

Executive Officer’s Report January 13, 2021

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Staff Presentations and Publications

Carrie Austin, Planning Division engineer, is a co-author of a recent publication, "Effects of hypolimnetic oxygenation on fish tissue mercury in reservoirs near the New Almaden Mining District, California, USA." The Guadalupe River Watershed Mercury Total Maximum Daily Load addresses pollution from historical mercury mining. This publication reports on Valley Water's studies of the effect of oxygen addition on methylation of mercury in reservoirs. Methylation is a key step affecting bioaccumulation up the food chain, ultimately affecting the amount of mercury in fish. The oxygenation systems operated consistently over four years and greatly reduced (up to 85 percent) water methylmercury levels. However, fish methylmercury levels only declined modestly in two of three reservoirs. We expected to see a substantial decline in mercury fish tissue concentrations because these fish have such high levels that health agencies advise people to not consume any fish from these reservoirs and downstream creeks. However, mercury cycling and aquatic food chain dynamics are complicated, so Valley Water is continuing to oxygenate and study mercury cycling. [The publication is available here.](#)

New Statewide Toxicity Policy (John Madigan)

On December 1, 2020, the State Water Board adopted new statewide water quality objectives for acute and chronic toxicity and a program to implement them. The new objectives and implementation program, together called the [Toxicity Provisions](#), have been added to the *Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California*. (They do not apply to ocean waters.) They will take effect upon approval by the State Office of Administrative Law and USEPA, which could occur as soon as April 2021.

The Toxicity Provisions are intended to protect aquatic life beneficial uses and supersede all Basin Plan toxicity provisions, with limited exceptions that include the existing narrative objectives, provisions regarding implementation of the narrative objectives, and TMDLs (e.g., the Water Quality Attainment Strategy and TMDL for Diazinon and Pesticide-related Toxicity in Urban Creeks).

The new objectives are expressed in terms of a new statistical test, the Test of Significant Toxicity, or TST. Bioassay results for test waters and control waters are compared, and if the test response is statistically similar to the control response, the test result is reported as "pass." If the difference between the test and control responses is too great, the test result is reported as "fail." The TST places the burden of proof on dischargers and their laboratories to show that their discharges are not toxic, and is intended in part to improve laboratory performance.

The Toxicity Provisions contain extensive implementation requirements focused on non-stormwater NPDES dischargers. We are working closely with the Bay Area Clean Water Agencies to develop model permit language to smooth the transition to the new requirements.

Santa Clara Valley Water District Stream Maintenance Program Stakeholder Meeting, December 2, 2020 (Susan Glendening)

At the May Board hearing, the Board reissued its authorization for the Santa Clara Valley Water District's (Valley Water's) Stream Maintenance Program (SMP, or Program) with the adoption of Order No. R2-2020-0017 (Order). The Order authorizes Valley Water to perform routine maintenance activities, consistent with the Program and the SMP Manual, within the four watersheds in Santa Clara County that drain to San Francisco Bay. While supportive of the Program, Board members recognized commenters' concerns over certain aspects of the Program, including skepticism about SMP activities being grounded in objective evaluations of project priorities, impacts, and mitigation needs. The Board requested Valley Water convene a stakeholder meeting to have an open discussion and to raise the level of confidence in the Program among all the parties. Valley Water convened a meeting on December 2, which was attended by the Guadalupe-Coyote Resource Conservation District (GCRCD), California Trout (Cal Trout), Santa Clara County Creeks Coalition, the Water and Power Law Group (legal counsel to GCRCD and Cal Trout), and Susan Glendening as the Water Board's project manager for Valley Water's SMP.

The meeting consisted of Valley Water staff presentations of the 2020 work season activities and an overview of some of the types of maintenance covered in the Order (vegetation management, animal conflicts management, minor maintenance, and large woody debris (LWD) management), followed by a Q&A session. While the meeting resulted in greater transparency in SMP implementation, some attendees expressed concern that additional work is needed for outreach to stakeholders, and for mitigation planning and implementation. Valley Water responded that work is in progress to address these concerns.

