

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

STAFF REPORT FOR REGULAR MEETING OF JULY 14, 2011
Prepared on June 16, 2011

ITEM NUMBER: 17

SUBJECT: Executive Officer's Report to the Board

STAFF CONTACT: Roger W. Briggs 805/549-3140 or 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 805/542-4771]

The table on the following pages list applications received and certifications issued from March 31, 2011 – June 6, 2011.

401 Water Quality Certification Applications Received March 31, 2011 – June 6, 2011.

Applicant	Date Received	Project Title	Project Purpose	Location	County	Receiving Water	Total Acreage	Status
Cal Poly - Kim Busby	4/4/11	Nelson Reservoir Culvert Replacement	Remove and replace a damaged and undermined outlet culvert at Nelson Reservoir to improve safety and prevent road collapse.	San Luis Obispo	San Luis Obispo	Stenner Creek	0.000023	Incomplete application
Channel Islands National Park - Paula Power	4/6/11	Prisoners Harbor Coastal Wetlands Restoration	Restore ecological functioning to a portion of the back barrier coastal wetland and restore a riparian corridor of lower Canada del Puerto Creek.	Santa Cruz Island	Santa Barbara	Canada del Puerto Creek	1.300	Under staff review
County of Santa Cruz - Russell Chen	4/8/11	East Zayante Road Storm Damage Repair Project	Repair the roadway embankment adjacent to East Zayante Road near address #8538 by excavating, diverting the creek, constructing a retaining wall, placing compacted backfill, placing RSP and filter fabric, and repairing the roadway.	Felton	Santa Cruz	Zayante Creek	0.130	Under staff review
City of Santa Barbara - George Johnson	4/16/11	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	Under staff review
California American Water - John Kilpatrick	4/19/11	Los Padres Dam Downstream Fish Passage Project	Implement an economically viable interim downstream fish passage solution in place of the existing inadequate fish passage facilities at Los Padres Dam.	Near Carmel	Monterey	Carmel River	0.070	Under staff review

Applicant	Date Received	Project Title	Project Purpose	Location	County	Receiving Water	Total Acreage	Status
City of San Luis Obispo – Freddy Otte	4/20/11	City of San Luis Obispo Sediment Removal Project - Prefumo at Madonna	Remove sediment from bridge outlet of Laguna Lake under Madonna Road. The goal is to restore conveyance capacity along the existing flood control channel in order to prevent flooding and property damage.	San Luis Obispo	San Luis Obispo	Prefumo Creek	0.175	Under staff review
Santa Cruz County Redevelopment Agency - Sheryl Bailey	5/13/11	The Farm Neighborhood Park and Community Center	Redevelop a former farm site into a park with a community center and related features while restoring a portion of the riparian habitat on site through bank stabilization and non-native, woody tree removal.	Soquel	Santa Cruz	Noble Creek Gulch	290 linear feet	Complete application received, review has not begun
Topaz Solar Farms LLC - Ashley Kenny	5/16/11	Topaz Solar Farm	Increase the availability of electricity generated from renewable energy sources through the development of a 550 megawatt photovoltaic solar facility and associated transmission and support facilities for interconnection to the Morro Bay-Midway 230 kilovolt transmission line within eastern San Luis Obispo County.	California Valley	San Luis Obispo	Soda Lake	0.081	Incomplete application
San Luis Obispo County Public Works Department - Dave Flynn	5/18/11	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	Under staff review
Federal Highway Admin., Central Federal Lands Highway Division - Nate Allen	5/18/11	CA PRA PINN 10(2) Sandy Creek Bridge	Replace an existing unsafe vehicle/pedestrian bridge with a new bridge of modern design and materials protected against channel scour.	Pinnacles National Monument	San Benito	Sandy Creek	0.015	Complete application received, review has not begun
Monterey Bay Aquarium Research Institute Pier - Kers Clausen (Clausen Engineers)	5/22/11	Monterey Bay Aquarium Research Institute Pier Replacement	Demolish and replace pier with 1200 square foot addition and 1200 square foot removal on adjacent site.	Moss Landing	Monterey	Monterey Bay	0.030	Incomplete application
County of Santa Barbara, Flood Control District - Seth Shank	5/25/11	Santa Barbara County Annual Routine/Debris Basin Maintenance Plan	Maintain the capacity of key watercourses in the county, to preserve existing conveyance capacity, and to prevent accumulation of obstructing vegetation and sediments. Also, maintain the debris basins to retain the maximum amount of debris possible while allowing biological resources to exist at the basin sites.	Varies	Santa Barbara	Varies	Varies	Incomplete application

Applicant	Date Received	Project Title	Project Purpose	Location	County	Receiving Water	Total Acreage	Status
County of Santa Cruz - John Ricker	5/31/11	Shingle Mill 4.8 Repair Project	Reconstruct a portion of a fish passage project. The original project was constructed in 2008 and two rock weirs are failing.	Corralitos	Santa Cruz	Shingle Mill Gulch	245 linear feet	Complete application received, review has not begun

⁽¹⁾ Total Acreage includes both temporary and permanent impacts to riparian, streambed, and/or wetland environments within federal jurisdiction.

