

**STATE OF CALIFORNIA  
REGIONAL WATER QUALITY CONTROL BOARD  
CENTRAL COAST REGION**

**STAFF REPORT FOR REGULAR MEETING OF SEPTEMBER 1, 2011**  
Prepared on August 9, 2011

**ITEM NUMBER: 22**

**SUBJECT: Executive Officer's Report to the Board**

**STAFF CONTACT: Roger W. Briggs 805/549-3140 or [rbriggs@waterboards.ca.gov](mailto:rbriggs@waterboards.ca.gov)**

This item presents a brief discussion of issues that may interest the Board. Upon request, staff can provide more detailed information about any particular item.

**WATER QUALITY CERTIFICATIONS**

[Kim Sanders 805/542-4721]

The tables on the following pages list applications received and certifications issued from June 7, 2011 – July 27, 2011.

**401 Water Quality Certification Applications Received June 7, 2011 – July 27, 2011.**

Applicant	Date Received	Project Title	Project Purpose	Location	County	Receiving Water	Total Acreage	Status
City of Gilroy - Rick Smelser	6/10/11	Christmas Hill Park/Uvas Creek Outfall Reconstruction Project	Reconstruct drainage system for two drainages to provide adequate conveyance of stormwater flows and repair and reconstruct culvert crossing to protect downstream habitat in Uvas Creek.	Gilroy	Santa Clara	Uvas Creek	0.020	Under staff review
Conoco Phillips - Ed Ralston	6/13/11	Nipomo Creek Pipeline, Line 300	Control erosion of weathered crude from an inactive pipeline paralleling Nipomo Creek. Ensure that concentrations of chemicals remaining in soil and groundwater are protective to human health and the environment. Protect and restore the current and potential beneficial uses of ground and surface water.	Nipomo	San Luis Obispo	Nipomo Creek	0.500	Certified under General 401 Water Quality Cert. Order of U.S. Army Corps of Engineers Nationwide Permits
Chevron - Greg Underwood	6/21/11	Casmalia Mineral Fee and Tompkins Lease Remediation	Excavate and remove petroleum hydrocarbon-containing soils from former oil well features, pipelines, and three concrete footings.	Casmalia	Santa Barbara	Shuman Creek	4.290	Incomplete application
Santa Clara Valley Water District - Elise Latedjou-Durand	6/30/11	Santa Clara Conduit Calaveras Fault Crossing Road/Levee Repair and Culvert	Reestablish reliable vehicle access to CFI vault on the east end of the road/levee. Restore the culvert to maintain a drainage point for the pasture from south to north into Lake San Felipe. Prevent loss of	Un-incorporated	San Benito	Tesquiquita Slough, San Felipe Lake	0.005	Incomplete application

Applicant	Date Received	Project Title	Project Purpose	Location	County	Receiving Water	Total Acreage	Status
		Replacement	communication via buried telemetry cable.					
Monterey Peninsula Water Management District - Thomas Christensen	7/1/11	Selective Vegetation Management in the Carmel River Channel Fall 2011	Remove or modify vegetation and debris piles located in the center of the active channel in preparation for the winter season.	Carmel Valley	Monterey	Carmel River	1375 linear feet	Complete application received, review has not begun
Monterey Peninsula Water Management District - Larry Hampson	7/1/11	Carmel River Maintenance and Restoration	Maintenance, repair, and restoration of streambanks, aquatic habitat, and terrestrial habitat along 18.6 miles of the Carmel River.	Carmel Valley	Monterey	Carmel River	Varies	Complete application received, review has not begun
Gregory Barr	7/7/11	Widen Main Driveway	Comply with minimum 20 foot driveway width for California Department of Forestry and Fire Protection access requirement.	Paso Robles	San Luis Obispo	Huer Huero Creek	0.011	Complete application received, review has not begun
Monterey County Water Resources Agency - Chris Moss	7/20/11	Salinas River Diversion Facility Erosion Repair	Installation of a temporary cofferdam to dewater a portion of the Salinas River bed. Investigation of the cause of the erosion pit and make necessary repairs.	Marina	Monterey	Salinas River	0.520	Under staff review
County of Santa Barbara, Flood Control District - Seth Shank	7/20/11	Lillingston Canyon Debris Basin Dam Removal	Removal of the Lillingston Debris Basin dam which will result in the reestablishment of Lillingston Canyon Creek to its historical elevation thus opening this watershed to steelhead migration, high quality spawning habitat, as well as year-round resident habitat.	Carpinteria	Santa Barbara	Pacific Ocean	0.230	Incomplete application
CalTrans - Lisa Schicker	7/21/11	Pepperwood Gulch Culvert Replacement	Replace a double pipe culvert under Highway 1 at post mile 0.3 in Monterey County to restore proper function including drainage flow through the culvert and prevent undermining of the highway.	Un-incorporated	Monterey	Pepperwood Gulch	0.057	Incomplete application

<sup>[1]</sup> Total Acreage includes both temporary and permanent impacts to riparian, streambed, and/or wetland environments within federal jurisdiction.

