



2010



ACCOMPLISHMENTS REPORT

Published January 2011

STATE WATER RESOURCES CONTROL BOARD
REGIONAL WATER QUALITY CONTROL BOARDS



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State of California

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www.waterboards.ca.gov

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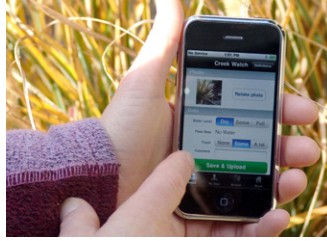


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California's Water Environment

Surface Waters

- Rivers and streams 211,000 miles
- Lakes 9,000 totaling 1.6 million acres
- Bays and estuaries 1.3 million acres
- Perennial estuarine wetlands 44,456 acres
- Coastline 1,100 miles
- Beaches 427 totaling 630 miles

Groundwaters

- Groundwater basins underlie about 40 percent (over 40 million acres) of the State's surface area
- Groundwater meets about 35 percent of agricultural, urban, and managed wetlands water uses statewide in a typical year (about 15 million acre-feet per year)

California Water Boards' Water Quality Regulation

Major Categories of Facilities and Operations Regulated	Over 59,000
Treated municipal and industrial wastewater discharge facilities.....	Over 1,900
Stormwater and urban runoff	Over 24,000
Waste discharges to land	Over 2,400
Land disposal facilities	Almost 800
Agricultural and farming operations	Over 30,000

Clean-Up Sites Regulated

Sites requiring cleanup	Over 10,000
Sites in active clean-up	Almost 2,500

California State Water Board Water Rights Regulation

Active water right holders regulated.....	Almost 37,000
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California State Water Board Financial Assistance

Loan funds disbursed	\$332,521,834
Grant funds disbursed	\$153,993,582



Introduction

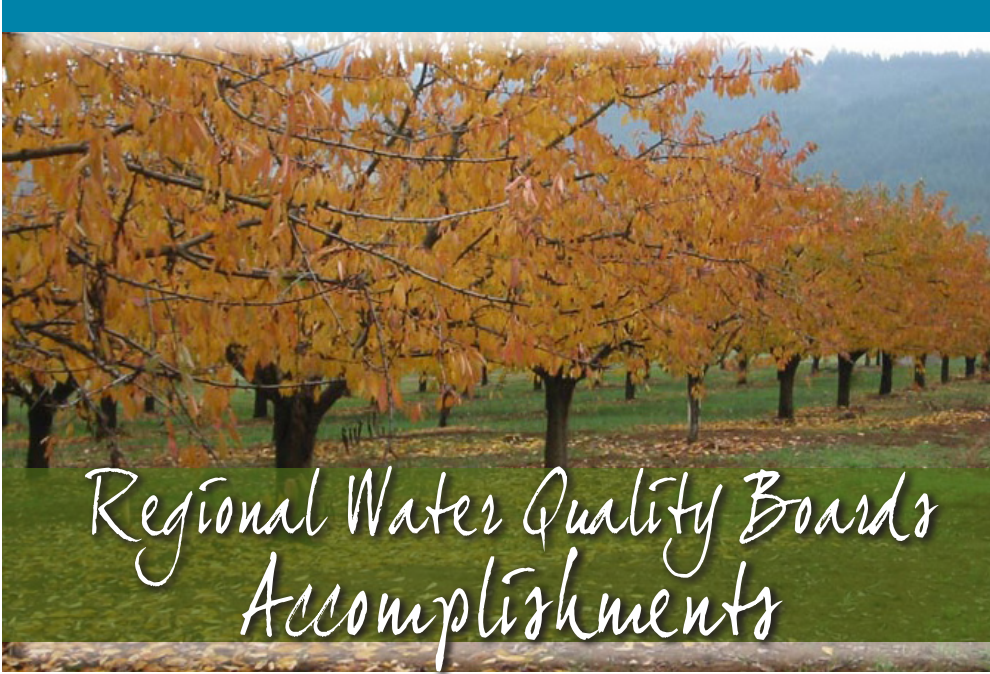
The State Water Resources Control Board (State Water Board) and the nine Regional Water Quality Control Boards (Regional Water Boards) protect California's surface waters and groundwaters. Together, the State and Regional Water Boards control pollution by setting water quality standards, adopting water quality control plans, monitoring waters, regulating pollution sources, and enforcing compliance with regulatory requirements. Financial assistance is available in the form of grants and loans for projects that clean up and protect water quality. The State Water Board also administers an almost century-old system that allocates rights to divert and use surface waters.

Protecting and restoring water quality to support the needs of industry, agriculture, municipalities, and the environment is an ongoing challenge for the Water Boards. Water Board staff include scientists, engineers, analysts, and other personnel who work with local, State, and federal agencies, communities, dischargers, and water rights holders to ensure that a wide range of water issues and concerns are addressed. The complexity of California's statewide and regional water issues is reflected in the large number of Water Board programs and activities throughout the State.

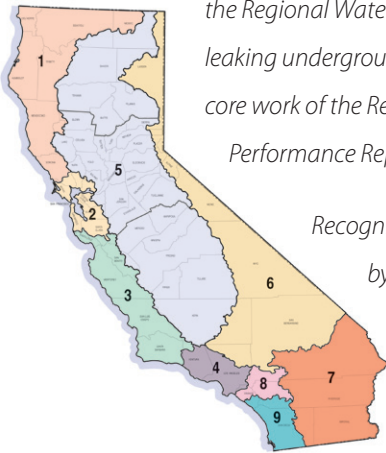
This report summarizes some of the important accomplishments of the Water Boards during 2010. While many of these accomplishments will have broad impact across the State in the years to come, many more are focused on the specific challenges faced in particular watersheds around the State.

For a more thorough explanation of the ongoing core work of the Water Boards, go to:
http://www.waterboards.ca.gov/about_us/performance_report/.

For more information about the activities and programs of the Water Boards, including those featured in this report, see our Web site at www.waterboards.ca.gov.



The nine Regional Water Boards work in coordination with the State Water Board, and serve as the frontline for State and federal water pollution control efforts. These efforts include: providing local implementation of statewide policies, plans, and regulations; developing regional water quality control plans (basin plans) that establish water quality standards, implementation provisions, and water restoration strategies; issuing waste discharge requirements (permits) for sources of pollution; monitoring and assessing water quality; and evaluating compliance with requirements and taking enforcement actions against violators. Of significance for 2010 is the progress made by



the Regional Water Boards in overseeing the cleanup and closure of numerous leaking underground storage tank sites. This and other information describing the core work of the Regional Water Boards can be found in the Water Boards' Annual Performance Report.

Recognizing that California's water pollution problems are influenced by environmental and social factors that vary regionally, the boundaries of the nine Regional Water Boards are based on watersheds, or hydrologic areas. This organizational structure allows for water quality decisions and actions to recognize local differences in climate; topography; geology; hydrology;

population; municipal, recreational, agricultural, and industrial development; and other factors.

ACCOMPLISHMENTS

*HIGHLIGHT***Additional Steps Taken to Restore Klamath River Basin****What Was Accomplished?**

In March 2010, the North Coast Regional Water Board adopted water quality restoration strategies, known as Total Maximum Daily Loads (TMDLs), to restore the salmon fisheries and water quality in the Klamath River in California. The plan establishes pollutant limits and identifies the parties responsible for meeting those limits to address high water temperatures, low levels of dissolved oxygen, high amounts of nutrients, and an abundance of aquatic plant growth, most notably blue-green algae. The plan also addresses water quality impacts of the Klamath Hydroelectric Project, establishes a policy to protect thermal refuges (cooler areas in the river that provide critical habitat for fish during periods of higher temperatures), and addresses nonpoint sources of pollution such as roads and agriculture. The TMDLs, objectives, and implementation plan, which were adopted as amendments to the North Coast Region's Water Quality Control Plan, were approved by the State Water Board in September 2010 and the United States (U.S.) Environmental Protection Agency (USEPA) in December 2010.

Why Is It Important to the State?

The Klamath River basin in California comprises approximately 12,680 square miles in Modoc, Siskiyou, Trinity, Humboldt, and Del Norte counties. This watershed is of vital economic, agricultural, recreational, cultural, and overall environmental importance to California and Oregon, and to the Klamath, Hoopa, Karuk, and Yurok Tribes, the Quartz Valley Indian Reservation, and the Resighini Rancheria. The Klamath River system once supported the third largest salmon runs in the nation. Degraded water quality conditions contributed to the impairment of beneficial uses in the Klamath River basin, including the most sensitive uses such as cultural uses and practices, recreation, and those associated with coldwater fish, particularly salmonids.



*In summer and fall, blue-green algae blooms cover the surface of Copco Reservoir and Iron Gate Reservoir (shown here) on the mainstem Klamath River, when nutrient-rich river waters flow into quiescent reservoirs.
Photo by: Elmer Dudik, Regional Water Board staff.*

The effort to develop the Klamath River TMDLs, which spanned several years, benefited greatly from the involvement of many individuals, organizations, and agencies within California and Oregon, two regions of the USEPA, and several Tribes. Continued cooperation of these entities will be key to implementing the TMDLs and other measures to restore the river. The Klamath River TMDLs are also the last of those required under a 1997 court-ordered consent decree in the North Coast Region that addressed pollutant impairments in 17 watersheds in the Region.

For more information: http://www.waterboards.ca.gov/northcoast/water_issues/programs/tmdls/klamath_river/

Major North Coast Timber Company Required to Control Pollution from Road Activity

In June 2010, the North Coast Regional Water Board issued waste discharge requirements (a water quality permit) to Green Diamond Resource Company, a major timber company located in Northern California. The purpose of the permit is to control runoff generated from the management and maintenance activities on all of Green Diamond's roads. Erosion and sedimentation from roads are the leading causes of water pollution in most coastal watersheds on the north coast. The permit, which supplements the company's Aquatic Habitat Conservation Plan (AHCP) to recover endangered Coho salmon, implements water quality restoration strategies, known as a Total Maximum Daily Loads (TMDLs), for reducing sediment, turbidity, and temperature. The permit establishes requirements for road management activities, carried out through the AHCP's Road Management Plan, that include routine inspections and maintenance of all mainline and secondary roads, a sediment source inventory, the prohibition of discharges of waste, the retention of natural shade canopy, monitoring and reporting, and other actions.



The Klamath River rises from shallow lakes and wetlands in Oregon, and flows through the rugged Cascade Range and Siskiyou Mountains on its way to the Pacific Ocean.

Photo by: Thomas B. Dunklin

The permit and AHCP cover approximately 401,000 acres of private timberlands in the following watersheds: Smith River, Lower Klamath River, Redwood Creek, Maple Creek, Little River, Mad River, Jacoby Creek, Freshwater Creek, Elk River, Salmon Creek, and Eel River. Compliance with the permit will prevent future degradation of salmon-bearing streams on Green Diamond's property by keeping upgraded roads at low risk for impacts to water quality, and preventing and minimizing catastrophic and chronic sources of sediment from roads to be upgraded or taken out of commission.

For more information: http://www.waterboards.ca.gov/northcoast/board_decisions/adopted_orders/pdf/2010/100610_10_0044_WDR_GDRC_1B10066RHUM.pdf

Nonpoint Pollution Addressed by Innovative U.S. Forest Service Requirements

In June 2010, the North Coast Regional Water Board issued a conditional waiver of waste discharge requirements to control nonpoint source discharges on U.S. Forest Service (USFS) lands. The waiver is the first and only of its kind in California, and likely the nation, and is being used as a model by the State Water Board to develop a statewide waiver to control nonpoint source pollution on USFS lands in the rest of the State. In the North Coast Region, the USFS manages public lands that encompass approximately 55 percent (6,889,419 acres) of the Region, and are spread across two USFS regions and six national forests. The USFS manages those lands for multiple uses, including grazing, forestry, recreation, fire suppression, vegetation thinning, and restoration. These activities generate sediment discharges, affect the natural shade canopy, and influence other water quality characteristics. Implementation of the waiver, which builds upon USFS's planning framework for addressing water quality impacts, will result in the restoration and protection of water quality from nonpoint sources on USFS lands in the North Coast Region.

