

*STATE OF CALIFORNIA*

**REGIONAL WATER QUALITY CONTROL BOARD  
SAN FRANCISCO BAY REGION**

MEETING DATE: January 15, 2014

ITEM:       **5**

SUBJECT:    **EXECUTIVE OFFICER'S REPORT**

# EXECUTIVE OFFICER'S REPORT: *January 2014*

A Monthly Report to the Board and Public

NEXT MEETING: January 15, 2014      WEBSITE: <http://www.waterboards.ca.gov/sanfranciscobay/>

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## **Leona Heights Sulfur Mine Update (Lindsay Whalin)**

The Leona Heights Sulfur Mine is a small, inactive sulfur mine located in the Oakland hills. Mining waste, piled and abandoned on site, produces acid mine drainage on contact with water, either from stormwater runoff or Leona Creek, which runs through the site (Photo 1). The creek is consequently highly impaired, both visually and chemically, from acidity and elevated metals. In May 2013, the Board adopted a Cleanup and Abatement Order that requires that the specified dischargers remediate the mining waste and restore Leona Creek. Due to a history of non-compliance, the Board adopted a companion Time Schedule Order in July 2013 that prescribes penalties for missed deadlines.

Progress thus far indicates the Board's regulatory actions are working. Upon adoption of the orders, the dischargers, particularly Alcoa and Ocean Industries, began working in earnest to comply with tasks required in the orders. The site remediation and creek restoration designs, which were submitted on time in October 2013, were developed with significant input from Board staff in the Groundwater Protection and Watershed Management divisions, as well as Board staff creek restoration specialist A. L. Riley. The designs entail grading the mining waste to improve slope stability and isolating the waste from water with an impermeable cap. The creek will be restored with step-pool and cascade features to mimic a steep natural channel that allows natural movement of sediment, enhancing the stability of the creek onsite and downstream.

Photo 1. *Leona Creek, coloring due to acid mine drainage.*



The City of Oakland, as the lead CEQA agency for the restoration project, has provided significant input to the development of the designs. A community meeting is planned for early this year to inform and obtain input from neighbors, who will be temporarily impacted by restoration construction activity. Based on recent discussions, we anticipate that minor adjustments to the designs will be necessary to minimize impacts, in particular to reduce the number of trees that must be removed during construction.

In compliance with the Cleanup and Abatement Order, applications for permits to implement the designs were submitted to regulatory agencies on November 15. We will continue to work with the dischargers and their design and permitting teams, as well as the permitting agencies, to ensure the site is remediated and restored with minimal impact to neighbors and wildlife.

### **Zero Waste Anaerobic Digester Grand Opening (Vic Pal)**

On November 22, Board staff (Terry Seward, Keith Roberson, and Vic Pal) attended a grand opening event celebrating completion of the first phase of what will ultimately be the world's largest dry fermentation anaerobic digestion facility (Photo 2). The facility, located on the former Nine Par Landfill in north San Jose, is a joint venture between Zero Waste Energy Development Company (ZWEDC) and the City of San Jose.

The facility is planned for development in three phases, with each phase capable of processing 90,000 tons per year of organic materials. The facility will recover energy from food and organic waste that are separated from municipal solid waste at a nearby material recovery facility and yield two useful products: biogas (predominantly methane) and compost.

Guest speakers at the event included U.S. Representative Mike Honda and Mayor Chuck Reed of San Jose. Carole Mortenson, Director of CalRecycle, also spoke and presented the Solid Waste Facility Permit required for the facility to operate. Board staff was involved in the initial

review and permitting of the project and worked with ZWEDC to demonstrate that the old landfill had been properly capped and closed in compliance with Title 27 California Code of Regulations prior to site redevelopment.



*Photo 2. Anaerobic digestion facility in north San Jose.*

### **Watershed Stewardship Outreach Projects (A.L. Riley)**

Watershed Stewardship Project volunteers, Will Logsdon and Connor McIntee, and A.L. Riley of the Planning Division recently conducted a half day workshop at our office on best management practices to protect, restore, and enhance creek habitats. The workshop was conducted for ACTERRA, a watershed stewardship non-profit located in Palo Alto that has contracts to do restoration work in the San Francisquito Creek and other peninsula watersheds.

The training was followed by a hands-on field workshop in the San Francisquito Creek watershed where we worked with stakeholders to install soil bioengineering-based planting systems for bank stabilization. These soil bioengineering systems are now published in federal engineering manuals and accepted as good engineering practice. The workshops involved over 20 participants and included staff from ACTERRA, the West Valley Clean Water Program, the California Urban Streams Partnership, the Green Town Los Altos program, the City of Cupertino, Santa Clara County's Engineering Department, and watershed residents.

