STATE OF CALIFORNIA

REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

MEETING DATE: August 12, 2015

ITEM: **4**

SUBJECT: **EXECUTIVE OFFICER'S REPORT**

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

EXECUTIVE OFFICER'S REPORT: *August 2015*

A Monthly Report to the Board and Public

NEXT MEETING: August 12, 2015 **WEBSITE:** http://www.waterboards.ca.gov/sanfranciscobay/

Items in this Report (Author[s])

Demolition of Bay Bridge Pier E3 (Derek Beauduy)

CalTrans is progressing with the dismantling and removal of the original eastern span of the San Francisco-Oakland Bay Bridge between Yerba Buena Island and Oakland, with planned completion in 2019. The entire original eastern span, including its underwater foundations, is required to be removed under the Waste Discharge Requirements (WDRs) the Board adopted for construction of the new bridge in 2002. To date, CalTrans has removed Section 2, the above-water cantilever truss section near Yerba Buena Island, and it is currently working eastward (see Figure 1).

As shown in Figure 1, the original eastern span of the bridge consists of steel truss sections sitting on concrete pier caps and underwater foundations. Removal of the steel truss sections allows for access to the pier caps and foundations for demolition. CalTrans originally planned to remove all concrete piers and underwater foundations using mechanical methods. However, mechanical demolition of the largest and deepest underwater foundations is time-consuming and labor-intensive due to the sheer size of the foundations and the challenges of installing and maintaining the necessary coffer dams during the demolition work.

Pier E3, located approximately 1,500 feet east of Yerba Buena Island, is one of the deeper piers.

CalTrans is proposing to demolish Pier E3 using controlled explosive charges to implode it, instead of using conventional mechanical demolition methods. Pier E3 is a 268-foot tall, largely hollow, concrete structure that descends to 175 feet below the mud line. The implosion is intended to result in the pier's above-mud line concrete falling into the hollow portions of the structure below. Any remaining portions above the mud line will be removed mechanically.