For more information: http://water100.waterboards.ca.gov/rb1/adopted_orders/record_detail.asp?discharger=&ordernumber=&ordertype=Waiver&WADbSearch1=Submit&ID=1291

Region 2

SAN FRANCISCO BAY REGION

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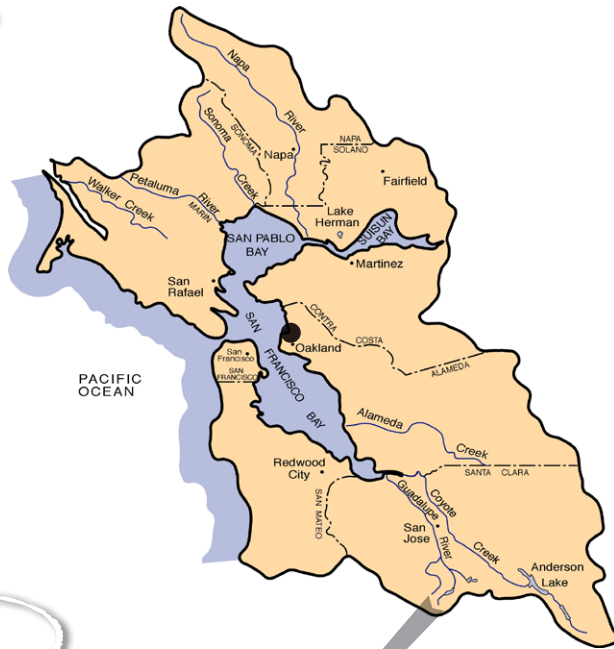
San Francisco Bay lies at the heart of this area, home to more than 7 million people. Industries range from high-tech computer manufacturers in the Silicon Valley to oil refineries in Contra Costa County. The northern part of the Region supports agriculture, such as the wine industry and dairies. Despite the Region's heavy urbanization, the Bay and its watersheds are home to diverse populations of fish and migratory birds.

Priorities

- Implement TMDLs for pathogens, sediments, pesticides, mercury, and PCBs by using waivers for grazing activities and vineyards, implementing the regional urban stormwater permit, and directing grants towards TMDL actions.
- Pursue aggressive enforcement with emphasis on sewage spills and polluted stormwater discharges.
- Close low-risk contaminated groundwater sites following investigation and cleanup actions necessary to protect water quality, human health, and the environment.

Accomplishments

- U.S. Maritime Administration Required to Cleanup and Dispose of Mothball Fleet
- Stringent Requirements Imposed on Poorest Performing Sewage Collection Agencies
- Addressing Multiple Water Quality Pollutants
- Dredged Material from Oakland Harbor Reused



● Regional Board Office
Number of Employees = 112



HIGHLIGHT

U.S. Maritime Administration Required to Cleanup and Dispose of Mothball Fleet

What Was Accomplished?

In March 2010, the San Francisco Bay Regional Water Board and three environmental plaintiffs involved in a citizens' suit against the United States Maritime Administration (MARAD) reached agreement on a consent decree, which was entered into District Court in April 2010, to address pollution from military vessels anchored in Suisun Bay. MARAD stores more than 70 aging military vessels, commonly known as the "Mothball Fleet", at the Suisun Bay Reserve Fleet's anchorage, a practice dating to the 1940's. While the Fleet's 15 "retention" vessels have the potential to be returned to active duty and are regularly maintained by MARAD, the Fleet's 57 "non-retention" vessels are at the end of their useful lives, destined for scrapping, and have received little maintenance. The Regional Water Board discovered, in 2006, that MARAD was cleaning the hulls of those non-retention vessels (destined for towing to and disposal in Texas) in Suisun Bay with no pollution controls, and later discovered that none of the non-retention vessels were being maintained. MARAD's own 2007 study found that over 20 tons of heavy metals had been washed, blown, or discharged to Suisun Bay from the vessels, and over 60 tons could discharge in the future. While MARAD stopped open water cleaning upon the Regional Water Board's demand, it did not comply with the Regional Water Board's enforcement actions to properly clean and remove paints and other debris from the vessels. In 2008, the Regional Water Board intervened in a suit filed against MARAD by three environmental groups under the citizens' suit provisions of the federal Clean Water Act (CWA).

In September 2009, MARAD conceded its liability under the CWA for the discharge of pollutants into Suisun Bay without a valid permit. The 2010 consent decree requires MARAD to maintain the military vessels anchored and stored in Suisun Bay, minimize the discharge of pollutants from non-retention vessels that are awaiting disposal, and establish a schedule for relatively rapid disposal of the vessels.



Retention and non-retention vessels, chained and anchored together, in one of the rows at the Suisun Bay Reserve Fleet's anchorage.

Photo by: Keith Lichten and David Elias, Regional Water Board staff.

Why Is It Important to the State?

The San Francisco Bay Regional Water Board's suit against MARAD established precedents that can be applied statewide. It was the first time a Water Board filed suit against a federal agency under the citizens' suit provisions in the federal CWA. The suit also resulted in the court finding that the discharge of paint and other materials from the vessels constituted a point source discharge enforceable under the CWA. The cleanup and proper disposal of the non-retention vessels will prevent the ongoing discharge of heavy metals from these ships into Suisun Bay, and the subsequent impacts on the environment and human health. Since reaching agreement on the consent decree, MARAD has properly disposed of 14 vessels, removed over 300 tons of peeling paint and other debris from the remaining vessels, and contracted for the disposal of vessels at Mare Island in Vallejo under Regional Water Board permit.

For more information: http://www.waterboards.ca.gov/sanfranciscobay/water_issues/hot_topics/mothball.shtml

Stringent Requirements Imposed on Poorest Performing Sewage Collection Agencies

During 2010, the San Francisco Bay Regional Water Board took aggressive actions to restore sewage infrastructure and reduce the occurrence of sewage spills. Poor sewage collection and treatment system operations and maintenance have resulted in many raw and partially-treated sewage spills to San Francisco Bay. Through enforcement activities coordinated with the U.S. Environmental Protection Agency, the State Water Board, and local environmental organizations, aggressive requirements were developed for the poorest performing sewage collection agencies. Some of the poorest performing agencies targeted included the Sewerage Agency of Southern Marin, the Crystal Springs County Sanitation District, the City of San Mateo, the Town of Hillsborough, and the City of Pacifica. The enforcement actions taken against these agencies included proposed fines totaling \$4,678,375. The stringent requirements imposed on these agencies include funding incentive programs for homeowners to replace or repair failing sewer pipes, which are major contributors to sewage spills, and prioritizing infrastructure upgrade needs.

For more information: http://www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/SSO_Reduction.shtml

Addressing Multiple Water Quality Pollutants

During 2010, the San Francisco Bay Regional Water Board took significant steps to improve water quality, implementing water quality restoration strategies, known as Total Maximum Daily Loads (TMDLs), for pathogens in the Tomales Bay watershed, mercury and polychlorinated biphenyls (PCBs) in the San Francisco Bay, and sediment in the Sonoma Creek and Napa River watersheds. The Regional Water Board issued a conditional waiver of waste discharge requirements for grazing lands in the Tomales Bay watershed, achieving an initial 87 percent compliance rate, and implemented provisions in its region-wide municipal stormwater permit to reduce the amount of mercury and PCBs discharged. The Regional Water Board also began development of requirements for grazing operations and vineyards in the Sonoma Creek and Napa River watersheds, including expanding programs for third party certification of vineyard water quality plans to address multiple pollutants. By the end of 2010, over 10,000 acres of vineyards and 5,000 acres of adjacent rural lands, covering about 40 percent of the Napa River watershed, had certified farm water quality plans.

For more information: http://www.swrcb.ca.gov/sanfranciscobay/water_issues/programs/TMDLs/

Dredged Material from Oakland Harbor Reused

In January 2010, the delivery and reuse of dredged material from deepening the Oakland Harbor, a decade-long process conducted under a series of permits issued by the San Francisco Bay Regional Water Board, was completed. Beginning in 2002, over 12 million cubic yards of sediment were dredged to accommodate new classes of container ships. Permits issued by the Regional Water Board protected human health, habitat, and water quality during both the dredging and the subsequent relocation of the dredged material. Nearly 100 percent of the dredged material from the Oakland Harbor has been reused for wetland restoration, habitat enhancement, and construction projects in and around the San Francisco Bay.

One of the first areas in the San Francisco Bay Region to realize the benefits of reusing dredged material from the Oakland Harbor was Middle Harbor Shoreline Park, a 38-acre shoreline park adjacent to the Port of Oakland. Approximately six million cubic yards of dredged material has been reused to restore about 188 acres of shallow water habitat at the park. Additionally, approximately six million cubic yards of dredged material has been reused for wetland restoration projects at the Hamilton Army Airfield in Marin County and the Montezuma Wetland restoration site adjacent to Suisun Marsh in Solano County. The Regional Water Board permitted each site where reuse is occurring and facilitated the approvals from other agencies.

For more information: http://www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/dredging.shtml

Region 3

CENTRAL COAST REGIONAL WATER BOARD

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The Central Coast Region extends from Santa Clara County south to northern Ventura County. The Region has 378 miles of coastline, including Santa Cruz and the Monterey Peninsula, the agricultural Salinas and Santa Maria valleys, and the Santa Barbara coastal plain. Tourism, power and oil production, agriculture, and related food processing activities are the major industries.

Priorities

- Decrease nitrate sources (predominantly agricultural sources in the larger basins) and continue with cleanup of chemical and fuel sites.
- Secure replacement water for rural wells without treatment.
- Improve urban stormwater runoff quality and quantity, and increase watershed sustainability through the development and approval of high-quality Stormwater Management Plans, including hydromodification criteria and requirements.
- Improve irrigated agricultural runoff quality (toxicity, nutrients, sediment) and require protection of riparian corridors.

Accomplishments

- Collaboration Prompts Region-Wide Approach to Hydromodification Control and Low Impact Development
- Enhanced Water Quality Protections from Agricultural Discharges
- Major Step Toward Continued Clean Up of Perchlorate-Contaminated Groundwater



● Regional Board Office
Number of Employees = 67

ACCOMPLISHMENTS



HIGHLIGHT

Collaboration Prompts Region-Wide Approach to Hydromodification Control and Low Impact Development

What Was Accomplished?

During 2010, the Central Coast Regional Water Board launched a “Joint Effort” where cities and counties located in the Region agreed to participate in a collaborative, region-wide approach to implementing Low Impact Development (LID) and hydrologic modification (hydromodification) controls. LID, which uses planning and engineering design approaches to manage stormwater runoff, emphasizes conservation and the use of on-site natural features to protect water quality. Hydromodification is the alteration of natural hydrologic characteristics of waters, which in turn can degrade water resources. The Regional Water Board required hydromodification control through stormwater permits and encouraged participation in the Joint Effort. All stormwater permit municipalities are now working together to develop a methodology, with stormwater and hydrology consultants, to derive locally-appropriate numeric requirements for hydromodification control. The development of these requirements is being assisted by the Central Coast’s Low Impact Development Initiative (LIDI), a technical expertise assistance office enabled through the Regional Water Board. These requirements will be the foundation for on-the-ground improvements in maintaining stormwater quality and quantity in new development and redevelopment. Because streets and parking lots are huge contributors to stormwater runoff in urban areas, the LIDI developed a Green Parking Lot guidance for municipalities and designers. LIDI also assisted the City of Paso Robles and the City of Atascadero in seeking grant funding for the Green Street Project and Central Coast Green Street Guidance (Paso), and an LID parking lot for Atascadero. Both cities were awarded grants for these projects, which will provide great examples for others in the region to follow.

Why Is It Important to the State?

Controlling stormwater for water quality protection and groundwater recharge can best be advanced by managing the flow rate and volume of stormwater. By controlling



*Piles of hydromodification sediment dredged from sediment basin upstream from Santa Cruz Harbor.
Photo by: Roger Briggs, Regional Water Board staff.*

hydromodification, fewer pollutants will flow to receiving waters, the runoff will not be destructive by virtue of its increased force and volume, and groundwater recharge will be preserved at a time when water supply is increasingly stressed and basins are more commonly over pumped. As the primary sources of high volume stormwater runoff in municipalities, streets and parking lots are being targeted because of their development priority in the State. The results of the Central Coast Region's efforts regarding LID and hydromodification control will benefit other municipalities throughout the State and other regions.

For more information: http://www.waterboards.ca.gov/centralcoast/water_issues/programs/stormwater/index.shtml

Enhanced Water Quality Protections from Agricultural Discharges

In November 2010, the Central Coast Regional Water Board launched a new web-based system for agricultural dischargers to enroll in the existing agricultural water quality order (Order). The Order is scheduled for revision in 2011 but, in the meantime, the Regional Water Board is working toward interim solutions for those with contaminated drinking water wells (identifying the wells, which will lead to notifying users of options, and evaluating alternative water supply options), and streamlining discharger enrollment and data tracking. The Regional Water Board has been attempting to work with each county Public Health Officer and others to provide interim testing and drinking water solutions for the thousands of domestic well users who are exposed to excessive nitrate in their drinking water. Interim measures to provide alternative water supplies are necessary since solutions to overloading of groundwater basins will be long-term because groundwater reacts very slowly to changes in land use practices.