For outreach, Valley Water plans to initiate a series of stakeholder workshops and agency meetings as part of its future request to renew the SMP. The SMP is planned on a 10-year cycle, with a more-minor update every five years. The Board just authorized the mid-term update. The current cycle sunsets in 2023, and the next 10-year cycle, called SMP-3, will be subject to environmental review pursuant to the California Environmental Quality Act (CEQA). Stakeholder and agency input will be used to develop the revised project description, including identification of impacts and mitigation under CEQA. The planned stakeholder process for SMP-3 was received well by the meeting participants.

Another key outcome was an improved understanding of mitigation project feasibility. Valley Water staff explained that they strategically select mitigation sites to build on other efforts in a creek reach, and to maximize existing functions and values based on qualified biologists' evaluations. For example, revegetation and invasive plant removal activities are often targeted at sites next to other previously improved areas. Similarly, mitigation to improve salmonid habitat is targeted to creeks with high potential for supporting salmonid spawning and rearing (e.g., with adequate flows and temperature), but with existing low-quality habitat (e.g., low complexity in creek bed and banks). Valley Water staff also pointed out limitations to mitigation site feasibility, such as land ownership, access and equipment issues, health and safety risks (e.g., encampments of

unsheltered homeless populations), and suitable irrigation supply. These factors are being compiled in GIS layers to further refine mitigation site evaluation and prioritization.

The Q&A discussion also drew out Valley Water's intention to develop new approaches for mitigation based on watershed-scale improvements in SMP-3. The GIS tool mentioned above is intended to help develop concept plans for such approaches and to help engage with stakeholders. Cal Trout staff further commented that their agency's preferred mitigation approach would also account for nuanced functions and values. Using large woody debris as an example, a cubic yard of a straight log may have lower levels of functions and values compared to the same volume of a large root wad or an assemblage of logs. Valley Water staff agreed that additional factors for complexity, functions, and values would be evaluated for SMP-3.

Finally, Valley Water staff stated that they maintain a list of priority projects that could be used for mitigation of SMP impacts. This point was only mentioned briefly, so may warrant additional discussion between Valley Water and the stakeholders. This could help Valley Water continue to promote public confidence in the SMP during the current cycle.

Asphalt Emulsion Spill Cleanup at Alpine Road Spill in La Honda (David Tanouye)

The Alpine Road Spill (Site) is located about 2.5 miles southeast of the town of La Honda within a rural and agricultural area along Alpine Creek. Alpine Creek is an important drinking water source and habitat for native salamander species. On September 30, 2019, a rollover accident involving a tractor trailer carrying 25 tons (6,000 gallons) of liquid asphalt emulsions, resulted in a spill into a tributary of Alpine Creek. The distance from the spill area to the confluence with the tributary drainage and Alpine Creek is approximately 500 feet. Additionally, about 2-miles downstream from the spill area is a public drinking water intake that draws water from Alpine Creek (see Figure 1 for site vicinity).

