

California Regional Water Quality Control Board
San Francisco Bay Region
EXECUTIVE OFFICER'S REPORT

A Monthly Report to the Board and Public

November 2011

The next regular scheduled Board meeting is November 28, 2011.

See <http://www.waterboards.ca.gov/sanfranciscobay/> for latest details and agenda

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The Moon Hides While Nurdles Rise in San Leandro (Christine Boschen)

To fulfill the requirements of a Water Board Cleanup and Abatement Order, the cleanup of spilled pre-production plastic from the salt marsh at Oyster Bay Regional Shoreline in San Leandro started on October 28. Pre-production plastic, often referred to as “nurdles”, is a key component in plastic debris fouling California’s waters and the world’s oceans. The cleanup, the direct result of a first-in-the-nation targeted inspection effort by this Water Board, the State Board, and U.S. EPA, was kicked-off with a press release and media event attended by the Board’s Christine Boschen and Bruce Wolfe and representatives of the State Board and U.S. EPA. Numerous members of the media watched as two-person crews hired by the parties responsible for the spills swept the marsh with large pool skimmers picking up nurdles discharged from nearby storm drains and trash washed in from the surrounding area.

How did this come to happen?

Word’s gotten out that plastic marine debris (including nurdles) is a major water quality problem. So much so that the California legislature created a law requiring the State and Regional Water Boards to target pre-production plastic pellet releases in our inspections of industrial facilities and associated enforcement campaigns. In response, we formed a work group with members from State Board and U.S. EPA to tackle this problem. We kicked off our inspections in San Leandro in fall 2009, and were surprised when, on our first day out, we spotted a plastic bag manufacturer with significant plastic pellet releases outside its facility. We were further surprised to see that its pellets had made their way via the storm drain system to the nearby salt marsh at the East Bay Regional Park District’s Oyster Bay Regional Shoreline. (Photos 1a-1c)



Photo 1a. Exterior of Metro Poly, 2009.



Photo 1b. Exterior of Metro Poly, 2009.



Photo 1c. Nurdles in Pickleweed at Oyster Bay marsh, winter 2010.

Tracing our way back up the storm drain system, we found three other businesses with significant plastic pellet releases. All four facilities (three plastic bag manufacturers and one auto bumper manufacturer) are now named in Cleanup and Abatement Order, No. R2-2011-0033 (CAO). The CAO requires the responsible parties to clean up pellets from their facilities, install the necessary equipment to prevent future spills, and participate jointly cleaning up the Oyster Bay marsh. To compensate for any unrecoverable pellets that have already washed out of the marsh into the Bay and beyond, the responsible parties will also be removing other types of trash in the marsh and Bay margin.

...And the new October moon?

Picking pellets out of a salt marsh is tricky. The fact that the marsh is home to the endangered Salt Marsh Harvest Mouse and the California Clapper Rail makes the task even trickier! That's where the new moon comes in: when the salt marsh floods during extreme high tides, which coincide with the new moon, nurdles float up out of the vegetation where they can be picked from the water surface by hand—or, in this case, by modified pool skimming nets. The high tides are also critical because during this time the animals living in the marsh move to higher ground, which allows workers to slowly pick their way through the marsh without disturbing wildlife. To avoid Clapper Rail nesting season, cleanup can only happen from October through January. The CAO requires the responsible parties to clean up the marsh over two seasons

(October '11 – January '12 and October '12 – January '13). This season, there are seven possible extreme high tides. Next season, there are nine. Cleanup will extend through that entire period or will wrap up earlier if we determine that the area is clean.

Can nurdle discharges be controlled?

The good news is that keeping pellets from leaving an industrial facility is easier than one might think. With a few targeted facility upgrades and good old-fashioned housekeeping (known collectively as Best Management Practices or BMPs), zero pellet spillage and loss is possible. In fact, the four sites named in the CAO have already made the necessary improvements to their facilities and practices. (Photos 1d & e)



Photo 1d & 1e. Proper seal and containment systems for pellet transfer, 2011, ePoly Star.

From a regulatory perspective, we now have models for inspections, enforcement, and cleanup that we can apply around the Region. Armed with our inspection and enforcement procedures, a list of industry-specific BMPs, and a good idea of where we will find other plastic manufacturers, we plan to build upon our efforts in San Leandro. We recognize that cleaning pellets out of wetlands is not enough. We hope our efforts will result in an increase in public and industry awareness regarding the use and disposal of plastics in the environment and the damage that polluted stormwater discharges can cause.

Peyton Slough Marsh Complex Watershed Field Trip (Lindsay Whalin)

The Peyton Slough Marsh Complex in northern Contra Costa County consists of critical marshes such as the Rhodia Marsh, Peyton Slough, and the McNabney Marsh (Photo 2a). These marshes drain to the Carquinez Strait and offer important habitat for a wide range of plants and wildlife. On September 27, the Peyton Slough Wetlands Advisory Committee explored the watershed that drains to the marsh complex we work to restore and protect. The Wetlands Advisory Committee is a group of individuals representing local industry, environmental groups, and regulatory agencies that collaboratively manage the marsh resources and coordinate restoration and mitigation activities. Wetlands Advisory Committee members in attendance included representatives of the Mt. View Sanitary District, Rhodia, Inc., Shell Refinery, Mt. Diablo Audubon, California Dept. of Fish and Game, Board staff Terry Seward and Lindsay Whalin, and Board member Steve Moore.