The new web-based system, launched through the teamwork of Regional and State Water Board staff, will assist the industry's Cooperative Monitoring Program, which relies on operator information for billing and Water Board staff for tracking compliance. For the Central Coast Region's approximately 3,000 farmers, the new system means an easier method for enrollment and subsequent changes as their operations change.

For more information: http://www.waterboards.ca.gov/centralcoast/water_issues/programs/ag_waivers/noi_submittal.shtml



*Irrigated agriculture.
Photo by: State Water Board staff.*

Major Step Toward Continued Clean Up of Perchlorate-Contaminated Groundwater

During 2010, the Central Coast Regional Water Board approved a cleanup feasibility study, a major milestone towards the completion of Olin Corporation's final design for an offsite groundwater containment and treatment system to remove elevated concentrations of perchlorate from a drinking water aquifer. Discharges from Olin's flare manufacturing facility in Morgan Hill resulted in one of the largest groundwater contamination plumes in the history of the Central Coast Region: approximately 10 miles long, half a mile wide, and up to 500 feet deep in places. When perchlorate was found in offsite domestic supply wells in 2003, forcing hundreds of rural well users to use alternative water supplies, the Regional Water Board required Olin to provide either wellhead treatment or bottled water. The Regional Water Board also required Olin to: (1) pump and treat contaminated groundwater at the source area to prevent it from moving further offsite; (2) clean up contaminated soils that acted as a perchlorate source; and (3) establish a robust groundwater monitoring program to ensure that cleanup efforts achieve better downgradient drinking water quality. Olin began operating the onsite pump and treat system in April 2004, and successfully cleaned up source area soils in May 2006. Olin continues to operate the onsite pump and treat system, and is expanding the system to include perchlorate-impacted groundwater from offsite wells, as required by the Regional Water Board.

Perchlorate concentrations in groundwater are decreasing and, in 2010, 13 domestic supply wells exceeded the drinking water standard for perchlorate in the sub-basin as compared to 188 wells during the first quarter of 2004. A majority of the wells that exceed drinking water standards are located within one mile south of the Olin site, and the Regional Water Board expects significant decreases in perchlorate concentrations in this area after the offsite containment and treatment system begins operation in 2011.

For more general information: http://www.waterboards.ca.gov/centralcoast/water_issues/programs/olin_corp/index.shtml

For more recent technical information: http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=SL0608756247

Region 4

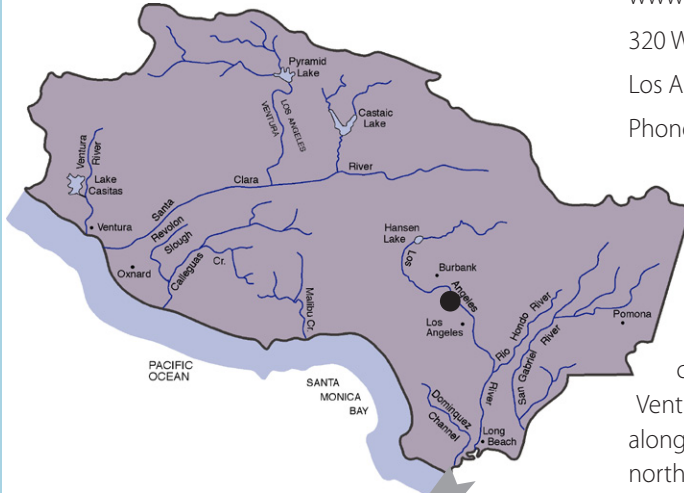
LOS ANGELES REGIONAL WATER BOARD

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With 10 million residents, the Los Angeles area is the most densely populated in the State. It encompasses all the coastal watersheds of Los Angeles and Ventura counties, along with portions of Kern and Santa Barbara counties. Land use varies considerably. In Ventura County, agriculture, and open space exist alongside urban, residential, and commercial areas. In northern Los Angeles County, open space is steadily being transformed into residential communities. In southern Los Angeles County, land uses include urban, residential, commercial, and industrial.



Priorities

- Reissuing the Region's Conditional Waiver for Irrigated Lands, which regulates discharges from agricultural activities.
- Reissue Municipal Separate Storm Sewer System (MS4) Permits for municipalities within Los Angeles County and the unincorporated portions of Los Angeles County, which regulate urban runoff and stormwater discharges.
- Assist local agencies in their development of nutrient and salt management plans required by the water recycling policy.
- Increase the level of local groundwater protection through permitting, monitoring, inspection, cleanup, and enforcement to ensure that groundwater resources remain available for use during droughts and for future generations.

Accomplishments

- Protective Low Impact Development Requirements in New Ventura County Stormwater Permit
- Bacteria and Debris Pollution Addressed
- Agreement Reached on Cleaning Up Polluted Groundwater and Soil

● Regional Board Office
Number of Employees = 128

ACCOMPLISHMENTS

*HIGHLIGHT*

Protective Low Impact Development Requirements in New Ventura County Stormwater Permit

What Was Accomplished?

In July 2010, the Los Angeles Regional Water Board reissued the Ventura County Municipal Separate Storm Sewer Systems (MS4) Permit to advance protection of water quality from stormwater runoff. The permit applies to cities in Ventura County who have joined together to form the Ventura Countywide Stormwater Quality Management Program to discharge wastes from their storm drain systems. After the development of seven drafts and over five years of negotiation and discussion, the MS4 Permit contains stringent low impact development standards. Specifically, it limits impervious areas (ground surfaces that cannot absorb stormwater runoff) and requires that certain volumes of stormwater runoff be retained on-site either through infiltration (movement of water into the soil) or capture and reuse. Mitigation alternatives are available in limited circumstances.

In November 2010, the County of Ventura Watershed Protection District released an extensive Low Impact Development Technical Guidance Manual to assist developers and planning agencies in implementing the permit's new development and redevelopment requirements.

Why Is It Important to the State?

The low impact development standards contained in the Ventura County MS4 Permit are a significant step in reducing stormwater runoff, habitat destruction from erosion, and the amount of pollutants conveyed in runoff being discharged from new development or redevelopment project sites during storm events. In addition to improving protections of water quality, the permit encourages water conservation, which is critical given the increasing shortages of imported and local water supplies.



Low impact development in a Ventura County parking lot, using landscaping to capture and treat stormwater runoff (known as bioretention).

Photo by: Geosyntec Consultants

For more information: http://www.swrcb.ca.gov/rwqcb4/water_issues/programs/stormwater/municipal/ventura_ms4/AdoptedVenturaCountyms4/Order.pdf

Bacteria and Debris Pollution Addressed

In July 2010, the Los Angeles Regional Water Board adopted a water quality restoration strategy, known as a Total Maximum Daily Load (TMDL), for indicator bacteria for the Los Angeles River watershed. The bacteria TMDL will be used by municipalities and agencies to protect the public from health risks due to high levels of bacteria found in waters of the Los Angeles River watershed. This 2010 TMDL incorporates new compliance features and will be implemented in phases so that priority sections of the river are targeted first.

In November 2010, the Regional Water Board adopted a TMDL for debris in the near and off shore waters of Santa Monica Bay. The TMDL prohibits any discharge of debris into the Santa Monica Bay Watershed Management Area, including trash or preproduction plastic pellets (raw plastic resin that is molded into finished plastic products). The trash and plastic pellet requirements will be implemented primarily through the Regional Water Board's stormwater permits.

For more information: http://www.waterboards.ca.gov/losangeles/water_issues/programs/tmdl/tmdl_list.shtml



Air flow lines and insulation being installed to treat contaminated soil and shallow groundwater at the former Gillette/PaperMate facility in the City of Santa Monica.

Photo by: Peter Raftery, Regional Water Board staff.

Agreement Reached on Cleaning Up Polluted Groundwater and Soil

In November 2010, the Los Angeles Regional Water Board issued a modified Cleanup and Abatement Order (Order) to the Gillette Company for soil and groundwater contamination caused by volatile organic compounds and other chemicals at a former PaperMate facility in the City of Santa Monica. The former PaperMate facility, which overlies the Olympic Groundwater Sub-basin and serves as a significant local source of drinking water for the City of Santa Monica, is contaminated by chemicals released by PaperMate and others. The modified Order incorporates agreements reached between the City of Santa Monica, the Gillette Company, and its parent company, the Procter & Gamble Company, on how to clean up both soil and groundwater contamination. Approximately \$20 million is dedicated for the cleanup of contaminated soil and shallow groundwater, and \$68 million for developing and implementing a 30-year water supply plan to capture and treat the contaminated groundwater, which includes the upgrade and expansion of the City's drinking water treatment system.

For more information: http://www.swrcb.ca.gov/losangeles/water_issues/programs/Site_Cleanup/Gillette/cao_r4-2010-0202_11-10-2010.pdf

Central Valley Regional Water Board



● Regional Board Offices
Number of Employees = 233

Region 5

CENTRAL VALLEY REGIONAL WATER BOARD

www.waterboards.ca.gov/centralvalley

Sacramento Office

11020 Sun Center Drive, Suite 200

Rancho Cordova, CA 95670

Phone: (916) 464-3291

The Central Valley Region is the State's largest, encompassing 60,000 square miles, or about 40 percent of the State's total area. Thirty-eight of California's 58 counties are either completely or partially within the Region's boundaries, formed by the crests of the Sierra Nevada on the east, the Coast Ranges and Klamath Mountains on the west, the Oregon border on the north, and the Tehachapi Mountains on the south. The Sacramento and San Joaquin rivers, and their tributaries, drain the major part of this large area through an inland Delta into San Francisco Bay. The Delta is the focal point of the State's two largest water conveyance projects, the State Water Project and the federal Central Valley Project. Together, the Sacramento and San Joaquin rivers and the Delta furnish over half of the State's water supply.

Priorities

- Develop a comprehensive Salt and Nitrate Management Plan.
- Strengthen agricultural waste regulatory programs.
- Strengthen and implement regulatory programs for the preservation and protection of Delta waters.
- Strengthen ground water regulatory and control programs consistent with the Ground Water Quality Protection Strategy.

Accomplishments

- Strategy for Protecting Central Valley Groundwater Quality Approved
- High Mercury Levels Being Addressed in the Delta
- Major Strides Made in Regulation of Irrigated Agriculture and Dairies
- Former Air Force Base Property Transferred for Reuse
- New Requirements Imposed on Sacramento Regional Wastewater Treatment Plant

ACCOMPLISHMENTS

*HIGHLIGHT*

Strategy for Protecting Central Valley Groundwater Quality Approved

What Is It?

In September 2010, the Central Valley Regional Water Board adopted the Groundwater Quality Protection Strategy (Strategy) for the Central Valley Region following four public workshops and extensive stakeholder involvement. The Strategy is a long-range planning and informational document that defines the regulatory programs to be improved, developed, and implemented by the Regional Water Board to halt degradation, and improve and restore the quality, of Central Valley groundwater. Recognizing that not all high priority actions identified in the Strategy can be implemented with existing resources, partnering opportunities with other State, federal, and local agencies and organizations to leverage existing resources and avoid duplication of efforts will be needed. High priority actions currently underway include the development of a Salt and Nutrient Management Plan for the Central Valley, enhancing public participation methods, and implementing a long-term Irrigated Agriculture Regulatory Program. A progress report on implementation will be presented to the Central Valley Regional Board in April 2011. Re-evaluation of the Strategy will be conducted annually.

Why Is It Important to the State?

In a typical year, water pumped from groundwater wells meets approximately 30 percent of California's total water needs, while during drought years the State relies on groundwater to meet as much as 50 percent of the State's water demands. Groundwater accounts for almost 50 percent of the drinking-water supply in the Central Valley region and it supplies a large part of the irrigation water for agriculture, especially during times of drought. Vital groundwater resources throughout the Central Valley have been polluted, in part through historical practices of the agriculture and dairy industries; commercial, industrial, and military discharges; failing septic systems; and

other discharges to land. With the population of the Central Valley expected to grow, the importance of groundwater to this region will not diminish.