On December 13, Will and Connor also organized a creek restoration project for the El Cerrito Montessori Family School where students and teachers helped with efforts to restore the riparian corridor of lower Codornices Creek in Albany. The students planted willow-dogwood fascines and stakes to improve steelhead habitat, learned about water quality, and helped collect data with Board staff Kevin Lunde. This project involved approximately 30 participants and Board staff is encouraging the school to become a long term steward of this creek.

### Groundwater Protection Division Recycling Program (Elizabeth Wells)

In keeping with the Board's mission to protect water quality and the environment and to reduce the amount of material landfilled, the Groundwater Protection Division initiated a recycle/reuse/reduction program several years ago. While it started with the idea of giving the numerous binders the Division received each month a second use, it has since expanded to include the rest of the office. The Division's recycling efforts now include not only binders but a wide variety of typically "un-recyclable" items.



Photo 3a. Binders to be delivered to Lighthouse Charter School in Oakland.

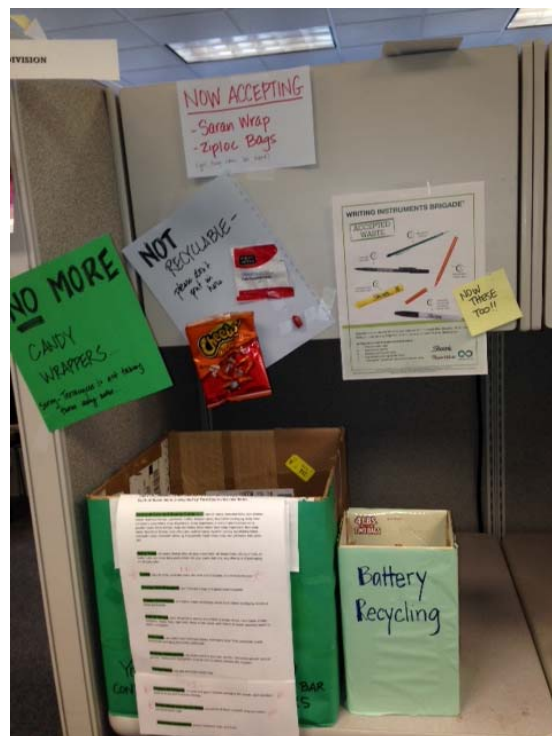


Photo 3b. GWP Recycling Area.

**Binders** – More than 1,000 gently-used binders have been given to local elementary, middle, and high schools to distribute to students and teachers. We have developed a relationship with several schools that continue to want the binders, and Division staff members deliver binders several times per year (Photo 3a). Additionally, we have actively asked our dischargers and consultants to stop sending hard copy reports in binders in favor of electronic documents.

**TerraCycle** – This New Jersey company recycles and upcycles (uses the normally disposed material to make something new) unusual items, specifically things not typically accepted in municipal recycling bins. A green recycling box (Photo 3b) was set up initially near the Division's staff offices, and more recently in three other locations around the Board's office as collection points. Board staff are encouraged to recycle the following items: cereal bags, dairy containers, empty baby wipe packaging, plastic diaper packaging, pens/pencils, corks, energy/granola bar wrappers, hummus containers, shoes, Saran wrap, cheese packaging, Ziploc bags, personal care and beauty product containers, dental floss containers, and toothbrushes. TerraCycle either recycles the materials and creates products, such as trash cans, outdoor furniture, and gardening equipment, or upcycles the materials into products such as backpacks, pencil cases,

and clipboards. A Division staff member collects the items for shipment to TerraCycle. Based on the amount of material received, TerraCycle donates money to local elementary schools in exchange for these items.

CDs & Cases – CDs are collected and taken to a local recycling center.

Batteries – When the State building stopped its battery recycling, the Division decided to continue to collect used batteries for recycling and have a volunteer from the Division deliver them to an e-waste/battery recycling location.

Plastic Bags – To reduce the number of plastic bags that go into the trash or become litter, a bag collection system was set up in the break rooms on the 14<sup>th</sup> and 15<sup>th</sup> floors of the office. Subsequently, a Division staff member delivers the bags to a recycling center.

### **Solvent Impacts to South San Francisco Wellfield (Cheryl Prowell)**

Chlorinated solvents have impacted existing and proposed municipal wells in a South San Francisco wellfield. Groundwater in the area has been impacted by tetrachloroethene (PCE), a common dry cleaning solvent. Groundwater extracted from existing Cal Water Service wells in this wellfield is blended with water imported by the San Francisco Public Utilities Commission (SFPUC). The blend provides drinking water for an area extending from Daly City to San Bruno. The PCE concentrations have not resulted in exceedance of drinking water standards in the blended water that is provided to residents.