Photo 2a. Peyton Slough Marsh complex, Martinez.

Before setting out to view the Peyton Slough watershed, Jeff Skinner from the Central Contra Costa Sanitary District discussed his experience as an environmental compliance inspector in the watershed. He showed us photo after photo of local businesses' intentional or negligent discharges to Peyton Creek, from washing cement mix down the storm drain to routing hoses through fences to discharge chemicals directly to the creek. Board staff inquired whether he perceived these activities to be a result of ignorance or arrogance, and was dismayed to hear the latter was all too common. Jeff explained that he often catches businesses, with whom he has worked with in the past, ignoring BMPs or dumping illicitly on weekends, when they think he is off the job.

After the presentation, we inspected the watershed. Our first stop was Peyton Creek's headwaters, located in a residential neighborhood on public property. Though adjacent to a school, the area was clearly not being used for recreational purposes but rather to dispose of litter. We next headed downstream to a portion of the creek running through a condo development. Jeff Skinner indicated that, though historically there were issues with dumping on the property, the creek was currently well maintained and being used by local residents (see Photo 2b). We then traveled to a portion of the creek located on property owned by the federal Bureau of Reclamation. Here, Peyton Creek was channelized and completely lacking in riparian

vegetation. We found slumping banks and a eutrophic stream complete with a dead fish (see Photos 2c & 2d).



Photo 2b. Francesca Demgmen (URS) searches for invertebrates while avoiding crawdads hiding under rocks.



Photo 2c. Peyton Creek on Bureau of Reclamation property.



Photo 2d. Peyton Creek on Bureau of Reclamation property.

Fortunately, further downstream in the portion of Peyton Creek on Shell's Martinez Refinery property, where the creek daylights from a culvert, the creek was surrounded by vegetation and wildlife. Here deer, wild turkey, mallards, egrets, and herons all seemed to be drawn to the creek and ponds.

We were similarly pleased at our last two stops. Rhodia, Inc., recently remediated and restored the marshes and Peyton Slough on and adjacent to its property, allowing tidal action to be restored. There we saw bay water rush through the tide gates, bringing brackish water, native fishes and seedlings to areas that, until recently, only received freshwater (see Photo 2e).



Photo 2e. Water from Carquinez Strait flows through tide gates to the southern marshes.

Finally, we visited the most southern marsh (McNabney), which Mt. View Sanitary District is working to enhance. Evidence of the beneficial reuse of the wastewater surrounded us, and we were all pleased to see that water levels in McNabney were high and salinity was brackish (see Photo 2f).



Photo 2f. High water in McNabney Marsh.

In the end, we were happy to see our efforts in the marsh complex paying off, but daunted to learn that for the Peyton Slough Wetland Advisory Group to be successful in preserving, protecting, and restoring the marsh complex, additional work is needed. We have alerted our Watershed Division to the negative conditions we encountered and will further investigate.

The Big Clean at the Chevron Refinery (Alan D. Friedman)

Chevron operates a petroleum refinery in Richmond, adjacent to San Francisco Bay, at Castro Cove. For decades, Chevron discharged sewage and refinery wastewater into the cove and several nearby oxidation ponds. Oily sludge and wastes were the primary contaminants found in the oxidation ponds. Chevron has now closed the oxidation ponds by filling them with a mixture of Castro Cove sediment, soil, and cement. As can be seen in photo 3, the oxidation pond area is now hardscaped and its wastes are isolated within. This portion of the facility is regulated under the statewide industrial stormwater permit to assure there are no further discharges of

concern. The Board recently approved a plan for removing toxic sediment from the bottom of Castro Cove. This removal action is underway, and we'll keep you informed of the progress.



Photo 3. Oxidation Pond Post Remediation- Note Castro Cove Near Top Of Photo

Enforcement: Complaints and Settlements (Brian Thompson)

The following twelve dischargers have agreed to conditional offers to settle violations for submitting late annual reports for their industrial stormwater discharges: Andrade Trucking, ABS Seafood Co., Inc., Bodycote Thermal Processing, Conklin & Conklin, Inc., Discovery Foods, East Bay Resources, Garden City Sanitation, Pacific Auto Parts, Inc., Pressure Cast, Preston Pipelines, U Tech Media USA, LLC, and University Plating Company. These dischargers will each pay \$1,000 to the State Board's Cleanup and Abatement Account if the payment agreements circulated on October 10 for a 30-day public comment period do not generate opposition to accepting the offers. Copies of the settlement offers can be found on our website: http://www.waterboards.ca.gov/sanfranciscobay/public_notices/pending_enforcement.shtml

Two dischargers have agreed to conditional offers to settle mandatory minimum penalty violations through the Board's Expedited Payment Program. The following payments will be made to the State Board's Cleanup and Abatement Account for alleged violations if payment agreements circulated on October 4 for a 30-day public comment period do not generate opposition to accepting the offers. Copies of the settlement offers can be found on our website: http://www.waterboards.ca.gov/sanfranciscobay/public_notices/pending_enforcement.shtml

- C&H Sugar, Inc. - \$9,000
- Atlantic Richfield Company - \$18,000

Two dischargers are making payments to the State Board's Cleanup and Abatement Account for mandatory minimum penalties settled through the Board's Expedited Payment Program.