For more information: http://www.waterboards.ca.gov/centralvalley/water_issues/groundwater_quality/index.shtml

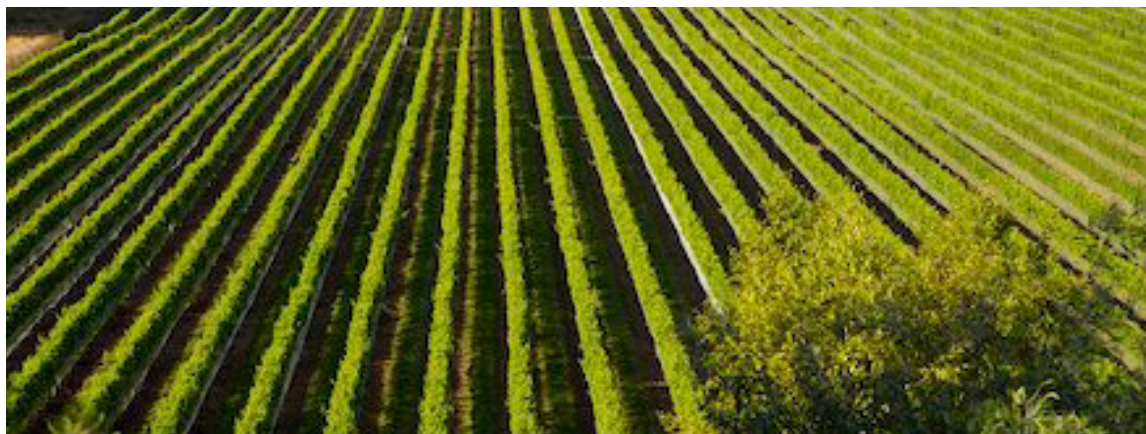


Sacramento-San Joaquin Delta.
Photo by: Regional Water Board staff.

High Mercury Levels Being Addressed in the Delta

In April 2010, the Central Valley Regional Water Board adopted a water quality restoration strategy, known as a Total Maximum Daily Load (TMDL), to address elevated levels of mercury in the Sacramento–San Joaquin Delta. The Regional Water Board established objectives for methylmercury levels in fish tissue to protect humans and wildlife that consume fish from the Delta, as well as a comprehensive Delta mercury control program to achieve compliance with the objectives. While the control program primarily focuses on methylmercury production and discharge, it also addresses inorganic mercury (inorganic mercury in sediment is converted to methylmercury by bacteria). The control program requires reductions of both inorganic mercury and methylmercury from the principal sources identified in the Delta watershed. Sources include: municipal wastewater treatment plants, urban stormwater runoff, managed wetlands, irrigated agriculture, and water management activities. The Delta mercury control program provides the science and framework for strategies to control mercury in the watersheds upstream from the Delta. The issues associated with the control program are very complex and controversial, and took over six years to develop through a rigorous stakeholder process.

For more information: http://www.waterboards.ca.gov/centralvalley/water_issues/tmdl/central_valley_projects/delta_hg



Central Valley vineyard.
Photo by: Regional Water Board staff.

Major Strides Made in Regulation of Irrigated Agriculture and Dairies

During 2010, the Central Valley Regional Water Board proposed a long-term strategy for regulating discharges from irrigated agriculture, and approved a program for regulating discharges from dairy manure digesters and co-digesters. In July 2010, a draft Program Environmental Impact Report (EIR) and economic analysis for a long-term program to regulate pollutant discharges from irrigated agricultural lands was distributed for public comment. Alternatives to the current approach, developed with a diverse group of stakeholders, all consider adding groundwater quality protection to the Regional Water Board's current irrigated agricultural lands regulatory program. Adding groundwater protection requirements would add up to 2 million additional acres of irrigated agricultural lands to the current program, which now includes about 5 million acres. The Regional Water Board will consider approving the EIR and the long-term strategy for the irrigated agricultural lands regulatory program in early 2011.

In December 2010, the Central Valley Regional Water Board approved a Program EIR for a program to regulate liquid and solid discharges from dairy manure digesters and co-digesters in the Central Valley. Dairy manure digesters capture methane gas, one of the greenhouse gases blamed for global warming, which can then be used to generate electricity or used as a substitute for conventional natural gas. Culminating an intense, 11-month interagency effort, the EIR will streamline and expedite the permitting of these facilities for the Regional Water Board, as well as other State and local permitting agencies. It will also lead to reduced permit processing times of at least 50 percent for renewable energy projects.

For more information on irrigated agricultural lands: http://www.waterboards.ca.gov/centralvalley/water_issues/irrigated_lands/long_term_program_development/index.shtml

For more information on dairy manure digesters and co-digesters: http://www.waterboards.ca.gov/centralvalley/board_decisions/tentative_orders/1012/index.shtml#15a.



*The former McClellan Air Force Base (now McClellan Business Park) before and after major renovation of some buildings to convert former military buildings into a modern business park.
Photos by: McClellan Business Park.*

Former Air Force Base Property Transferred for Reuse

In May 2010, the Central Valley Regional Water Board completed a multi-year, multi-agency effort for approval to transfer the 560-acre property of the former McClellan Air Force Base to a non-federal entity for redevelopment. The former McClellan Air Force Base, which included a variety of industrial facilities, office buildings, a hotel, and housing, was contaminated and designated a federal Superfund site. While the military is generally responsible for cleaning up a Superfund site prior to transfer, in this case property will be transferred to a non-federal entity prior to cleanup of all contamination on site. This approach involves a developer completing environmental cleanup activities while the base is being redeveloped. The benefits of this innovative public-private partnership are numerous, including more expeditious cleanup. Leading up to the success of the McClellan property transfer were many years of intensive preparation, negotiation, coordination, and teamwork. The California Department of Toxic Substances Control and the Regional Water Board jointly prepared the “early transfer package” and obtained Governor approval for the property transfer.

The former McClellan Air Force Base is now one of the largest economic development and infill reuse projects in Northern California. Sacramento County estimates that, when fully developed, McClellan Park will provide approximately 35,000 jobs, and generate over \$6.6 million per year in local property taxes and \$1.1 million per year in local sales tax revenue.



*Wastewater treatment plant clarifier, which separates solids from partially treated wastewater.
Stock Photo.*

New Requirements Imposed on Sacramento Regional Wastewater Treatment Plant

In December 2010, the Central Valley Regional Water Board adopted a new waste discharge permit for the Sacramento Regional County Sanitation District (SRCSD) that imposes significant new and more stringent standards for wastewater discharged from their Sacramento Regional Wastewater Treatment Plant (SRWTP) to the Sacramento River in the northern part of the Sacramento-San Joaquin Delta. The SRWTP discharge, which enters critical habitat for five federally-listed fish species (winter- and spring-run Chinook salmon, Delta smelt, and green sturgeon), is the primary source for nearly 99 percent of the ammonia in the Delta. Ammonia is toxic to fish and other aquatic life, and lowers oxygen concentrations in the river. After years of study and lengthy hearings, the permit will require major improvements to the SRWTP, which has not significantly changed since the current treatment facilities began operating in 1983. The new permit requires that ammonia be reduced from the current discharge of about 14 tons per day to around one ton per day, and that the nitrate discharge be reduced by about two-thirds. The SRCSD has approximately 10 years to comply with the new standards.

The SRCSD provides wastewater treatment service to the Cities of Sacramento, Folsom, West Sacramento, and the Sacramento Area Sewer District, serving approximately 1.3 million people. The permitted discharge flow of 181 million gallons per day is the single largest discharge of municipal wastewater to the Sacramento-San Joaquin Delta, discharging more than all other Delta wastewater treatment plants (WWTPs) combined. Almost all of the other WWTPs in the Delta already treat wastewater to the standard now required of the SRWTP.

For more information: http://www.waterboards.ca.gov/centralvalley/board_decisions/tentative_orders/1012/index.shtml#6

Region 6

LAHONTAN REGIONAL WATER BOARD

www.waterboards.ca.gov/lahontan

South Lake Tahoe Office

2501 Lake Tahoe Boulevard

So. Lake Tahoe, CA 96150

Phone: (530) 542-5400

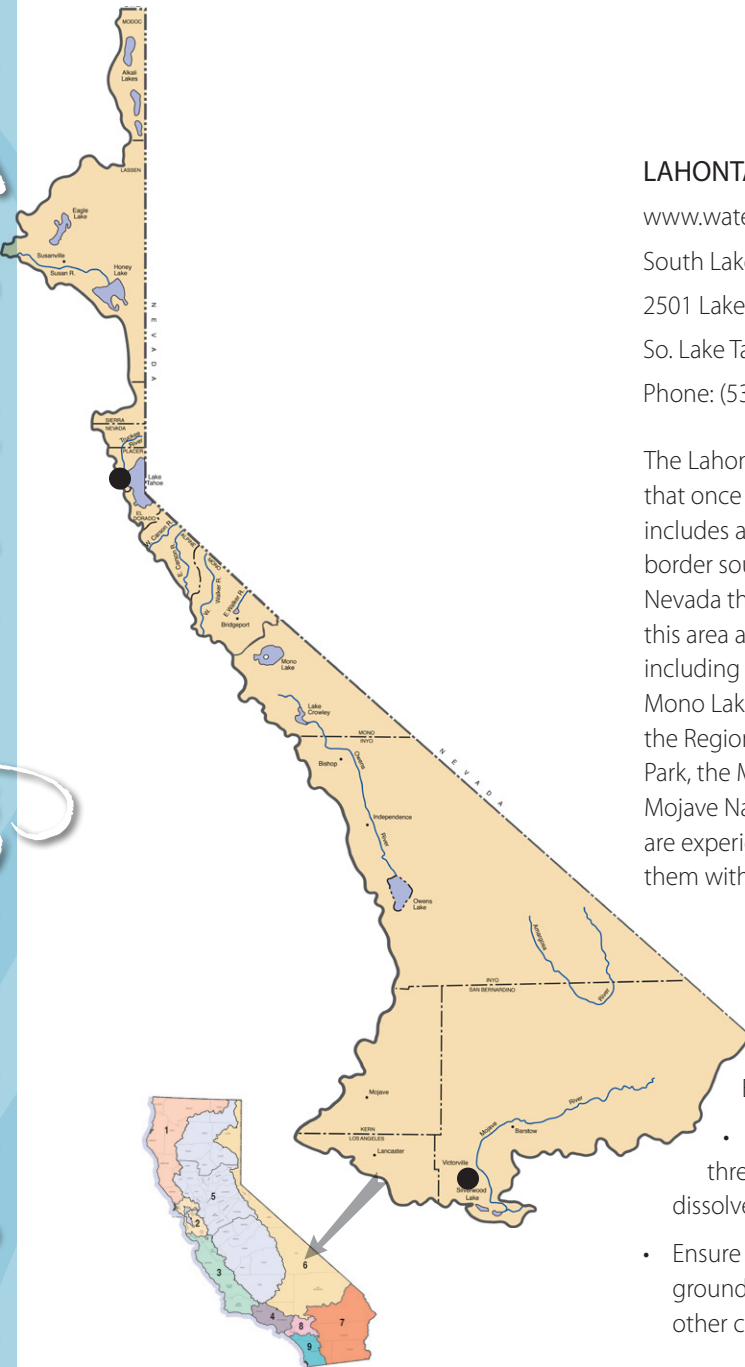
The Lahontan Region is named for a prehistoric lake that once covered much of the Great Basin. The Region includes about 20 percent of California from the Oregon border south along the eastern crest of the Sierra Nevada through the northern Mojave Desert. Within this area are hundreds of lakes, streams, and wetlands, including the nationally significant Lake Tahoe and Mono Lake. Tourism is the most important industry in the Region, which also includes Death Valley National Park, the Mammoth Lakes area, and portions of the Mojave National Preserve. The Region's southern cities are experiencing rapid population increases, ranking them within the top ten nationally.

Priorities

- Adopt and implement a Lake Tahoe TMDL concurrently with the Nevada Division of Environmental Protection.
- Protect and restore groundwater quality threatened or polluted by nitrate and total dissolved solids from municipal and dairy wastes.
- Ensure timely and efficient remediation of groundwater at sites affected by petroleum and other contaminants.

Accomplishments

- Plan to Restore Lake Tahoe Clarity Adopted
- Alternative Energy Projects Permitted for Water Quality Protection
- Dairy Strategy Underway to Protect Groundwater Quality



● Regional Board Office
Number of Employees = 56



HIGHLIGHT

Plan to Restore Lake Tahoe Clarity Adopted

What Is It?

In November 2010, the Lahontan Regional Water Board adopted a water quality restoration strategy, known as a Total Maximum Daily Load (TMDL), to significantly reduce pollution entering Lake Tahoe with the goal of improving deep water transparency (clarity) to approximately 100 feet, the depth that was seen in 1967-1971. The strategy lays out a 65-year schedule to reduce the amount of fine sediment, phosphorus, and nitrogen going into the lake.