**401 Water Quality Certifications Issued June 7, 2011 – July 27, 2011.**

Applicant	Date Certified	Project Title	Project Purpose	Location	County	Receiving Water	Total Acreage
City of Santa Barbara - George Johnson	6/22/2011	Mission Creek Fish Passage Project Upper CalTrans Channel	Improve upstream migration of the endangered steelhead trout to provide access to their historic spawning grounds and eventually restore a healthy population of steelhead trout in Mission Creek.	Santa Barbara	Santa Barbara	Mission Creek	0.210
San Luis Obispo County Public Works Department - Dave Flynn	6/29/2011	Rodriguez Bridge Waterline Grade Stabilization	Stabilize the pipeline and channel from further destructive scour and enhance migrational fish passage and streambed habitat.	Huasna	San Luis Obispo	Arroyo Grande Creek	290 linear feet
City of San Luis Obispo - Freddy Otte	7/15/2011	3026 South Higuera Culvert Replacement	Excavation along upper bank of SLO creek to remove failing storm drain pipe and extend to existing ground contour. Pervious pavers will be added to stop gully erosion at the site.	San Luis Obispo	San Luis Obispo	San Luis Obispo Creek	0.005
Conoco Phillips - Ed Ralston	7/20/2011	Nipomo Creek Pipeline, Line 300	Control erosion of weathered crude from an inactive pipeline paralleling Nipomo Creek. Ensure that concentrations of chemicals remaining in soil and groundwater are protective to human health and the environment. Protect and restore the current and potential beneficial uses of ground and surface water.	Nipomo	San Luis Obispo	Nipomo Creek	0.500

<sup>[1]</sup> Total Acreage includes both temporary and permanent impacts to riparian, streambed, and/or wetland environments within federal jurisdiction.

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### **Water Quality Certifications; Follow-up to July Board Meeting** **[Phillip Hammer/805-549-3882]**

This section of the Executive Officer's report provides clarification of some issues discussed about 401 Water Quality Certifications at the July 14, 2011 Board meeting. Board members discussed timing of staff approval of projects that show "complete application" in the Status column of the table listing all recent applications for Water Quality Certifications. Board members wanted to insure that project applicants are not unnecessarily prevented or delayed by staff review and approval of the Water Quality Certifications. Staff explained that once an application is complete, staff has 60 days to review and approve the applications; otherwise, applicants can begin work.

This situation and factors affecting "complete application" status are more nuanced than presented during this discussion so the following adds more information to clarify.

First, projects are rarely delayed beyond anticipated start dates; staff almost always issues a Water Quality Certification in time to account for project start dates. Staff works routinely and systematically to prioritize and triage projects according to their risk of

affecting water quality and habitat, complexity to prevent impacts, and project schedules. Therefore, projects typically are processed as efficiently as possible and with appropriate conditions to prevent adverse impacts of the project.

Second, staff affirmed for Board members in July that projects can proceed if staff fails to issue a Water Quality Certification within 60 days of the application being deemed complete. The associated procedure is more specifically stated in the following paragraphs.

Section 401 of the Clean Water Act requires Water Quality Certification by the State when the US Army Corps of Engineers (Corps) issues a Section 404 permit for dredging and filling in waterways. If we, as the State, do not issue a Water Quality Certification within 60 days of application completion, then the Corps can issue the 404 permit without 401 Water Quality Certification and a project may then proceed.

When a project says “complete application” in the status column in the Water Quality Certification table, it does not necessarily mean that staff can or should issue the Water Quality Certification at that time. The level of information necessary for an application to be deemed complete, as specified in the California Code of Regulations (CCR), is relatively low. As such, staff frequently needs to request supplemental information in accordance with 23 CCR 3836 to ensure the project is protective of water quality. Occasionally, this requested supplemental information is not immediately forthcoming, and staff must wait for its submittal prior to issuing the Water Quality Certification. In addition, a final California Environmental Quality Act (CEQA) document is not required for a complete application, yet staff cannot issue a Water Quality Certification without reviewing final CEQA documentation (23 CCR 3836(c)). Lack of a final CEQA document can prevent staff from issuing a Water Quality Certification, even though the application may be complete.