401 Water Quality Certifications Issued March 31, 2011 – June 6, 2011.

Applicant	Date Certified	Project Title	Project Purpose	Location	County	Receiving Water	Total Acreage
City of Watsonville - Steve Palmisano	4/6/11	Manabe Property Wetland Restoration - Phase 2	Complete the Manabe wetland restoration project on Watsonville Slough and provide pedestrian access by including pathways and informational signs.	Watsonville	Santa Cruz	Watsonville Slough	1675 linear feet
San Luis Obispo County Public Works Department - Dave Flynn	4/11/11	See Canyon Slip-out Repair Project	Increase traffic safety by stabilizing the stream bank so that erosion toward the roadway is stopped, restoring the road shoulder, and erecting a guard rail.	Avila Beach	San Luis Obispo	See Canyon Creek	0.030
Susan Lichten - City of Morro Bay	4/15/11	Morro Bay State Park Marina Maintenance Dredging Project	Conduct maintenance dredging to remove shoaled materials and hazards to navigation.	Morro Bay	San Luis Obispo	Pacific Ocean	9.000
San Mateo County, Department of Public Works - Mark Chow	4/27/11	Pigeon Point Road Maintenance Project	Replacement of a deteriorated culvert and the removal of accumulated sediment from a drainage along Pigeon Point Road in San Mateo County	Un-incorporated	San Mateo County	Unnamed drainage to Pacific Ocean	0.005
City of Santa Cruz - Anne Hogan	4/29/11	San Lorenzo Flood Control Channel Gravity Outlet Replacement Project Phase 2	Replace four of the original 1960-era slide/flap gates at the levee system gravity outlets on the San Lorenzo River Federal Flood Control Project.	Santa Cruz	Santa Cruz	San Lorenzo River	0.046
Randy LaVack-CalTrans	5/4/11	Arroyo Grande Culvert Maintenance	Repair culvert end sections to prevent continued erosion and eventual facility failure. The project is needed to maintain a safe travel way for the public.	Arroyo Grande	San Luis Obispo	Unnamed tributaries to Arroyo Grande Creek	0.010
Randy LaVack-CalTrans	5/6/11	Santa Margarita Culvert Replacement	Replace corroded culverts to prevent future failure. The project is needed to maintain a safe travel way for the public.	Santa Margarita	San Luis Obispo	Trout Creek, Shell Creek	0.017
Oly Chadmar General Partnership - Chuck Lande	5/9/11	Haskell's Landing	Establish a hydrologic connection between the project site and the limited urban runoff currently being discharged to the north.	Goleta	Santa Barbara	Devereux Creek	0.320
Matt Horn - City of San Luis Obispo	5/16/11	Andrews Creek Bypass Storm Drain Improvements	Improvements will connect deficiencies in the current water conveyance structures and the condition of the creek	San Luis Obispo	San Luis Obispo	Andrews Creek	0.040
PG&E	5/18/11	70 kV Power Line Reconducting Project	Improve transmission reliability, replace aging structures, and provide sufficient peak period transmission voltage for Atascadero and other San Luis Obispo County areas.	Atascadero	San Luis Obispo	Paloma Creek, South Fork Paloma Creek, Santa Margarita Creek, San Luis Obispo Creek	0.013

Applicant	Date Certified	Project Title	Project Purpose	Location	County	Receiving Water	Total Acreage
David Gittleson - City of Morgan Hill	5/24/11	Butterfield Boulevard South Extension	Connect Butterfield Boulevard to Watsonville Road and extend Butterfield Channel. Additional detention basins will be constructed to ameliorate flooding in the local watershed	Morgan Hill	Santa Clara	West Little Llagas Creek	0.154
Santa Ynez Community Services District	6/6/11	Sewer Protection Measures	To protect existing sewer lines from being undermined and to prevent sewage spills.	Santa Ynez	Santa Barbara	Zanja de Cota Creek	0.020

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

STATUS REPORTS

PG&E Grant Project Completion: Demonstrating Best Management Practices For Coastal Vegetable Production (PG&E Grant #2009-0179) [Monica Barricarte 805/549-3881]

Consistent with the Water Board's Vision of Healthy Watersheds, the Grants Program has prioritized agricultural water quality grant projects that effectively implement irrigation and nutrient management practices. This staff report highlights the successful completion of an agricultural water quality grant that demonstrated the implementation of efficient irrigation and nutrient management practices for coastal vegetable production in Monterey County. The results of this grant project demonstrated that total fertilizer application can be reduced substantially with minimal risk of reduced yield or quality for the lettuce crop. Furthermore, the results clearly show that reducing or eliminating early season nitrogen (N) fertilizer application can significantly reduce nitrogen loading rates.

Project Summary

In March 2009, Central Coast Water Board staff awarded \$47,897 of PG&E Settlement Funds to the University of California Cooperative Extension (UCCE) for this project. UCCE researchers, directed by Dr. Tim Hartz, evaluated implementation of efficient irrigation and nutrient management practices and their success in reducing nutrient and water inputs compared to common grower practices, as well as the effects on crop productivity and post-harvest lettuce quality.

UCCE researchers selected 18 lettuce fields from Watsonville to Chualar during the 2009 production season and included pre-sidedress soil nitrate testing technique (PSNT) to estimate unnecessary sidedress nitrogen (N) application. They chose fields that had at least 20 ppm residual soil nitrate (N) prior to the first sidedressing, and in each field they selected a plot that UCCE managed to receive a reduced-N fertilization regime.

