California Regional Water Quality Control Board
San Francisco Bay Region

EXECUTIVE OFFICER'S REPORT

A Monthly Report to the Board and Public

January 2008

The next regular scheduled Board meeting is January 30, 2008.
*See **http://www.waterboards.ca.gov/sanfranciscobay/** for latest details and agenda*

Items in this Report (Author[s])

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Copper Objectives for San Francisco Bay (Richard Looker)

On January 15, the State Water Board approved site specific marine water quality objectives (SSOs) for copper in San Francisco Bay, which were adopted by this Board in June 2007. The new SSOs will replace the nationally-derived objectives of 3.1 micrograms per liter (chronic toxicity) and 4.8 microgram per liter (acute toxicity) with recalculated objectives that reflect recent toxicity data for mussel larvae residing in the Bay. The recalculated SSOs for Suisun Bay, San Pablo Bay, Central Bay, and Lower Bay north of the Hayward Shoals are 6.0 and 9.4 (microgram per liter chronic / acute), and, for the portion of Lower Bay south of the Hayward Shoals, are 6.9 and 10.8.

The new objectives will be implemented through a Bay-wide strategy that includes: required studies to address technical uncertainties; mandatory effluent limits for all municipal and industrial wastewater dischargers; control measures for major sources of copper (urban runoff, wastewater treatment facilities, lagoons, and marine anti-fouling coatings); and an ambient water quality monitoring program designed to detect small changes in dissolved copper concentrations in the Bay that may trigger additional control measures.

Sonoma Creek Pathogens TMDL approved by OAL (Tina Low)

In June 2006, this Board adopted a Basin Plan amendment establishing a TMDL for pathogens in Sonoma Creek. The State Water Board approved the amendment in September 2007, and forwarded it to the Office of Administrative Law (OAL). OAL staff, as

part of their review of the administrative record, identified some minor editorial changes that they felt were needed to improve clarity. These changes consist of clarifying the term "designated entities" when referring to municipal runoff permittees as implementing parties of measures required by the amendment I revised Tables 7-j and 7-k to clarify the identification of the "designated entities" according to criteria specified in NPDES General Permit No. CAS00004, commonly known as the State-wide Phase II stormwater permit. I then submitted the revised Basin Plan amendment to staff of the State Water Board and OAL on December 6. I am happy to report that OAL approved the very slightly revised Basin Plan amendment in December. It is now being reviewed by U.S. EPA.

Cosco Busan Oil Spill Technical Workshop (Karen Taberski)

On Friday, January 25, the Board is hosting a workshop to facilitate data sharing among all agencies, environmental groups, and scientists working on the Cosco Busan oil spill. The workshop will discuss approaches to short- and long-term monitoring and final cleanup and restoration of the Bay and affected coastline. The workshop will be held at the State Building's Auditorium from 8:30 a.m. to 4:45 p.m. An invitation to the workshop is posted on our home page (http://www.waterboards.ca.gov/sanfranciscobay/).

The primary objectives of the workshop are to:

1. Summarize previous data collection activities related to the spill, as well as any future data collection activities and/or projects;
2. Identify data gaps in order to determine if there is a potential for longer-term impacts of the oil spill on the Bay;
3. Determine long-term monitoring needs;
4. Evaluate cleanup goals; and
5. Identify short-term restoration/mitigation opportunities.

The discussions at this meeting are intended to help guide the Board and other interested parties in determining the appropriate courses of action to ensure that the impacts of the oil spill on the Bay are minimized and mitigated.

Hamilton Wetland Restoration Project (Beth Christian)

As we reported in March 2007, the Hamilton Project received its initial 200,000 cubic yards of clean sediment from the Bel Marin Keys Community Services District, Hamilton's immediate neighbor to the north, to begin the restoration of 630 acres of tidal and seasonal wetland habitat at the former Hamilton Army Airfield in Marin County. Another major milestone for the Hamilton Wetland Restoration Project began in late December when the first delivery of dredged sediment to Hamilton (see photo below) from the Oakland Harbor 50-Foot Deepening Project arrived. The U.S. Army Corps of Engineers (Corps) is currently in the process of delivering about three million cubic yards of sediment from the deepening of the Port of Oakland's harbor. The Corps is using a system that can pump material directly off a barge into an "off-loader" located in deep water five-miles offshore of the Hamilton Project site in San Pablo Bay. Once off-loaded, the dredged material will be pumped via a five-mile long pipeline to the Hamilton Project site where the shallow water outboard of the site prohibits barges from approaching the shoreline. After the dredged

material has settled and reached its design elevation, the outboard levee to the Bay will be breached, so that tidal wetlands can begin to form. Ultimately, about five million cubic yards of dredged material will be imported to the Hamilton Project site from dredging projects all around the Bay. We will continue to keep you updated regarding the progress in the construction of wetland habitat at the site.