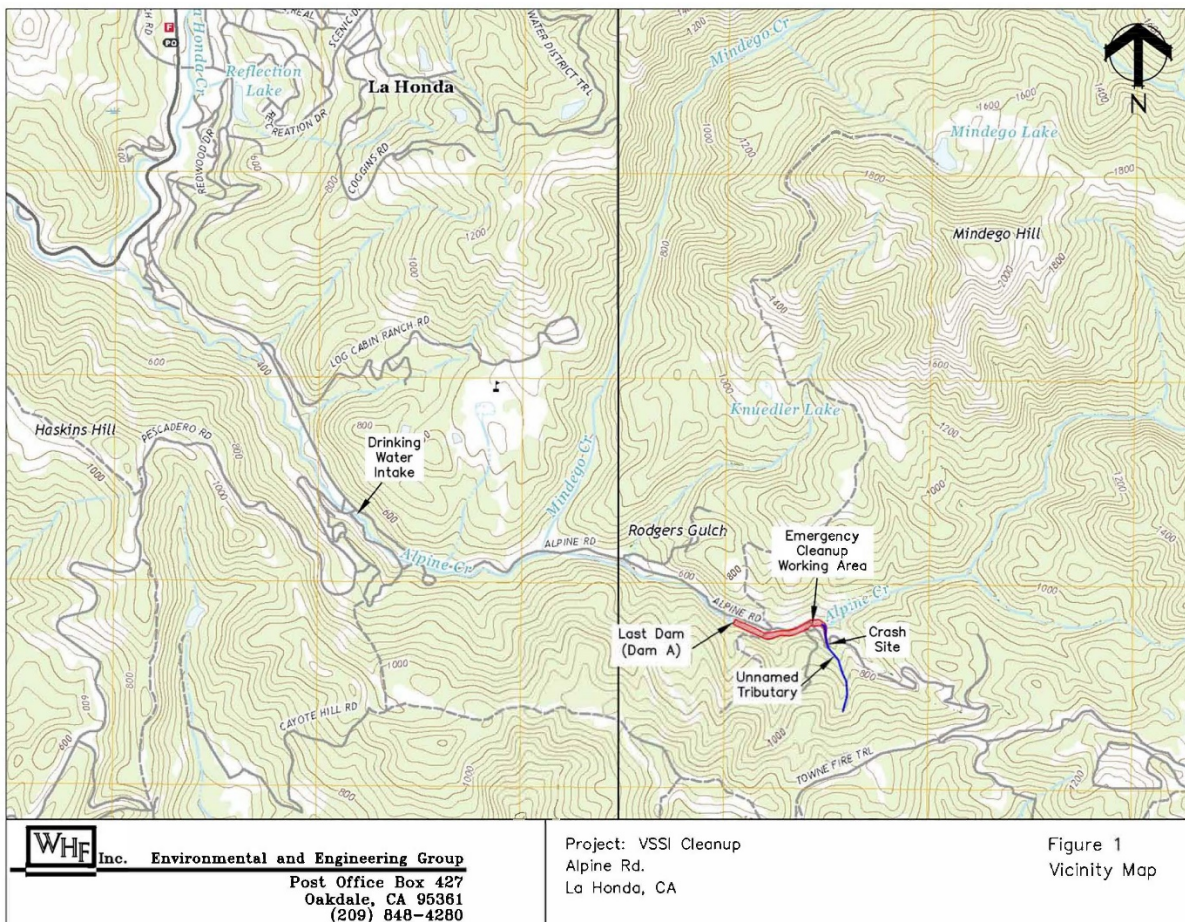


Figure 1. Site Vicinity Map. Red outline shows the extent of emergency response cleanup activities.

Immediately after the spill Water Board staff coordinated with USEPA, California Department of Fish & Wildlife, and San Mateo County to direct emergency spill response cleanup activities from the time of the crash through October 2019. During this phase of work, emergency crews were onsite 24 hours a day actively removing spilled material and impacted debris. Cleanup activities included physical excavation and removal of material by hand, physical removal of floating material with skimmer nets, absorbent pads, and containment booms. In-stream controls were implemented to prevent potential mobilization of contamination downstream, and as shown in the Figure

2 photos, the crash site release and tributary drainage was cleaned up and restored with vegetated erosion control mesh to provide bank stabilization.



Figure 2. Photos of the crash site from October 2019 and April 2020. Petroleum contamination was excavated to bedrock and stabilization measures were implemented to prevent downstream impacts to the creek.

Sampling following the spill cleanup showed a significant reduction of the petroleum asphalt emulsion within the impacted areas. Water quality monitoring was conducted at the Site and in Alpine Creek downstream locations from October 2019 to June 2020 for a total of 11 sampling events. The results indicated that surface water samples showed no petroleum impacts to Alpine Creek.

Further, observations documented from each sampling event to monitor the effectiveness of the erosion control measures indicate that no significant erosion occurred throughout the course of the remediation and restoration project. The in-stream controls remained in place until they were removed in May 2020.



Figure 3. Photo showing Alpine Creek downstream from the confluence of the tributary.

Based on the information provided from environmental investigations and water quality monitoring, we concluded that cleanup of the Site was completed to levels protective of human health and the environment. The data collected shows that existing irrigation and drinking water supplies can be used for drinking, irrigation, and other purposes, and ecological risks to the salamander habitat have been remediated at Alpine Creek.