- South Bayside System Authority - \$3,000
- University of California, Berkeley - \$3,000

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

In-house Training

Our October training was on computer topics, namely Microsoft Word and Excel software, to coincide with a department-wide shift from Office 2003 to Office 2010. Our November training will consist of an annual health and safety refresher for staff whose work takes them to hazardous waste sites. Brownbag seminars included an October 27 session on "Assessing Groundwater Discharges into Surface Water".

Staff Presentations

On September 27 and 28, Tom Mumley and Dale Bowyer were speakers at the 7th Annual California Stormwater Quality Association Conference in Monterey. Tom gave a presentation on implementation of TMDLs in stormwater permits in our region. Dale gave a presentation on the Municipal Regional Stormwater Permit's low impact development (LID) treatment requirements for new and redevelopment projects and its trash load reduction requirements. Dale also participated on a panel that discussed LID implementation successes, lessons learned, and challenges.

On October 10, Carrie Austin spoke at the annual meeting of the National Association of Abandoned Mine Land Programs about the remediation of the Gambonini Mine in Marin County. California and Nevada jointly hosted this year's 3-day annual meeting in South Lake Tahoe. Carrie presented on the recently published article about the Board's work at Gambonini that showed how contaminant rating curves are better for evaluating remediation effectiveness than simple before-and-after comparisons of contaminant concentrations. The Gambonini remedial design followed the California Department of Conservation's guidelines:

[Rehabilitation of Disturbed Lands in California - A Manual for Decision Making](http://www.consrv.ca.gov/omr/reclamation/Pages/index.aspx)

<http://www.consrv.ca.gov/omr/reclamation/Pages/index.aspx>

(Gambonini is shown on the cover page of the guidelines). Carrie is also presenting this same information to Lahontan, Central Valley, and San Francisco Bay Water Board staff, and San Francisco Estuary Institute staff, at several brownbags.

On October 25, I joined with Alexis Strauss of U.S. EPA in presenting the East Bay Municipal Utility District's Board of Directors with U.S. EPA's National Partnership for Environmental Priorities Award. The award recognized the District's Mercury Challenge Project to collect mercury-containing instruments from schools (like UC Berkeley) and hospitals that has resulted in nearly 500 pounds of mercury collected over the past 5 years. I noted that, as a past winner of the Board's Pollution Prevention Award, the District had consistently demonstrated leadership in collecting and preventing pollutants like mercury from entering the Bay's waters.

On October 26, Carrie Austin spoke at the North American Lake Management Society's annual International Symposium in Spokane, Washington. Carrie participated in an afternoon session on mercury, and spoke on "Coordinated and Informative Mercury Monitoring". Her focus was on the coordinated monitoring program for mercury in the Guadalupe River watershed, including methylmercury cycling in reservoirs and the use of biosentinels (prey fish in reservoirs and creeks, and song sparrows in adjacent riparian areas).

On November 1, Stephen Hill participated in a panel discussion on expedited cleanup, as part of a forum on sustainable redevelopment and "green" site cleanup techniques. The forum was sponsored by the Interstate Technology and Regulatory Council (a coalition of state regulators and dischargers). Stephen examined the pluses and minuses of expedited cleanup from an environmental regulatory perspective. Expedited cleanup is an option for landowners or

redevelopers, and may be attractive if it significantly speeds up redevelopment. The forum was attended by about 40 environmental professionals, including several staff from U.S. EPA.

On November 8, I made a presentation on low impact development (LID) and the Municipal Regional Stormwater Permit's (MRP) LID requirements for new and redevelopment projects to the Oakland City Council's Public Works Committee. As part of the presentation, I showed a number of slides of examples of LID projects that Keith Lichten had prepared that showed how LID was being successfully implemented in Oakland and other Bay Area cities. I emphasized that the Board wanted to work with Oakland and other MRP permittees to identify funding sources for LID projects and to demonstrate which types of LID worked best in urban areas.

Keith Lichten recently participated in the 2011 Low Impact Development Symposium in Philadelphia, which drew an international crowd of more than 600 stormwater practitioners, including academics, engineers, and planners, to discuss the latest advances in low impact development. The conference was the follow-up to the fourth International Low Impact Development Conference in San Francisco, which Keith co-chaired. He'll be working to produce publications from the 2011 conference and to assist in the preparation of upcoming technical guidance on bioretention.