The SFPUC has proposed new wells near the wellfield as part of its Regional Groundwater Storage and Recovery Project (Figure 1b). The wellfield draws groundwater from the Westside Basin, which covers an area of roughly 45 square miles, extending from Golden Gate Park in San Francisco to Burlingame in San Mateo County (Figure 1a). SFPUC would like to provide customers with additional imported water during wet years, thereby reducing the need for the cities to pump groundwater and allow the groundwater basin to recharge. During dry years, the existing and proposed new wells will allow for greater groundwater extraction, reducing demand for imported water.

PCE has been detected in two Cal Water Service wells and one SFPUC monitoring well in the location of a proposed new SFPUC well. One Cal Water Service well was taken out of service as a result. Board staff has made it a priority to identify the source of the PCE in order to protect the groundwater resource and prevent additional wells from being shut down. We have partnered with Cal Water Service (a private company), SFPUC, and other agencies – the California Department of Public Health, San Mateo County's Environmental Health Division, and the City of South San Francisco – so that necessary investigatory work can proceed more quickly.

In December, we held a coordinating meeting with those parties. Cal Water Service and SFPUC provided well data that will be helpful in determining the PCE source. Using historical records, Board staff has identified several locations in the wells' vicinity where dry cleaners have operated. We have also prioritized these locations based on the age and duration of dry cleaner operations because we have learned that older and longer operations tend to produce bigger

PCE spills. San Mateo County staff has begun oversight at two former dry cleaning locations. We will work with San Mateo County staff to expand this effort as needed. The December meeting was a productive opportunity to share information regarding the status of investigations, the agencies' knowledge of local hydrogeology, and the capabilities of each stakeholder. The group agreed to continue to meet on a quarterly basis.

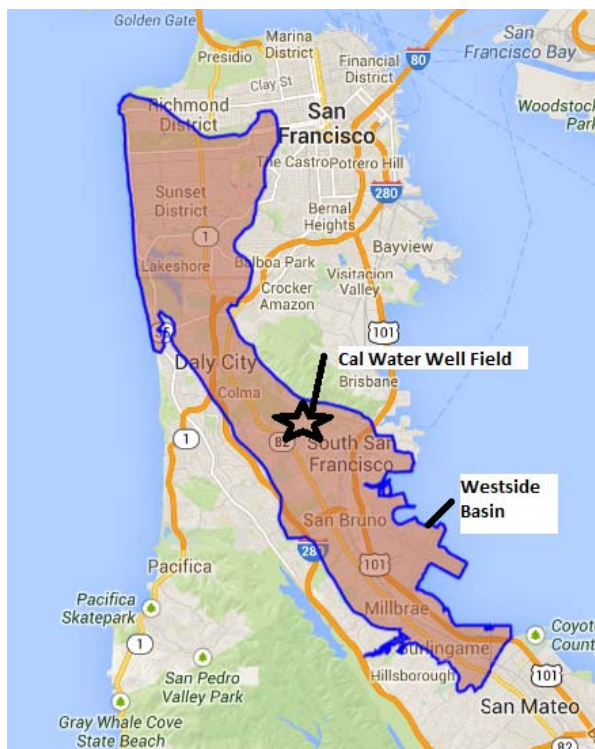


Figure 1a. Westside Groundwater Basin.  
(Source: GeoTracker GAMA)

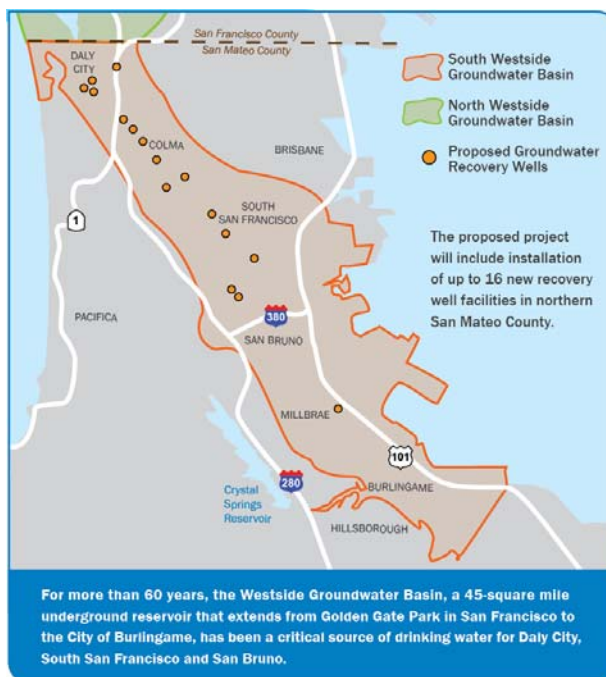


Figure 1b. SFPUC proposed new wells.  
(Source: SFPUC Fact Sheet - Regional Groundwater Storage and Recovery Project)