Site Cleanup Facilitates Affordable and Homeless Housing (Celina Hernandez, Mark Johnson, Emma Hoffman-Davies)

Site cleanup is often linked to property redevelopment. Recent cases highlight how cleanup (and our regulatory oversight) supports safe redevelopment for affordable and homeless housing.

Affordable Housing at Belmont Firehouse Square: MidPen Housing (midpen-housing.org) is partnering with the City of Belmont and San Mateo County to provide affordable housing at the former Belmont Firehouse and Training Center. The new Belmont Firehouse Square will have onsite programs for adults and youth, including computer training, literacy development, and an after-school program.

In August 2019, Water Board staff met with the City and MidPen Housing to discuss the project, and next steps needed to address the discovery of Per-and Polyfluoroalkyl Substances (PFAS) in groundwater. Due to the pressing need for affordable housing in this area, we worked with MidPen to develop investigation and cleanup goals and a plan to expedite our report reviews. In February 2020, we conditionally approved a plan to remove residual soil contamination as part of a 15-foot deep excavation for a below-grade parking garage beneath the entire footprint of the building. Views of the historic firehouse and the planned redevelopment, and a video of the October 2020 groundbreaking, are attached.



Figure 1. Historic Belmont Firehouse photo (undated)



Figure 2. Drawing of proposed redevelopment

A video of the groundbreaking celebration can be seen at this link:



Affordable Housing in East Palo Alto: Water Board staff are also working with MidPen Housing to oversee investigations/cleanup efforts at a property known as 965 Weeks Street in East Palo Alto. The site was formerly a family-run nursery. Based on this past use, the site is being investigated to evaluate the presence of residual pesticides. MidPen Housing plans to redevelop the approximate 2.5-acre nursery into 136 residential units, providing much needed affordable housing to the community.

Homeless Housing in Mountain View: The Peninsula Auto site was an automotive repair, storage, and wrecking business that operated for more than 50 years. Petroleum products were stored in a sump that leaked and caused contamination in the soil and groundwater. The property owner investigated the extent of contamination and excavated the sump and contaminated soil. Later, the City of Mountain View partnered with LifeMoves (lifemoves.org) a non-profit agency, to obtain grant money from the state to buy the property in order to redevelop it for homeless housing. The grant funds are derived from the state's allocation of the federal Coronavirus Aid Relief Funds.

In September 2020, Water Board staff met virtually with the non-profit agency and its consultants to address the fast-paced timeline of the project. In October, we approved a cleanup completion report and scoped out a path towards case closure. In November, we approved a site management plan and a deed restriction. In December, we approved a design plan for a vapor intrusion mitigation system. This will ensure that the residents living in the interim housing are protected from any potential vapor intrusion from residual contamination. The housing uses modular, prefabricated units so that it can be built quickly. LifeMoves will provide case management services at the complex to help each person overcome homelessness and return to stability. The construction is scheduled to be completed in March with occupancy shortly thereafter.

Spill Response at Kinder Morgan Pipeline Release in Walnut Creek (David Tanouye)

We are responding to a spill incident in Walnut Creek where emergency cleanup operations have been addressing petroleum product discharges to surface water since early December. On December 7th, the Regional Water Board received a report of a large gasoline release in Walnut Creek. The release was determined to be from a break in a 10-inch petroleum pipeline operated by Kinder Morgan referred to as LS-16. The Pipeline Release (Site) is located along the eastern side of South Broadway Avenue in Walnut Creek between Rudgear Road and Newell Avenue where the underground fuel pipeline released up to 42,000 gallons of gasoline.

The gasoline product has migrated from the Site through the subsurface and has impacted an area that extends about 1.5 miles north of the release Site. About 1.2 miles from the release Site, gasoline has emerged at the surface and has discharged to the concrete-lined Walnut Creek Flood Control/Bypass Area drainage channel and has impacted surface water (see Figure 1 for site vicinity). Cleanup operations have mainly been focused at the intersection of Walnut Creek and San Ramon Bypass Channel near the Iron Horse Trail footbridge where approximately 17,000 gallons of gasoline product to date have been recovered.

