of the Bay Bridge connect. Together, both islands make up the former Treasure Island Naval Station.



Figure 3. Map View of Yerba Buena Island with Site YF3 and Clipper Cove

Site YF3 was formerly used as a fueling depot for Navy vessels; six main fuel lines were installed on YBI as early as the 1940s to transport gasoline, diesel, bunker fuels, and other petroleum products. It also included pipelines, a dock, and two aboveground petroleum storage tanks for heating the bunker fuel, which would otherwise be too viscous to flow. Most of the infrastructure is now gone, but there have been observations of petroleum sheen in the Bay just below the water surface and strong hydrocarbon odors within the intertidal shoreline area of Site YF3. Metal and concrete debris also remains (Figure 4). Since 1994, the Navy has investigated and evaluated the site, which was necessary to determine the extent of petroleum fuel impacts and the risk posed to aquatic organisms in this intertidal shoreline area.



Figure 4. *The Intertidal Shoreline of Site YF3*

The evaluation of risks due to contaminant spills and leaks in the nearshore environment is notoriously difficult and costly. This is due to complications of the tidal mixing zone, which tends to dilute and disperse pollutants, and due to uncertainties about the specific location(s) where groundwater actually discharges to surface water.

In 2014, the Navy completed an ecological risk assessment to determine if cleanup was necessary. Board staff identified data gaps that required further assessment of tidal mixing, potential for ongoing discharge to the Bay, and the risks to aquatic organisms. Our primary concerns were that the tidal mixing in the shoreline was not properly evaluated because pore-water in the shoreline sediments was not sampled and that the risks from petroleum metabolites, which are the weathering products of petroleum hydrocarbons, were not assessed.



Figure 5. Pore-water sampling with Trident Probe

The 2017 report did not satisfy our concerns regarding a complete evaluation of contamination in sediment and pore-water of the tidal mixing zone and assess what source control measures could be taken to limit the discharge to the Bay and risks to aquatic life. The points of contention are two-fold:

First, we question the assumed toxicity values the Navy used for petroleum hydrocarbons and metabolites because we have studies from other Region 2 sites that suggest these hydrocarbons and metabolites are more toxic than the Navy assumed.

Second, we believe the existence of petroleum contaminants in the shoreline tidal mixing zone is tantamount to a discharge because the contaminants are in direct contact with surface water as the tide rises and falls and during wave action. The Navy believes that this is acceptable because the risk to aquatic life, while not zero, is low. The major tenets of our cleanup policies, which mirror our NPDES permitting for point-source discharges to surface water, require elimination of toxic effluent discharges to the extent feasible. If not feasible, then a determination of acceptable risk would ensue. At this point, the Navy has not provided an adequate feasibility evaluation to eliminate the discharge.

In December 2017, Board staff provided comments and non-concurrence on the Navy's 2017 revised risk assessment. We are waiting for the Navy's response and expect it will want to meet to discuss. If necessary, we are prepared to invoke the formal dispute process governed by our State cooperative agreement with Department of Defense agencies. Should that become necessary, we would coordinate with our State agency partners at the Department of Toxic Substances Control and the Department of Fish and Wildlife. We will keep the Board updated on the resolution of this issue.

Aquifer Storage and Recovery in the Sonoma Valley Groundwater Basin (David Tanouye)

I recently signed a formal notice concurring with the Sonoma County Water Agency's (SCWA) request to perform an Aquifer Storage and Recovery (ASR) pilot test pursuant to the State Board's General Waste Discharge Requirements for Aquifer Storage and Recovery Projects that Inject Drinking Water into Groundwater (General Order). The General Order is a conditional waiver of waste discharge requirements to use aquifer storage for sustainable management of groundwater resources.

ASR is a type of groundwater banking that utilizes a well designed to inject high volumes of treated water into an aquifer for reuse when needed. Declining groundwater levels and increased vulnerability of surface water have strengthened the interest in ASR for communities that rely on both groundwater and surface water resources. The Sonoma Valley ASR project is located north of the Veteran's Memorial Hall in the City of Sonoma (Figure 6).