Results

The results from this grant project indicate that participating growers used widely varying amounts of N fertilizer; seasonal N application rates ranged from 76 to 233 lb/acre, averaging 134 lb/acre. The seasonal N application rates in the reduced-N plots ranged from 0 to 127 lb/acre, averaging 61 lb/acre. Averaged across the 18 fields, reducing N fertilization at first sidedressing had no overall effect on crop productivity. Despite receiving on average 73 lb/acre less N fertilizer than the grower plots, the reduced-N plots had similar total crop N uptake, with an average of only 7 lb/acre of additional plant N uptake on the grower plots. Much of the

seasonal irrigation inefficiency was related to management during crop establishment, a time at which many growers apply substantially more water than required in an attempt to keep the seed beds moist until plant establishment.

The results of this grant project demonstrated that total fertilizer application could be reduced substantially (by 54% on average) in lettuce fields with high residual soil nitrate and that such fields can be identified simply by testing soil residual N using pre-sidedress soil nitrate testing (PSNT). The results clearly show that reducing or eliminating early season N application in fields with high residual soil NO₃-N can significantly reduce N loading rates with minimal risk of reduced lettuce yield or quality.

	UCD Harvest Total fresh weight (lbs/acre)	Commercial Crew * Marketable yield weight (lbs/acre)
Grower	88,700	37,300
PSNT	88,100	37,400
PSNT as a % of grower	99.3	100.3

* Table extracted from Dr. Hartz's presentation to the 2010 Irrigation and Nutrient Management and Cover Crop and Water Quality Field Day, February 23, 2010

As for quality, the report found "No evidence that lower N rate reduced postharvest shelf life."

The Final Report for this project indicates that, combined with data from similar projects, the resulting dataset covering several dozen fields is a very useful teaching tool, in that showing growers on the inefficient end of the spectrum how much less water (and fertilizer) their more efficient neighbors use demonstrates the competitive disadvantage of their less efficient practices. Furthermore, demonstrating the utility of this management technique across such a wide range of growers and production environments should improve grower confidence in PSNT.

Based on the results of this grant project and an average cost of \$0.60 per pound of fertilizer¹, Water Board staff estimates that the average reduction in fertilizer application estimated in this project could result in a cost savings of more than \$2000 per season for an average 50 acre lettuce farm. While cost related to fertilizer application is only a small portion of total farming costs, potential cost savings from improved fertilizer management are not insignificant – in addition to the water quality benefits from reduced pollutant loading.

¹ Fertilizer cost estimated in UCCE PG&E Grant 2008-0408 (M. Cahn), "Optimizing Irrigation and Nitrogen Management in Lettuce for Improving Farm Water Quality, Northern Monterey County – Final Project Report", April 2010.

More than 250 individuals attended the grower educational events related to this grant project, including representatives from most major lettuce producers. The Final Report for this grant project states that grower interest in improved irrigation and fertilization practices appears to be increasing as regulatory pressure builds, and the 2011 irrigation and nutrient management meeting in Salinas had the largest attendance (> 100 participants) in recent history of this annual event. UCCE is also developing a web-based platform that will provide on-line training to deliver this information to Certified Crop Advisors (CCAs) and the agricultural community. UCCE related presentations can be viewed on the Internet at:

http://cemonterey.ucdavis.edu/Custom_Program567/Presentations.htm ;

http://cemonterey.ucdavis.edu/Vegetable_Crops/2010_Irrigation_&_Nutrient_Management_&_Cover_Crop_&_Water_Qual.htm ;

http://cemonterey.ucdavis.edu/Vegetable_Crops/2011_Irrigation_and_Nutrient_Management_Meeting_and_Cover_Crop_a.htm) .

Lagoon Study Results [Karen Worcester 805/549-3333]

The U.C. Davis Marine Pollution Studies Laboratory and the U.S. Geological Survey recently completed a grant funded project on the status of three of our central coast lagoons, located at the lower ends of the Salinas, Pajaro, and Santa Maria rivers. Lagoons are essentially small estuaries, where fresh water mixes with salt and creates unique habitat areas. We reported findings from this study in the May Executive Officer's report to the Board. The study was the first to identify several fungicides, specifically azoxystrobin, pyraclostrobin, and boscalid, in the ambient environment of our Region, including in fish tissue. Concentrations of these fungicides in tissue are shown in Table 1. Some of the highest concentrations of chemicals measured in this study were of these "novel" chemicals. At the May Board meeting, Chairman Young requested additional information on these three chemicals. That information is presented here.

We have compiled use history for these three chemicals from the Department of Pesticide Regulation's Pesticide Use Report (Table 2). Azoxystrobin has been used in our Region since 1997. It tends to be used more in Santa Barbara County than in Monterey. Its use has been fairly stable since 2000. The other two chemicals have come into use more recently (since 2003-4), and are applied more heavily in Monterey County than in Santa Barbara. Boscalid in particular has had a rapid rise in use. For example, in Monterey, it rose from no use in 2003 to 30,000 pounds in 2006.