For the first 15 years, the strategy requires pollution reductions that are expected to improve lake transparency to approximately 80 feet of depth, focusing on reducing the amount of very fine sediment (particles less than one-third the diameter of a human hair) from reaching Lake Tahoe. The bulk of these sediments originate in the urban setting, so the burden to reduce sediment loading into the lake falls to the local jurisdictions, and the California and Nevada highway departments. Increased road sweeping and maintenance of existing stormwater treatment and retention facilities (basins, stormwater vaults, etc.) will contribute greatly to reducing the amount of sediment reaching the lake. Also, private property owners can contribute by implementing best management practices, such as restoring disturbed areas by adding mulch or native plants, and directing runoff from roofs and driveways to infiltration areas or depressions in the landscaping.

Why Is It Important to the State?

The State of California and the U.S. Environmental Protection Agency designated Lake Tahoe an Outstanding National Resource Water in 1980 for its exceptional water quality and clarity. The Lake Tahoe TMDL is the first restoration strategy in the State and the nation that identifies very fine sediment particles as the primary cause of the lake's deep



Lake Tahoe wildlife.
Photo by: California Department of Water Resources.

water transparency, and to develop a pollution load allocation plan based largely on an analysis of the load reduction opportunities. Also unique to this TMDL, and significant to the State and the nation, is the Lake Clarity Crediting Program that was developed to track load reduction actions and link those actions to improvements in the deep water transparency.

For more information: http://www.waterboards.ca.gov/lahontan/water_issues/programs/tmdl/lake_tahoe/index.shtml

Alternative Energy Projects Permitted for Water Quality Protection

During late 2009 and 2010, the Lahontan Regional Water Board adopted water quality permits for two alternative energy projects, a solar tower project and a wind project, to protect ground and surface water quality. The Regional Water Board also submitted permit requirements for six other energy projects to the California Energy Commission (CEC). Of those six, the CEC has permitted one project, and five are in final stages of public comment. Providing energy from renewable sources is a priority in California. Solar and wind renewable energy projects are being sited in the Lahontan Region due to its vast open spaces. While the CEC has primary permitting responsibility for these projects, the Regional Water Board develops permit requirements to protect ground and surface water quality for incorporation into the CEC's license. Alternative energy facilities can be responsible for a variety of water quality issues, such as placing fill in surface waters, discharging polluted stormwater during construction and routine operations, and containment of wastewater in evaporation ponds.

For more information: <http://www.energy.ca.gov/siting/solar/index.html>



California dairy cows.
Stock Photo.

Dairy Strategy Underway to Protect Groundwater Quality

Dairies operations can have adverse impacts on groundwater quality and, in a few instances, these effects have resulted in pollution of domestic wells. In May 2010, the Lahontan Water Board initiated implementation of a Dairy Strategy that prioritizes actions to clean up existing water quality problems and requires actions by dairy owners, thereby reducing the possibility of future water quality problems.

First priority is the protection of existing domestic well users. In early 2010, Lahontan Water Board staff sampled numerous wells in close proximity to the dairies in the Region. As a result of contaminant detections, four dairies have been required to perform further well sampling. One dairy operator has been required to provide alternate water to affected private residences. All dairies will be required to develop nutrient management plans. In response to manure management issues, one dairy operator has been ordered to develop, submit, and implement a nutrient management plan, including initial actions to remove significant manure storage piles at the dairy. Additionally, groundwater investigation and cleanup will be initiated when it is determined that dairies have caused groundwater contamination.

For more information: http://www.waterboards.ca.gov/lahontan/water_issues/programs/docs/dairy_stffrpt.pdf

Region 7

COLORADO RIVER BASIN REGIONAL WATER BOARD

www.waterboards.ca.gov/coloradoriver

73-720 Fred Waring Drive, Suite 100

Palm Desert, CA 92260

Phone: (760) 346-7491

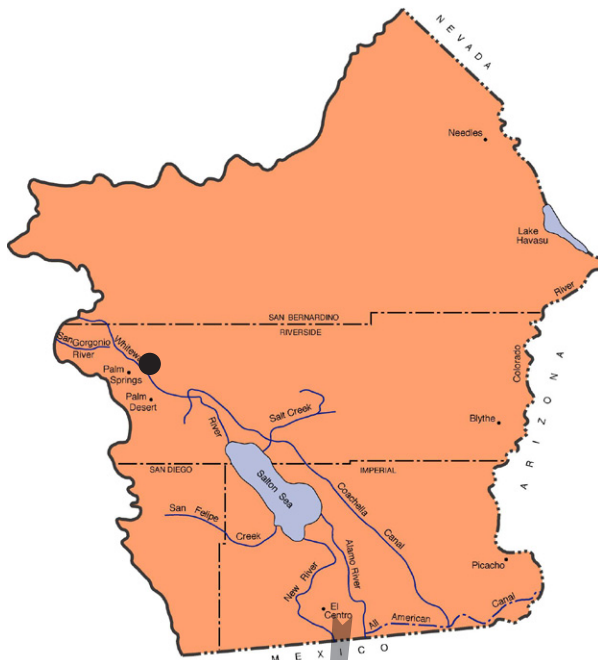
The Colorado River Basin Region covers California's most arid area. Despite its dry climate, the Region contains two water bodies of State and national significance: the Colorado River and the Salton Sea. Water from the Colorado River irrigates more than 700,000 acres of productive farmland in the Imperial, Coachella, Bard, and Palo Verde valleys. The river also provides drinking water to several million people in California's southern coastal cities.

Priorities

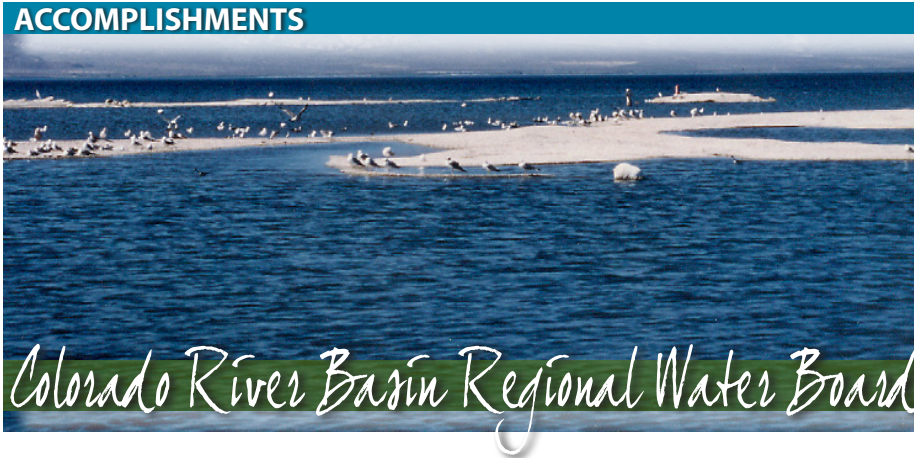
- Monitor, inspect, and assess water quality improvements in the New River at the international boundary with Mexico.
- Eliminate septic tanks and promote the construction of wastewater treatment plants and sewer lines in dense residential and commercial areas.
- Prohibit agricultural discharges through basin plan amendments.

Accomplishments

- Water Quality Strategy Approved to Address Most Polluted River in the U.S.
- Renewable Energy Projects Permitted



● Regional Board Office
Number of Employees = 30



HIGHLIGHT

Water Quality Strategy Approved to Address Most Polluted River in the U.S.

What Is It?

In May 2010, the Colorado River Basin Regional Water Board adopted a water quality restoration strategy, known as Total Maximum Daily Load (TMDL), to address low dissolved oxygen (DO) in a 12-mile reach of the New River downstream of the International Boundary (IB). This reach of the New River has been prioritized over other reaches because of proximity to waste discharges from Mexico (the major source of low DO), and to target the most polluted areas in the Region. Sources of flows to the New River at the IB are urban and agricultural runoff, and treated municipal and industrial wastes from the Mexicali Valley, Mexico. While the Regional Water Board cannot require Mexico to reduce discharges causing low DO, it can raise awareness with federal agencies and the Mexican government on IB issues. The TMDL requests, but does not require, federal assistance to ensure that discharges from Mexico do not contribute to a violation of the TMDL, as well as to continue water quality monitoring in the New River at the IB. Achieving DO water quality objectives at the IB will most likely lead to achieving the DO water quality objective in downstream reaches. Water quality standards for DO in the New River are expected to be achieved within the first three years of implementation, upon approval of the TMDL by the State Water Board and the U.S. Environmental Protection Agency .



*New River at International Border with Mexico (looking south).
Photo by: Jose Angel, Regional Water Board staff.*

Why Is It Important to the State?

The New River dissolved oxygen TMDL is key to addressing New River water quality pollution from Mexico. Over the past 60 years, the New River has been recognized as one of the most polluted rivers in the United States because of high concentrations of bacteria coming from Mexico. Implementation of the TMDL will also address restoration of the Salton Sea. The Salton Sea is California's largest inland lake, and is a major environmental and wildlife habitat resource. The New River is the second largest contributor of flows to the Salton Sea. Assembly Bill 1079 (chaptered into law in 2009), requires the California-Mexico Border Relations Council, chaired by California Environmental Protection Agency Secretary Linda Adams, to develop a Strategic Plan to address environmental and public health threats caused by pollution from the New River. The TMDL complements that Strategic Plan.

For more information: http://www.waterboards.ca.gov/coloradoriver/water_issues/programs/tmdl/tmdl_current_projects.shtml#nr_oxy

Renewable Energy Projects Permitted

In 2010, the Colorado River Basin Regional Water Board and State Water Board worked with the California Energy Commission (CEC) on the development of CEC certifications (licenses) for five large solar energy projects and one geothermal project. Permit requirements for compliance with water quality laws and regulations were drafted and incorporated into the licenses to mitigate potential water quality impacts. Stringent time constraints were imposed on the Regional Water Board in order for the projects to be eligible for federal stimulus monies. In late 2010, the CEC approved the five solar projects, which include: the 150-megawatt (MW) Rice Solar Energy Project; the 250-MW Genesis Solar Project; the 500-MW Solar Millennium-Palen Project; the 1000-MW Solar Millennium-Blythe Project; and the 709-MW Imperial Valley Solar Project. The CEC also incorporated requirements for the 159-MW Black Rock 1, 2, and 3 Geothermal Power Project, located adjacent to the Salton Sea in Imperial County.

In December 2010, the Regional Water Board issued a separate federal Clean Water Act Section 401 Water Quality Certification for the Imperial Valley Solar project. In years 2011 and 2012, the Regional Water Board will incorporate the draft permit requirements, included in the CEC licenses, into water quality orders enforceable under the State Water Code.

For more information on CEC energy projects: <http://www.energy.ca.gov/siting/solar/index.html>

For a map on solar power plant projects: http://www.energy.ca.gov/maps/Solar_Power_Plant_Licensing_Projects.pdf

For information on the Black Rock 1, 2, and 3 Geothermal Project: http://www.energy.ca.gov/sitingcases/saltonsea_amendment/

Region 8

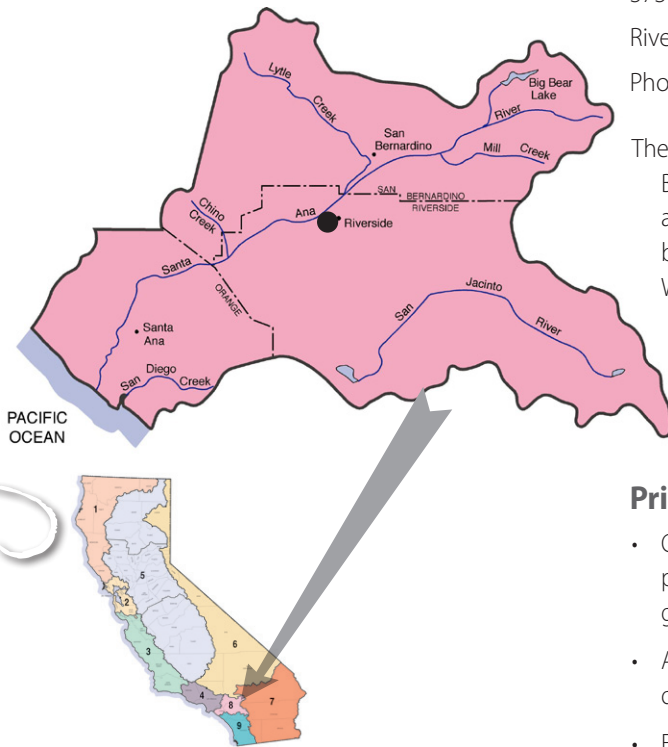
SANTA ANA REGIONAL WATER QUALITY CONTROL BOARD

www.waterboards.ca.gov/santaana

3737 Main St., Suite 500

Riverside, CA 92501

Phone: (951) 782-4130



The Santa Ana Region, which extends from the San Bernardino and San Gabriel mountains in the north and east to Newport Bay along the coast, continues to be one of the most rapidly growing areas of the State. While the Region is geographically the smallest, at 2,800 square miles, it boasts one of the largest populations with almost 5 million people. This semi-arid Region is known for its temperate climate and relatively low rainfall, which is about 15 inches per year.