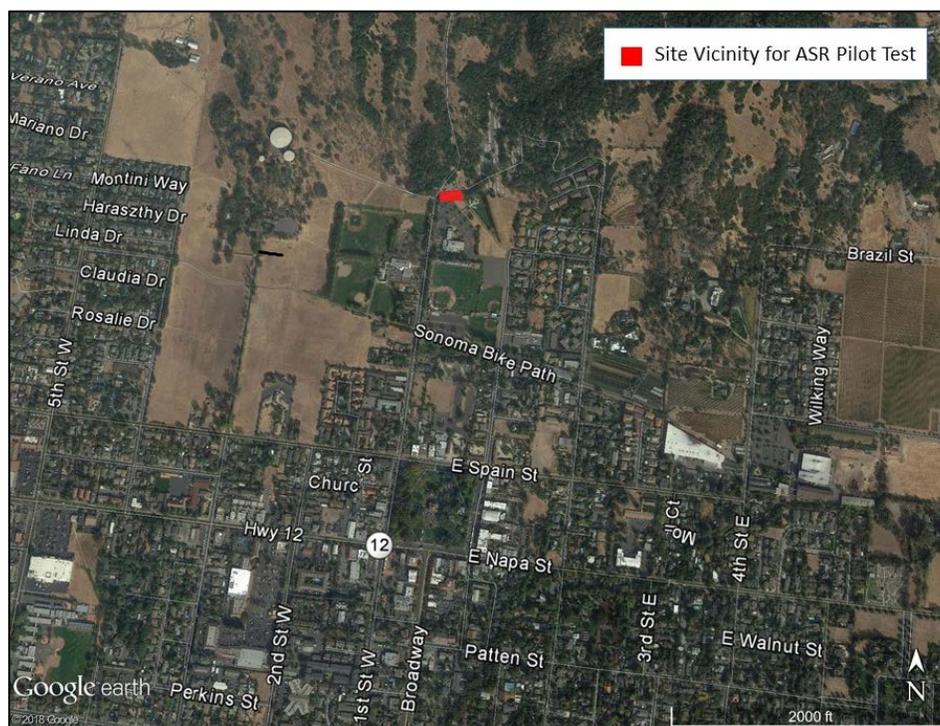


Figure 6. Map of site vicinity, located just north of Veteran's Memorial Park near downtown Sonoma.

The keys to successful ASR are a confined aquifer system with optimal properties for storage and recovery of the source water and the availability of the source water. In this case, the source water is winter runoff in the Russian River when that runoff is in excess of other water supply needs. The winter runoff is captured by SCWA's Riverbank Filtration Facility near Forestville and treated to meet drinking water standards. It is then transported through SCWA's existing service pipeline to the Sonoma Valley.

The target aquifer storage zone is a sequence 120 feet in depth that consists of volcanoclastic sedimentary deposits and unwelded tuffs within the Sonoma Volcanics underlying Sonoma's

service area. For the ASR pilot test, 6.3 million gallons of treated potable water from the Russian River will be injected into a single well screened from 100 to 215 feet below the surface. The test has three storage and recovery cycles with 30 days between each, to allow monitoring of water quality and recovery efficiency. The initial study targeted Sonoma City Well #6 as a proposed ASR well. However, subsequent aquifer testing showed improved hydrologic responses at proposed monitoring well TW6A, 60 feet away (Figure 7). Well TW6A was ultimately selected for the ASR injections.

SCWA and other local partners, including the City of Sonoma, conducted a feasibility study in 2013 for a regional groundwater banking program to explore potential groundwater management measures to meet local needs. Constituents of concern in the source water, including low levels of disinfection byproducts such as trihalomethanes and haloacetic acids, were measured to evaluate potential adverse effects of mixing with native groundwater. Modeling results indicate that these constituents should not present a problem. The ASR pilot test will provide additional information to confirm these results and assess the viability of a long-term ASR program in the Sonoma Valley.



Figure 7. Photo showing location of ASR project near Veterans Memorial Park, with drill rig installing the ASR Well (TW6A) in the background.

This is the second ASR project in our Region. In 2007, the Board issued Waste Discharge Requirements to the East Bay Municipal Utilities District for its Bayside ASR Project in San Lorenzo. SCWA anticipates completing its pilot testing over the next three to six months, submitting a technical report of its findings, and seeking General Permit coverage for a long-term ASR project later this year.