None of these three chemicals are listed as "Bad Actors" by the Pesticide Action Network (http://www.pesticideinfo.org/List_Chemicals.jsp). Bad Actors are "chemicals that are one or more of the following: highly acutely toxic, cholinesterase inhibitor, known/probable carcinogen, known groundwater pollutant or known reproductive or developmental toxicant. Because there are no authoritative lists of Endocrine Disrupting (ED) chemicals, EDs are not yet considered PAN Bad Actor chemicals".

Pyraclostrobin

Pyraclostrobin is used widely on a variety of fruit and vegetable crops, with its top crop uses in California on tomatoes, grapes, almonds, strawberries, pistachios, broccoli, carrots, and lettuce.

The Material Safety Data Sheet for pyraclostrobin

(<http://www.greenbook.net/Docs/Msds/M90836.pdf>) states it shows acute and prolonged toxicity to fish and is not readily biodegradable. It is toxic in water to aquatic organisms at the following

levels: trout: LC50 = 20 parts per billion (ppb); *Daphnia magna*: LC50 = 64.9 ppb (LC50 is the concentration that is lethal to 50% of the test organisms). It is an eye and skin irritant to humans, but little data is available about other human health risks. EPA considers it "not likely to be carcinogenic". EPA has established a food tolerance level for residues in poultry for human consumption at 100 parts per billion (ppb). No regulatory limits have been established for fish or shellfish. These values are presented here to provide some context for interpretation.

Pyraclostrobin was detected in 41 of 144 (28.5%) water samples from the estuary study. The average concentration of all samples (including main stem and tributary stations) were 0.16 ppb in the Santa Maria system, non-detect in the Salinas system, and 0.12 ppb in the Pajaro system. The highest value measured was 7.1 ppb at site 305MDD in the Pajaro system, under the LC50 for trout. This site was an agricultural drain downstream of Thurwacher Road that discharges to the Pajaro River.

Average concentrations in starry flounder tissue (a human food species) from Santa Maria estuary were 404.8 ppb, and from the Salinas estuary were 295.7 ppb (these concentrations exceed the EPA residue tolerance level in poultry). Concentrations from the Pajaro estuary were 33.4 ppb. The Santa Maria River also stood out for its high concentrations of pyraclostrobin in sand crabs, at 1953 ppb. The other two rivers had undetectable concentrations of this chemical in sand crabs.

Azoxystrobin

Azoxystrobin is a fungicide used in California on rice, garlic, almonds, broccoli, strawberries, grapes, landscaping and a variety of other crops.

The EPA Pesticide Fact Sheet (<http://www.epa.gov/opprd001/factsheets/azoxystr.pdf>) states that this fungicide is of very low toxicity to mammals, birds and bees, but is highly toxic to freshwater fish and invertebrates and estuarine fish, and very highly toxic to estuarine/marine invertebrates. It also states that it may represent risk to groundwater because it is mobile and moderately persistent. It is not a carcinogen. The Department of Pesticide Regulation is currently evaluating whether it is being found in domestic and other wells in California. The Material Safety Data Sheet for this chemical (<http://www.cdms.net/LDat/mp9NC001.pdf>) states that it is of "low bioaccumulation risk". U.S. EPA has determined it to be a "Reduced Risk Pesticide" in part because of low application rates and intervals, low toxicity to birds, mammals and bees, and because "the risk to estuarine/marine animals from Turf use is very low". In water, the LC50 is 470 parts per billion (ppb) for rainbow trout and 259 ppb for water fleas. The EPA tolerance level for azoxystrobin residue in pea and bean tissue is 500 ppb. Residue tolerances for meat or poultry tissue are not available.

Azoxystrobin was detected in 82 of 144 (56.9%) water samples from the estuary study. The average concentrations (including main stem and tributary stations) were 0.164 parts per billion (ppb, measured in micrograms per liter) in the Santa Maria system, non-detect in the Salinas system, and 0.122 ppb in the Pajaro system. The highest value measured was 4.55 ppb at site 309BLA in Blanco Drain, that discharges to the Salinas River. These levels are far lower than any levels associated with toxic effects.

In spite of the EPA determination that it is of low bioaccumulation risk, this chemical was found in fish tissue in all three estuaries. In comparing average concentrations in starry flounder only (a human food species), Santa Maria concentrations were highest at 445.7 parts per billion

(ppb, measured as nanograms per gram). Concentrations in flounder from the Salinas estuary averaged 164.3 ppb, and levels in the one flounder collected from the Pajaro estuary was 72.1 ppb. Concentrations in sand crabs were low or not detected. There are no established limits for this chemical in fish tissue for protection of human or aquatic health. However, average concentrations for flounder in the Santa Maria estuary approach the EPA tolerance levels for pea and bean tissue.

Boscalid

Boscalid is used widely on a variety of fruit and vegetable crops, with its top crop uses in California on grapes, almonds, lettuce, strawberries, pistachios and stone fruits. As mentioned earlier, its use in the Central Coast Region has risen rapidly since 2003, so that now it exceeds applications of the other two chemicals combined.