Dredged material from Oakland Harbor entering Hamilton Wetland Restoration Project Site

Suisun Marsh Regulatory Working Group (Jolanta Uchman)

The Suisun Marsh is the largest contiguous brackish water wetland in the western United States. In October 2001, agencies with primary responsibility for actions in Suisun Marsh formed the Suisun Marsh Charter Group to develop an implementation plan for the Marsh. The plan will outline actions needed to preserve and enhance managed seasonal wetlands, restore tidal marsh habitat, implement a comprehensive levee protection/improvement program and protect ecosystem and drinking water quality.

A subcommittee of the Charter Group, the Suisun Marsh Regulatory Working Group, is comprised of staff from agencies with regulatory oversight responsibilities. The Regulatory Working Group is preparing a joint National Environmental Policy Act (NEPA) and California Environmental Quality Act (CEQA) Programmatic Environmental Impact Statement -Environmental Impact Report (EIS/EIR) for a Habitat Management, Preservation, and Restoration Plan for the Suisun Marsh. Participating agencies include the Board, Solano Resource Conservation District, U.S Bureau of Reclamation, U.S. Fish and Wildlife Service, National Marine Fisheries Service, U.S. Army Corps of Engineers, and California Department of Fish and Game. On January 7, the Suisun Marsh Regulatory Working Group met to discuss the EIR/EIS elements and related permitting requirements, and to specify roles and responsibilities for the continued management and oversight of the project.

San Pedro Creek Watershed (Carmen Fewless)

In December, we received the Final Report for the San Pedro Creek Watershed Coalition's "Bacterial Source Identification in San Pedro Creek (Pacifica)" project. The project was funded with Proposition 13 monies, and aimed to pinpoint the source of coliform bacteria found along San Pedro Creek by utilizing genetic analyses of bacterial samples by the Institute for Environmental Health (IEH), in Washington. The Project also funded the development of a new set of assays for the tracking of microbial sources carried out by the Biomolecular Resource Lab (BRC) at the University of California in San Francisco. The BRC Lab used the new assays to perform analyses of the bacterial samples.

Results submitted by the IEH were compiled and statistically analyzed by Dr. Jerry Davis, the Director of the San Pedro Creek Watershed Coalition. According to the Final Report, wet season results appear dominated by avian sources, but significant numbers of canine, human, horse, raccoon, and deer sources can be seen as well. Dry season results still show a large count of avian sources, but raccoons and dogs become more apparent in the percentages. Rainfall-generated runoff was shown to be a significant influence on producing high *E. coli* counts at downstream sites. According to the Final Report, human inputs are from leaking sewer lines, and greatly increase downstream, so the places to focus sewer line repair efforts are in downstream neighborhoods where laterals are old and poorly constructed.

The Final Report recommends that the Board conduct periodic site inspections of animal facilities within San Pedro Valley and work with ranch owners to implement Best Management Practices that will minimize runoff from sites and improve runoff quality. In the Final Report, the San Pedro Creek Watershed Coalition requests that, given the existing contact recreational use of the beach and creek mouth, the Board add Contact Recreation as a Beneficial Use of San Pedro Creek.

One interesting conclusion of the study is that although microbial source tracking (MST) shows considerable promise in identifying sources of microbial water quality problems, the method badly needs independent verification. Only 21% all the samples analyzed were keyed to the same source by each lab, and there is no way to determine which lab (if either) is correct. Verification of methods should be done with known fecal *E. coli* sources, blinded from the laboratory and carried out by a microbiologist with genetics expertise, thus providing an independent assessment.

Potrero Power Plant to be shut down (Derek Whitworth)

The Potrero Power Plant, located next to the Bay in San Francisco, burns natural gas to generate high pressure steam used for driving generators to produce power for San Francisco. On October 30, the Plant's owner, Mirant, and the City of San Francisco signed a conceptual agreement to shut down the Plant when it is no longer needed for electric reliability. The agreement, which establishes a process for plant closure and future reuse of the Potrero site, will be considered by the San Francisco Board of Supervisors this month.

The Potrero Plant uses 200 million gallons per day of Bay water to condense boiler steam. Water is pumped from the Bay, passes through screens and heat exchangers and is returned directly to the Bay slightly warmer. Although there is no contact with the process, marine life in the Bay water is damaged by the actions of pumps and by flowing through the pipes and heat exchangers. When the Board adopted the most recent NPDES permit in May 2006, provisions in the permit directed Mirant to evaluate the potential impacts of once-through cooling and to examine options to reduce the use of Bay water. If the Plant closes, its once-through cooling impacts will cease, and these studies will be unnecessary.

Closure will depend on the concurrence of the California Independent System Operator and the Federal Energy Regulatory Commission. The California Independent System Operator's Action Plan for San Francisco currently indicates that electric system improvements will eliminate the need for the Potrero Plant by 2009.