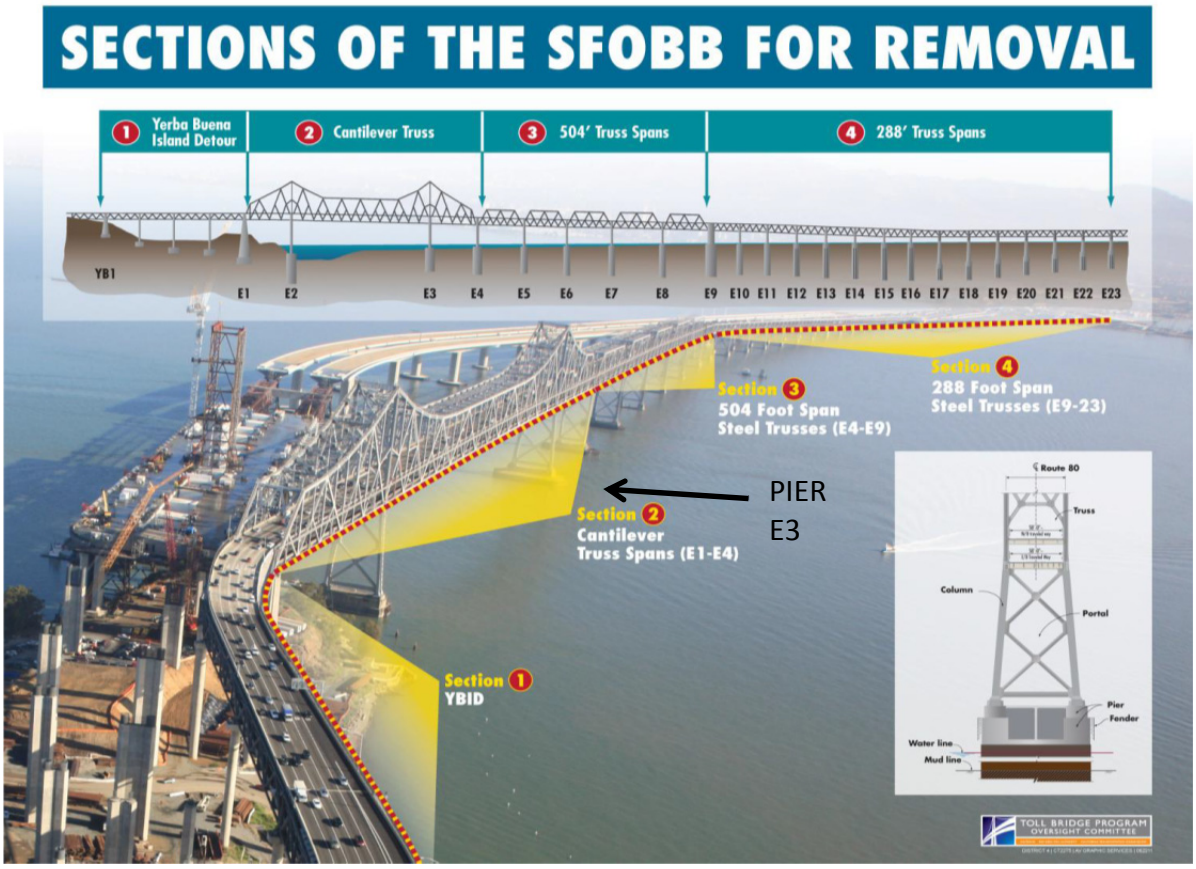


Figure 1. *Mockup of Bay Bridge demolition.*

The pier implosion was proposed as a demonstration project that will be used to guide future decision-making as CalTrans plans the demolition of the remaining in-water piers supporting the original east span. Under the WDRs, we have considered these types of changes to the project as amendments to the project's Stormwater Pollution Prevention Plan (SWPPP). These SWPPP amendments are submitted for Executive Officer approval when plans are finalized or changes to the construction or demolition plans are necessary. I accepted a SWPPP amendment for the Pier E3 controlled implosion project on July 21.

Water quality monitoring during construction and demolition activities is a requirement of the WDRs, and Caltrans will complete an extensive water quality monitoring program for the implosion. If the monitoring results show that the implosion of Pier E3 had the expected minimal impacts to Bay water quality, sediment quality, and biological resources, demolition by controlled implosion will be considered a viable option for the remaining in-water piers. Although the timing is not directly related to this project, CalTrans anticipates completing the multi-use path on the new Bay Bridge East Span from the Oakland touchdown to Yerba Buena

Island during 2015 as well.

Alameda Finger Lagoons Public Forum Followup (Selina Louie)

During the July Board Meeting's Public Forum, the Board heard comments from Monty Heying regarding water quality conditions in the City of Alameda's Finger Lagoons. The Board asked staff to investigate Mr. Heying's concerns and provide a response. As described below, we found that the lagoons are being managed appropriately to address potential water quality impacts.

Alameda Finger Lagoons Overview

The Alameda Lagoons are a system of five lagoons, approximately two miles in length. They are owned by the local homeowners' association and managed by the City. Each day, Bay water is pumped into the lagoons at the easternmost end. The water then flows west by gravity and ultimately discharges back into the Bay. In addition, about 1.6 square miles of the City drain into the lagoons via storm drains and overland flow.

The lagoons are shallow, with an average depth of about three feet and a maximum depth of about six feet. The water level is maintained by two adjustable weirs. The potential for such shallow waters to develop odor and visual nuisance conditions, which can result when an overabundance of algae dies and decays, is managed by water pumping, occasional dredging to remove sediment, and limited applications of algaecides.

Findings Regarding Potential Lagoon Water Quality Impacts

Mr. Heying expressed concern that an unreported toxic spill from the lagoons may have been responsible for a greyish-brown sludge that he observed on October 12, 2014, and that this sludge may have been responsible for the mid-January "mystery goo" in San Francisco Bay that coated hundreds of aquatic birds and killed approximately 300. Staff was unable to find information supporting Mr. Heying's concern. There were no reports of significant numbers of fish or aquatic birds killed during the days or weeks around October 12, 2014. We investigated other potential sources and likewise found no evidence.

