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

EXECUTIVE OFFICER'S REPORT: *November 2012*

A Monthly Report to the Board and Public

NEXT MEETING: November 14, 2012 **WEBSITE:** http://www.waterboards.ca.gov/sanfranciscobay/

Items in this Report (Author[s])

Proposition 84 Stormwater Grant Funding (Leslie Ferguson)

Bay Area stormwater management agencies were recently awarded $6.4 million for implementation and $1.47 million for planning projects as part of the first round of Proposition 84 grants awarded by the State Board. Proposition 84, the Safe Drinking Water, Water Quality and Supply, Flood Control, River and Coastal Protection Bond Act (Prop 84) was approved by California voters in 2006. Prop 84 provided the State Board with $90 million to fund matching grants to local public agencies for the reduction and prevention of storm water contamination of rivers, lakes, and streams. The Bay Area's funded implementation projects are low impact development (LID) demonstration projects that include innovative ways to treat parking lot stormwater runoff and to "green" urban alleyways, streets, and neighborhoods. Funded planning projects include developing trash monitoring protocols and "green" infrastructure master plans with an LID focus.

The Prop 84 Stormwater Grant program had several mandates that restricted eligibility for funding and created challenges for Bay Area stormwater agencies. Despite these restrictions, Bay Area projects received 35% of the implementation funds and 16% of the planning funds allocated statewide. The program's requirement to reduce "contamination of rivers, lakes and streams" created a significant hurdle, as many local projects conceptually in the works, or already designed, discharge to estuarine or San Francisco Bay saltwater environments and, therefore, do not qualify for this funding. In addition, the majority of the funding was slated for projects that incorporate LID stormwater controls. The focus on LID made it difficult, but not impossible, to fund other types of stormwater projects that are important in the Bay Area, such

as best management practices (BMPs) for trash control. Our Prop 84 interdivisional team (Sue Ma, Selina Louie, Dale Bowyer, Jan O'Hara, Keith Lichten, and Leslie Ferguson) worked hard to overcome these obstacles to successfully guide local stormwater agencies through the technical and policy intricacies of the grant application process. We are now working with the stormwater agencies in preparation for the next round of Prop 84 funding, anticipated late spring 2013.

Vopak Facility Remediation (Alyx Karpowicz)
Beginning in 1917, the Vopak terminal facility, located along Point Richmond's shoreline, was used to store coconut and palm oil. The facility was expanded in 1962 to include 100 aboveground storage tanks (ASTs) that were used to store a variety of liquids, including animal and vegetable oils, alcohols, lubricating oils, fuel and fuel additives, liquid fertilizers, phosphoric acids, toluene, xylenes, and linear alkylbenzenes. Two underground storage tanks (USTs) that were used for storage of fuel oil were removed in 1986. Vopak ceased operations in December 2000, and all ASTs were demolished and removed by 2001. Site investigations showed that soil and groundwater beneath the former AST and UST areas were contaminated with various petroleum hydrocarbons.

In response to the site cleanup order issued by the Board in September 2007, in-situ remediation was performed in the former AST area in 2010, using calcium peroxide granules as an oxygen source to degrade petroleum present in soil and groundwater. More recently, remediation of the former UST area was performed during the first two weeks of October 2012, by excavating soils to remove separate-phase hydrocarbons. The excavation extended to depths of 12 to 18 feet below the ground surface (bgs) and removed approximately 1,860 cubic yards (yds^3) of soil. About 800 yds^3 of this soil was clean overburden, which was reused, along with imported clean fill material, to backfill the pit.

Several previously unknown USTs, some containing residual oily liquid, were discovered and removed during the excavation (Photo 1a). An oily sheen was also observed on much of the exposed groundwater surface; absorbent pads were used to soak up most of the oil, and a vacuum truck was used to pump out visually impacted groundwater. Approximately 300 pounds of calcium peroxide granules were spread along the north and east margins of the excavation to enhance degradation of residual petroleum hydrocarbons in groundwater, prior to backfilling the excavation pit. The backfill material consisted of gravel from the base of the pit to eight feet bgs, followed by eight feet of clean overburden soil (Photo 1b). A geotextile fabric was placed across the top of the gravel before soil was introduced in order to preserve the high permeability of the gravel.