AB 739 Implementation (Shin-Roei Lee)

The Governor approved this bill in October 2007. The bill requires: (1) the State Water Board and the Department of Water Resources (DWR) to develop a coordinated approach for the expenditure of stormwater grant funding from the Safe Drinking Water, Water Quality and Supply, Flood Control, River and Coastal Protection Bond Act of 2006 (Proposition 84) and the Disaster Preparedness and Flood Prevention Bond Act of 2006 (Prop 1E); (2) that funds designated for stormwater grants meet certain criteria including sustainable, long-term water quality improvements; (3) that the design and construction of combined municipal sewer and stormwater systems are eligible for funding under Proposition 1E, provided the projects meet certain criteria; (4) the State Water Board to develop, after conducting public workshops, guidance for evaluating and measuring the effectiveness of municipal stormwater management programs by July 1, 2009; and (5) the State Water Board to appoint a task force to advise it on the stormwater program.

Below are the comments that we submitted to State Water Board staff on grant priorities and criteria. Our staff plans to provide similar comments on the State Revolving Fund loan for stormwater management.

Use loans/grants as financial incentives to institutionalize natural resource-friendly local land use policies and ordinances. During the initial round of funding, use the criteria below to assign priorities. After the initial round of funding, change the criteria to prerequisites.

- Give higher priorities to projects initiated and grounded by local ordinances on Wastewater and Stormwater Reuse, Smart Growth, Low Impact Development, Brownfield Redevelopment, Green Building Standards, Stream Restoration and Protection, Plastic Bag Ban, Styrofoam Container Ban, etc.;
- Give higher priorities to retrofit projects of existing (as opposed to new) infrastructure - sewer, water, storm drains, roads to facilitate infill and Brownfield redevelopment;
- Give higher priorities to integrated and comprehensive watershed planning and associated multi-benefit projects - flood control, water quality, water supply, water

reuse, groundwater recharge, habitat protection, air quality, and climate change control; and

- Give higher priorities to projects that implement multiple TMDLs.

Our staff plans to stay engaged in the task force to be formed by State Water Board. The task force is to provide advice to the State Water Board on stormwater program priorities, funding criteria, project selection, and interagency coordination of state programs that address stormwater management.

Enforcenomics (Alan Friedman)

How much would you pay for that first cup of coffee in the morning? When a beach closes because of an oil spill, what is that cost to beach goers (per person/per day)? Which has more value, a cup of diamonds or a cup of water? These are some topics discussed at the Enforcenomics conference, sponsored by the State Water Boar and held in Oakland in early January. Several Board staff attended this 3-day conference on the use of economics in water quality enforcement. The speakers included State Water Board Member Gary Wolff, State Water Board enforcement staff, and academic experts in the field of economics.

Several speakers said that from an economist's viewpoint, pollution is an externality, a cost imposed on society through the actions of a discharger. In a competitive market, government regulation and enforcement is needed to level the playing field, so that competing companies or society are not affected by the costs imposed by pollution. The government must provide economic incentives for people not to pollute, so that it is more beneficial to comply with environmental regulations then to compensate society for the harm caused by their actions. Natural Damage Resource Assessments are one way of putting a price tag on harm. A Natural Damage Resource Assessment is underway for the Cosco Busan oil spill in San Francisco Bay. Another interesting topic was the economic theory behind pollution cap and trade programs and the use of emission taxes as an incentive to drive down pollution loading.

Several speakers emphasized that we cannot expect compliance absent effective and economically-based enforcement. One case study showed that enforcement clearly discouraged pollution, and interestingly, there was a deterrent effect not only for the discharger who was fined, but on its competitors too. In other words, if a regulatory body acquires a reputation for pursuing enforcement, the effect is almost equal between those who are fined as those who aren't. Large environmental improvements can follow from even modest penalties, if they have sufficient economic "teeth."

On the last day of the conference, there were group exercises in which two enforcement scenarios were analyzed to determine what level of penalties were appropriate. There was a wide variety of answers, showing that setting enforcement penalties is not as straight forward as we'd like it to be. Still, it seemed clear that economics is an important factor to include in our enforcement actions and good area for us to continue to train our staff.

In-house Training

We had no December training. Our January training was on emerging contaminants. This training addressed what are emerging contaminants, their presence in the Bay, and our actions underway and planning to both understand and mitigate their presence.

Staff Presentations

Effective January 1, Dee Dee Dickey became Chair of the Environmental Law Section of the Bar Association of San Francisco. In that role she will work with the attorneys on the Section's Executive Committee to put on programs about environmental law and policy for the Bay Area legal community.

On January 16, Stephen Hill, Michael Rochette, and Elizabeth Allen presented a regulatory update to the Bay Area branch of the Groundwater Resources Association (GRA) at Spenger's Restaurant in Berkeley. They focused on several topics: implications of this Region's TMDLs and municipal regional stormwater permit for our site cleanup programs, Brownfield restorations, regulating risk management at sites with residual contamination, pending Basin Plan amendments regarding groundwater, the State Water Board's strategic plan update, and our recent update of environmental screening levels.