Under a conditional water quality certification issued by Board staff, the lagoons were dredged between July 10 and October 24, 2014. 12,000 cubic yards of sediment were removed, which was beneficially reused as waste isolation cap material at the Alameda Point Naval Air Station cleanup and redevelopment project. Our certification conditions for that dredging project included sediment testing and water quality monitoring requirements for pH, dissolved oxygen, temperature, and turbidity, to ensure that the dredging project did not adversely affect water quality. None of the monitoring results suggest that there would be a problem.

Mr. Heying expressed concern that chemicals used in the lagoons have: (1) attacked algae, the foundation of the marine food web, (2) damaged the environment such that herons and egrets no longer feed at the eastern lagoon discharge point, and (3) turned the lagoons into an "ecological wasteland." Algae are a key part of the food web; however, overabundance of algae in lagoons can result in low-dissolved-oxygen nuisance conditions. Thus, the lagoons are managed to avoid such conditions. There are regulatory controls in place to ensure the

potential impacts to water quality from that management are appropriately addressed. Algaecide applications are covered under the State Board's statewide General Permit for Residual Aquatic Pesticide Discharges to Waters of the U.S. from Algae and Aquatic Weed Control Applications (aquatic pesticide permit), which requires periodic monitoring and annual reporting to ensure that water quality objectives are being met. Under this permit, the City is implementing a management plan for the lagoon system and submits annual reports, which we have reviewed and found adequate.

The City's 2014 annual report for the aquatic pesticide permit shows it applied algaecide and herbicide in May 2014. No algaecides or herbicides were used in August, September, or October 2014. Water quality monitoring completed after the use of the algaecide and before discharging water back into the Bay in May 2014 indicates no exceedances of receiving water limits for the parameters that were required to be tested.

Mr. Heying showed the Board an older picture of a rocky shoreline with algae and a newer photograph of the shoreline with less algae. He concluded that a chemical spill must have killed the algae. However, a variety of factors, such as tide and seasons, can affect algae growth. Further, herons and egrets can be partially migratory, and their presence along the Alameda shoreline and lagoons can also vary with factors such as time of day and season. Aside from Mr. Heying's public testimony, we have not received complaints from residents fronting the lagoon regarding fish and/or aquatic birds killed in the lagoons, or that the lagoons do not provide fishing opportunities. The City has also stated that it has not received any other complaints similar to the issues reported by Mr. Heying.

Mr. Heying expressed concern that chemical use in the lagoons has increased due to the effects of global warming. There is no data to support Mr. Heying's allegation. Many factors, including tidal action, weather, and season, affect the need for algaecide and herbicide to control aquatic vegetation from year to year. With the exception of 2013-2014, the algaecide and herbicide use in the lagoons has not changed significantly over the past several years, according to information supplied by the City. In fact, in 2013-2014, algaecide and herbicide use was significantly less than in other years.

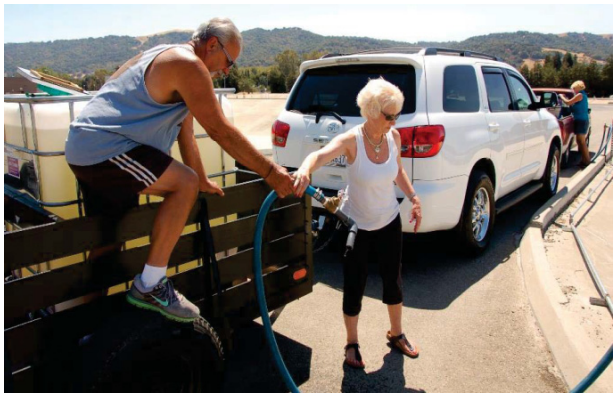
Mr. Heying asked the Board to strictly enforce its Municipal Regional Stormwater Permit (MRP) to reverse the destruction of marine habitat. We will continue to work with City staff to ensure the City appropriately complies with the MRP. Under the MRP, the City is required to have a program to address illicit discharges, complaints, and discharges associated with industrial and commercial sites. We evaluated the City's response to Mr. Heying's complaint and its procedures for responding to spills, complaints, and dumping. The City acted appropriately by responding promptly to Mr. Heying's original October 2014 complaint about the sludge in the water. The City's Fire Department was at the scene in less than 7 minutes and did not observe evidence of sludge in the water. Shortly after the incident, the City's Fire Chief conveyed his findings to Mr. Heying on the phone and later in an April 3 email. Also, other City staff spoke with Mr. Heying on several occasions regarding his concerns. These responses reflect the City's general procedures, which comply with the MRP's requirements.