As required by the Board order, Vopak is currently installing three additional groundwater monitoring wells and will monitor these wells for at least one year to look for the presence of residual petroleum.

Photo 1a. *Excavation around one of Vopak's unknown USTs that had caused extensive staining (looking northeast), and absorbent pads on groundwater surface soaking up oily sheen (east side of excavation).*

Photo 1b. *Excavation at Vopak was completed and backfilled with clean material, prior to repaving with asphalt (looking north).*

ThermoFusion Update (Randy Lee)
Last month, Board staff notified the dischargers at Thermofusion, a solvent-impacted site located south of the Hayward Airport, that cleanup work has substantially improved water quality. Our notification outlined the remaining steps needed to close the site.

Chlorinated solvents were released to soil and groundwater as a result of ThermoFusion's activities in the 1970s and 1980s, when ThermoFusion manufactured heat-treated materials for the aerospace industry. Soil and groundwater investigations began in the early 1990s and soil cleanup was completed in 1992. The Board's 1995 site cleanup order required groundwater cleanup but implementation was thwarted when the landowner went bankrupt later that year. As a result of the Board's efforts, the bankruptcy settlement created a $400,000 fund to pay for the remaining cleanup. Most of the settlement funds were used to provide an alternate water supply to four homes whose private wells had been impacted by solvents. Initially, the homes received bottled water; eventually some were connected to city water and some were connected to a new, deeper supply well.

In 2009 and 2010, Board staff required the remaining settlement funds to be used to fill site-investigation data gaps and provide updated groundwater monitoring data. The resulting work demonstrated that groundwater solvent concentrations had declined substantially since the early 1990s and that there are no human health threats from vapor intrusion of solvents or other contaminant exposure pathways. The new data suggests that soil cleanup work in the early 1990s had removed most of the solvent sources and that solvents in groundwater seem to be bio-degrading.

While we are encouraged by these recent results, more work is needed before the site would qualify for low-threat closure such as ongoing groundwater monitoring to demonstrate a stable groundwater contamination plume with declining concentrations. With the exhaustion of the bankruptcy settlement fund, there are no more funds to pay for this additional work. The best hope for additional funds is if the site is sold or redeveloped. To that end, Board staff sent a letter to the dischargers last month, summarizing the substantial cleanup progress to date and

outlining the steps needed to bring the site to closure (including rescission of the Board's 1995 order). We will keep the Board informed of any significant developments about this site.

Mixing Zones in Carquinez Straits (Sam Plummer)
Board member Terry Young recently asked about the relative size of discharge mixing zones in Carquinez Strait and their potential impacts on fish migration. As shown in Photo 2, the sizes of mixing zones (shown in red) granted by the Board are very small relative to the size of the Strait. Thus, we do not expect mixing zones to impact fish migration.

The Board grants mixing zones to industrial and municipal wastewater discharges as appropriate when it adopts NPDES permits. Mixing zones are based on hydraulic characteristics of each discharge outfall, and more often than not, are severely constrained due to the use of conservative assumptions. The mixing zones shown below are what the Board has granted in those facilities' current permits. In the case of C&H Sugar, it is also the same as what Board staff is proposing as part of the NPDES permit the Board will be considering at its November meeting. The mixing zones were illustrated using CORMIX, a plume discharge modeling program. We illustrated their shapes during slack tide, which will change as tidal conditions change; however, the size of the mixing zone will not change.