Staff works closely with applicants to get the information it needs to issue Water Quality Certifications in a timely manner and in accordance with project schedules. However, if necessary information from applicants is not available within the 60-day time period, staff can request an extension of the 60-day time period from the Corps. Other options to address potential expiration of the 60-day time period include applicant withdrawal of the application until supplemental information is submitted, or staff issuance of a denial without prejudice, which is issued for procedural, and not substantive reasons. While each of these scenarios provides a mechanism for addressing potential expiration of the 60-day time period, staff strives to issue Water Quality Certifications within the 60-day time period so that use of these approaches is not necessary. Generally, staff successfully issues the majority of Water Quality Certifications in a timely manner and with conditions that adequately protect water quality and aquatic habitat.

### **Regional Monitoring and Assessment**

[Karen Worcester 805-549-3333]

**Prop 50 Study on Marine Pathogens** - The Central Coast Long-term Environmental Assessment Program (CCLEAN), in collaboration with the Department of Fish and Game

Marine Wildlife Veterinary Care and Research Center and the University of California at Davis, recently completed a Proposition 50 (Coastal Management Program) funded study entitled *Monitoring and Mitigation to Address Fecal Pathogen Pollution along the California Coast*. The study investigated issues related to water quality monitoring and mitigation of fecal pathogen pollution along the central California coast. The study set out to answer seven questions. A summary of the answers to these seven questions, from the Executive Summary of the report, follows.

1. The study found that measures of traditional indicator bacteria, including coliforms and enterococci, correlated with the detection of some, but not all bacterial and protozoal pathogens in this study. Collectively the study findings suggest that monitoring for indicator bacteria alone may not provide sufficient information to minimize public contact with fecal pathogens in surface waters. They recommend utilizing a combination of Fecal Indicator Bacteria (FIB) and specific pathogen assays to provide the most useful and accurate perspective regarding the presence, relative abundance, and contributing sources of fecal contamination in environmental water samples.
2. The study's data suggest that discharge of pathogens in water originating from streams, rivers and storm runoff poses a greater risk to human health than offshore, deep-water discharges of wastewater effluent along the central California coast due to the absence of water treatment, limited pathogen dilution, and direct shoreline discharge patterns associated with the inland surface water sources.
3. In the current study, stormwater samples most commonly exceeded water quality (FIB) criteria, followed by river/stream/slough samples, and finally ocean water. Associations between FIB exceedances and specific pathogen detection varied by water sample type and pathogen group. Of all target pathogens, only *Cryptosporidium* detection was significantly associated with total coliform levels that exceeded current water quality criteria cutoffs. High fecal coliform counts were more closely associated with the presence of specific pathogens in surface water: *Cryptosporidium*, *Giardia*, *Salmonella*, and *V. parahaemolyticus* detection were all significantly associated with fecal coliform exceedances, while high enterococcal counts were predictive of *Giardia* and *V. parahaemolyticus* detection in surface water. These findings generally support the continued use of water quality criteria using FIB cutoffs for predicting health risks during recreational water contact and shellfish harvest. However, the lack of association between presence of some pathogens and FIB exceedances supports the concept that "absence of evidence is not necessarily evidence of absence", meaning that enteric pathogens may still be present in surface waters with acceptable FIB levels, as was observed in the current study. This finding underscores the need to consider using multiple, or alternative water quality monitoring practices to improve our ability to predict pathogen presence and minimize health risks associated with water contact. Quantitative Microbial Risk Assessment is one framework that can be used to more comprehensively consider, characterize, and predict health risks associated with different beneficial uses.
4. The study found that in general, there were no significant differences in pathogen detection between sampling bivalves as compared to ocean water. There were a few exceptions where pathogens were detected in the ocean water, but not in the bivalves. Another exception was where there was a higher percentage of pathogen detection in ocean water than in bivalves.
5. Of the three microbial source tracking techniques tested in this study (there are many more microbial source tracking methods than the three tested), *Bacteroidales* host-specific qPCR

was the most promising. This method outperformed the other two methods, which were *Enterococcus* surface protein (esp) gene assay and total to fecal coliform ratios in water samples. Fecal contamination in the coastal study (Monterey Bay Region) sites was more commonly from human sources than from livestock or dogs.

6. Feces from domestic and wild animals were tested to determine the prevalence and genotypes of selected pathogens in the Monterey Bay region. Of 808 fecal samples tested between 2007 and 2010, 28% were positive for one or more target pathogens, and many of the same species detected in terrestrial animals were also isolated from sea otters. *Giardia* spp. were isolated most frequently, with an overall animal prevalence of 15%, followed by *Campylobacter* spp. (11%), *Vibrio cholerae* (9%), *Cryptosporidium* spp. (6%), *Salmonella* spp. (6%), and *Vibrio parahaemolyticus* (5%).
7. The presence of vegetation in wetlands (either natural or constructed) enhanced removal of oocysts from fecally polluted water at both fast and slow flow rates.