Staff Presentations

Several Board staff participated in the February 5-8 Certified Unified Program Agencies (CUPA) conference: Kelly Archer, Nicole Fry, and Cheryl Prowell of the Toxics Cleanup Division and Ross Steenson of the Groundwater Protection Division. Under the CUPA program, Cal/EPA has certified 83 local government agencies to implement hazardous waste and hazardous materials management laws in a consistent fashion. The annual CUPA conference allows State and local agencies to share new information. Board staff gave three presentations and participated in one panel discussion:

- Evaluating Contaminated Groundwater Discharges to Surface Water (Ross)
- Vapor Intrusion (VI) Mitigation System Effectiveness and Long-Term Stewardship (Cheryl)
- Cal/EPA VI Supplemental Guidance: A Consensus Approach to Managing and Evaluating VI Risk for Building Occupants (Ross and Dan Gallagher of DTSC)
- Panel Discussion on Development of Contaminated Properties (Cheryl)

Local agency staff were very interested in the VI topic, which dominated the conference's cleanup program. The presentation on the Cal/EPA VI Supplemental Guidance included a step-by-step preview of the guidance, which is expected to be formally released later this spring. The VI mitigation presentation signaled that, going forward, we will be focusing more on ensuring the ongoing effectiveness of VI mitigation systems over time and not just proper installation of a system. Lastly, several county agencies expressed interest in receiving State-delegated authority to oversee cleanup of solvent-impacted sites, similar to the Local Oversight Program for petroleum underground storage tank cleanups. We support this and will keep the Board updated on the outcome.

In-house Training

Our February in-house training topic was "Climate Change and Watershed Hydrology." Christina Toms, Senior Environmental Scientist in our Planning/TMDL Division organized this training that explained how climate change is relevant to the work of the Board. Dr. Lisa Micheli (Pepperwood Foundation) and Dr. Stu Weiss (Center for Creekside Observation) provided a process-based discussion of how climate change affects watershed hydrology and ecosystems. They utilized the new [Watershed Analyst tool](#), which is scaled to sub-watersheds. James Gregory (Environmental Science Associates) and Bob Dickinson (Argos Analytics) provided an introduction to engineering applications of global climate projections. They discussed the use of "downscaled" projections—projections at scales relevant to projects for which we issue permits: river discharge, floods, and flood management infrastructure (culvert/bridge sizing, pumping requirements, and wastewater facilities).

Enforcement Actions (Mary Boyd and Brian Thompson)

The following table shows the proposed penalty action 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

Proposed Settlements		
The following have been noticed for a 30-day public comment period. If no significant comment is received by the deadline, the Executive Officer will sign an order implementing the settlement.		
Discharger	Alleged Violation(s)	Proposed Penalty
Equilon Enterprises LLC, dba Shell Oil Products US	Violations of NPDES permit effluent limits	\$86,000
Isaias Munoz, dba Munoz Granite and Munoz Tile	Failure to recertify Industrial Stormwater General Permit coverage	\$14,000
Super Store Industries, Fairfield Dairy Facility	Inadequate spill and leak prevention and response (Industrial Stormwater General Permit) and illegal discharges to Jameson Canyon Creek.	\$230,000

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 January 12 through February 8, 2018. 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
Sabercat Creek Knick Point Restoration	Fremont	Alameda	
Zone 3A Installation of New Concrete Pipe at Line G-1	Union City		✓
EBRPD Routine Maintenance and Restoration Activities	Oakland	Alameda-Contra Costa	✓
Grout Removal from Special Aquatic Habitat	Avon	Contra Costa	✓
Removal of Culvert at Pinehurst Road	Canyon		
Lauterwasser Creek Bank Stabilization	Orinda		
417 Moraga Way - Residential Development	Orinda		
Old Railroad Grade Trail Upgrade	Fairfax	Marin	
Demmel Boathouse Renovations	Inverness		
1 Santa Maria Court Erosion Protection	Novato		

Little Mountain Sediment Detention Basin Maintenance	Novato		
Francisco Blvd Multi Use Pathway - Second Street and Andersen Drive	San Rafael		✓
Cleary Pier Piling Replacement	Sausalito		✓
1200 Weeks St - School Building Construction	East Palo Alto	San Mateo	✓
1250 Edgewood Road – Install Gravity Wall Along Cordilleras Creek	Redwood City		✓