USEPA and CA Fish & Wildlife Office of Spill Prevention and Response (OSPR) formed Unified Command (UC) for the incident response, and Water Board staff have participated in daily UC meetings to provide technical input and comment on preliminary investigation results. Based on review of the preliminary results we issued a 13267 letter on December 21st that requires Kinder Morgan submit work plans for subsurface investigations by January 22nd. We also required information about supply well locations and potential utility migration pathways and an updated surface water sampling program. UC primarily continues to focus on the cleanup of the surface expression of the discharge as seen in Figure 2, and air monitoring, while Water Board staff are working on subsurface investigations.

Numerous residences are located along the 1.5-mile release, and adjacent to the Bypass Area where product is being recovered. Water Board staff and supervisors have participated in two public meetings organized by UC for residents living near the Bypass Area. We presented information about our short- and long-term role in the cleanup and investigation of contamination at the January 6th public meeting, and addressed concerns raised by residents about 1) backyard groundwater wells impacts, 2) the lateral extent of the release, 3) potential health impacts, 4) ongoing operations in neighborhood (noise, lights, odor complaints). We have identified several residences with backyard irrigation wells in the Bypass Area where water quality results are pending, and we are working to locate all private backyard wells near the pipeline. To date there has been no known impacts to public supply wells from the release or to the drinking water provided by the municipality that services the homes adjacent to the pipeline.

For next steps we have begun to expand the investigation of the spill to define the subsurface lateral and vertical extent of contamination and will continue working with UC to address product abatement in the channel. Field crews will continue to monitor

the effects of storm events and fluctuations in groundwater levels on sheen observed in the channel. Transition from UC and State oversight from OSPR to the Water Board will be based on the cessation of petroleum product discharging to surface water. We plan to issue a cleanup order to Kinder Morgan for complete characterization of contamination and set a schedule for remediation in the coming months.

The situation remains dynamic and we will continue to provide the Board with regular updates on the status of the release as new information becomes available.