Conclusion

While the Alameda Finger Lagoons have the potential to impact water quality, Board staff's review found that the City is taking appropriate steps to avoid and minimize such impacts. We did not find information supporting the specific concerns expressed in the testimony, but we will continue to communicate with the City and Mr. Heying should additional information come to light regarding identified or potential lagoon water quality impacts.

Residential Recycled Water Fill Stations (Blair Allen)

In response to the current drought, many municipal recycled water programs in our Region have initiated the use of residential recycled water fill stations. In essence, the stations allow residential customers to drive up, fill up, and take recycled water home (Figures 2a and 2b).



Figures 2a and 2b. *Examples of recycled water fill stations.*

There are currently eight recycled water programs offering fill station pickups in the Region, with several more in development (see schedule chart below). The recycled water being distributed is high quality, disinfected tertiary-treated recycled water, which is suitable for many uses, including for irrigation of landscape plants, parks, playgrounds, food crops, in decorative fountains, and for fire-fighting. In practice, the primary use is for irrigation of landscape plants and trees in response to mandatory reductions of potable water for such uses.

Water recyclers in our Region have been producing and distributing high quality recycled water for more than three decades. Distribution for large-scale projects is through permanent buried pipelines and constructed irrigation systems, often identifiable because of the purple pipe used for such systems. Those projects take a long time to design and build. Distribution by truck-hauling has also been used for many years and is particularly useful for short-term work such as on construction sites or difficult-to-access projects such as watering trees along a busy street.

The use of residential recycled water fill stations in this Region was started in 2014 by the Dublin San Ramon Services District (DSRSD). Permitting of the residential fill stations follows the same pathway as commercial truck-fill stations: an engineering report describing the project must be first reviewed and approved by the State Board's Division of Drinking Water. Based on that approval, our staff enrolls the local recycled water agency under the Board's 1996 general water reuse permit, after which the local agency trains each user and issues permits. The local agency tracks water use by volume, date, and location. The residential fill programs, while only active since 2014, have already implemented lessons learned, such as using dual-valved fill-

hoses, providing stick-on labels for each recycled water container, establishing a maximum allowed volume per vehicle (water is heavy, 50 gallons is over 400 pounds, plenty for most home cars!), and even providing traffic control due to the large number of customers.

To date, residential recycled water fill station projects have been tremendously popular. For water recyclers, it is an opportunity to showcase the benefits of recycled water and, for homeowners, it is an opportunity to preserve landscape plants and trees despite serious potable water use restrictions. Still, the volume of recycled water distributed from residential fill stations is small compared to pipeline-projects and commercial truck-hauling. For example, DSRSD reported that, as of July, their 2,500 residential pickup customers have hauled 12 million gallons, versus about 1,500 million gallons used by fixed-pipeline projects in the same time. Livermore reported residential customer pickups of 2.2 million gallons. But the objective is not to maximize the volume served but rather to provide recycled water to widely distributed residential property end-uses, in a timely manner, during the drought. One recycled water agency noted the most satisfying benefit of its residential fill station program is educational outreach, with its customers now well-educated about recycled water and even active advocates for increased use of this valuable and available resource. Tempering those benefits, another agency noted that some customers are using the water to maintain lawns in near-pre-drought conditions; for those customers, the availability of recycled water may be reducing the perceived need to switch to drought-tolerant, water-efficient landscapes.