Priorities

- Continue work to implement a cleanup plan for perchlorate contamination in the Rialto-Colton groundwater basin.
- Adopt a selenium TMDL and a selenium site-specific objective for the San Diego Creek/Newport Bay watershed.
- Enforce re-certification requirements under the State's Construction General Permit for approximately 500 construction sites within the Region where construction has been stalled due to the current economic conditions.
- Revise recreational water quality standards to reflect US EPA's national criteria, suspend standards during high-water flows, and modify the definition for water contact recreation.
- Develop and adopt a program of conditional waivers of waste discharge requirements for agricultural dischargers to manage nonpoint source pollution from irrigated and dry-farmed operations.

Accomplishments

- Cleanup of Contaminated Drinking Water Approved
- New and Improved Tools to Control Stormwater Runoff Pollution
- Efforts Intensified to Control the Release of Plastics into the Environment
- Water Quality Objectives Adopted for Nitrogen and Total Dissolved Solids

● Regional Board Office
Number of Employees = 69

ACCOMPLISHMENTS

*HIGHLIGHT***Cleanup of Contaminated Groundwater Approved****What Is It?**

In early 2010, the Santa Ana Regional Water Board assisted the U.S. Environmental Protection Agency (USEPA) on the release of the proposed Rialto-Colton groundwater basin cleanup plan for perchlorate and trichloroethylene (TCE) contamination, and its subsequent adoption in September 2010 through a USEPA Record of Decision. The Regional Water Board also assisted with a U.S. Department of Defense Environmental Security Technology Certification Program wellhead demonstration project for the cleanup of perchlorate in groundwater. Prior to 2010, soil and groundwater investigation activities were conducted by various parties within the 160-acre source area, and other adjacent source areas, under the oversight of the Regional Water Board. In 2009, the 160-acre site was added to USEPA's Superfund National Priorities List. In accordance with a Cleanup and Abatement Order issued by the Regional Water Board, the County of San Bernardino added two new extraction wells to its existing wellhead treatment system for the City of Rialto Municipal Well No. 3. The treatment system intercepts and removes perchlorate and TCE compounds in groundwater that originated from old industrial practices at property currently owned by the County. The treated water is then discharged to the local water purveyor's potable water distribution system.

Why Is It Important to the State?

Groundwater in the Rialto-Colton groundwater basin supplies more than 8 million gallons of drinking water per day to California residents. Numerous public drinking water wells in the basin, belonging to four water utilities, have been closed due to perchlorate contamination. Many of these contaminated wells have had wellhead treatment systems installed. Additional groundwater treatment will help to restore a lost groundwater resource to potable use, and implementation of a cleanup plan to remove contaminants from groundwater will protect other water supply wells and groundwater resources by limiting the spread of contamination.

For more information: http://www.swrcb.ca.gov/rwqcb8/water_issues/programs/perchlorate/index.shtml



*The perchlorate and TCE treatment system installed by the County of San Bernardino at the City of Rialto's Well No. 3.
Photo by: Kamron Sarem, Regional Water Board staff.*

New and Improved Tools to Control Stormwater Runoff Pollution

During 2010, the Santa Ana Regional Water Board completed the renewal of its three Municipal Separate Storm Sewer System (MS4) permits. These updated MS4 permits include sweeping new requirements for implementing low impact development (LID) techniques at most new development and redevelopment projects. LID techniques must be designed to mimic pre-construction conditions so that the quality and quantity of stormwater runoff from the site are not significantly impacted by the development. Even though the use of LID techniques has been in practice for many years, these systems must be properly designed and installed to attain optimum benefits. Permittees and the regulators are now challenged with creating new user-friendly technical guidance documents for use by project proponents and municipal plan checkers. Regional Water Board staff has been working closely with the municipalities and all other stakeholders to develop and implement the necessary tools to control pollution in stormwater runoff at new and redevelopment project sites.

For more information: http://www.waterboards.ca.gov/santaana/water_issues/programs/stormwater/ and http://www.waterboards.ca.gov/santaana/water_issues/programs/stormwater/docs/ocpermit/wqmp/ModelWQMP.pdf.

For Technical Guidance: http://www.waterboards.ca.gov/santaana/water_issues/programs/stormwater/docs/ocpermit/wqmp/TechnicalGuidance.pdf

Efforts Intensified to Control the Release of Plastics into the Environment

In 2010, the Santa Ana Regional Water Board intensified its efforts to control the discharge of pre-production plastic litter and pellets into the environment by implementing a multi-dimensional plastics litter control program. Recent studies have indicated that pre-production plastic resins and plastic pellets (pre-production plastics) used in industrial processes are an increasing cause of water pollution, especially of marine waters. Inspections were conducted at facilities currently regulated under the State's General Industrial Storm Water Permit as well as those suspected of requiring regulation. Enforcement Letters and Notices of Non-Compliance were issued where violations were found, and the Regional Water Board worked with these facilities to bring them into compliance.



Pre-production plastics are transferred during delivery using this hose situated directly above a storm drain inlet in the City of Corona, Riverside County.

Photo by: Mary Bartholomew, Regional Water Board staff.

Efforts are also underway to assist local municipalities in identifying the sources of pre-production plastics litter within their storm drain systems, and investigating the presence of plastics litter in natural water channels and other stormwater conveyance systems. These multi-faceted activities are expected to have a significant impact on the Regional Water Board's efforts to control the release of pre-production plastics into the environment.

For more information: http://www.waterboards.ca.gov/water_issues/programs/stormwater/plasticdebris.shtml

Water Quality Objectives Adopted for Nitrogen and Total Dissolved Solids

In October 2010, the Santa Ana Regional Water Board amended its Water Quality Control Plan (Basin Plan) to incorporate an additional set of nitrogen and total dissolved solids water quality objectives for the San Jacinto Upper Pressure Management Zone. These new objectives accommodate implementation of a water management plan by Eastern Municipal Water District (EMWD) and other stakeholders in the area. EMWD is the principal agency in the 542-square mile San Jacinto River watershed responsible for managing potable water supplies. EMWD also oversees wastewater collection and treatment at four water reclamation facilities, treating approximately 46 million gallons of wastewater daily. Approximately 80 percent of the wastewater produced is reused throughout the watershed. The water management plan will reduce local groundwater overdraft and increase the sustainability and reliability of local groundwater resources, maximize use of recycled water produced from local water reclamation plants, and maximize the reasonable and beneficial use of all waters available to the area. All of these activities will be managed by a local watermaster.

For more information: http://www.waterboards.ca.gov/santaana/board_decisions/adopted_orders/orders/2010/10_039_Resolution_Amending_WQCP_for_SARB_TDS.pdf

Region 9

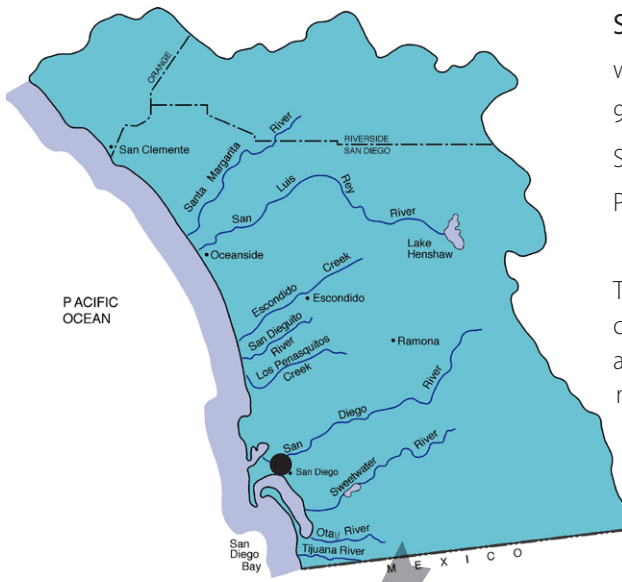
SAN DIEGO REGIONAL WATER QUALITY CONTROL BOARD

www.waterboards.ca.gov/sandiego

9174 Sky Park Court, Suite 100

San Diego, CA 92123-4340

Phone: (858) 467-2952



The San Diego Region stretches along 85 miles of scenic coastline from Laguna Beach to the Mexican Border and extends 50 miles inland to the crest of the coastal mountain range. In a mild coastal climate, the Region's growing population enjoys many water-related activities; however, little precipitation falls within this semiarid Region. About 90 percent of the Region's water supply is imported from northern California and the Colorado River.

Priorities

- Through municipal storm water regulation increase the use of low-impact development techniques, decrease the effects of hydromodification, and focus efforts on effective regulation of prohibited non-stormwater discharges.
- Continue to address the list of impaired, 303(d)-listed water bodies and coordinate with stakeholders to develop TMDL or non-TMDL solutions to effectively mitigate sources of pollution.
- Continue effective regional regulation of activities/sites that threaten local potable water supplies serving groundwater dependent communities.

Accomplishments

- High Rate of Leaking Underground Tank Case Closures
- New Stormwater Permit Adopted for Riverside County
- Hydromodification Management Plan for San Diego County
- Remediation of Camp Pendleton a Success

● Regional Board Office

Number of Employees = 62



HIGHLIGHT

High Rate of Leaking Underground Tank Case Closures

What Is It?

During 2010, the San Diego Regional Water Board closed a high percentage of leaking underground storage tank (UST) cases. For the 2009-2010 fiscal year, the Regional Water Board had a 19.2 percent closure rate, the highest in the State. The State Water Board's UST Cleanup Fund program, which provides financial assistance to UST owners and operators for costs associated with soil and groundwater cleanup, conducts a five-year review of all leaking UST cases and identifies those that should be closed. The most recent five-year review did not identify any San Diego Regional Water Board cases that should have been closed, but were not. The Regional Water Board also had the highest rate of discharger compliance with electronic reporting requirements (92 percent) in the State.

Why Is It Important to the State?

The closure of leaking underground storage tanks eases the financial burden on the UST Cleanup Fund by quickly moving cases to closure when site conditions warrant and reducing the number of stalled, active claims that place an unknown future burden on the fund. Closure of these cases also allows the Regional Water Board to focus on other projects to improve water quality. Discharger compliance with electronic reporting requirements provides ready access to up-to-date information on contaminated UST properties.

For more information: http://www.waterboards.ca.gov/sandiego/water_issues/programs/tsmc/ust.shtml



Removal of a leaking underground storage tank from an excavation.
Stock Photo.

New Stormwater Permit Adopted for Riverside County

In November 2010, the San Diego Regional Water Board adopted the fourth generation Riverside County Municipal Separate Storm Sewer System (MS4) permit. This innovative MS4 stormwater permit requires municipalities in southwest Riverside County to implement Low Impact Development (LID), an approach to minimize changes to the natural hydrologic cycle (runoff and infiltration after a storm) associated with the development of land. LID strategies integrate green space, native landscaping, natural hydrologic functions, and various other techniques to generate less runoff from developed land. The permit also requires the implementation of LID to retain water associated with certain storm events on-site and prohibits water, due to over-irrigation, from entering the storm sewer system. The permit contains stormwater and non-stormwater action levels, as well as a more comprehensive effluent and receiving water monitoring program. These permit requirements focus attention on the highest priority areas in the County. The Regional Water Board met regularly with dischargers to discuss approaches to minimize the economic impact while remaining effective at protecting water quality. Adoption of the permit brings southwest Riverside County up to a similar level of MS4 regulation as other cities and counties in the San Diego Region.

For more information: http://www.waterboards.ca.gov/sandiego/water_issues/programs/stormwater/rsd_stormwater.shtml

Hydromodification Management Plan for San Diego County

In July 2010, the San Diego Regional Water Board adopted a Hydromodification Management Plan (HMP) for San Diego County. This HMP, the first adopted by the Regional Water Board, is used to manage increases in the rates and durations of stormwater runoff from all priority development projects, where the force of the runoff is likely to increase channel erosion, generate sediment pollution, and cause other impacts to water quality and stream habitat. The plan sets requirements to control pollution exiting storm drain systems. This innovative HMP incorporates a sliding scale of discharge standards based on the channel stability of the downstream receiving water, and a receiving water monitoring component to evaluate the effectiveness of the HMP.