The EPA Fact Sheet on Boscalid (<http://www.epa.gov/opprd001/factsheets/boscalid.pdf>) describes it as an essentially stable chemical that binds to sediments and biodegrades very slowly in aquatic systems. It sorbs readily to organic material, giving it low mobility in soil. It is practically non toxic to terrestrial animals and moderately toxic to aquatic organisms. It is not considered likely to pose a risk to aquatic organisms at the maximum rate of use, but is expected by EPA to accumulate in surface waters in sediment. Photodegradation and hydrolysis are not expected to be significant in the degradation process, and degradation is expected to be slow in aerobic soils (96 to 578 day half-life). In anaerobic soils this chemical is stable (meaning essentially not degradable). The EPA Fact Sheet also states that Boscalid is expected to accumulate in fish tissues at moderate levels, though it should depurate from tissues when fish are no longer exposed to the compound. The tolerance level set by EPA for tissue residuals for most meat and poultry is 100 ppb.

The EPA Fact Sheet states that although Boscalid is moderately toxic to aquatic animals, its tendency to sorb to sediments will reduce its risk to water column dwelling organisms. Bottom-dwelling organisms are more likely to be exposed to this chemical. However, models of exposure over a 36 year scenario did not exceed a chronic risk level of concern for benthic organisms. According to a Boscalid Material Safety Data Sheet, it is toxic (LC50) to water fleas at 5330 ppb and to rainbow trout at 2700 ppb.

Boscalid was detected in 134 of 144 (93.1%) water samples from the estuary study. The average concentrations were 0.27 ppb in the Santa Maria system, 0.055 ppb in the Salinas system, and 0.895 ppb in the Pajaro system. The highest value measured was 36.0 ppb at site 305MDD in the Pajaro system. This site was an agricultural drain downstream of Thurwacher Road that discharges to the Pajaro River. All measured concentrations were well below LC50s for water fleas and trout.

Concentrations in flounder from the Santa Maria estuary averaged 185.5 ppb. This exceeds the EPA tissue residual level for meat and poultry. Flounder in the Salinas estuary averaged 16.3 ppb, and levels in the one flounder from the Pajaro estuary were not detected. Concentrations in sand crabs were low or not detected.

This report has been forwarded to the Department of Pesticide Regulation with attention called to findings, particularly the new detection of fungicides in fish tissue and water. DPA staff has indicated they will include these chemicals in upcoming surveys in our Region. In addition, we intend to add these fungicides to sediment chemical suites monitored by CCAMP at higher risk