Residential Recycled Water Fill Stations in SF Bay Region as of July 2015

LOCATION	ADDRESS	DAYS	TIMES
Central Contra Costa Sanitation District, Martinez	At Household Hazardous Waste Collection Facility, 4797 Imhoff Place, Martinez	M,T,W,Th,F,S	8 am to 6 pm
Delta Diablo Sanitation District, Pittsburg/Antioch	2500 Pittsburg-Antioch Hwy.	S & S	9 am to 3 pm
Dublin San Ramon Service District, two stations:		M,T,W,Th,F	10 am to 7 pm
Pleasanton	7399 Johnson Drive, Pleasanton	S & S	8 am to 3 pm
Dublin	Dublin Blvd at Clark Avenue, Dublin	M, W, F	9 am to 4 pm
City of Livermore	Livermore Water Reclamation Plant	M,T,W,Th,F	6:30 am to 8:30 am
	101 W. Jack London Blvd., Livermore	T, W & F	2:00 pm to 4:00 pm
		M & Th	12 pm to 7:00 pm
North Coast County Water District, Pacifica	At NCCWD office, at 2400 Francisco Blvd., Pacifica		
North Marin Water District, Novato	At NMWD office, 999 Rush Creek Place, Novato	M,T,W,Th,F	8 am to 4 pm
Palo Alto	At Palo Alto Regional Water Quality Control Plant, 2501 Embarcadero Way, Palo Alto	M,T,W,Th,F	5:30 am to 5:30 pm
Redwood City	Public Works Corp Yard, 1400 Broadway, Redwood City		

There are also numerous recycled water fill stations in the Region for municipal and commercial truck operators. The Bay Area Clean Water Agencies (BACWA) compiled a Commercial Truck Fill Guide, most recently updated in June, that is available on BACWA's website, www.bacwa.org, under Documents.

U.S. EPA Funds Sea Level Rise Policy Project (Ben Livsey, Naomi Feger)

The San Francisco Estuary Partnership (SFEP) has been selected to receive a $90,402 two-year grant from U.S. EPA to work with the Water Board to support the evaluation of existing State and federal regulations and policies governing the permitting of multi-benefit projects designed to address sea level rise.

This project will fill an evolving regulatory need as we are already seeing more projects that incorporate climate resilience and adaptation strategies in their design, including the use of treated wastewater as part of horizontal levee designs. This project will also address some of the regulatory challenges to climate adaptation that are expected to be identified in the forthcoming science update to the San Francisco Baylands Ecosystem Habitat Goals Project.

SFEP and the Water Board will collaborate with the Engineering Research Center for Re-inventing the Nation's Urban Water Infrastructure (ReNUWIt) and incorporate research findings on pollutant (e.g., contaminants of emerging concern) removal in wetlands. We will also collaborate with the State Coastal Conservancy, the San Francisco Bay Joint Venture, the Bay Conservation and Development Commission, and others to support the connection between this project and the myriad other climate change planning efforts in the Region. Project outputs will include findings, alternatives, and recommendations on how the Water Board should evaluate baylands climate adaptation projects, while balancing concerns for long-term wetland protection, restoration, and enhancement. The project includes a Board workshop to present its findings and recommendations. We expect to begin this two-year project in October, after the funds for the project are officially awarded.

Improved In-water Vessel Hull Cleaning Practices (David Elias)

In the August 2013 Executive Officer's Report, we reported that we had developed a Best Management Practice (BMP) Fact Sheet for the in-water vessel hull cleaning of large vessels. In-water vessel hull cleaning is done to remove bio-fouling. Without proper pollution controls, the cleaning can result in discharges of copper and zinc at concentrations orders of magnitude above water quality standards.

In 2012, the U.S. Maritime Administration conducted tests to evaluate hull cleaning methods. Based on these results and a subsequent mixing zone test, our Fact Sheet recommends a BMP that consists of a brushing device, vacuum pumps, and several filtration units. This method can successfully reduce soluble copper in the effluent from about 1,800 parts per billion (ppb) to about 90 ppb, and soluble zinc from about 1,300 ppb to about 500 ppb.

In June, the Maritime Administration significantly scaled up this operation by contracting with Underwater Services International to execute in-water vessel hull cleaning of the Cape Hudson,

a 750-foot long Reserve Fleet Vessel located at Pier 50 in San Francisco. The results were better than anticipated, as the treatment system effluent contained only 5 ppb soluble copper and 40 ppb zinc. This provides another example of the benefits of developing innovative approaches to solving water quality problems.