### New USEPA Vapor Intrusion Requirements (John Wolfenden)

On December 3, USEPA sent the Board new vapor intrusion evaluation requirements that apply to the 12 federal Superfund sites we oversee. Vapor intrusion can occur when volatile chemicals like trichloroethylene (TCE) are released to the subsurface and form vapors that can enter buildings through cracks and gaps in floors. We have been investigating vapor intrusion at these sites for over 10 years. This report highlights two significant changes in the new requirements:

*Short-term response action levels for TCE in indoor air are significantly lower than previously used values.* This is based on the recent toxicity finding that women in the first trimester of pregnancy are potentially at risk if exposed to short-term periods of inhalation of low levels of TCE in indoor air (2 ug/m<sup>3</sup> for residential exposure), because it could cause a heart malformation in the developing fetus. If TCE is found in indoor air at levels greater than the short-term action levels, then measures to reduce the TCE in indoor air should be implemented quickly (within a few weeks) due to the short-term exposure concerns.

*Vapor intrusion study areas should be expanded to include buildings overlying shallow groundwater contaminated with TCE as low as 5 ug/L.* Investigations at some sites have shown

a potential for vapor intrusion into buildings overlying very low TCE groundwater concentrations. At the 12 sites in our Region, we had been requiring vapor intrusion investigation for residential and commercial buildings overlying groundwater with TCE levels above 50 and 100 ug/L, respectively. We will now expand the vapor intrusion study area for both types of buildings out to 5 ug/L TCE in groundwater in the vicinity of our federal Superfund sites. Over the next year we will evaluate the results of these new investigations and assess whether we should apply this criteria to other sites.

### **In-house Training**

Our December training was on the legal underpinnings of the Board's regulatory programs ("Water Board 101") and was mandatory for new staff. Our January training will be on water reuse, which encompasses wastewater recycling (e.g., using highly treated wastewater for landscape irrigation) as well as other forms of reuse (e.g., recharging stormwater runoff to groundwater). Recent brownbag seminars included several webinars on contaminants of emerging concern (below); these were the final four in a series of six webinars offered by the Green Sciences Policy Institute:

- November 19 webinar on solvents
- November 26 webinar on heavy metals
- December 3 webinar on avoidance of new contaminants by manufacturers
- December 10 webinar on green chemistry

### **Staff Presentations**

On December 10, I spoke at the National Association of Flood and Stormwater Management Agencies' annual meeting in San Francisco as part of a session on Regional Flood Risk and Water Quality Management Perspectives. I focused on the many examples of collaborative success in our region, such as the Napa River/Napa Creek Flood Protection Project, where we have worked with flood management agencies and local stakeholders to achieve multi-objective benefits, and how these projects could be replicated elsewhere around the country.



### Penalty Enforcement Actions, Proposed and Final (Claudia Villacorta)

The following tables show newly issued complaints, recently proposed settlements, and settled actions for assessment of penalties as of the last report. All complaints and proposed settlements are available at:

[http://www.waterboards.ca.gov/sanfranciscobay/public\\_notices/pending\\_enforcement.shtml](http://www.waterboards.ca.gov/sanfranciscobay/public_notices/pending_enforcement.shtml)

<b>Proposed Settlements</b>			
The following are noticed for a 30-day public comment period. If no significant comments are received by the comment deadline, the Executive Officer will sign an order implementing the settlement.			
<b>Discharger</b>	<b>Violation</b>	<b>Penalty Proposed</b>	<b>Comment Deadline</b>
South Bayside System Authority	Discharge limit exceedances	\$18,000	January 2, 2014
International Business Machines (IBM)	Discharge limit exceedances	\$6,000	January 6, 2014
San Francisco Public Utilities Commission	Discharge limit exceedances	\$69,000	January 6, 2014

<b>Settled Actions</b>			
On behalf of the Board, the Executive Officer approved the following:			
<b>Discharger</b>	<b>Violation</b>	<b>Penalty Imposed</b>	<b>Supplemental Environmental Project</b>
Allied Defense Recycling Mare Island Ship Yard	Overdue fees	\$45,531.20	None
Archstone Emeryville Residential	Discharge limit exceedances	\$6,000	None

The State Board's Office of Enforcement includes a statewide summary of penalty enforcement in its Executive Director's Report, which can be found on the State Board website:

[http://www.waterboards.ca.gov/board\\_info/eo\\_rpts.shtml](http://www.waterboards.ca.gov/board_info/eo_rpts.shtml)