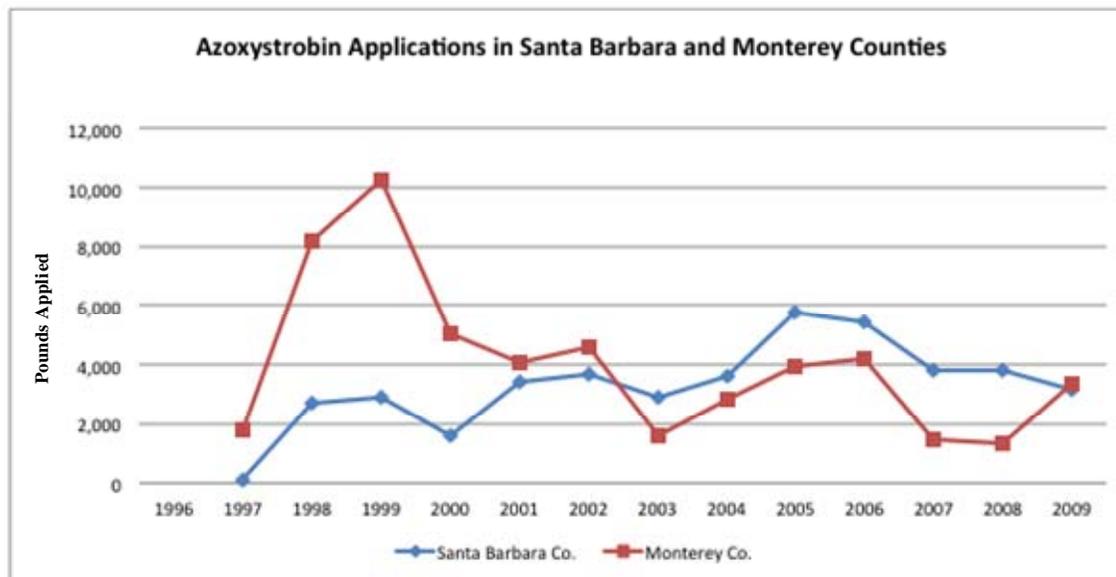
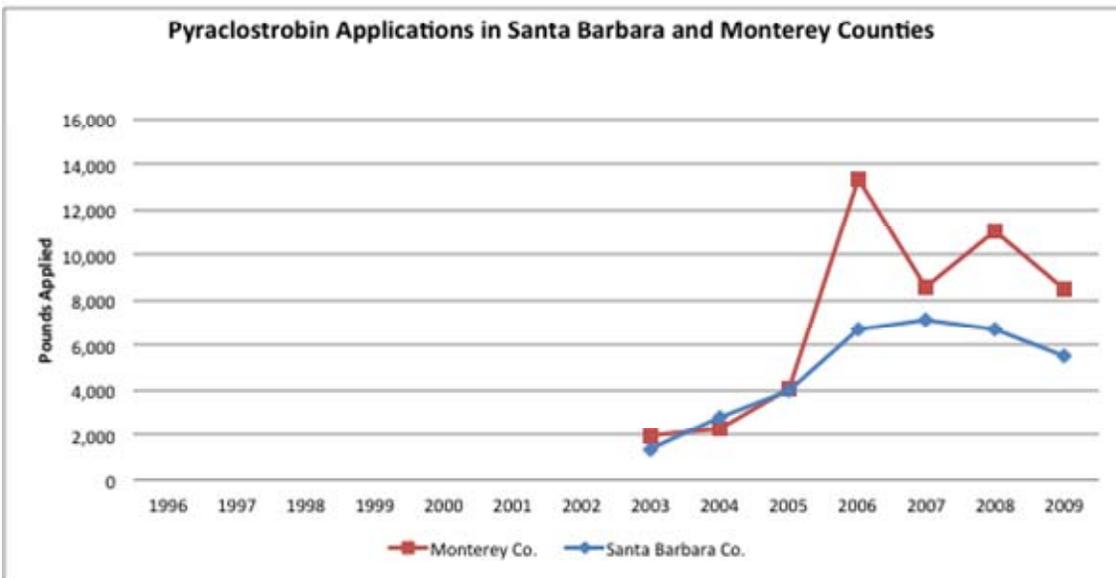
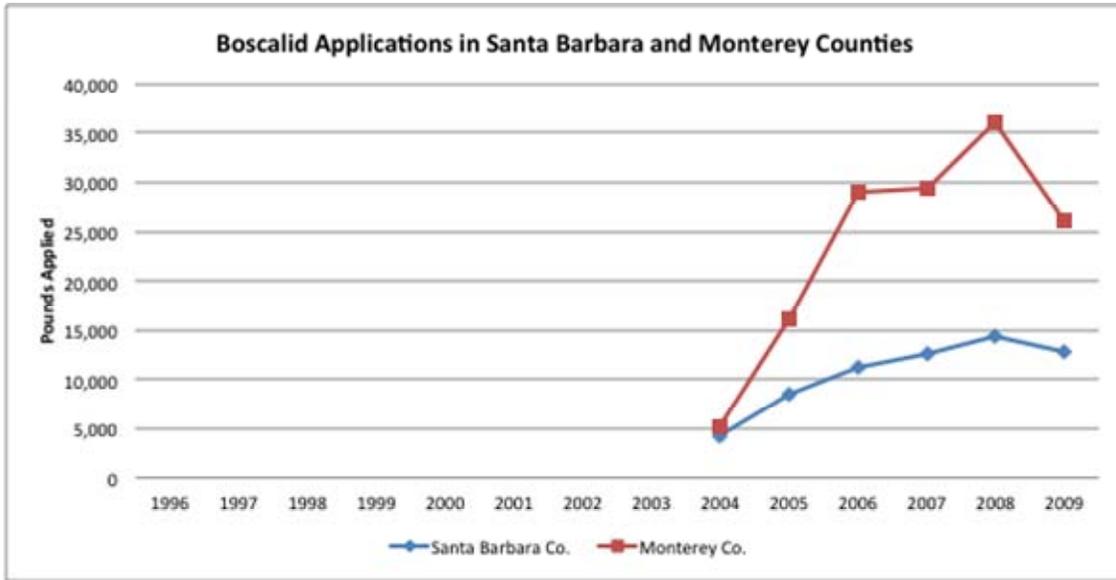
sites. These findings are the first to identify these chemicals as being a potential issue in the environment of the Central Coast Region.

The study, entitled "Watershed-scale Evaluation of Agricultural BMP Effectiveness in Protecting Critical Coastal Habitats: Final Report on the Status of Three Central California Estuaries", can be found on the CCAMP website, at

<http://www.ccamp.org/ccamp/documents/EstuariesFinalReport022311.pdf>.

	Azoxystrobin (ng/g)	Boscalid (ng/g)	Pyraclostrobin (ng/g)
Santa Maria Sand Crabs			
Mouth	37.5	34.1	2258
North	13.1	31.4	1351
South	16	41.2	2251
Average	22.2	32.75	1953
Santa Maria Fish			
Starry Flounder	512	59.7	467
Starry Flounder	404	46.7	572
Starry Flounder	418	450	480
Sculpin	120	35.7	100
Average	314.0	177.5	384.0
Salinas Sand Crabs			
Mouth	nd	nd	nd
North	nd	nd	nd
South	nd	nd	nd
Average	nd	nd	nd
Salinas Fish			
Croaker	nd	nd	nd
Sculpin	83.4	197	329
Starry Flounder	216	nd	434
Starry Flounder	nd	nd	nd
Starry Flounder	277	49	453
Average	115.3	49.2	243.2
Pajaro Sand crabs			
Mouth	nd	nd	nd
North	nd	nd	nd
South	nd	nd	nd
Average	nd	nd	nd
Pajaro Fish			
Smelt	19	25.1	70.6
Smelt	nd	nd	nd
Sculpin	13.3	nd	28.9
Starry Flounder	72.1	nd	33.4
Average	26.1	6.3	44.3

Table 1. Concentrations of fungicides, expressed in nanograms per gram (equivalent to parts per billion) found in fish and sand crab tissues in Pajaro, Salinas, and Santa Maria estuaries (Anderson, et al., 2010)