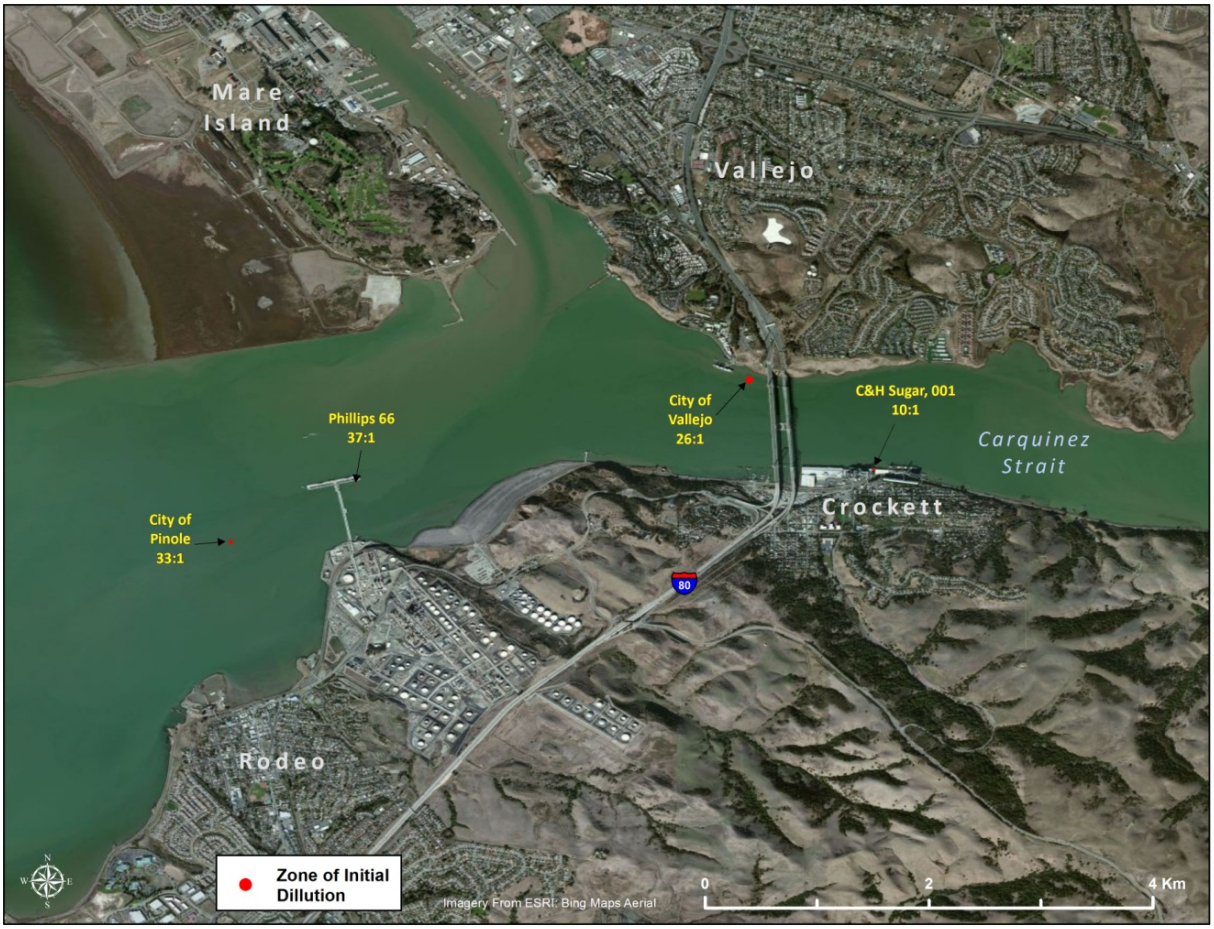

Photo 2. Aerial view of *Carquinez Strait.*

In-house Training
Our October training was on Negotiation Skills. Our November training will be on Environmental Economics. Both sessions are provided through the State Water Board's Training Academy.

Staff Presentations
On October 17, David Elias, Senior Geologist in the Groundwater Protection Division, made a presentation to the Bay Delta Science Conference in Sacramento. His talk focused on stormwater data collected from the vessels moored at the Suisun Bay Reserve Fleet (aka "the mothball fleet") over the last four years. The results soundly supported our original hypothesis that the removal of exfoliating paint from the vessels in the mothball fleet would dramatically reduce the discharge of metals to Suisun Bay.