The In-Water Vessel Hull Cleaning BMP Fact Sheet can be found on our website at: http://www.waterboards.ca.gov/sanfranciscobay/publications_forms/documents/in_water_hull_cleaning_bmp_fact_sheet.pdf

Watkins Terminal Site in San Leandro Closed (Cherie McCaulou)

The Board has delegated to the Executive Officer the authority to issue or rescind site cleanup orders pursuant to Water Code section 13304. The choice between having these orders acted upon by the Board or by the Executive Officer hinges on the degree of controversy and urgency in each case. In general, I only issue or rescind these orders in situations where there is little or no controversy or when there is some urgency (e.g., cleanup action is needed promptly to address a current or imminent threat to human health or the environment). Otherwise, we bring these types of cleanup orders to the Board for its consideration and action in a public hearing.

In mid-July, I rescinded a 1998 site cleanup order for the Watkins Terminal site, an industrial site located at 2075 Williams St. in San Leandro. The site was developed in 1952 and has been used for metal fabricating, polymer industries, freight hauling, and storage. The Board's 1998 order was prompted by solvent contamination in groundwater beneath the site, principally trichlorethene (TCE) and perchlorethene (PCE). Subsequent site investigations found that the groundwater contamination was originating from an up-gradient source. We have ruled out a solvent source at the Watkins Terminal site and an upgradient parcel at 2051 Williams St., and the order was therefore no longer needed. We will be requiring investigations further upgradient to find the solvent source and require its cleanup.

CLRRA Agreement for Redwood Plaza Site (David Barr)

In July, we entered into a California Land Reuse and Revitalization Act (CLRRA) agreement with the Sobrato Organization, a potential purchaser of a property in Redwood City that is a source of soil and groundwater pollution. The agreement will both accelerate the cleanup of the property and allow for its redevelopment.

The property is located at the intersection of Broadway and Woodside Road in central Redwood City. Chlorinated solvents and petroleum hydrocarbons were released to soil and groundwater from an industrial facility that manufactured shims and oil seals from 1941 to 1970. The Redwood Plaza Shopping Center has operated at the site since 1972 and contains a number of retail outlets. Investigation and cleanup has been impeded by the bankruptcy of the former industrial facility and the limited financial resources of the current site owners. Sobrato proposes to demolish the shopping center, investigate and cleanup the pollution, and build a mixed-use project with a 600-unit apartment complex and some commercial space.

For context, CLRRA is a State law passed in 2004 and reauthorized in 2010. It provides eligible parties such as potential purchasers certain immunities in order to promote the cleanup and redevelopment of blighted, contaminated properties, often referred to as "Brownfields." A CLRRA agreement provides an eligible party with liability protection for the site's contamination and requires it to conduct necessary site investigation and cleanup. Specifically, the law affords protections from claims made by any person for response costs or other damages associated with a release and prohibits an agency (e.g., the Water Board) from requiring an eligible party to take a response action other than the one required in an approved response plan, subject to certain exceptions related to endangerment. Failure to comply with the work required in a CLRRA agreement can result in the loss of immunities.

Our goal when considering a CLRRA agreement is to obtain significant cleanup in return for granting liability protection. We first confirm that the requesting party is eligible. We then determine what additional site assessment and cleanup work is needed and make sure that the agreement will result in that work getting done. I will update you on future CLRRA agreements as we continue to explore the benefits of using this tool to facilitate the cleanup of contaminated sites.

In-house Training

We had no in-house training in July and will resume in-house training in the fall.

Staff Presentations

In collaboration with the Marin Municipal Water District, the Marin Resources Conservation District (RCD), and the California Conservation Corps Watershed Stewardship Program, Board staff participated in a workshop educating property owners on how to best address stream bank instability problems. The evening workshop on July 2 included 50 people, many from west Marin County. Property owners in the Lagunitas Creek watershed interested in learning what they can do to further protect the creek's endangered coho salmon were well represented, in addition to attendees interested in range management and rural property management. Board staff A.L. Riley began by illustrating the most common stream bank erosion control strategies prone to failure. She then provided the participants with more successful practical methods for protecting stream banks and streams habitats. She is working with the RCD to provide a followup hands-on field workshop this fall.

Penalty Enforcement Actions Proposed (Lila Tang)

The following table shows recently proposed settlements. There are also two complaints on which Board staff and the dischargers are still in settlement discussions. All complaints and proposed settlements 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 deadline, the Executive Officer will sign an order implementing the settlement.