On a related coastal lagoon/lake note, we have been evaluating Oso Flaco Lake in the dunes portion of southern San Luis Obispo County. As we have reported previously, the lake was noteworthy in the Statewide Lakes report due to very high concentrations of DDT, in fish tissue. However, the data set is very sparse. Nevertheless, as a precautionary measure, we asked State Parks to provide a warning to those who fish in the lake about the potential dangers of consumption, and State Parks is providing the warnings. We have coordinated additional sampling with more fish species; lab results are not yet available. Those test results will give us a better picture of the nature of the risks to wildlife and people, as well as what an appropriate response should be from our agency or State Parks, or other agencies. Options would include dredging or capping the sediments. We recently considered an idea to perform analyses on cored samples (deeper into lake bottom sediment) to see how the pesticide concentrations vary with depth. However, some watershed-wide data through our TMDL work for the Santa Maria and Oso Flaco watershed indicate that DDT may be continuing to bleed out of both watersheds on a fairly broad scale. If that is the case, then dredging or capping (which are both very expensive) could be followed by recontamination of the lake sediments with the same problem. Such a scenario lends credence to the notion of focusing on source control rather than investigation of deeper sediment DDT concentrations (contaminants at depth are not as bioavailable; not a significant wildlife or public health risk). Since sediments seem to be the primary transport mechanism for legacy pesticides like DDT, the best course of action might be more focused sediment control measures in the watershed. We are considering additional sampling up the creek and drainages to determine if there are subareas of the watershed that should be higher priority, to be able to zero in our control efforts. However, access in this watershed is difficult and may hamper sampling activities.

Plains Exploration and Production Company (PXP) Arroyo Grande Produced Water Reclamation Facility, San Luis Obispo County [Sheila Soderberg 805/549-3592]

At the May 2011 Board meeting, the Board requested an update regarding PXP's proposed produced water treatment system within the Arroyo Grande Oil Field in San Luis Obispo County. Instead of re-injecting produced water into the oil-producing formation, in 2007, PXP proposed to construct a wastewater treatment facility and discharge treated produced water to Pismo Creek, at a point approximately 3.5 miles northeast of the Pacific Ocean.

On May 9, 2008, the Central Coast Water Board adopted an NPDES permit that authorizes PXP to discharge up to 0.84 million gallons per day of treated produced water into Pismo Creek or beneficially reuse the treated water for irrigation on agricultural properties.

Since the Water Board adopted the NPDES permit, PXP completed the local land use permitting process. During the 2nd quarter of 2011, PXP began grading, soil preparation, and foundation work at the proposed facility location. PXP expects to begin facility construction in 3rd quarter of 2011 and begin facility operations during the 1st quarter of 2013. To date, PXP has not negotiated any agreements to use the treated water for irrigation. However, PXP remains open to discuss and evaluate any viable beneficial use option that may become available in the future, consistent with its operational and permit requirements.

The NPDES permit includes a monitoring and reporting program that specifies effluent and receiving water monitoring and screening for potential pollutants. Specific monitoring requirements are described in greater detail in the permit (Attachments E and F), available online at:

http://www.waterboards.ca.gov/centralcoast/board_decisions/adopted_orders/2008/2008_0004_wdr_arroyo_grande_wrf.pdf

AB885 Regulations Update [Sorrel Marks 805/549-3695]

During its May 5, 2011 discussion of regional onsite regulation, the Central Coast Water Board asked staff to provide a brief status report regarding development of statewide onsite regulations. More detailed information is available on the State Water Board's website at: http://www.swrcb.ca.gov/water_issues/programs/owts/index.shtml

In 2000, the California State Legislature passed Assembly Bill 885 (§13291 of the California Water Code). Assembly Bill 885 (AB885) requires the State Water Board, in consultation with state and local health departments, California Coastal Commission, counties, cities and other interested persons, to adopt regulations or standards for onsite wastewater systems by 2004. Over the past decade, several policy approaches have been developed, and Central Coast Water Board staff has participated in discussions and/or provided comments on each proposal. These regulations are not yet established.

In April 2011, State Water Board staff developed a scoping document for a proposed policy and circulated that scoping document for public input. The scoping document is available on the link above. Public scoping workshops were held on May 2, and May 5, 2011, in Sacramento and Riverside respectively. The scoping document describes a conditional waiver program somewhat like that adopted by the Central Coast Water Board in May. The statewide waiver policy is proposed to be based upon tiers of increasing regulatory oversight for systems with increasing potential threat to water quality. State Water Board staff anticipates releasing a draft policy and associated CEQA document on September 1, 2011, for a 60-day public comment period, and workshops are scheduled to be held in early October at various locations around the state.

Ultimately, this policy will most likely be implemented by Regional Boards. Therefore, Central Coast Water Board staff member Sorrel Marks is participating on a workgroup formed to facilitate development of practical and effective standards. We do not anticipate that the statewide regulations (when adopted) will replace the need for Basin Plan criteria for onsite systems. However, if more stringent statewide regulations are adopted pursuant to §13291, then such regulations will be incorporated into regional Basin Plans.

Additional updates will be provided in future EO Reports as this project nears or completes significant milestones.