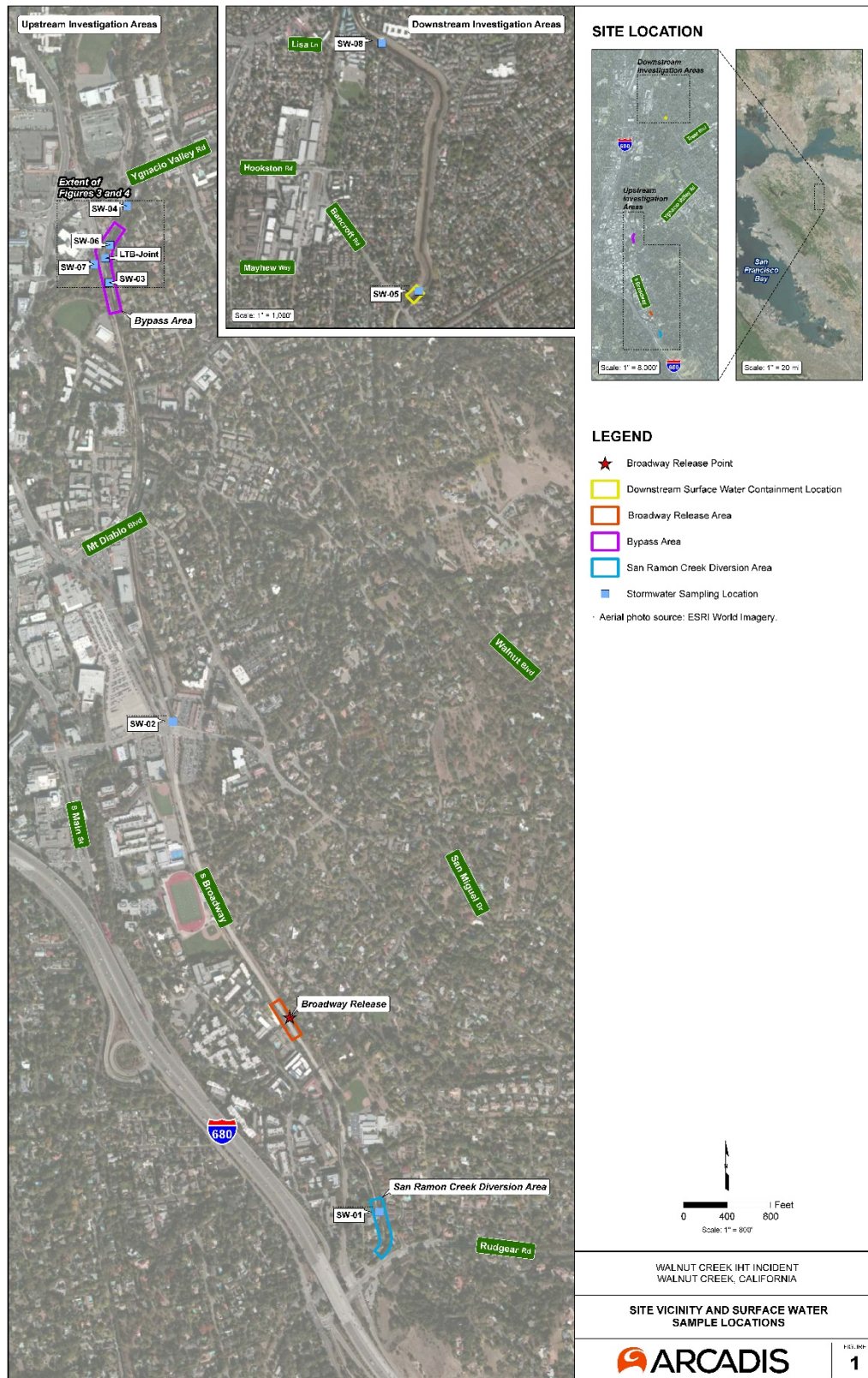


Figure 4. Site Vicinity Map depicting current surface water sampling locations and work areas. The upstream Diversion Area is operating to alleviate water levels in the Bypass Area where product recovery operations are ongoing.



Figure 5. Photo from top view of the concrete channel at Bypass Area where product sheen is observed discharging into the surface water.

Cleanup Progress at Mission Clay Site, Niles Cone (Ralph Lambert and Kevin Brown)

The Mission Clay Site is in the Niles Canyon district of Fremont. Alameda Creek is located 250 feet northwest of Mission Clay. Between 1907 and 1992, companies manufactured bricks and sewer pipes at the Source Property, using clay from an onsite open pit mine (Figure 1).



Figure 1. Brick and Pipe Manufacturing Facility

Petroleum products were stored and used in the manufacturing process with crude oil shipped from the Central Valley along the existing Niles Canyon Railroad. In the late 1980s, several fuel underground storage tanks were removed. In 2000, brick-lined fuel vaults were removed, and petroleum-impacted soils were excavated. Significant petroleum impacts to soil and groundwater were discovered during investigations conducted between 2006 and 2019. Groundwater contamination was found to extend several hundred feet to the north and northwest of the source area, crossing beneath the railroad and extending to a side channel that runs parallel to Alameda Creek. About a mile and half downstream, Alameda Creek recharges the Niles Cone Groundwater Basin, which is a significant source of municipal drinking water for the cities of Fremont, Union City, and Newark.

In mid-2017, regulatory oversight was transferred to the Regional Board from the Alameda County Water District. In August 2018, we issued a Cleanup and Abatement Order to the Discharger, BBK KRG Inc to cease, investigate, and cleanup discharge of petroleum to Alameda Creek. The Discharger has been responsive and timely in implementing the Order and cleaning up the petroleum.

Source Cleanup: In 2018 and 2019, the Discharger completed two large soil excavations in areas where considerable petroleum contamination was present (Figure 2).