For more information: http://www.waterboards.ca.gov/sandiego/water_issues/programs/stormwater/sd_stormwater.shtml



A tributary to Murrieta Creek, in the City of Murrieta, illustrating what happens without proper hydromodification controls. Photo by: Alan Monji, Regional Water Board staff.

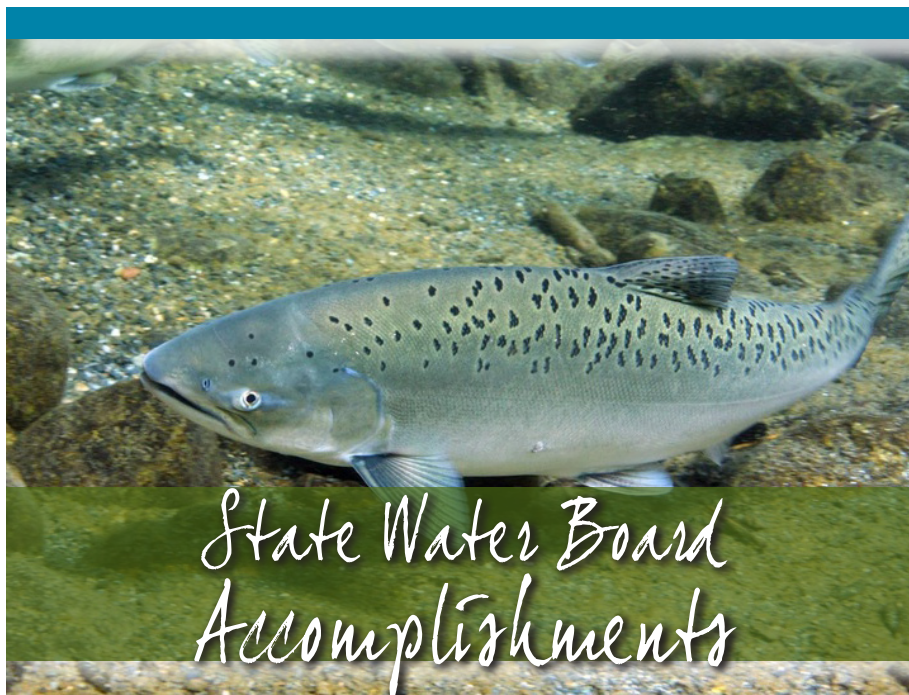
Remediation of Camp Pendleton a Success

During 2010, the San Diego Regional Water Board oversaw completion of the U.S. Navy's cleanup of over 60 sites at the Marine Corps Base Camp Pendleton. Investigations and cleanup of soil and groundwater pollution associated with leaking underground storage tanks, pesticide-contaminated soils, burn dumps, and above-ground oil tanks were completed and the cases closed. The Regional Water Board worked with the military to ensure compliance with the statewide construction stormwater permit during construction activities. These cleanup actions made approximately 17 acres of land available for reuse at Camp Pendleton. The actions also build on last year's approval, and this year's installation, of photovoltaic panels on the surface of the now-closed Box Canyon Landfill, which will generate 1.5 megawatts of solar electricity to serve the southern part of the base.

For more information: https://geotracker.waterboards.ca.gov/military_base.asp?pca_num=16592&status=&case_number=&business_name=CAMP+PENDLETON



A former burn ash dump site at Camp Pendleton after cleanup that was hydroseeded to promote revegetation with native plants. Photo by: Cheryl Prowell, Regional Water Board staff.



The State Water Board, located in Sacramento, works with the Regional Water Boards to protect and restore water quality. Where water quality issues cross Regional Water Board boundaries or have significant statewide application, the State Water Board may develop statewide water quality control plans and policies, including water quality standards, and issue general permits that cover specific types of discharges. The State Water Board also approves regional basin plans, reviews petitions that contest Regional Water Board actions, addresses enforcement, and provides administrative and other functions in support of the Water Boards. The State Water Board also separately administers grant and loan programs to assist communities in need, examine and propose solutions to important water quality problems, and provide capital for infrastructure and other improvement projects. Unique to the State Water Board is the administration of a complex system of water rights that allocates our scarce surface water resources.

State Water Board Accomplishments

- Policy Adopted to Protect Marine and Estuarine Life from Power Plant Cooling
- Policy Adopted to Protect Fisheries in Northern California Coastal Streams
- Improvements Made to Underground Storage Tank Cleanup Fund Performance
- California Environmental Data Exchange Network (CEDEN) Launched
- Enforcement Taken for Government-Owned Underground Storage Tank Violations
- Approved Impaired Waters List and Report of Water Quality Assessment Accessible Via Online Tool
- Flow Criteria Developed for the Sacramento-San Joaquin Delta Ecosystem
- Creek Watch iPhone Application Created
- Comprehensive Assessment of Toxicity Data Conducted



*Estuary.
Stock Photo.*

HIGHLIGHT

Policy Adopted to Protect Marine and Estuarine Life from Power Plant Cooling

What Is It?

In May 2010, the State Water Board adopted a Policy on the Use of Coastal and Estuarine Waters for Power Plant Cooling (Policy). The Policy establishes technology-based standards to implement federal Clean Water Act (CWA) section 316(b) and reduce the harmful effects associated with cooling water intake structures on marine and estuarine life. Each year in California, seals, sea lions, and turtles, as well as billions of larval, juvenile, and fully-grown fish, are killed in the power plants' intake structures. The Policy will apply to the 19 existing power plants (including two nuclear plants) that currently have the ability to withdraw and return over 15 billion gallons per day from the State's coastal and estuarine waters using a single-pass system, known as once-through cooling (OTC). These 19 power plants use ocean waters to cool equipment. The intake structures for power plants that use OTC impinge (trap against screens) and entrain (draw through cooling water systems) marine life to the detriment of the marine environment. Federal Clean Water Act Section 316(b) requires that the location, design, construction, and capacity of cooling water intake structures reflect the best technology available for minimizing adverse environmental impact. The Policy establishes "best technology available" on a statewide basis using Best Professional Judgment; it includes alternative means of compliance (for both fossil-fueled and nuclear-fueled power plants), an implementation schedule, and monitoring provisions to ensure that the goals of the Policy are being met. Nationally, the Policy is the first of its kind.

Why Is It Important to the State?

The withdrawal of ocean waters for the purposes of OTC results in the impingement and entrainment of marine life to the detriment of the marine environment. Impingement occurs when larger aquatic organisms are trapped against a facility's intake screen, resulting in injury or death. Entrainment occurs when smaller aquatic organisms are

drawn into a plant's cooling system and killed. Annually, impingement results in mortality to over 2.6 million fish, and entrainment to over 19 billion fish larvae. Because the Policy was developed with input from a broad range of regulatory entities and organizations that deal with energy (including the California Energy Commission, the California Public Utilities Commission, the California Independent System Operator, the California Coastal Commission, the California State Lands Commission, and the California Air Resources Board), the goal of reducing the impact that OTC has on the marine environment, while protecting the stability of the State's electrical grid, was achieved.

For more information: http://www.waterboards.ca.gov/water_issues/programs/npdes/cwa316.shtml

HIGHLIGHT

Policy Adopted to Protect Fisheries in Northern California Coastal Streams

What Is It?

In May 2010, the State Water Board adopted the Policy for Maintaining Instream Flows in Northern California Coastal Streams (Policy). The Policy encompasses coastal streams from the Mattole River to San Francisco and coastal streams entering northern San Pablo Bay, and extends to five counties: Marin, Sonoma, and portions of Napa, Mendocino, and Humboldt. The Policy applies to applications to appropriate (divert and use) water, small domestic use of water, livestock ponds, and water rights petitions, and it establishes principles and guidelines for the protection of fishery resources. It focuses on anadromous salmonids (e.g., steelhead trout, Coho salmon, and Chinook salmon) and their habitat, and requires measures to protect these resources. Under the Policy, new water rights and changes to existing water rights are not to affect the instream flows needed for fish spawning, migration, and rearing, or the flows needed to maintain natural flow variability to protect biological functions. Fish migration paths to spawning and rearing habitats are not to be blocked, and the impacts of water diversion projects on stream hydrology and biological resources are to be evaluated. The State Water Board recognizes through the Policy that, in some cases, site-specific evaluations are warranted and in others, a watershed-based approach may be more appropriate.

Why Is It Important to the State?

Water diversions result in a significant loss of fish habitat in California. Water withdrawals change the natural hydrologic patterns of streams and can directly result in a reduction or loss of the physical habitat that fish occupy. Furthermore, flow reduction can reduce the capacity of streams to assimilate pollutants. Dams create barriers to fish migration and disrupt the flow of food, woody debris, and gravel needed to maintain downstream fish habitat.

Coastal streams within the Policy area provide habitat for steelhead trout, Coho salmon, and Chinook salmon. The National Marine Fisheries Services and the California Department of Fish and Game have listed steelhead trout and Chinook salmon as "threatened" under the federal Endangered Species Act (ESA) and the California Endangered Species Act (CESA), respectively. Coho salmon are listed as "endangered" on both the ESA and CESA lists. The Policy will help to protect the environment by



*Coastal stream.
Stock Photo.*

ensuring that water rights are administered in a manner designed to maintain instream flows for the protection of California's fishery resources.

For more information: http://www.waterboards.ca.gov/waterrights/water_issues/programs/instream_flows/index.shtml

HIGHLIGHT

Improvements Made to Underground Storage Tank Cleanup Fund Performance

What Is It?

In February 2010, an independent external performance audit of the State Water Board's Underground Storage Tank Cleanup Fund (Cleanup Fund) program, commissioned by the Board in late 2009, was finalized. In response to the audit, which recommended improvements in the operations of the Cleanup Fund in three areas, an action plan was developed and steps were taken to immediately begin implementing the audit recommendations. The three areas of audit recommendations addressed by the action plan are: (a) financial management and cost containment to reduce the number of active claims and the average cost per claim; (b) processing efficiencies to accelerate claim processing; and (c) internal controls to eliminate weaknesses that could result in waste and abuse. Many changes have already been implemented, such as ensuring efficiencies in groundwater monitoring activities, completing the transition to electronic submittal and review of technical information, and creating a Fraud Team to pursue allegations of fraud, waste, and abuse. A pivotal success leading to the creation of the Fraud, Waste, and Abuse (FWA) Prevention Unit within the enforcement program was the successful Judgment filed in Sacramento Superior Court to settling allegations against E2C Remediation, Inc. for submitting fraudulent reimbursement requests to the Cleanup Fund. The FWA Prevention Unit audited approximately 40 claims for reimbursement to the Cleanup Fund in 2010 and enforcement is ongoing.



*Underground storage tank.
Photo by: Regional Water Board staff.*

Why Is It Important to the State?

Since the Underground Storage Tank Cleanup Fund program began operations in 1991, the State Water Board has paid over \$2.2 billion to thousands of individuals and small businesses to help them cover the cost of cleaning up their gas stations and other leaking tank sites. Another \$500 million has been paid to local governments and large businesses. During the course of the program, over 19,000 claims have been filed. Some 11,000 claims have been paid in part or in full, of which about 7,000 have been closed and about 4,000 remain active. Another 4,600 claims filed by major corporations and government agencies are on the priority list, awaiting activation. Individual payment transactions have numbered more than 66,000, for a long-term average payment of about \$40,000 per claim per year. The changes being made to the Cleanup Fund are designed to restore the efficient and effective operation of the fund so that it can continue to provide necessary financial assistance to underground storage tank owners.

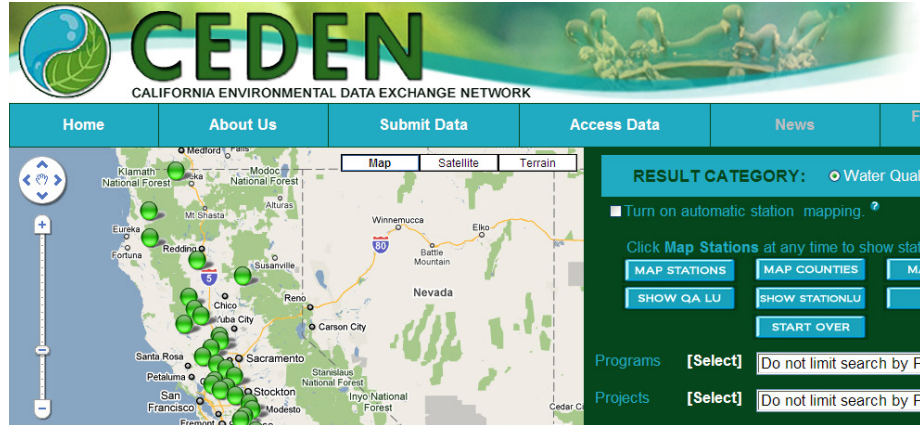
For more information: http://www.waterboards.ca.gov/water_issues/programs/ustcf/

HIGHLIGHT

California Environmental Data Exchange Network (CEDEN) Launched

What Is It?