On October 26, Jim Ponton, Senior Geologist in the Planning Division, spoke at the Tomales Bay Watershed Council's *2012 State of the Bay Conference – Building Collaboration & Stewardship of the Tomales Bay Watershed*. Conference topics included current research and stewardship efforts needed to preserve the Bay and its watershed. Jim's presentation covered the Board's total maximum daily load (TMDL) projects for pathogens and mercury and associated implementation actions affecting the watershed, including environmental outcomes realized from the Board's 2008 Tomales Bay Grazing Waiver Program and remediation of the former Gambonini mercury mine site. Conference attendees were also briefed on recent State Board actions including the adoption of statewide regulations for septic systems (Onsite Waste Water Treatment Policy, July 2012). Jim's presentation was well received and conference attendees were happy to hear about the ongoing efforts the Board and other dedicated watershed groups are making towards improving and protecting the water quality of Tomales Bay.

On November 7, Stephen Hill, Division Chief of the Toxics Cleanup Division, spoke at a dry cleaner symposium put on by the Groundwater Resources Association of California. The symposium focused on the investigation and cleanup of dry cleaner spill sites. Stephen participated in a panel discussion on the technical, legal, and regulatory challenges facing dry cleaner site cleanups. His remarks highlighted the regulatory challenges we face at dry cleaner spill sites, largely due to the prevalence of "mom and pop" dischargers and their limited ability to fund necessary cleanup. He noted recent efforts by the Regional Water Boards and the Department of Toxics Substances Control, our sister agency, to improve the agencies' regulatory capability, including holding a staff-level dry cleaner workgroup. He also noted this Board's 2009 assessment tool for low-threat closure of solvent-impacted sites, something that can provide a "path to closure" for some dry cleaner spill sites. As part of the symposium, Kevin Brown, geologist in the Toxics Cleanup Division, moderated a panel discussion on regulatory, risk, and vapor intrusion issues at dry cleaner spill sites.

Recent Penalty Enforcement Complaints and Settlements (Lila Tang)
The following tables show proposed settlements and settled actions for assessment of penalties as of last month's report. Active cases are available at:
http://www.waterboards.ca.gov/sanfranciscobay/public_notices/pending_enforcement.shtml

Proposed Settlements
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.

Discharger(s)	Violation	Penalty Proposed	Comment Deadline
Friendly Cab Co., Inc., in Cupertino	Failure to submit annual report and to implement practices to reduce stormwater pollution	$100,400	December 6, 2012
GWF Power Systems, Site V Power Plant, in Bay Point	Discharge limit exceedance	$3,000	November 16, 2012
Mt. View Sanitary District, Wastewater Treatment Plant, in Martinez	Discharge limit exceedance	$3,000	November 16, 2012
ABS Seafood Inc., in San Francisco; Carone & Co. Inc., in Concord; DH Title Co., in Fremont; General Chemical, in Bay Point; Hall Wines, in Rutherford; MBJ Ent Inc., in Pleasanton; Perry Tool & Research Inc., in Hayward; Topcon Positioning Systems Inc., in Livermore; East Bay Truck & Auto Repair, in Oakland; and Westak, in Sunnyvale	Late annual industrial stormwater report	$1,000 each	November 15, 2012

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

Discharger	Violation	Penalty	Supplemental Environmental Project
Novato Sanitary District, Wastewater Treatment Plant and collection system	Sewage overflows, other unauthorized discharges to San Pablo Bay and tributaries	$354,241	Revegetate 4.3 acres of Simmons Slough and 2.3 acres of Bahia Tidal Pond with native plants, and monitor success.

Durham School Services, L.P., in Campbell, Concord, and Hayward	Late annual industrial stormwater reports, inadequate controls, and outdated plans for stormwater pollution prevention	$131,000	Not applicable
San Jose Water Company, Mircrofiltration Plant, in Saratoga	Discharge limit exceedances	$9,000	Not applicable
East Bay Municipal Utility District, Water Treatment Plant, in Walnut Creek	Discharge limit exceedances	$9,000	Not applicable
Valero Refining Company Refinery, in Benicia	Discharge limit exceedances	$27,000	Not applicable

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