Nitrate Notification and Domestic Well Sampling [Matt Keeling 805/549-3685]

A Central Coast Water Board working group (consisting of Matt Keeling as team leader, Cecile DeMartini, Dean Thomas, and John Robertson) is developing an approach (project) to implement public education and outreach in the Central Coast Region addressing the risk of nitrate impacts to domestic wells and providing a means for free nitrate sampling to domestic well owners. The need for this project is based on the well documented and significant nitrate impacts to groundwater supplies and the approximately 44,000 at risk rural residences relying on shallow domestic water supply wells in the Central Coast Region

The overall project goals (listed in order of priority) are to:

1. Provide domestic/individual well owners and the general public with information regarding potential nitrate impacts to their drinking water supplies and available testing opportunities
2. Develop a higher resolution data set of nitrate impacts to domestic drinking water supplies and shallow aquifers

The project consists of education and outreach components and a free domestic well nitrate sampling component. The education and outreach tasks include developing and mailing informational fliers/pamphlets and developing a Central Coast Water Board website with supporting information (i.e., contacts and links regarding public health, available free and for fee testing alternatives, nitrate treatment alternatives, etc.). Staff has already begun developing the education and outreach materials and identifying supporting sources of information (i.e., health impacts, laboratory locations, etc.) and contacts with other agencies that can assist with the education component. Staff currently anticipates implementing the education and outreach components, although the timing of the mailing is dependent on elements in the sampling component.

The free nitrate sampling and analysis component consists of identifying and entering into a contract with third parties for the implementation of free nitrate sampling activities. Water Board staff are currently identifying and interviewing prospective third parties to fill this scope of work which includes:

1. Developing a Quality Assurance Project Plan (QAPP),
2. Coordinating with domestic well owners requesting free sampling,
3. Conducting sampling,
4. Coordinating with laboratories for water quality analysis, and
5. Providing sample results and supporting information back to the well owner.

Identifying the third party(ies) and finalizing a grant/contract are currently the critical path tasks, given that fliers can't be mailed out until third parties and programs are in place to implement free sampling.

The initial education and free sampling outreach conceptual plan is to mail out notices/fliers in focused priority areas consisting of blocks of about several hundred rural residences located outside of known water service areas and within areas where groundwater is known to have nitrate impacts approaching or in excess of the drinking water standard (45 mg/L). Working with smaller initial mailings would allow us to focus initial efforts on relatively small geographic areas to evaluate effectiveness of our approach and work-load capabilities (i.e., nitrate flier response and sampling throughput) before conducting additional block areas or more widespread mailings. More focused outreach and sampling within economically disadvantaged areas with a high risk for nitrate contamination will also be evaluated as an additional component of the project.

The project will initially target areas within the northern counties of Monterey, Santa Cruz, Santa Clara and San Benito with the most severe and widespread nitrate impacts in groundwater. However, staff intends to expand the program region-wide as additional third parties or local agencies are identified who can help support our outreach and sampling efforts. Although we plan to develop and implement a uniform regional approach for domestic well nitrate sampling, we also anticipate that locally specific programs by county or other defined areas (i.e., groundwater basins/subbasin) will be necessary based on the involvement of different local stakeholders within each area. This means that rather than an individual grant covering sampling throughout the region, we may be constructing a number of smaller grants working

through local groups to take advantage of area-specific community knowledge or relationships to achieve higher response rates and to gain better access.

Water Board staff is currently developing a workplan and schedule for project implementation in conjunction with identifying potential partners for the sampling component, and we anticipate that initial education and free sampling outreach will begin sometime this fall.

Meanwhile, the Executive Officer is continuing to follow up with individual counties regarding our letter of last year on the need for local county testing and notification requirements (county ordinance amendments) for wells in high nitrate risk areas. We have some level of commitment from Santa Barbara and Santa Cruz County staff, and we have discussed the issue with Santa Clara County Water District (the District provided a notification several years ago – a one shot mailing, and we provided more recent notification as a result of nitrate sampling of a lot of domestic wells by Olin Corporation). The Executive Officer also contacted and discussed the issue with the new Environmental Health Director of San Benito County, and will be following up with the Board of Supervisors.

ADMINISTRATIVE REPORTS

Budget Update

As of this writing, two weeks before the start of the new budget year, the State Legislature adopted a budget and sent it to Governor Brown, who vetoed the budget less than 24 hours after receiving the plan. The Governor and Legislature will have to go back to the budget drawing board.

As for budget year 2010-11, we in our region are still in the hole about one personnel year, and we continue to be subsidized by the rest of the water board organization. The water quality side of the house is projected to have a surplus of 0.01% (\$16,000 out of a \$141M budget), while the water rights side will end up with about a 21% surplus. Of that dollar amount, our office will be nearly \$400,000 in the red, or 6% of our budget amount. We understand we will continue in this subsidized mode until attrition catches up with our region's budget.

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

Water Board staff attended a class taught in our office by Gene Crumley, Chair of UC Davis Extension's Business and Leadership Department,. The class was based on the book "Organizational Culture and Leadership" by Edgar H Schein.

Water Board staff attended two classes taught in our office through the State Board Training Academy, The Art of Giving Effective Presentations and Meeting Management.

On June 16, 2011 Monica Barricarte presented to the organic ALBA growers in Salinas.

Roger Briggs has been asked to give a presentation at the Biennial Groundwater Conference in October in Sacramento, on regulatory actions regarding nitrate contamination problems, particularly in the Salinas Valley - - How to Protect Water Quality?