In August 2010, the California Environmental Data Exchange Network (CEDEN) was launched. CEDEN is a system designed to facilitate the integration and sharing of water quality monitoring data collected by different entities, making it accessible to water quality managers and the public. Four Regional Data Centers (RDCs) work with local data sources to input data into the CEDEN system and make it available for query and download. These data centers include: Moss Landing Marine Laboratory, the Southern California Coastal Water Research Project, the San Francisco Estuary Institute, and the University of California Davis. Currently, CEDEN houses data collected by the Water Boards through the Surface Water Ambient Monitoring Program (SWAMP), the Southern California Stormwater monitoring Coalition, the Central Valley Regional Water Board's Irrigated Lands Regulatory Program, the Total Maximum Daily Load (TMDL) Program, and the San Francisco Bay Regional



Online California Environmental Data Exchange Network (CEDEN).

Monitoring Program. The RDCs are working to add more data, as well as additional query and data assessment capabilities, to enhance the CEDEN system.

Why Is It Important to the State?

The Water Boards are responsible for assessing the quality of all of the State’s waters and making that information available to the public. A wide range of local, State, and federal agencies, as well as non-governmental organizations, monitor water quality in California, but integrating those data for comprehensive assessments is a major challenge. The CEDEN system facilitates data exchange among entities while allowing local data sources to maintain control of their data. With CEDEN, the Water Boards can now access data collected by others to comprehensively assess the quality of the State’s waters. In addition, this system feeds data to the California Water Quality Monitoring Council’s My Water Quality web portals, which provide data assessments to answer questions important to the public, such as whether it is safe to swim at a local beach or whether it safe to eat fish caught from California waterways.

For more information: www.ceden.org

Enforcement Taken for Government-Owned Underground Storage Tank Violations

In January 2010, a Judgment was filed in Los Angeles County Superior Court to resolve widespread violations of underground storage tank (UST) construction and monitoring requirements by the City of Long Beach. The total value of the Judgment was \$6,200,000, and requires the City to pay \$1,500,000 in civil penalties and \$200,000 in costs. An additional \$2,000,000 in penalties was credited to the City for actions it took to enhance compliance at its UST facilities, and \$2,500,000 was suspended, conditioned on future compliance. In addition, the City of Long Beach was required to place a full page mea culpa advertisement in the January 31, 2010 Sunday edition



Fueling station for Long Beach City vehicles with two closed fueling dispensers, located next to the beach, with no required containment.

Photo by: John Elkins, State Water Board staff.

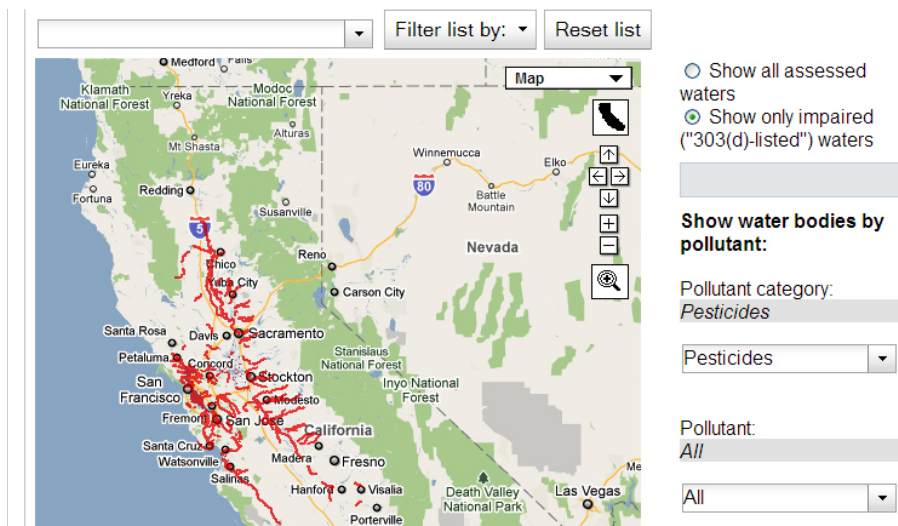
of the Long Beach Press Telegram. This case led to the start of the Government-Owned/Operated UST Enforcement Initiative (“GOT Initiative”), which targets noncompliance with leak prevention laws at facilities owned and/or operated by government agencies. Information was gathered regarding the current operations of government owned/operated UST facilities in 79 different Certified Unified Program Agency (CUPA) jurisdictions (CUPAs are responsible for local implementation of certain State environmental and emergency response programs). During 2010, more than 145 reviews and 50 inspections were performed. Formal enforcement resulting from the reviews and inspections is ongoing.

Widespread noncompliance with UST leak prevention laws and regulations at government-owned/operated facilities throughout the nation has been an issue for some time. As with privately owned/operated USTs, these violations are significant and point to the potential for failed monitoring equipment, or secondary containment, to threaten public health and the environment. The “GOT Initiative” ensures better governmental agency compliance with leak prevention requirements by taking meaningful and well-publicized enforcement against noncompliant publicly-owned or operated tank systems.

For more information: http://www.waterboards.ca.gov/water_issues/programs/enforcement/docs/longbeach_consentjudgement.pdf

Approved Impaired Waters List and Report of Water Quality Assessment Accessible Via Online Tool

In 2010, the State Water Board adopted the first California Integrated Report, which lists the State's impaired (polluted) water bodies and reports on surface water quality conditions. The report meets the Clean Water Act requirements to submit to the U.S. Environmental Protection Agency (USEPA) a list of impaired water bodies [303(d) List] and a report on the condition of surface water quality [305(b) Report]. The 2010 Integrated Report updates the 2006 303(d) List of impaired water bodies. The Water Boards continue efforts to develop water quality restoration strategies, known as Total Maximum Daily Loads (TMDLs), for impaired waters to establish the maximum amount of a pollutant that a water body can receive and still meet water quality standards. The broader assessment of the quality of the State's waters [305(b) Report] is used to characterize water quality and identify widespread water quality problems of statewide significance. The Water Boards have been working to improve the management of water quality data by making information more transparent, understandable, and easily accessed by water quality managers and the public in a timely fashion. In April 2010, the State Water Board published on its website a new tool to view the 2010 Integrated Report, which is comprised of an extensive record of water quality assessment data and information.



Interactive Online Map for the Integrated Report.

This tool is an interactive map that enables users to easily search and view water quality information about specific waters in California, such as pollutants assessed, potential sources of pollutants, the year a pollutant was listed, estimated sized of assessed area, and the schedule for water quality restoration. In November 2010, the USEPA approved California's final 2010 Integrated Report.

For more information: http://www.waterboards.ca.gov/water_issues/programs/tmdl/integrated2010.shtml



San Joaquin River.
Photo by: Regional Water Board staff.

Flow Criteria Developed for the Sacramento-San Joaquin Delta Ecosystem

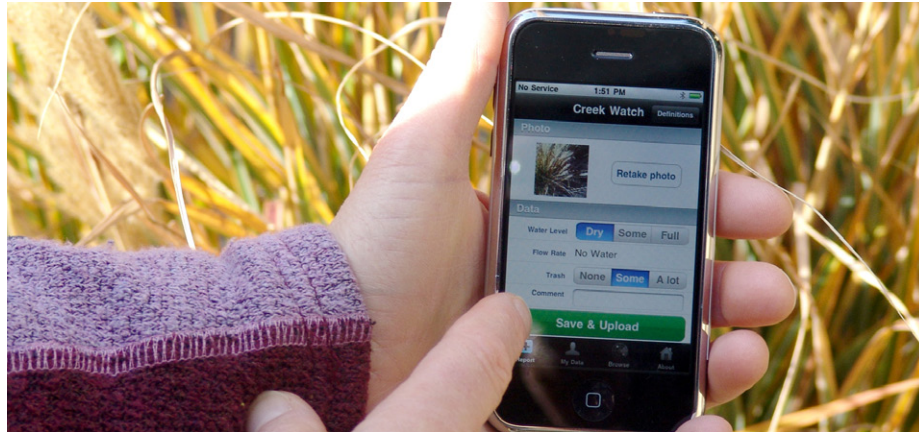
In accordance with the Delta Reform Act of 2009 (Water Code section 85000 et seq.), the State Water Board approved new flow criteria for the Sacramento-San Joaquin Delta Ecosystem that are necessary to protect public trust resources. The flow criteria report, which was completed ahead of schedule, will inform planning decisions for the Delta Stewardship Council's Delta Plan and the Bay-Delta Conservation Program.

Under the circumstances analyzed in the report, the State Water Board found that current flows are insufficient to support native Delta fishes and that there is sufficient scientific information to support the need for increased flows to protect public trust resources. In order to achieve the goal of halting the population decline and increasing the populations of native fish species, as well as species of commercial and recreational importance, the report includes criteria for percentages of natural or unimpaired flows that provide fisheries protection under existing conditions. The report also summarizes other issues and concepts including: increased fall Delta outflow in wet and above normal years; fall pulse flows on the Sacramento and San Joaquin rivers; and flow criteria in the Delta to help protect fish from mortality in the central and southern Delta resulting from operations of the State and federal water export facilities.

For more information: http://www.waterboards.ca.gov/waterrights/water_issues/programs/bay_delta/deltaflow/

Creek Watch iPhone Application Created

With the new Creek Watch application, designed by Water Board staff, anyone can monitor the health of their local watershed. The IBM-Almaden Research Lab invited the Water Boards' Surface Water Ambient Monitoring Program's Clean Water Team to create a smart phone application that would benefit water quality and citizen monitoring. Whenever passing by a waterway, iPhone users can spend a few seconds using the Creek Watch application to snap a picture, and report how much water



*Creek Watch iPhone application encourages the public to monitor watersheds.
Photo by: Dale Oliver, State Water Board staff.*

is present and how much trash is observed. Creek Watch aggregates the data and shares it with watershed groups and agencies that track pollution and manage water resources. A map on the Creek Watch website displays data that already has been contributed. The application is now available on the iTunes App Store, which can be accessed through the Creek Watch website.

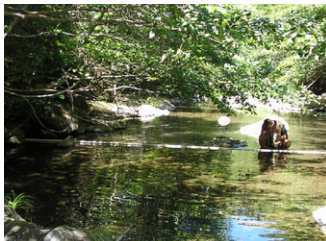
For more information: <http://creekwatch.researchlabs.ibm.com/>

Comprehensive Assessment of Toxicity Data Conducted: About Half of Surface Water Sites Sampled Showed Toxicity

In November 2010, the Surface Water Ambient Monitoring Program (SWAMP) released a report summarizing nine years of toxicity test results in California watersheds and coastal waters. This is the first comprehensive assessment of toxicity data conducted on a statewide basis since the 1990's. The report describes where toxicity has been observed in California waters and sediment; assesses the magnitude of the observed toxicity; compares the results among waters draining urban, agricultural, and other land uses; and summarizes studies identifying the chemicals implicated as the cause of toxicity and the ecological implications.

Toxicity was observed in every region of the State. Approximately half of all locations assessed (922 sites) had at least one sample in which toxicity was measured in either water or sediment and 13 percent of the locations were classified as high toxicity sites. Sites draining urban and agricultural areas had significantly higher toxicity than sites in less developed areas. A review of studies conducted in California identified ammonia and pesticides as the primary cause of toxicity observed, although these findings cannot necessarily be extrapolated to all of the sites assessed in this report. A more detailed interpretive report will be released in early 2011.

*For more information: http://www.waterboards.ca.gov/water_issues/programs/swamp/
and http://www.waterboards.ca.gov/water_issues/programs/swamp/docs/reports/tox_rpt.pdf*



Our Vision

A sustainable California made possible by clean water and water availability for both human uses and environmental resource protection.

Our Mission

To preserve, enhance, and restore the quality of California's water resources, and ensure their proper allocation and efficient use, for the benefit of present and future generations.



CALIFORNIA
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REGIONAL WATER QUALITY CONTROL BOARDS

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