Discharger	Violation(s)	Penalty Proposed	Comment Deadline
Sal J. Acosta Sheet Metal Manufacturing Inc., in San Jose	Failure to timely submit industrial stormwater annual report for 2013.	$1,100	August 10, 2015
Auto Wreckers, in Rodeo	Failure to timely submit industrial storm water annual report for 2013.	$1,100	August 10, 2015

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

401 Water Quality Certification Applications Received (Keith Lichten)

The table below lists those applications received for Clean Water Act section 401 water quality certification from June 1 through July 24. A check mark in the right-hand column indicates projects with work that may also be within the jurisdiction of the Bay Conservation and Development Commission (BCDC).

Project Name	City/Location	County	May have BCDC jurisdiction
Livestock pond improvement projects – Dry Creek Regional Park (separate applications for 3 projects)	Hayward	Alameda	
Bankhead livestock pond and rangeland health improvement project	Livermore	Alameda	
Big Inch storm drain repair	Berkeley	Alameda	
Chapman livestock pond restoration project	Livermore	Alameda	
East Bay Regional Park District Geldermann Property - livestock pond and rangeland health improvements (Mendoza/Duck pond)	Hayward	Alameda	

Glen Echo Creek bank rehabilitation project	Oakland	Alameda	
Glen Echo Creek restoration	Oakland	Alameda	
Installation of additional 60-inch reinforced concrete pipe on Zone 5 flood control Line H at railroad crossing	Newark	Alameda	
Mission Road Culvert Installation	Calaveras Road, Sunol	Alameda	
San Francisco East Bay Ferry Terminal, Alameda Harbor Bay Pile Replacement	Harbor Bay Ferry Terminal, Alameda	Alameda	√
Stream maintenance priority projects for 2015	Pleasanton	Alameda	
Barge Pier Repair	Military Ocean Terminal, Concord	Contra Costa	√
Chevron Pipeline Company, Bay Area Products Line, Sac Leg PIM Repairs	Pittsburg	Contra Costa	√
Creekside Walk – Cerrito Creek daylighting	El Cerrito	Contra Costa	
Honeywell Bay Point Site Interim Measures	Bay Point	Contra Costa	√
Ohlone Creek protect-in-place pipeline maintenance project	Hercules	Contra Costa	
Plains Richmond Pile Replacement	Santa Fe Channel, Richmond	Contra Costa	√
Union Pacific Railroad Tracy Subdivision Bridge Replacement Project	Martinez	Contra Costa	√
1 West Shore Rd – Waterfront Improvements	Belvedere	Marin	√
112 Railroad bank erosion protection project	Woodacre	Marin	
Livestock exclusion fencing and gully repair	Tomales	Marin	
Maintenance cleaning of sediment from culverts and drainages; Marin County	Inverness	Marin	
Reed Creek Repair	Mill Valley	Marin	
Valhalla Property	2nd & Main Streets, Sausalito	Marin	√
Kimball Reservoir inlet/outlet project	Calistoga	Napa	
Main Street Exchange Pedestrian Bridge	1st and Main Streets, Napa	Napa	√
54-inch Outfall Force Main Replacement	Radio Road at Steinberger Slough, San Mateo	San Mateo	√
Taxiway B culvert replacement	Half Moon Bay	San Mateo	

Weiler Ranch Road culvert replacement	Pacifica	San Mateo	
Anderson Reservoir Phase 1A geotechnical and geologic investigations	Morgan Hill	Santa Clara	
Calcine-paved roads remediation project	New Almaden mining district	Santa Clara	
McKean Road Tank and Pipeline Project	San Jose	Santa Clara	
Storm Pump Station No. 1 Rehabilitation	Bay Trail near Sunnyvale Water Pollution Control Plant, Sunnyvale	Santa Clara	√
Berths 16 & 17 – Fender Repairs	Mare Island, Vallejo	Solano	√
Kiewit Infrastructure West Co. Maintenance Dredging	Mare Island Strait, Vallejo	Solano	√
Travis Air Force Base culvert and security grate installation and other infrastructure work	Travis AFB	Solano	
Altura Apartments	Petaluma	Sonoma	√