Figure 2. Excavation Area

The excavations extended into bedrock about 35 feet deep. A corner of the excavation was treated with an oxidizing agent to clean-up residual petroleum contamination that could not be reached due to the adjacent railroad. Approximately 28,000 cubic yards of contaminated soil were removed and disposed of at the Newby Island landfill. The excavations were backfilled, and interim grading was completed. Over 3.5 million gallons of groundwater from the excavation was pumped and treated to remove contamination, then discharged to land under an approved plan.

About 50,000 cubic yards of excavated soil remains stockpiled onsite. In October 2019, Board staff approved a bio-remediation pilot test to remediate the remaining soil stockpile. The pilot test began in November 2020 and a report documenting the results and recommending next steps is due by March 15, 2021.

Groundwater and Surface Water Impacts: An investigation based on our 2018 Order identified petroleum hydrocarbon impacts to surface water in a nearby channel adjacent to Alameda Creek. Petroleum globules and sheen were observed in the side channel. Interstitial pore water samples were collected by digging shallow pits into sediments adjacent to the creek and sampling the water that flows into the pits. The samples contained petroleum hydrocarbons exceeding screening levels for drinking water and freshwater aquatic toxicity thresholds. Water samples from the main Alameda Creek channel did not exceed screening levels. The side channel, which is groundwater fed, is hydraulically connected to Alameda Creek via groundwater flow, and during flooding events. Additionally, the side channel supports ecological habitat like Alameda Creek. Alameda Creek is used for groundwater recharge, agriculture, commercial, both warm- and cold-water habitat, recreation, spawning habitat, migration, and contains some rare species.

In response to the 2018 discovery of globules and sheen in the side channel, our Order required abatement activities consisting of placing staked straw wattles and absorbent

pads, daily observations, weekly sampling of water within the side channel (Figure 3), and subsequent reporting.

A follow-on investigation documented the route of hydrocarbon impacts in groundwater via an approximate 65-foot wide subsurface buried stream channel leading from the source excavation area to Alameda Creek. The investigation included the drilling and sampling of 13 borings near the railroad and the installation of four monitoring wells.

Our Order requires cleanup of petroleum discharges to Alameda Creek, the side channel, and to groundwater.



Figure 3: Side Channel to Alameda Creek

Groundwater and Surface Water Cleanup Plan: We have reviewed a draft cleanup plan for the groundwater and surface water impacts and provided comments to the Discharger. The conceptual cleanup plan includes excavating a 100-foot long trench adjacent (upgradient) to the side channel, down to bedrock and below the depth of the buried stream channel. Piping would be installed in the trench to allow for monitoring and potential injection of treatment chemicals. The trench would then be backfilled with

access to the instruments. We have requested additional information including updated topographic maps for the hillside and flood plain between the rail line and Alameda Creek. We anticipate reviewing a revised plan in the next few months and approving it in the spring.

Because the land where the proposed treatment trench is located is owned by the San Francisco Public Utility Commission, and because multiple state, federal, and local agencies have jurisdiction over activities in sensitive riparian areas, access negotiations and permitting conditions will take some time before an approved cleanup plan can be implemented. The cleanup plan will be available to the review agencies and developed in coordination with staff from our wetland and riparian area protection and permitting program, to help them issue permits, as needed.

January 2020 Enforcement Actions (Brian Thompson and Jessica Watkins)

The following table shows the proposed enforcement actions since December's report. In addition, enforcement actions are available on our website at http://www.waterboards.ca.gov/sanfranciscobay/public_notices/pending_enforcement.shtml

Proposed Settlement

The following is 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	Violation(s)	Proposed Penalty	Comment Deadline
Equilon Enterprises LLC d/b/a Shell Oil Products US	Discharge limit violations.	\$9,000	January 21, 2021

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 December 2, 2020 through December 22, 2020. 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
NuStar Selby Maintenance Repair	Crockett	Contra Costa	✓
Chevron Pipe Line Company Ground Well Abandonment	Martinez	Contra Costa	
China Camp State Park Pier Repair	San Rafael	Marin	✓
Stormdrain Improvement Project at 2101 Pickett Rd	Calistoga	Napa	
San Carlos Airport Levee Emergency Repair	San Carlos	San Mateo	✓
Freedom Bridge Removal	Santa Clara	Santa Clara	✓