The full report can be found online on the CCLEAN website at <http://www.cclean.org/ftp/Prop50%20Fecal%20Pathogen%20Final%20Report%20copy.pdf> and on our CCAMP website at [www.ccamp.org/reports](http://www.ccamp.org/reports). Publications and additional outreach materials associated with this report will also be posted on at [www.pathogenpollution.org](http://www.pathogenpollution.org) (an educational website sponsored by U.C. Davis), as they become available. This study provides valuable information comparing source tracking methods, assessing effectiveness of fecal indicator bacteria at representing specific pathogens of concern, recommending new approaches for monitoring that combine conventional indicator bacteria with specific pathogen assays, and assessing effectiveness of wetland treatment for removal of specific protozoal pathogens. This information will support future monitoring, assessment and management decisions by Regional Board staff, research organizations and stakeholder agencies and organizations.

**Letter from Defenders of Wildlife** - Staff received a letter from Defenders of Wildlife dated July 25, 2011, that was also addressed to Dominic Gregorio and Kim Ward of State Board staff, Robert Ketley from the City of Watsonville, and Dr. Raphael Kudela of the University of California at Santa Cruz. The letter commends efforts currently underway to understand and address serious water quality issues associated with fresh water cyanobacteria (also known as "blue-green algae") blooms and the associated microcystin toxin that has now been related to the deaths of at least 21 sea otters.

In 2010, Pinto Lake in Watsonville was placed on the 303(d) list of Impaired Waters because of high levels of microcystin associated with periodic cyanobacteria blooms. Since that time, the City of Watsonville has been awarded an EPA 319(h) Planning and Assessment grant, approved by the State Water Resources Control Board on January 25, 2011, with the purpose of identifying the causes of cyanobacteria harmful algal blooms (CHABs) as well as developing solutions to eradicate/reduce CHABs in Pinto Lake.

The City of Watsonville is highly motivated to find ways to control and/or eradicate the blooms in the lake since over 100,000 visitors visit the two parks on the lake each year. These visitors use the lake for boating and fishing as well as for lakeside picnics and camping. Many are local low income families with young children. Eradication of cyanobacteria would eliminate the significant health risks associated with water contact. . Meanwhile, the City samples lake water routinely for microcystin (in collaboration with Cal State Monterey Bay), on a weekly basis during bloom

season, and posts warnings during bloom events to prevent visitor contact with water. U.C. Santa Cruz also samples the lake for a more comprehensive suite of cyanobacteria toxins. The City also plans to outreach to landowners in the Pinto Lake watershed to share general information on the cyanobacteria problem and what landowners can do to reduce or eliminate nutrient loadings from their properties. As monitoring data provides more specific information on the causes of the cyanobacteria blooms, outreach will be adapted to target appropriate land uses and activities.

CCAMP is working with Dr. Kudela to place Solid Phase Adsorption Toxin Tracking (SPATT) devices in all of our coastal confluence monitoring sites this summer. SPATT essentially act like fake clams – they are hydrophobic membranes that can passively capture and retain microcystin toxin when suspended in the water over a period of time. SPATT sampling will allow us to screen for presence of this toxin in the majority of our Region's watersheds. Dr. Kudela has already found that the toxin is present in other watersheds, including Carmel and even Big Sur. Cyanobacteria blooms may be much more wide-spread than we have realized in the past, though perhaps not always in concentrations which cause toxicity. We are hoping that the Pinto Lake research will give us better tools to address this serious problem and that CCAMP monitoring can identify which watersheds should be prioritized for additional source identification work.

## **ADMINISTRATIVE REPORTS**

### **Budget Update**

The State Board received our target budget reductions from the Department of Finance. These reductions are in addition to the workforce cap reduction, cell phone reductions, and any possible fleet reductions. Our targets are \$495,000 in General Fund savings and \$3.1 million in other fund savings. The savings do not have to be tied to personal services. Once DOF determines that our plan is sufficient to meet the targets, the Water Boards would no longer be subject to the provisions of the Hiring Freeze. However, we in the Central Coast Region continue to have a staffing level that exceeds our allocation, as discussed in many previous reports. In a nutshell, our attrition rate has not kept pace with budget reductions. Regardless of the statewide hiring status, we will continue to be unable to replace people who leave until we are out of the hole and have usable vacancies.

### **Presentations, Education, and Training [Roger Briggs 805/549-3140]**

Monica Barricarte presented "Water Quality Regulation in the Central Coast and Organic Production" on June 30, 2011, at a conference sponsored by Cal Poly CAFES Center for Sustainability. The focus of the conference was Growing Organically on the Central Coast.

Michael Thomas and Roger Briggs participated in a Leadership Class, « If Aristotle Ran the Water Boards, » by U.C. Davis Extension on July 26th, presented to the Management Coordinating Committee and Assistant Executive Officers in conjunction with those groups' regularly scheduled meetings in Sacramento.

## **ATTACHMENTS**

A. Defenders of Wildlife letter, July 25, 2011